

AN ETHIC OF FREEDOM

BY

C2009  
Anne Marie Morgan

Submitted to the graduate degree program in Philosophy  
and the Graduate Faculty of the University of Kansas  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy.

\_\_\_\_\_  
Chairperson\*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Defended \_\_\_\_\_

The Dissertation Committee for Anne Marie Morgan certifies  
that this is the approved version of the following dissertation:

AN ETHIC OF FREEDOM

Committee:

\_\_\_\_\_  
Chairperson\*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date Approved: \_\_\_\_\_

## Table of Contents

### Chapter One: Appropriating the Beauvoirean Theory

|                                      |    |
|--------------------------------------|----|
| 1.1: Introduction                    | 1  |
| 1.2: Human Ontology                  | 6  |
| 1.3: The Conversion                  | 16 |
| 1.4: Extraneous Factors              | 22 |
| 1.5: The Appropriation               | 24 |
| 1.6: Summary of Chapters 2 through 4 | 37 |

### Chapter 2: The Pre-Conditions of Choice and Humanity

|  |     |
|--|-----|
| 2.1: Introduction                              | 45  |
| 2.2: Choice and its Neurological Processes     | 47  |
| 2.3: Early Brain Development                   | 61  |
| 2.4: Pre-condition—Micronutriture              | 62  |
| 2.5: Pre-condition—Nurture/Sensory Stimulation | 70  |
| 2.6: Pre-condition—Education                   | 99  |
| 2.7: Pre-condition—Absence of Violence         | 109 |
| 2.8: Pre-condition—Adequate Nutrition          | 125 |
| 2.9: Pre-condition—Sleep                       | 130 |
| 2.10: Pre-condition—Overall Health             | 135 |
| 2.11: Key Concepts                             | 137 |

### Chapter Three: The Conditions of Choice and the Impact of Culture

|  |     |
|--|-----|
| 3.1: Introduction  | 160 |
| 3.2: Engagement and Symbolic Interpretation/Contribution | 161 |
| 3.3: Self Reliance versus Interdependence                | 171 |
| 3.4: Intra-Cultural Interdependence                      | 180 |
| 3.5: The Conditions of Choice                            | 201 |
| 3.6: Inter-Cultural Interdependence                      | 216 |

### Chapter Four: Arguments in Favor of Choice and Freedom

|   |     |
|---|-----|
| 4.1: Introduction   | 230 |
| 4.2: The Argument from Consistency  | 232 |
| 4.3: The Justification Argument   | 243 |
| 4.4: The Argument from Consequences   | 255 |
| 4.5: Just Deserts   | 283 |
| 4.6: Norms of Non-Interference  | 300 |
| 4.7: Special Obligations & Systems to Redistribute the Pre-conditions of Choice | 307 |

|   |     |
|---|-----|
| 4.8: The Politics of Freedom: Choice as a Justification for the State | 309 |
| 4.9: Conclusion   | 311 |

## **Chapter One: Appropriating the Beauvoirean Theory**

### **1.1: Introduction**

An ethical theory, in general, is an attempt to explain what actions and/or inactions will be designated as ethical or not, moral or immoral, and why that is the case. Since such a designation requires a justification, some criterion in virtue of which decisions may be made and praise and blame may be assigned, the field of ethics is at its core a search for justifications and reasons to prefer some actions and/or inactions over others. Historically, western philosophers have, of course, advocated different positions on the matter. Some, such as Kant, maintained that moral action must accord with duty, while others, such as Mill, have held that the moral course of action is that which creates the greatest happiness for the greatest number. Often, philosophers have sought an eternal or immutable justification for their ethical theories, perhaps one that is based on a notion of “the good” or one that would be incumbent upon any rational agent without regard to the agent’s type of being or situation; however, the theory that I will put forward here does not aim at a timeless or fixed foundation for ethics. Rather, it is an attempt to ascertain what is best for humans and what is right for us to do, given that we are physically and conceptually vulnerable creatures, who have certain attributes and needs that are common to the species, and given that we all struggle to survive and fulfill our particular interests, at the same time that we are embedded in families, societies, and cultures—that is, collectivities—that shape our lives and personal possibilities. It is an exploration into what we are here and now, within the evolutionary niche we fill

on earth. If, for instance, we were no longer vulnerable, if we no longer had certain attributes, if we no longer struggled singly and collectively for survival, then this account would have little or nothing to say about how we ought to behave. The theory concerns the contingent. But perhaps that is only fitting since we are contingent beings whose attributes and context have developed in the environment of the evolving world.

The theory is a practical approach to ethical reasoning that is founded on the notion that there are certain factors that structure every human life (given by the vulnerabilities, attributes, and context noted above) within which we carry out our separate projects and responsibilities, work toward our particular goals, care for our own loved ones, and, in general, attempt to fulfill our particular interests. It asks the reader to do the hard work of setting aside, if only temporarily, her preconceived notions about morality in order to consider seriously what humans have in common and what this commonality might entail. The goal is to give each reasons to work toward attaining choice and freedom for the self as well as for all others. The theory is, above all, not an apology for the status quo. It does not ask whether its conclusion can be easily implemented or whether it adheres to commonly or socially accepted ethical standards. Humans are capable of all sorts of behaviors and what is best need not also be easy, and commonly or socially accepted standards may, for instance, merely reflect common prejudice or the particular interests of the powerful, rather than the interests each of us has in virtue of our shared humanity.

The argument I will defend herein is *appropriated* from Simone de Beauvoir's *The Ethics of Ambiguity*, although I will extract the argument from its original existentialist context, modify it significantly, and supplement it with information gathered from fields that study the existence of humans, such as neuroscience, nutrition, and social psychology. That is, although Beauvoir's theory is the impetus for the present work, I will make significant changes (to be addressed in sections 1.4 and 1.5) that also entail substantial alteration in the Beauvoirean argument. Beauvoir's theory, I maintain, is a novel ethical theory in western philosophy that has yet to garner the attention it deserves, and this situation is, I believe, in part due to a rift within western philosophy itself.

Most present day philosophers are aware of this divide within the discipline. On the one hand, there are those who work in the continental tradition, including the existentialists in general and Beauvoir in particular. Existentialism, as a genre of philosophy, tends both to focus on the meaning of lived experience and to communicate in a literary mode. On the other hand, there are those who work in the analytic tradition, who are also interested in human experience, broadly construed, but who prefer to communicate in the language of scientific discourse. Some analytic philosophers reject the work of their continental counterparts, with the explanation that the latter's unwillingness to approach philosophical research from a scientific perspective weakens the credibility of their arguments. Moreover, many continental philosophers have failed, it is claimed, to take the "linguistic turn"—an approach to philosophy that has become nearly taken for granted in analytic circles within the last

century—which might be characterized as both a recognition that past philosophical endeavors were sometimes embroiled in confusions due to the ambiguities that exist in natural languages and a commitment to focus on language itself (as reflective of the human experience of the world) in order to avoid such linguistic mistakes in the future. The two traditions then advocate opposing methodologies and, as a result, see themselves as having little in common.

Given this situation within the discipline, in addition to defending the theory that Beauvoir put forward in *The Ethics of Ambiguity*, part of my goal is to demonstrate that a modified version of the Beauvoirean theory—a charitable interpretation, when cast into the language of pragmatic philosophy—is relevant to philosophers in both traditions. The problem with what I have depicted above as the analytic philosopher's position is that one may express oneself in a literary mode and still communicate something that is largely consistent with scientific research. It would seem then unreasonable to dismiss an argument based upon the mode in which it is expressed. If the analytic philosopher is concerned about the human's experience of the world, including her attempts to make sense of that experience, then this theory has much to offer. The approach that I will utilize, in order to help bridge the divide, does not belong strictly to either camp; rather, it utilizes a pragmatic methodology, that leans on scientific discourse for support and that draws on the spirit of American pragmatism (an often ignored philosophical alternative to the (false) dichotomy created by the either-continental-or-analytic scenario). And while I will not, along with many ethicists in the analytic tradition, concentrate specifically on the ethical

language—in and of itself—that is employed in the theory, I will clearly define the terms in use in order to avoid linguistic ambiguity. The appropriated theory argues that it is in the *prior interest* of all persons to help provide the *pre-conditions* of choice—those things that are necessary if choice will occur for individual persons—for all beings who are genetically human and the *conditions* of choice—those factors that minimize the personal costs of choice and ensure the practical availability of possibilities for particular choosers—for all members of one’s cultural group. Any person who does not help supply the pre-conditions for all simultaneously dehumanizes herself, lacks any and all warrant for her action, and leaves herself open to warranted suppression by all others. In some instances, she may also put her own prior interest in choice, as well as that of all others, at risk. Thus, the appropriated theory argues that it is in each person’s *prior interest* to will choice for all persons and freedom for those with whom one shares a cultural system.

This chapter will be devoted to explaining Beauvoir’s ethical theory and to clarifying just what it is that I will extract from it. It will first be necessary to lay out Beauvoir’s account (utilizing the vocabulary of existentialism) in some detail, while taking care to explain key concepts that will feature (directly or in altered form) in the appropriated version of the argument. In what follows, these components will be assigned identifiers (e.g., (A1), (A2), and so forth), since they will be revisited in section 1.5, after the presentation of the Beauvoirean theory, in order to offer preliminary definitions of key concepts. However, not all aspects of Beauvoir’s argument will be retained. Two components—an ambiguity between consciousness

and the factual body and a proposed desire for self-coincidence—will be set aside as extraneous to my purpose. These factors will also be assigned identifiers (i.e., (E1) and (E2)) in the explication and discussed again in section 1.4, in order to explain why they will not be useful for the present project. It is important to note that the following explication of the Beauvoirean theory is just that—an explication. A defense of the appropriated version of the argument will be taken up in Chapter 2 and extend through Chapter 4.

## **1.2: Human Ontology**

Ultimately, Beauvoir argued for an ethical principle that may be stated thus: *one should recognize the ontological conditions of one's own freedom and that of others, and act so as to treat oneself and other humans as freedom, so that each human's end may be freedom.* As I will explain (in section 1.3), human freedom occurs on four levels in Beauvoir's theory: one ontological and three moral levels. In order to demonstrate how she arrived at this principle, an explicit illumination of her account of human ontology will prove helpful.

*Human ontology* (A1), as the term is used by existentialists, is a description of the type of being that humans experience; it is an account of the phenomena that show up upon examination of human life. According to Beauvoir, our existence is characterized by an inherent dichotomy (E1)—that each of us is both *for-itself* (transcendence) and *in-itself* (immanence) (*Ethics* 52)—and that, as such, there is an ambiguity at the core of our experience (7). As *in-itself*, the human is matter, a

physical body that is given by nature; as for-itself, the human is mind or consciousness.

Due to its ambiguous ontological status, the human may be described as pure consciousness, a mind that is unattached to anything physical, or as a purely material body, a physical being devoid of mind.<sup>1</sup> However, on Beauvoir's view, if one were to describe the human as exclusively either, one would be gravely mistaken. Each of us is *both* transcendence and immanence, and when I, as a human, reflect upon my ontology, both aspects are apparent.

Consider first one's own act of reflection. That a human can undertake such contemplation indicates that she has certain attributes. In my capacity to reflect, I find that my consciousness consists, in part, of intentionality. It is due to my consciousness (A2) that I can undertake this mental act, and it is my capacity to intend that enables me *to choose* and *to aim at* some particular object of reflection, rather than all the other possible objects. It appears to me that I could have rejected the proposal to reflect or chosen a different object altogether on which to focus. That I can direct my mental act in this way indicates that I have capacities for *intention*, for *choice*, and for *differentiation* (A3), and these are displayed immediately upon reflection.

Consider now one's relation to the object of reflection. This relation is such that, unless I focus on my own consciousness, or some other intimate aspect of my

---

<sup>1</sup> Beauvoir maintained that "the Cartesian *cogito* expresses both the most individual experience and the most objective truth" (*Ethics* 17).

own capacity to reflect, I find that I am not identical with the object. The object appears as other than myself. Moreover, if I think about the types of objects that show up in everyday life, another relation is present. This object before me—a chair, hammer, or drinking glass—has some purpose with regard to human intentionality in general. The chair, for instance, has been purposefully planned and constructed with regard to the function it can fulfill in different activities. It may be an easy chair designed for my comfort or a three-legged cobbler’s chair created for easy movement. Whatever the case may be, when I think of or have contact with such an object, I *reveal* the *intention* of the designer and maker and the function that the chair serves for people on a daily basis as part of the *meaning* or *significance* of the object. Moreover, when I react (or not) to the object—perhaps I lounge in it, reject it as uncomfortable, buy it to take home, tell a friend of its unusual color, or simply walk away from it—I further *contribute* to its *significance*. I help to designate the chair as cozy, ugly, expensive, unusual, or simply not worth my time. When I *reveal* objects and/or signification and *contribute* to additional objects and/or further signification, in Beauvoirean terms, I *disclose being* (A4) (*Ethics* 41). Disclosure is for Beauvoir a description, at the most basic level, of how a human engages in the world; it is how “the world becomes present by [our] presence in it” (23). She maintained that one cannot help but disclose, because it is the core of every activity or inactivity.

Disclosure is also, for Beauvoir, the source of all value and signification (*Ethics* 14). There is no external view point, “inhuman objectivity”, or divine decree in virtue of which value is determined (14). It is because one desires rest, and because

humans are such that they require rest, that the chair is valuable; it has no value in and of itself. The value of the object or signification is created through its utility. As she explained, “[v]alue is this lacking-being of which freedom *makes itself* a lack” (14); that is, we create value through our capacities to intend, choose, and differentiate in disclosure. As noted, disclosure is the basic mode of engagement for a person; it is what we do. If I touch, hear, smell, taste, see, think of, or remember some object, I reveal something of it; my response, or lack there of, is a contribution to signification. The very possibility of lack of constraint is derivative of the capacities for intention, choice, and differentiation in disclosure, and, for Beauvoir, it is upon these qualities that a person “spontaneously cast[s herself] into the world” (25). Thus, it is in virtue of these capacities that one is “originally” or ontologically free (25).<sup>2</sup> *Ontological freedom* (A5) is then, for Beauvoir, that which enables human activity (it is its core), creates value (it is the original value and the source of all others), and, as I will explain, makes moral freedom (ongoing free disclosure) possible.

If I consider now the factual aspects of the ontology, I also note that the freedom of my consciousness is inextricably bound to physical being. I have a body which is my mode of engagement (*Ethics* 41), and this body, for Beauvoir, is the locus of a “historical idea” or factual situation (35). But just what is a factual situation? In Beauvoir’s view, *facticity* (A6) itself includes our physical selves, the

---

<sup>2</sup> For Beauvoir, consciousness is essentially free due to its pre-reflective awareness that is non-identical with its object of awareness and that invests its object with the meaning that it has. As my concern is not to give an exhaustive account of the Beauvoirean theory, I set this notion aside for my present purpose.

raw materials we use to create objects, these objects themselves, the signification that we attribute to objects, other significations, non-human animals, and each other (both near and distant). It also includes the social, cultural, symbolic, political, and economic systems within which we exist. *Facticity is everything that affects human life (other than consciousness itself), including the material and immaterial byproducts of consciousness.* The body, as a factual situation, then, is the mode in which I am embedded within facticity. My factual situation is such that I am a flesh-and-blood being who is born into and inextricably tied to family, society, and/or culture—that is, collectivities—that affect my potentialities and possibilities. I require food, water, and other physical necessities. I am a body that will decay and die, and an object that can be “crushed” (7). And these attributes not only affect my physical being, they in part determine whether I will be able to utilize my capacities for disclosure—that is, *they potentially affect my ontological freedom.* A specifically placed knife or a bullet on a certain trajectory can stop the functioning of my heart or brain; tainted or inadequate food and water can disable or kill me. In short, due to my factual situation, I am a *physically vulnerable* creature (A7). I exist in a *state of physical vulnerability*, in which a potential for malnourishment, disabling disease, or death is always present, and any one of many such potentialities may affect my capacities for freedom.

Now, I also note that I am not alone in the world. In fact, this aspect of my ontology became apparent when I considered my capacity to disclose. While the world in its physicality existed prior to any human (*Ethics* 28), the objects that I

reveal are already imbued with human significance (74). Many people, from many cultures, have come before me and they have constructed the world in which I now find myself. Much of the mathematics we use, for instance, to construct buildings and structures originated in India and Greece, and many others, of course, have honed and added to this stock of practical knowledge. In addition, other people currently co-exist, and these others are, along with myself, revealing and contributing to the objects and signification that are relevant to survival and fulfillment.

These others may construct either my physical surroundings or the significations attributed to them such that *my freedom may be wholly or partially visible to me or invisible*. Each of us is born, in a helpless state, into already constructed social, cultural, economic, and symbolic systems. What will these systems afford to each? A person must be nourished, nurtured, and educated in order to come to see the scope of her own ontological freedom. The issue is whether or not one has been taught to think and to respect oneself as a person who discloses being and enacts choice. For Beauvoir, it is not the case that a person's ontological freedom must be either fully apparent or fully hidden from her. While both of these scenarios are possible, her factual situation may also be such that she can see herself as freedom in some limited sense or context, but fail to see herself as a free actor in the world or outside her sphere.

Each of us learns and grows within a factual situation in which we are taught, via family, school, television, movies, clubs, activities, and culture in general, that certain values and significations are set in stone. Through these media, others teach us

what we will *reveal* through *disclosure*, and this determines, to a large extent, what future objects and significations we will be able to *contribute*. If a person is not educated (or if she is under-educated), she will be able to contribute few, if any, innovative objects. She may not even understand the usefulness of common objects around her (say a book or computer). Moreover, some significations may escape her grasp. I once had a chance to engage with a seemingly bright, but under-educated, woman in a conversation about a then current political race. Some twelve years prior, she had graduated from an inner city high school and had more recently completed training in cosmetology. When I suggested to her that I had heard on the news that a certain candidate was “ahead in the polls”, the woman questioned me: “Oh, you mean he gets to vote first.” In Beauvoirean terms, she was unable to *reveal* my intended signification merely because she lacked knowledge regarding campaign polling activities. Her *contribution* reflected her ignorance of the multiple meanings of the word *poll*. In addition to being physically vulnerable, humans are also *psychically vulnerable* (A8). We come to understand and to be able to utilize concepts that are common to everyday life through interactions with others. If this interaction (i.e., education) does not occur or is insufficient, we may not understand or fully grasp the meanings (concepts), objects, and or activities of those around us.

I am psychically vulnerable because I enter the world in a state of ignorance, and I rely on others to rectify this situation. Others may construct my facticity such that I will remain ignorant. They may teach me that some alternatives don't exist or that they are not really choices at all, or that I am not really one who can intend and

choose; that is, they may construct for me a constrained view of the world such that I cannot see or utilize, or cannot grasp the scope of, the capacities that I have. *And if these others who affect me have not been made aware of their own capacities for freedom or if they have been taught that I belong to a group whose members lack or should not have the relevant capacities, then chances are they will not provide for mine.* In the first instance, from what standpoint and with what resources would they teach me? In the second, what would be their motive to teach me? In Beauvoirean terms, if I *have* come into a factual situation in which my freedom has been fostered, then I have been afforded an “apprenticeship of freedom” (A9) (Ethics 37).

Upon further consideration, I realize, if I am consistent, that just as these others contribute to my facticity, I contribute to theirs. While they have an effect upon me, I affect them. Each of us is a part of the social, cultural, political, economic, and symbolic systems that determine whether or not and how these others are nourished, nurtured, and educated. I help determine what is out there for the other to reveal, how she will reveal it, and, given this background, what she will be likely to contribute. Human freedom does not operate in a vacuum; it is inextricably embedded in its context. What this other can think, can do, and what activities she will undertake is, in part, determined by the conditions that I help to create via my own contribution. Each of us helps shape the world. By choosing actions and inactions, we take part in and choose the objects, significations, and values that are cast back onto the world as conditions upon which to act for others as well as for ourselves.

Past creations of objects and significations are springboards upon which one may act. When I write a philosophical essay, I read the work that others have written and I utilize citations and a bibliography to acknowledge my debt since I used and built upon the thoughts of others to write the paper. When I make dinner, I may or may not use a recipe, but I am indebted to those who either taught me how to cook or to read (and those in the past that helped to create language and to set it down in writing), and I utilize the objects—ingredients that others grew and produced—and the significations—the designation of some objects as healthy or not, tasteful or not, edible or not—in my activity. If I create a nutritious dinner, I reinforce one type of signification; if I become frustrated at the attempt to cook and settle for a twinkie, I reinforce another. *Any and every human activity exists in reference to some others and to the people who carried them out.* Consider another example. Perhaps I create a commercial in which I depict (by using special effects) young people as having flawless skin—indeed, as having no pores. If others reveal the commercial in the way that I intend and contribute to the success of my product by buying it, then other creators of commercials will likely follow suit. They want to sell their product too. The result will be the airing of many commercials that depict young people in such a light. The signification that will be cast out into the culture is that it is very important to have flawless skin, and young persons may attempt to emulate those in the ads (in order to do as the culture—in this instance, in the form of the media—says they ought). Since the depiction was created with special effects, they will have no means of succeeding; however, such a situation seldom abates the desire that has been

created (especially if the persuasive commercials continue). In consequence it may be that many people will attempt to attain the impossible (trying to have pore-less skin through buying products or undergoing plastic surgeries). In this case, my activity has affected many people because humans share their facticity in a communal fashion. I utilized the psychic vulnerability of some humans in order to influence the way they reveal themselves and the signification they contribute regarding themselves. The signification that these young people will likely contribute has been *effectively limited*; thus, I have limited their chance to enact choice in what they disclose. Since I have impacted so many people in order to sell my product, then, if it is determined that I have some particular responsibility for my actions, that responsibility will be vast. Now, of course, not all of my activities will have such an enormous effect, as that will vary with regard to the factual situation and my relation to the others in question. However, since each of my actions and inactions contributes values and signification (that I and others will use as springboards for future action), none will be without some effect.

Thus, Beauvoir has proposed that each of us, at least potentially, affects and is affected by all others. Examination of the ontology of the human shows that we have a potential for freedom—that is, that humans in general have capacities for intention, choice, and differentiation in disclosure—but that, since we are *physically* and *conceptually vulnerable*, and since we exist within an *interdependent context* (A10), the freedom that each possesses may be wholly or partially hidden. According to Beauvoir, when I reflect on the ontology, I reveal myself as a subject who is both

consciousness and immanence, who is in “turn an object for others” and who is “an individual in the collectivity” upon which I am dependent (*Ethics* 7). The collective is also dependent on each, and it is for these reasons that, according to Beauvoir, the “me-others relationship is as indissoluble as the subject-object relationship” (72). Both relations are inherent to the ontology. The fact is that others are my concern, as I am theirs (72).

### **1.3: The Conversion**

Beauvoir used the term “[e]xistentialist conversion” (*Ethics* 14) to denote undertaking an examination of the ontology and accepting the conclusion of her argument. This conversion, according to Beauvoir, is analogous to Edmund Husserl’s epoché (Beauvoir, *Ethics* 14). Husserl held that if a person brackets the question of whether or not the world and its objects exist, she will be led to a clearer understanding of the processes of consciousness (Husserl 22-3 and 28). Beauvoir argues that if one reflects seriously upon the ontology of the human, including the interests each has in virtue of her capacities, vulnerabilities, and the interdependent context, one will come to recognize that it is reasonable (in that it avoids self-defeating behavior) to undertake action that safeguards one’s own capacities for freedom. This involves willing (creating) a situation that allows for ongoing use of the capacities for freedom, for both oneself and all others. It is, then, one’s own interest in freedom that gives one a reason to accept one’s responsibilities to freedom in general.

The conversion includes three steps toward moral freedom: first, recognition of the ontological; second, willing freedom for oneself; and third, willing freedom for others. Recall that, for Beauvoir, each person is able to be free in that consciousness is capable of intentionality, choice, and differentiation in disclosure. Disclosure is the way that one engages with the world, but if one knows of the scope of one's freedom—that is, if one is not compelled by ignorance and/or one's factual situation toward revealing or contributing particular or limited objects and/or significations—then one is, for Beauvoir, capable of *moral freedom*.

Beauvoir also maintained that humans have two basic desires: (1) a *desire for self-coincidence* (E2) (*Ethics* 12), and (2) a *desire for disclosure* (A11) (*Ethics* 11). Regarding (1), recall that each of us is both for-itself and in-itself. The human experiences, according to Beauvoir, tension as a result of existing between these two modes; as such, one may choose to deny one's ambiguity and attempt to assert oneself as fully one or the other mode. However, if I assert myself as pure consciousness (i.e., behave as if no physical thing and no other person can affect me), I will be hard pressed to explain the existence of the body to which I am attached. The puzzle would be to explain why physical factual phenomena can diminish my capacities for freedom. Alternately, if I assert myself as a pure immanence (i.e., behave as though my behavior is determined and beyond my control), my psychic vulnerability becomes the puzzle and I deny my own capacities. Beauvoir explained that asserting oneself as either fully for-itself or fully in-itself is an attempt to “dispel the ambiguity of [one's] being” (13); however, it is an attempt that will fail, because

one “rejoins [oneself] only to the extent that [one] agrees to remain at a distance from [oneself]” (13). That is, if I assert that I am pure consciousness or pure immanence, I cannot fulfill my desire for self-coincidence, because I am a being with *both* attributes. I hold self-defeating beliefs if I maintain otherwise. It is, then, in my interest (in order to avoid a self-defeating stance), to acknowledge my own ambiguous ontological status. And since others affect me, it is in my interest to recognize theirs as well.

Now consider (2). Beauvoir maintained that humans have a desire to disclose. She explained that a person is a “being who *makes [itself]* a lack of being *in order that there might be being*” (*Ethics* 11);<sup>3</sup> that is, that consciousness separates itself from the factual context in which it is embedded in order to reveal and contribute objects and signification. Consciousness is, for Beauvoir, an intentionality that makes itself present to the world so that it may disclose, and since the desire for disclosure occurs in virtue of one’s own intent, the desire is “not inflicted . . . from without” (11). If, then, I accept disclosure as my purpose, with regard to (1), I coincide exactly with myself since I am no longer tormented by the desire to be fully for-itself or in-itself (13).

However, for Beauvoir, if I desire disclosure then I must desire ontological freedom as well. On her view, “[t]o wish for disclosure of the world and to assert oneself as freedom are one and the same movement” (*Ethics* 24). Recall that the very possibility of non-constraint derives from the capacities for disclosure. Thus,

---

<sup>3</sup> Here, Beauvoir is quoting Sartre.

Beauvoir maintained that a desire for disclosure is the same as a desire for lack of constraint. It is via one's ontological freedom that one is able to disclose; when I desire disclosure, I then desire to disclose freely. *My choices in disclosure*—the kinds of objects and significations I choose to bring into the world—*must be consistent with the possibility of future disclosure, if I will fulfill my desire to disclose*. Some activities and inactivities will be inconsistent with my desire to disclose, and it is in my interest (with regard to freedom) to will objects and significations that are consistent. It will be specifically in my interest to will for myself anything and everything that is included in an “apprenticeship of freedom”. It will also be in my interest to create a factual situation in which my desire for disclosure can be fulfilled on an ongoing basis. However, given the context displayed in the examination of the ontology, there are many ways in which my interest may be thwarted. I will not have an apprenticeship unless I have been nurtured and educated. It is near and distant others, who may or may not know of their own freedom and who may or may not want me to know of mine, who help to determine whether the factual context is conducive to these needs. Is nutritious food available or do some members of my society have extensive access while I have little? Does my government, in an agreement with global buyers or other governments, encourage farmers in my community to produce crops for export rather than for local consumption? Is a broad based education available for all, or is it accessible only to the elite or not at all? In each of these cases, near or distant others are creating the conditions that determine whether I will have my apprenticeship, and, if it has been previously fostered,

whether or not I exist in a context in which I will be able to make choices in disclosure. Humans may be kept in chains, ignorance, and other generally oppressive states, and of course we are easily killed. Given these physical and psychic vulnerabilities and one's interest in and desire for ongoing choice in disclosure, how should one proceed?

Thus far, I have focused mostly on the first level of freedom (ontological freedom) that is apparent in her theory, but, as noted earlier, freedom also occurs on three moral levels for Beauvoir. These three moral levels correspond to the three levels in which consciousness finds itself to be free. As I will explain, it is one's *interest* in ontological freedom (created by the desire to disclose) that makes it reasonable to accept the principle of freedom. The *first step* toward moral freedom is to recognize the interactive and interdependent conditions of the ontology, including the notion that the freedom I desire can only be carried out in this context. The human is consciousness and immanence, and since she has a desire for self-coincidence, she can avoid self-defeating behavior if she acknowledges she is both. Since this other can affect me, my interest in my freedom compels me to acknowledge that the other is both as well. Thus, the *first moment* of the conversion is *the recognition of the interdependent conditions of my own ontological freedom, and, due to my interest in freedom, this recognition compels me toward the epistemic responsibility to coincide with myself and to acknowledge the ontological freedom of others.*

The *second step* toward moral freedom involves accepting that I ought to will conditions for myself that accord with my own freedom. It is at least partially through

my own freedom that I contribute objects and significations that I will use as springboards upon which to disclose in the future. If I don't will actions that accord with my own desires and capacities, I may, in the future, be paralyzed by my own past action. Thus, the *second moment* of the conversion is *my recognition of my desire to freely disclose, and, due to my interest in freedom, this recognition compels me toward the responsibility to will my own self free.*

The *third step* toward moral freedom is the recognition that I ought also will for others conditions that accord with their capacities for freedom as well as with my own. In cutting off another's potential for freedom, I create a situation in which some possibilities cannot be revealed. I also limit what I and others can contribute. According to Beauvoir, human facticity is interdependent in such a way that I cannot will moral freedom (an open-ended future in which each choice leaves room for further choice) for myself and not will it for the other as well. This scenario is, with regard to the desire for ongoing disclosure, as destructive as willing that I should have a restrictive future. Potentially, they have the same effect. Humans share their facticity in a communal and interdependent way. Thus, the *third moment* in the conversion is *my recognition that humans are factually interdependent, and, due to my interest in freedom, this recognition compels me toward the responsibility to will all others free at the same time that I will myself free.*

Each step in the conversion is precipitated by recognition of some crucial aspect of the ontology; one is then compelled, due to one's interest in freedom, to accept the respective epistemic, personal, and/or social responsibility regarding the

capacities for freedom. If one considers each step of the conversion together, one arrives at the principle of freedom: *one should recognize the ontological conditions of one's own freedom and that of others, and act so as to treat oneself and other humans as freedom, so that each human's end may be freedom.*

#### **1.4: Extraneous Factors**

Having laid out Beauvoir's ethical theory, I turn now to the task of setting aside components that will not prove to be theoretically useful in the modified version of the argument. These components are: (E1) a dichotomy between consciousness and the factual body and (E2) a desire for self-coincidence.

The notion that humans have a dual mode of existence, as both mind and matter, has a long history. Saint Augustine was one of the first to hold such a position from a philosophical perspective. He maintained that a human is a physical being (a body) who is vivified or enlivened by a non-physical soul (Augustine 308 (X.10.15)). The Augustinian soul permeated the body and enabled movement (318 (XI.2.2); 135 (IV.3.5); 150 (IV.13.16)); it was, for him, also that which "lives, remembers, understands, wills, thinks, knows, and judges" (308 (X.10.14)). He was then something of a precursor to Descartes. And while there is no indication that Augustine, along with Descartes, entertained the notion that the body might exist without the mind, both philosophers held the mind and the body to be distinct substances.<sup>4</sup> Descartes, however, took this position one step further. He maintained

---

<sup>4</sup> Descartes did not maintain that the soul vivified the body; rather, he maintained that the body is a machine. He held that in much the same way that a clock has "wheels and counterweights" that

that the human body is but a machine that can move about without help from the mind (Descartes, *Meditations* 80; see also *Philosophical* 315), and that as a mind one is purely a “thinking being” (*Meditations* 27). This and other similar views, which hold the human to be a dichotomy between mind and matter, have become a significant feature of day to day life in many cultures. In western culture, for instance, dualism has become a common feature of folk psychology.

In setting aside (E1) or the notion that a dichotomy exists between mind and the physical body, I do not deny that it is possible for a human to experience herself in this way. Indeed, I will retain a distinction (though not a dichotomy) between conceptual and physical traits for heuristic and categorization purposes. I merely do not find it useful to posit that these traits are, in reality, distinct. Consider: if one takes seriously the notion of evolution, it makes little sense to posit that mental functioning derives from a something distinct from physical matter. On the contrary, intellectual and emotional attributes will be best understood, along with all other human attributes, as outcomes of evolutionary pressures (survival and reproduction). Moreover, (E1) is at best philosophically and scientifically controversial. Thus, since it is also the case that nothing in the modified version of the theory rests upon or requires such a dichotomy, it will be discarded for my present purpose. Then, although one may experience herself as a dichotomy and perhaps have a

---

function as they obey “all the laws of nature” (*Meditations* 80), the body has parts—bones, nerves, blood, and such—that are set into motion by fireless heat (*Discourse* 33). When the human body is in good working condition, its parts are composed in such a way that they may engage in movement without the direction of the mind or soul (*Meditations* 80).

corresponding desire for coincidence between these two attributes (E2), neither premise will be useful for the present endeavor.

### **1.5: The Appropriation**

I turn now to an explanation of just what it is that I will extract from Beauvoir's argument. In general, Beauvoir sought to explain how moral freedom is possible, and what it entails, given that humans, on her view, have an ambiguous ontological status. Since the notion of an inherent dichotomy or ambiguity at the core of personhood has been set aside, my concern will be to discern what enables the possibility of choice (and, hence, freedom) and to determine what that possibility entails for us with regard to morality. It will be helpful then to recall the components of her argument that were designated as (A1), (A2), etc., and to explain whether and how they will be recast into the language of pragmatic philosophy for the appropriated version of the theory.

Earlier, (A1) human ontology was described as an account of the phenomena that show up upon examination of human life. In Beauvoir's project, it functions as an implicit thought experiment through which one attempts to get at factors that all humans have in common. But an implicit thought experiment relies upon little more than a hope that others will view the world in a similar way. It leaves itself open both to incessant disagreement regarding the facts of human existence and to the charge of armchair philosophizing. It avoids the hard work of presenting scientific evidence in support of philosophical reasoning (in fairness to Beauvoir, one should note that most of the information that will be presented was unavailable during the time in which she

wrote). Rather than relying on this type of thought experiment, a pragmatic approach will be to undertake an extensive analysis of the physical and conceptual factors that affect human choice and structure experience (a task that will be accomplished throughout Chapters 2 and 3). The phenomena that feature in the main arguments will be those that are accepted in different scientific fields—such as, neuroscience, nutrition science, and social psychology—or those that are established through explicit philosophical argumentation. The evidence compiled and presented throughout the next two chapters supports Beauvoir’s position that people are (A7) physically vulnerable and (A8) conceptually vulnerable and that humans exist in an (A10) interdependent context. As such, these points will be retained virtually unchanged, though I will elaborate upon each of them and offer further examples.

Consider now the way in which Beauvoir introduces her notion of freedom. Beauvoir’s starting point seems to be Sartre’s view that a human is “‘a being who *makes [itself] a lack of being in order that there might be being*’” (Beauvoir, *Ethics* 11). In Beauvoirean terms, one is a lack of being as consciousness and consciousness is what makes being appear in the act of disclosure; but *Beauvoir also locates the phenomenon of choice in this passage*. She noted that, since the human is *making herself a lack*, her basic activity is “not inflicted upon [her] from without” (11). She “chooses it” (11). Moreover, she explained that the “term *in order that* clearly indicates intentionality” (12). With regard to this starting point, I will first discuss the relation between choice and freedom that is implicit in the passage, second, the more

explicit *conflation of choice with disclosure*, and, third, the concept of consciousness that is displayed.

In introducing her notion of freedom with the passage above, Beauvoir implies that it is choice that opens the possibility of freedom. However, as the explication of her theory (in sections 1.2 and 1.3) demonstrated, the existence of choice is not enough in and of itself. One also requires facticity that is conducive to choice in order to exist in a state of freedom. Thus, the point seems to be that choice is a necessary, but insufficient, component of freedom. This notion seems consistent with the way the term *freedom* is used in everyday speech. The term may be said, for instance, to signify a number of interrelated concepts, such as the absence of want, restraint, enslavement, detainment, or subjection to arbitrary or illegitimate authority; and this last concept, absence of subjection, often includes the notion of gaining and/or maintaining political independence and of holding of civil rights and privileges. The term may also be used to denote the ability to exercise choice in determining what one's activities will be and how they will be carried out. This last definition seems to be at the root of all the others. Consider: one desires the absence of want, restraint, enslavement, detainment, and subjection, because each of these prevents one from carrying out one's own choices. The notion of choice also underpins the concepts of political independence and civil rights and privileges; the former denotes the ability of a group to determine how they will organize and govern, and the latter indicates a situation in which the ability to make certain choices (perhaps those most highly valued by the group) is preserved (likely at the expense of

less valued choices). Thus, along with Beauvoir and common usage, I will conceive of choice as a necessary element of freedom that alone is insufficient.

Second, in taking this sentence as her starting point, Beauvoir combined the phenomena of choice and disclosure into one activity. To the degree that all that is meant here is that a person is such that she can discern possibilities, determine a preference between them, and aim at obtaining her preference in her daily interactions and activities, this notion is not, on the face of it, terribly problematic. We do most often attribute these capacities to people. However, if one considers that Beauvoir also held that humans have a desire to disclose and that this desire is one and the same thing as a desire for freedom (*Ethics* 24), a problem becomes apparent.

This problem is that disclosure (general activity in the world) and choice (a necessary condition of freedom) are conceptually (and perhaps physically) distinct activities. And in a certain way, Beauvoir acknowledged this point in that she maintained that disclosure is what we always do (and cannot help but do) and that one's ability to enact choice can be hidden from one's view. But her concern was with cases in which persons were, on her view, already able to make choices—those situations in which people suffer from ignorance and/or constrictive facticity. The capacity to disclose is for Beauvoir a capacity that is inherent to being human, and the phenomenon of choice is included in the activity of disclosure. If someone is left to wallow in ignorance, the goal, for Beauvoir, is to set her “in the presence of [the] freedom” that she already has (*Ethics* 98).

However, in utilizing Beauvoir's definition of disclosure, it is possible to show that a person can disclose (reveal and contribute) without performing any activity that is normally called choice. Consider a child who has been born with a serious brain defect, perhaps due to a genetic fluke or a birthing complication. Such a person may not have the brain functions that are necessary to make a choice. I'm thinking of a scenario in which certain relevant brain functions simply don't occur. It is entirely possible, though, that this person will both reveal and contribute, if in a somewhat limited fashion. In all likelihood, she will come to reveal her caretakers' faces (that is, she will interpret them and at least recognize them as familiar); moreover, if she persists in her existence, she will contribute to her surroundings. By requiring some things and desiring others, she indicates that these are of value to her. If she cannot articulate her preference, her caretakers will still reveal the contribution. Thus, first, *choice and disclosure cannot be one and the same activity*; and, second, *a desire for disclosure cannot be one and the same as a desire for freedom*. The person in this example may in fact desire to participate in the activities that surround her—that is, she may want to disclose—but if she has no capacity to choose and if having such a capacity is a necessary condition of freedom, it will not make sense to say that her desire for disclosure is also a desire for freedom. Moreover, many actions have their origin, for instance, in biological, hormonal, and/or conditioned responses (Deacon 434; Geary 202-04), and it would be odd to depict these actions as deriving from choice. Thus, the appropriated argument will hold choice and disclosure to be conceptually distinct, though intimately connected, activities, because, while every

choice is an act of disclosing, it is not also the case that every act of disclosure is a choice. Thus, I will maintain along with Beauvoir that one's capacity for choice (and hence one's capacity for freedom) may be hidden, but I will also argue that this capacity cannot be taken for granted. That is, on my view, *persons are not automatically capable of choice*; as I will explain, many conditions must obtain if the capacity or ability to choose will be enabled for any particular person.

Third, consider another notion present Beauvoir's starting point: that (A2) consciousness is what enables choice and, hence, freedom. First, it is important to note that Beauvoir did not clearly state what she takes consciousness to be. She held that it is the means by which a person has the capacity to be non-constrained; it is, for her, the possibility of freedom, as opposed to the physical body which is, at least in certain ways, determined like other physical objects. There is textual evidence, for instance, that Beauvoir took consciousness to be the human ability to conceptually (though not physically) separate the self from its environment (*Ethics* 7),<sup>5</sup> and it is this latter notion that is most similar to the notion of choice (though not the notion of consciousness) that will be utilized in the appropriated version. The neural functions that enable consciousness—the quality of being aware of oneself and one's environment—are distinct from the neural functions that enable conceptual separation and choice. As I will explain in Chapter 2, the capacity to conceptually separate from the environment results from particular *neural processes* that allow a well-functioning

---

<sup>5</sup> Beauvoir explains that she takes a human to be a “[r]ational animal” or “thinking reed,” who is able to escape “from [her] natural condition without, however, freeing [herself] from it” (*Ethics* 7).

human to escape concrete thinking (contemplation only of what is immediately present) and to consider multiple and often physically non-present possibilities at once. Thus, I will maintain that a *particular* mode of consciousness—that is, certain types of brain functions (together with the functions of the rest of the body), that are common, *as a potentiality*, to members of the species—facilitates the capacity to conceptually separate (and this ability will, in turn, be conceived of as a necessary component of the ability to make a choice).

Let us return to Beauvoir's notion that each person is (A5) ontologically free in that she has a (A3) capacity for intention, choice, and differentiation in (A4) disclosure. I will consider (A4) first, then (A3), and lastly (A5). Recall that, for Beauvoir, (A4) *disclosure is a dual activity through which one reveals and contributes objects and/or signification*. Now, if this concept is understood charitably and in a practical mode, every action or inaction may be construed as disclosing. In reading the italicized portion of the sentence above, for instance, the reader has *revealed*—that is, *interpreted*—the sentence, and, if she has had any response to it whatsoever, she has *contributed* something of her own in return. Or consider going to the store, market, bazaar, or whatever place in one's culture one goes to obtain objects that one has not manufactured for oneself. The reader should picture herself in the act of perceiving an object (perhaps a head of lettuce or a loaf of bread). In merely determining what the object is, she has made an interpretation. She has also conceived of how the object may be utilized or not, and in choosing the object or not she has contributed to or added to the signification of the object in terms of its utility.

The goal in using such a mundane example was to show that the concept of disclosure is applicable in any case. However, to *disclose* means only to expose to view or to make known. Thus, the term disclosure seems to refer more to the act of interpreting rather than to contributing. I propose, since Beauvoir maintained that disclosure is the mode in which a human *engages* with others and objects in the world, that *engagement* is a more apt term. The notion of engagement (in the sense of participating in or meshing with something) will then be said to encompass both acts—interpreting and contributing objects and/or signification.

Next, I define *the capacity to make a choice* (A3) as a capacity to consider multiple physically present and/or non-physically present possibilities that are feasible within and appear to be feasible within one's physical and conceptual environments, to compare the similarities and differences between them, to project oneself into each scenario, to have an effective emotional response that motivates one toward a particular possibility, and to aim one's activities at actualizing the possibility toward which one is motivated. Then, since making a choice includes comparing and aiming at some outcome, differentiation and intentionality will be construed as being parts of a capacity for choice. As noted above, I take it that a person's potential to make choices depends in part upon certain neural processes that enable a person to escape concrete thinking (contemplation only of what is immediately present), and I also maintain a distinction between physical and conceptual attributes. Further, I will argue that both types of attributes are relevant to the phenomenon of choice. However, I will decline to theorize the relation between the brain and what is

commonly referred to as the mind. Such an endeavor would take me too far astray from my stated purpose. Instead, I maintain first that, whatever the relation between the brain and the mind, the latter does not perform well unless the former is physically functioning well. Second, I will take the conjunction of what neuroscience and psychology have to say about the workings of the brain as an acceptable explanation of how our cognitive, social, and emotional neural processes should be conceived.

Barring currently non-preventable genetic malformities, these relevant potentialities for choice exist for particular members of the species *in virtue of their genetic makeup*, and, as I will discuss in Chapter 2, certain conditions must obtain if a genetic attribute will be enabled. An organism comes to be via the interaction between its genes and the environment. Accordingly, I will reinterpret Beauvoir's notions of choice (A3) and ontological freedom (A5) as *species attributes*, and I stipulate that a particular species member's *enabled species attribute* for choice in engagement will be called a *capacity*, and that a particular person's *enabled capacity* for choice in engagement will be termed an *ability*. Since a capacity and an ability must be enabled, they may not only be hidden from one's view, as Beauvoir would have it, but, in situations marked by deprivation, *a person may not develop a capacity or ability for choice at all or she may become incapacitated with regard to what was previously enabled*. The means by which attributes and capacities are enabled are addressed in sections 2.4 through 2.9.

This leads to Beauvoir's notion of (A9) an "apprenticeship of freedom". She maintained that one has been apprenticed if one exists in a factual situation, through which one's awareness of and respect for one's ontological freedom has been fostered. In light of the stipulation above, I will recast this notion of an apprenticeship and maintain that a person's genetic potential for choice has been enabled if she has received the *pre-conditions* of choice. Collectively, the pre-conditions are necessary for one to develop the capacity to make a choice in one's activities. And since choice is as a necessary condition of freedom, a human will be said to have a potential for freedom in virtue of her genetic attributes, a capacity if her attributes are enabled, and an ability to live freely if her capacities are enabled. A list of the *pre-conditions* includes such things as adequate micro- and macro-nutrition, stimulation/nurture, education, an absence of violence, sleep, clean water and air, and overall health. Together, the pre-conditions of choice will perform a function in the appropriated version that is analogous to the role that an "apprenticeship of freedom" played in Beauvoir's theory. And while one might contend that not all of the pre-conditions need be simultaneously present for choice to occur, I will argue that choice cannot be said to occur unless each pre-condition obtains for a given person in a sufficient amount both within one's period of development and throughout adulthood.

Now, as noted above, these pre-conditions are not a sufficient condition for living freely; and that is because, as Beauvoir has pointed out, the facticity in which one exists may or may not be conducive to making choices. Recall that (A6) facticity is everything that affects human life (except consciousness itself), including the

material and non-material byproducts of consciousness. However, since Beauvoir's notion of facticity includes nearly everything, it fails to distinguish between the specific kinds of things that help or hinder one's ability to make choices. Thus, instead of utilizing this notion, I will draw a distinction between the human's physical environment and her conceptual environment, while keeping in mind that different contexts and factors may affect either environment in any number of ways. The availability of nutritious food, for instance, is a factor that, in part, depends upon a given political context, and which potentially affects either the physical or the conceptual environment or both. Moreover, whether a person exists in a context in which she can speak and move about without restraint and whether she is allowed to take part in making the laws to which she is subject, help determine what choices she can make for herself and which ones will be off limits. Thus, if the appropriated theory offers a person reasons to safeguard her capacities and ability to enact choice, then not only will she have reason to secure for herself the pre-conditions of choice, but she will also have reason to create a physical and conceptual environment that respects her as a person who makes choices. The elements that make up such an environment will be termed the *conditions of choice*.

The last concept to be addressed in this section is (A11), the notion that humans have a *desire to disclose*. This desire performed a very important function in Beauvoir's argument. She held that if one has a desire to disclose then one also has a desire for freedom (as the two desires are, for her, one and the same). Since, on her view, humans do have the former, they ought to take steps to safeguard their original

or ontological freedom, in the sense that if they do not do so they are behaving in a self-defeating manner. This is the crux of the Beauvoirean argument; it is the interest that is said to compel one toward one's responsibilities to freedom in steps two and three of the "conversion". However, as I have argued, the desire to disclose cannot be one and the same as a desire for freedom, since the phenomenon of choice is conceptually distinct from disclosure. Thus, the main arguments in Chapter 4 will be akin to (but not the same as) Beauvoir's (in that they will arrive at a similar conclusion), but they will not hinge on the notion that persons have a desire to disclose. A different concept will need to stand in its place in the altered theory.

As such, consider the notion of *having any particular non-trivial interest* (I will explain in section 2.11 that a non-trivial interest is one that involves novelty). That humans have such interests—anything from maintaining health for oneself and/or dependents to attaining the highest position in a particular field or business—is not in question. At least two things are necessary conditions of actualizing the situation in which one is interested. First, one must *engage* with others and the world—that is, one must take some sort of action. And, second, one must be able to consider which possibilities may or may not help that situation obtain, compare the similarities and the differences between them, project oneself into each scenario, have an emotional response that motivates one toward a particular scenario, and then aim one's activities at actualizing that scenario. That is, if one wants to fulfill *any particular non-trivial interest*, one will utilize the ability to enact *choice in engagement*. Then, in order to obtain any particular non-trivial interest, a person will

have a reason to will for herself *whatever enables* her ability to make choices with regard to the way she engages. And if the way others engage in the world affects whether or not the situation in which she exists is conducive to her ability to make choices in engagement, then she will have reason to make certain sorts of choices with regard to others as she does for herself. However, it is not the case that a person has only one particular non-trivial interest at only one specified moment. Indeed, each of us has multiple interests and this is a situation that continues throughout life.<sup>6</sup> The having of interests is ongoing, and some present choices may be practically inconsistent with one's ability to make choices in the future; that is, they may preclude one's ability to obtain one or any number of particular non-trivial interests in the future. Thus, if it is established that a person does have a reason to will certain kinds of things for herself and others, then this reason will be significant. I will argue that if a person is able to engage in such a way that she *knowingly and purposefully* utilizes her capacity to enact choice—that is, *if its use is not impeded and if she is not compelled, via incapacity, cultural factors, and/or force, toward revealing or contributing trivial or limited objects and/or significations, in the present or in the future*—then she will have the best ongoing chance of fulfilling her particular non-trivial interests. What choices will be said to be in her general interest will be limited only by the fact that she has a *prior interest*, which will take precedence over any particular interests, in safeguarding her ability to enact choice in the future. She will

---

<sup>6</sup> Some might argue that a person could even be said to hold interests after her death. However, given the constraints of my current project, I will not enter into that debate.

also be said to be in an environment in which she may engage *freely*. She will exist in a state of freedom.

## **1.6: Summary of Chapters 2 through 4**

The thesis I defend holds that choice or freewill, as a confluence of neural and cultural factors, is enabled and maintained through interdependent relations with others. That is, choice is within human control in general, but not at all initially and later only partially in the control of the individual person. But choice need not be and often is not enabled for particular persons. I will argue that since persons hold interdependent relations with each other (and, in certain ways, with all others), we have important reasons, that are in our *prior interest* (an interest that is prior to and necessary for being able to fulfill any particular non-trivial self-interest), for wanting each person, both near and far, to be raised and to exist within situations that foster, grow, promote, and maintain choice or freewill. That is, it is in one's *prior interest* to help create the pre-conditions of choice for all persons and the conditions of choice for all members of one's cultural group. As I will explain, many factors must obtain in order for a person's capacity and ability to choose to be enabled, and these factors regard things as diverse as nutritional science and codified law. The discussion of them that extends through Chapters 2 and 3 is extensive and, some might argue, non-philosophical. Thus, a defense of my method is in order.

Philosophers and lay persons hold all sorts of assumptions about the "nature" of humans. One such assumption holds that persons are choosers, beings who, in nearly all but the most exceptional circumstances, are able to choose one action over

another. On this view, they are personally (and perhaps morally) responsible for their actions in the overwhelming majority of cases. Another view holds that persons are rational agents, without ever asking how it is that persons come to be that way. In fact, most ethical theories attempt to say what persons ought to do—for instance, refrain from lying, cheating, and killing—without ever asking how it is that people become capable of restraint. However, a moral command that holds that a person ought to choose truth and non-violence is empty if the person in question cannot choose. The appropriated theory (at least implicitly) criticizes all such positions, because it demonstrates that persons are choosers *only if* certain pre-conditions obtain. And, if one considers seriously the situations of millions upon millions of persons in the world, the factors that enable choice are for them either absent or inadequate. As such, there are unfortunately *many millions* (perhaps billions) of persons who are either not capable of or are at great risk with regard to choice or freewill.

However, if I were merely to assert that many humans lack a capacity for choice, while some interlocutors might nod in agreement, others might mount an opposition against my position. In either case, would I and my interlocutor be using the same basic assumptions about humans and their situations? Given the multitude of those that are available to use, I have no good reason to think that is the case. It is not uncommon, for instance, to encounter the notion that persons tend, via their nature, toward greed and selfishness or that they are basically prudent creatures who, all else being equal, work toward attaining their own advantage. Others want to emphasize

that people are quite capable of sympathy, empathy, and altruism. Particular persons may have these qualities, but one cannot assume such notions generally without being able to back them up. My argument holds that humans do not necessarily tend toward any specific type of behavior by nature (including choice), unless “nature” is said to refer to all the intricate, minute, and momentous interactions that occur between the organism’s genetics and the environment throughout the prenatal period and the lifespan; persons are the outcome of these interactions. This position is supported by the most recent scientific information.

Moreover, when discussing the “nature” of persons (or what people are like), the philosopher leaves herself open to the charge of armchair philosophizing. The interlocutor can merely claim that her experience differs or that her understanding of the world just does not yield the same result. Philosophical argumentation, or any argumentation for that matter, is as vulnerable as its presuppositions. Thus, I offer extensive information regarding the phenomenon of choice from a neurological perspective, how it is that people become choosers, and the context in which persons live and make choices. That is, I make few assumptions about the basic phenomenon of my and all ethical theories: the human and thoroughly personal capacity for choice. I do presume that choice and freewill are possible, that the various scientific fields that study humans are the appropriate place to glean information about that possibility, and that persons have interests (anything from survival to achieving premier status in one’s field) that they want to fulfill. As such, my account will neither convince a hard determinist (or those who hold for whatever reason that

choice, freewill, and freedom are not possible), nor those who hold scientific research in low regard, nor those who maintain that they want nothing and have no interests (though if such a person exists, she won't for long). The price of maintaining few assumptions about my basic phenomenon and still communicating with the reader is a lengthy description of the issues in question and that is precisely what I have provided.

Although some philosophers, such as Peter Singer, Martha Nussbaum, and Thomas Pogge (to name but a few), have done significant work to bring attention to our moral responsibilities to those who suffer without the basic necessities of life, to my knowledge, no philosopher has compiled and utilized this type of information as it relates to the phenomenon of human choice and how (or whether) it is enabled. This omission is, to me, striking. How does one know that a person has a capacity for choice unless one examines what choice is, how a person chooses, and what that person needs in order to do it? Without that examination, the ethicist builds a theory on little more than personal experience or, in some cases (two of which will be considered in Chapter 4), faith in the belief that all persons are equally choosers. In times past, the philosopher had the perfect excuse: neuroscience was not advanced enough to explain the capacity for choice. As such, my proposed method would have been imprudent. But that is no longer the case (fMRI technology, for instance, has supplied neuroscientists with knowledge of the functioning brain) and the old excuses seem feeble. Ethicists can no longer evade an analysis of their basic phenomenon.

Philosophers pride themselves on having and being skilled in the use of the very capacities that will be examined (in Chapter 2); that is, my analysis concerns the “higher” brain functions that enable rational thought, social understandings, and emotional stability. Moreover, since the philosopher is trained to use these capacities in order to recognize and pick apart bogus arguments and faulty scientific presuppositions, I have not merely stated the results of various scientific investigations. The goal was to provide enough information for the ethicist (as a chooser) to examine the force of the evidence. Again, such an endeavor cannot be undertaken with few words.

Ethical theory, if it is to be in any way relevant, must concern itself with the reality of human life. Beauvoir’s existentialist approach recognizes this as it is concerned, like most other existentialist theory, with lived meaning and experience. However, as noted earlier, most philosophers who work in the analytic tradition tend to discount this sort of theory due to the manner in which it is expressed. In order to avoid this problematic expression, I have turned to the sciences to gain useful and recent information about our type of being. Thus, it is for these reasons that I ask for the reader’s indulgence. In the next two chapters, I will refer only to one philosopher and then merely in passing. But that does not make my work non-philosophical. I merely wish to establish with clarity what has previously been left to the philosopher’s personal imagination.

In this chapter, I have explained, though not defended, Beauvoir’s ethical theory and I have indicated which components of her work are to be adopted and/or

changed for the appropriated theory. Chapter 2 offers a definition of choice and an explanation of it from a neurological perspective. It also examines extensively how an individual's capacity for choice is established and maintained. The chapter ends with a discussion of concepts that are important components in the appropriated theory, such as, human well being, trivial and non-trivial interest, novelty, the development of an inner world (conditioned neural processes) as it regards choice or preference selection, the notion of humanity, preliminary definitions of interference and interdependence, and one's *prior interest* in the pre-conditions of choice.

While Chapter 2 is centered on considering choice from the point of view of the individual, Chapter 3 is concerned with an examination of the impacting environment. The discussion is general—that is, it regards the components present in social life that influence choice no matter one's culture, nationality, or individual circumstance. The issues addressed are: engagement and its overwhelmingly symbolic attributes; an argument against the idea that persons are or can be self-reliant; as well as an analysis and description of intra-cultural interdependence, the conditions of choice, and inter-cultural interdependence. Chapters 2 and 3, taken together, perform a function in the appropriated theory that is analogous to what human ontology did for Beauvoir. That is, these chapters layout the phenomena in question in all of their relevant details.

Chapter 4 presents the theory's three core arguments: the argument from consistency, the justification argument, and the argument from consequences. The first argues that *if* a person is consistent, she will engage in interference that helps

provide the pre-conditions of choice for all persons and the conditions of choice for persons within her cultural group. The second maintains that choice is the basis of and the method toward justification in general and that justifications and actions that offend choice are without warrant. A person who offends choice simultaneously dehumanizes herself, negates any justification for her action, and leaves herself open to justified suppression by any other human. The last argument explains that there are often (though not always) significant consequences—that affect one’s prior interest—if other persons, either in one’s own or another culture, exist without the pre-conditions of choice. These consequences have the potential to harm such that any person’s capacity for choice—no matter that person’s socio-economic status—may be negatively affected or destroyed. Thus, it is in each person’s prior interest to prevent such situations. I conclude that all persons have significant reason to be *consistent*—that is, to help provide the pre-conditions of choice for all and the conditions for those who share their culture.

However, I will also consider whether other factors—such as just deserts, norms of non-interference, and special obligations—might mitigate against the conclusion or prevent any particular inferences in the arguments. Just deserts are said to be those things, pleasant or not, that a person deserves because of what she has done on her own, because she is responsible for her actions. Since Chapter 2 demonstrates that persons without choice, through no fault of their own (in the overwhelming majority of cases), act merely from conditioning and Chapter 3 shows that these persons are constrained by this conditioning and sub-group interactions, it

will not make sense to maintain that they *could* have done otherwise. The notions of responsibility and desert cannot apply to them in the usual manner of application.

Desert may be a relevant concept with regard to persons with choice, though the analysis will show that even these persons never deserve anything without reference to the many persons who have developed in them a capacity for choice. However, the present theory does not rely on a notion of desert to determine how persons ought to be treated.

Norms of non-interference are also shown to be inapplicable because interference is a basic part of life. To demand non-interference, in and of itself, is to require others to affirm one's actions, no matter what those actions might be or entail. The theory will show that persons with choice ought to affirm actions that are consistent with choice and disaffirm those that are not. Special obligations to dependents or those to whom we hold specific responsibilities will be upheld; but, as I will explain, these obligations give us reasons to set up *systems* to provide the pre-conditions of choice for everyone. Lastly, I will briefly consider what the theory might entail for political philosophy. Persons have reason to submit to political authority, I will argue, only if that political system provides for the pre-conditions and conditions of choice; moreover, a state earns legitimacy (sovereignty) by providing the pre-conditions for those who live within its borders and by taking an active and cooperative part in the system that provides them for all persons. A state that fails to do the former may be coercive.

## **Chapter Two: The Pre-Conditions of Choice and Humanity**

### **2.1: Introduction**

Each of us needs and wants certain things for survival and fulfillment. These needs and wants constitute, for each, interests, which each attempts to satisfy through her activities in the world. Thus, that each of us has particular interests is not in question. While one person may be attempting to actualize a situation in which she will get a promotion at work, another may be set on the objective of teaching a child to read; one person may be planning a trip to a local market and another a trip around the world. However, our interests not only vary in their objects, they also differ with regard to complexity. It takes a lifetime and a multitude of interwoven tasks to, say, reach the goal of Aristotelian eudaimonia, but only a few moments and relatively few actions if one seeks to satisfy hunger and thirst in a situation in which food and drink are plentiful. However, there are few instances in this world in which a person can satisfy her interests and needs as easily as this latter situation. Throughout adulthood, the overwhelming majority of us have to engage with others to fulfill our needs, and most interest satisfaction requires complex thought and planning. Given that this theory is intended as a practical approach to ethics, the important consideration is what everyday life is like on earth. We are constrained by our environments, our genetic make up, the fact that we come to be through an interaction between the two, and our subsequent predispositions and needs given that this is the scenario in which we live. These things are true no matter where a person is from or to what culture she belongs.

Since we have in common these factors that give structure to our lives, we also share structural factors that help determine both what it takes to satisfy any particular non-trivial interest and whether or not we are able to do so (trivial and non-trivial interests will be addressed in section 2.11). Whatever factors affect the possibility of fulfilling any given non-trivial interest will be important to each of us. That is, each will have a *prior interest* in these factors, since they are what enable each of us to fulfill any particular non-trivial interest we may have. And if it is the case that near and distant others feature prominently in this *prior interest*, as I will argue in Chapter 4 that they do, we will have important reason to take these others into account.

I mentioned in Chapter 1 that satisfying any particular non-trivial interest will require making *choices in engagement*. Engagement is action and interaction in the world. Choice, as one possible way of engaging, of course has to do with determining what one needs and/or wants to obtain and/or the way in which one will go about doing it. In this chapter, I consider the notion of choice and its preconditions in some detail. I approach the phenomenon of choice from a neurological perspective. We are physical beings. If one wishes to explain a given behavior, such as choice, it will be important to consider the physical apparatus that is responsible for the behavior. Choice, I will explain, occurs, when it does, as a confluence of cognitive, social, and emotional neural processes (it also inevitably involves the physical and conceptual environments within which one is situated). If these neural processes do not obtain, neither does choice. Thus, whatever facilitates these processes—such as adequate

nutrition, nurture/stimulation, education, sleep, overall health, and the absence of other factors that impede the growth and/or maintenance of them—are the preconditions of choice. In so far as interest fulfillment requires choice, *these things are prior to and preconditions of interest fulfillment as well*. My goal will be to describe a neurological perspective of choice, including an example that relates neural functions to the cognitive, social, and emotional processes of choice. I will then explain how the preconditions are necessary conditions of these processes.

## **2.2: Choice and its Neurological Processes**

The human brain has of course an impressive structure and functional potential, and if this potential is actualized for a given person, she will have many capacities which together constitute her capacity for choice. The capacity for choice appears to make her unique among animals, but there are many ways in which the human brain is not that different from those of other mammals, especially those of our nearest primate cousins (Wexler 32-33; Geary 92; Deacon 255). So why is it that humans have the potential to develop the capacities requisite for choice (and other cognitive feats), whereas it seems that our closest relatives are limited in this area? The answer appears to be that throughout our evolution, presumably in response to ecological and/or social pressures that influenced our chances for reproduction and/or survival (Geary 7; Deacon 408),<sup>7</sup> the human brain has grown, most prominently in the

---

<sup>7</sup> Geary and Deacon agree on this basic point; however, they hold different positions regarding which pressures were significant enough to impact our evolution. Geary emphasizes the human attempt to gain “ecological dominance” and the subsequent social pressures that would have arisen (such as, “a within-species arms race”) as a result (7). Deacon focuses instead upon the notion that food

prefrontal region (Stone, 105; Deacon 255; Wexler 31; Geary 230).<sup>8</sup> And, as I will explain, this region is implicated in the capacities involved in choice (and other uniquely human functions, such as the use of symbols and language). However, the issue is not just the relative increase in the number of cells or neurons that make up the prefrontal lobe (though this by itself is an important piece of the puzzle, as this region is “clearly disproportionately larger in humans compared with recent hominids and great apes” (Stone 123; see also Deacon 343 and Wexler 31)), this region’s connectivity has also expanded (Geary 230). That is, other brain systems have experienced a “shift in connectivity favoring prefrontal connections” (Deacon 255), and greater connectivity allows “a greater number and variety of messages . . . to be processed” (Gallagher 13).

The brain has some 100 billion neurons, and each of them are “functionally linked with one another by a combined chemical and electrical communication system” (Wexler 20). Each is connected to every other through chains of neural fibers “with no more than six intermediary cells” (Wexler 23), gets signals from approximately 1,000 other neurons and sends to 1,000 in return (Peterson interviewed by D’Arcangelo 68; Wexler 20), and “may receive hundreds of signals from other neurons within a millisecond” (Wexler 20). The well developed and well connected frontal lobe then serves as “the center for executive functions and for broad

---

provisioning needs and “unique demands of reproductive competition and cooperation created conditions that led to our unique form of intelligence” and the use of the symbolic communication we call language (408).

<sup>8</sup> Wexler explains that this increase is mostly in the “surface area rather than cortical thickness” (31).

supervisory and behavioral control” (Geary 214)—that is, it controls and, to varying degrees, executes a number of functions (Wexler 108; Geary 211; Birberg-Thornberg et al 33; Noble et al 72; Zysset et al 1386; van ’t Wout et al 567; Bar-On et al 1791; Stone 104-05; Bechara and Bar-on 22-23; Deacon 256-57), many of which facilitate choice. These functions include amplified and sustained attention, working and long-term memory, retention of relevant information and separation of what is irrelevant, inhibition of internal and external stimuli, organization, simulation of possibilities, imagining oneself in the place of another, emotional stability, planning, and strategizing.

Of course, not all of the brain’s functions are controlled by the prefrontal lobe. Neuroscientist and evolutionary anthropologist, Terrence Deacon, explains that human action is given by both “bottom-up” processes—neurological sources of activity that are either “purely physiological” or “physiological sources mediated by conditioned associations” (i.e., learning) (Deacon 434)—and “top-down” processes—that is, “end-directed behaviors” (435)—such as the functions that are listed above. Purely physiological functions are those over which a person has little or no control; they arise involuntarily and result from internal stimuli such as hormones or other biological sources. Those sources that are “mediated by conditioned associations” are not strictly automatic functions; rather these sources regard information gained from experience and learning that has been internalized and integrated such that it is available as a stimulus for action without intentional deliberation on the part of the

actor. Top-down processes, in contrast, are those sources of behavior that require premeditated information processing on the part of the agent.

Psychologist David C. Geary makes a distinction that is very similar to Deacon's. Geary explains that human action may derive from "implicit processes" that "operate below the individual's awareness" (Geary 202), on the one hand, or "explicit" processes, on the other. The former operate quickly and automatically (168) and include either "inherent or learned ecology-cognition-behavior links" (204); the latter require the inhibition of the former (204), are slow and effortful processes (168), and enable complex behavior, such as processing the "conscious, abstract, and decontextualized"<sup>9</sup> information that is utilized in "controlled problem solving" (195-199).<sup>10</sup>

Given these distinctions, many of our everyday actions and activities are carried out by bottom-up or implicit processes. These processes enable all the things that one thinks and does *with little or no deliberative effort*. Alternately, choice, as I have defined it in Chapter 1, is a top-down or explicit function. It specifically requires the types of mental processes that are effortful, abstract, and end-directed. Moreover, the top-down or explicit processes involved in enacting choice employ the supervisory controls of the pre-frontal cortex. Indeed, neuroscientists credit the expansion and connectivity of this region with facilitating these cognitive, social, and

---

<sup>9</sup> Decontextualized information should be taken to mean information that is intelligible but that has been taken out of its original context.

<sup>10</sup> Part of Geary's purpose is to tie the implicit processes with patterns of information that have been invariant throughout human evolution and an individual's lifetime and the explicit processes with variant information (168). That aim will not be considered herein.

emotional functions involved in choice. However, since a significant part of human activity can be explained by appealing to bottom-up or implicit processes (Geary 195), the question becomes: why and how do the prefrontal cortex's supervisory processes become activated? According to Geary, it "does not activate itself" (215). In that case, either the supervisory processes would always be activated to some extent, indicating that implicit processes may not be such a good explanation of behavior after all, or we would be faced with the homunculus problem (that is, a worry about whether there is a neural system controlling the supervisor, leading to an infinite regression in supervisory systems). Geary explains that the supervisory function of the prefrontal cortex "is automatically activated" when implicit processes are insufficient to deal with information presented in the environment (215). Thus, it is called into play by the implicit systems when a person is presented with what seems to her to be a novel or complex situation.<sup>11</sup> Of course, if the prefrontal region controls and executes these functions, it is implicated in each function but carries out none of them alone. Choice requires the integration of the functions of many brain regions that work in concert, creating systems that carry out particular processes.

I turn now to an example of choice, in order to demonstrate how a given person's cognitive, social, and emotional processes coalesce to carry out this type of explicit function. Recall that the capacity to enact choice is the capacity (a) to consider multiple physically present and non-physically present possibilities that are

---

<sup>11</sup> In the considerations that follow and especially in section 2.11, I focus on novelty rather than complexity. That is because when a person is confronted with something that she takes to be complex, that thing must also be in large part novel to her. Thus, I take complexity to be a subset of novelty.

relevant to the issue at hand, (b) that are feasible within and appear to be feasible within one's physical and conceptual environments, (c) to compare the similarities and differences between them, (d) to project oneself into each scenario, (e) to have an effective emotional response that motivates one toward some particular possibility, and (f) to aim one's activities at actualizing the possibility toward which one is motivated. The goal will be to consider choice from a neurological perspective while keeping in mind that each chooser is embedded in a particular physical and conceptual context. I will consider each component (i.e., (a), (b), and so forth) of choice individually.

With regard to (a), if a person considers two (or more) physically present possibilities, she engages in relatively concrete thinking, so the interesting case will be the one in which the person entertains two or more non-physically present (or conceptually present) possibilities. Here the chooser, who I will call Amanda, is dealing with multiple abstractions. Amanda will, in the coming months, graduate from high school; she is choosing what endeavor to undertake next. The general end of her activities up until this point had not previously been in question (she had been focused solely on the goal of graduating from high school). Now, faced with novelty and a complex decision, her implicit neural systems call into play the explicit in order to plan a course of action. She has three possibilities before her: she can attend college, find a job, or travel for a year before taking one of the other two options.

In order to consider each as a possibility, she must have had some prior exposure to them. She will obviously not entertain notions to which she has never

been introduced. The issue here regards Amanda's *subjective relation* to different possibilities in her environment; what is it that she knows and has been exposed to, and what is her relation to that which she has been exposed? The point for the moment is that if she has never heard of Geling (a remote village in Nepal) and hence does not know of its existence, she will not consider traveling there. It will not be one of her considered options. Likewise, if she knows of Geling but has internalized the notion that she could not navigate the terrain, even if she is actually well equipped (with knowledge, physical capacity, and resources) to do so, she will likely not accept it as a possibility. Her prior exposure—to the possibility or to something similar enough that she can extrapolate from the non-identical case for this application—may have come through first hand experience, an academic setting, or hearing it from another, but in every case her knowledge of possibilities has originated in her interaction with others and her environment (i.e., engagement).

In any case, with regard to neural processes, she will utilize both working memory and long-term memory, the former in order to remain aware of the applicable information (utilizing “the dorsolateral prefrontal regions, the anterior cingulate cortex, and . . . the parietal cortex” (Geary 326)) and the latter to pull up and employ that which featured in her previous experience (involving the prefrontal cortex, the hippocampus, and other regions (Noble et al 72)). In addition, that the possibilities under consideration must be relevant entails that she must be able to sift through and set aside (or inhibit) a significant amount of information (both with regard to what is present to her senses and what is retrievable via long-term memory) that is not

pertinent to the case at hand. Such an activity exercises the prefrontal cortex and the anterior cingulate, among other regions (Geary 214).

Component (b) refers to the physical and conceptual state of affairs in one's environment. While it might seem that these states of affairs do not directly affect the person's neural processes, one's neural processes are in fact deeply affected by interaction with a microcosm or subset of the larger states of affairs (the impacting environment is addressed in Chapter 3). The issue regarding (b) is whether, for instance, resources, infrastructure, and/or institutions are physically available, on the one hand, as well as what concepts are applicable to that which is present, on the other. With regard to the former, Amanda cannot attend the university in the city if either the university (including faculty, classrooms, and libraries) or the city is not there. Moreover, many other constraints apply. For instance, if she will attend college or travel, she must have sufficient financial means. If she will work, she must have a suitable wardrobe and transportation. These possibilities regard both the physical environment (the objective state of affairs) and the conceptual environment (the intersubjective state of affairs), and the two types of environment intermingle. Those who have come before Amanda have either utilized their resources (supposing that such resources were available) and created the infrastructure and institutions or they have not. However, their actions, inactions, and interactions in large part have depended on the conceptual environment in which they operated. With regard to the latter (that is, the intersubjective state and what concepts are available), the issue is what social or institutional concepts govern the availability of the possibilities. This

again concerns the conceptual environment. In this case, the job Amanda wants is available, but perhaps the hiring manager has a predilection toward not hiring those of her gender, race, or level of schooling. Or the university and funds exist, but admittance may be awarded primarily to those of a certain social class, to those who score extremely high on an entrance exam, or perhaps by some other notion of exclusivity. Or, as Beauvoir pointed out, Amanda's conceptual horizons may be so low, given her upbringing, that she cannot see herself as carrying out these tasks or as one who can choose between them. The point for the moment is that if the physical and/or conceptual environments are such that some possibilities are unavailable or barred, then these will not pass the criterion of feasibility.

In order to (c) compare the possibilities that are feasible (and appear to be so), Amanda must have at least basic cognitive abilities and be aware of that which is physically and conceptually applicable. The relevant brain processes here are similar to those covered in the discussion of (a), such as awareness and working knowledge, and maintaining applicable information in working memory. She must also have sufficient concepts available for use such that she is able to recognize, and perhaps articulate (if only to herself), the similarities and differences in question. Such concepts are socially acquired and depend upon the cultural beliefs and mores of those around her. If she does not know of anyone who has attended college, for instance, her representation of it may not be accurate enough to conceive of credit hours, self-motivated study, and navigating a bureaucracy. If she has never traveled, she may be lacking information about airports and hostels. If she has not held a

position, say, in a factory, she may be unaware of the demands of a regimented work schedule. If she does have these and other concepts at her disposal, she will again utilize her prefrontal functions to facilitate the comparison and to inhibit irrelevant information from intruding during her deliberations.

If Amanda will have the capacity (d) to project herself into each possible scenario under consideration, she will create what Geary calls a “mental model” (195). She will engage in a conscious sustained effort to represent decontextualized and abstract information (195). As such, she will be limited to whatever “attentional and working memory resources” (195) that are available in her current state. She will imagine different states of affairs—for instance, places to travel, subjects to study, and jobs and pay available just out of high school versus after college—none of which are, as yet, actual. Geary explains that this type of mental activity requires “autonoetic awareness”, that is, “the ability to consciously consider the self across time, . . . to recall personal experiences, relate these experiences to current situations, and project oneself into the future” (Geary 210). This is a capacity that appears to be unique to humans, and it utilizes the prefrontal region’s supervisory processes in order to be able to inhibit immediate stimuli from the external context (e.g., distractions or irrelevant sensory information) as well as her internal context (e.g., biological and/or implicit processes or irrelevant information stored in memory). In the present example, extraneous external stimuli might include peer pressure in a given direction or the excitement surrounding high school graduation; implicit processes might include a fear response toward an uncertain future or other

biologically based compulsions; and irrelevant information abounds in all contexts of choice. Concerns regarding everything from “the phone is ringing” to “I’m hungry” to “I wonder where so-and-so will attend college” must be resolved, overridden, or otherwise generally inhibited in order to maintain attention on the mental model.

Moreover, whichever possibility Amanda simulates, other actors will be present who may influence the way that a given scenario plays out. There are teachers, bosses, and travel agents of whom to take account. Amanda will likely need to consider the reactions and preferences of family members and relevant others. She will need to be able to simulate their positions in an effort to predict their future behavior. This ability to put oneself in the place of another is, in non-philosophical circles, referred to as *theory of mind*. Theory of mind is a neural process that supports social interactions; it is a capacity that is used in all sorts of social situations as it allows one to attribute belief states to others, given experience with people in general or specific observations of some particular other. From this, one attempts to ascertain how a person with such a belief state would act (Birberg-Thornberg et al 33). The ability to empathize is not what is at issue here, although empathy—the attempt to arrive “at an emotional state that is the same as, or parallel with, that of another” (Deacon 428)—must also be involved if one will successfully put oneself in the place of another. Rather, the issue is one of arriving at an internal representation of the processes that are likely to be present in the other. This type of simulation is dependent upon the functions of the prefrontal cortex (Mitchell et al 68; Stone 105-06) in conjunction with other cortical and limbic structures (Mitchell et al 65).

However, since theory of mind is always based in part upon auto-noetic awareness, theory of mind is easier if the other is similar to the self (with regard to beliefs) and more difficult if not.

Throughout the history of western philosophy, reason and emotion have often been contrasted. Kant, for instance, held the emotions to be morally suspect; a moral choice, for him, was one that is made solely through the faculties of reason. Current neuroscience tells us that there is some basis for a contrast between cognition and emotion, in that the two are functions of different (though perhaps partially overlapping (Bar-On et al 1798)) brain systems. The former “is more dependent on cortical structures”, whereas the latter is supported by the “limbic and related neural systems” (Bar-On et al 1798). However, recent neural research indicates that emotion (and the neural systems that subserve it) plays a significant role in enacting choice (van ’t Wout et al 567; Bechara and Bar-On 22-23; Bar-On et al 1798), moral or otherwise. An emotional response is often taken to be a given, not as something requiring analysis and explanation. However, the neural structures that support the emotions are intricate much like those that facilitate the cognitive faculties. The prefrontal cortex and the amygdala (among other structures) are implicated in the neural processes that facilitate (e) having an effective emotional response. And such a response is affected by nurture, nutrition, sleep, and stress.<sup>12</sup> In general terms, one must possess emotional stability and be capable of experiencing the full spectrum of emotions (rather than experiencing some prominently and frequently or some not at

---

<sup>12</sup> Of course, brain damage may also determine whether an effective emotional response is possible.

all). If the amygdala does not function well, for instance, a person may literally have no fear, leading the person to take unreasonable risks. Her choices then suffer accordingly (Bechara et al 5480). An effective emotional response will allow the reasonable attainment of interests; if a person is hungry, for example, her effective emotional response will lead her toward ingesting that which is edible rather than paint chips or poisonous berries.

Lastly, in order to enact choice, a person must be able (f) to aim her activities at actualizing the possibility toward which she is motivated. If Amanda's aim is to get a job, there are subgoals that must be obtained along the way. She must fill out applications and go on interviews. If she decides to spend all of her time with friends or watching television instead, her goal will not be met. Aiming at some end requires planning and strategizing, both of which are prefrontal processes (Wexler 108). Carrying out a strategy necessitates ongoing inhibition of non-conducive behaviors, and often this amounts to making a series of choices that work in service of one's greater aim.

This description of choice demonstrates that choice occurs at a conjunction between three interconnected and overlapping realms: first, the person, including her cognitive, social, and emotional brain processes, her knowledge of relevant possibilities, and her conceptual relationship to that knowledge; second, the physical environment and what it affords; and, third, the conceptual environment regarding the concepts that are applicable to those possibilities. I will address the latter two realms in Chapter 3, while in the next section I will be concerned with the first. That is, I will

address how it is that a person comes to have the neural capacity to make a choice. She has the *potential* to engage in these sorts of mental feats—to amplify and sustain attention, engage working and long-term memory, retain relevant information and separate off what is irrelevant, inhibit internal and external stimuli, organize her thoughts, simulate possibilities, imagine herself in the place of another, maintain emotional stability, plan, and strategize—in *virtue of being genetically human*. But that is not the whole picture. It is obvious, for instance, that neither an infant nor one who has sustained severe deprivation during development has these capacities. That is because certain factors must obtain if a given person will have the requisite brain processes, knowledge, and conceptual understandings to enact choice. Some of the pre-conditions are more sensitive to short-term deficit than others; as such, I maintain that choice will not be said to occur unless each precondition obtains for a person in a sufficient amount over a given period of time (both throughout a person’s development and throughout the lifespan). A list of the pre-conditions includes factors like adequate nutrition, nurture/stimulation, education, sleep, overall health, and an absence of the things that detract from the growth and maintenance of the neural capacities involved in choice. After presenting some background information about human brain development, I will discuss each of the pre-conditions. However, as these factors and their effects intermingle—often one (for instance, general nutrition) affects another (say, capacity for learning)—in reality, they cannot be considered separately.

### **2.3: Early Brain Development**

As noted earlier, the human brain consists of some 100 billion neurons. Prior to birth, brain cells (neurons) are generated (and over-produced) through the process of neurogenesis (Chugani 186); the wiring of the cells is accomplished automatically and is presumably controlled genetically, since no brain activity need be present for the process to occur (Peterson interviewed by D'Arcangelo 68). The first "activity-dependent stage" occurs prior to birth, during which cells send and receive electrochemical signals (68); however, no particular external stimulus is yet present. As a result of these processes, most of the neurons are already in place prior to birth and are set to receive information regarding whatever stimuli will be present in the environment. A process called apoptosis ("programmed cell death") begins prior to birth and extends until the child is around two (Chugani 186). After birth, another process—synaptogenesis—begins, during which the synapses (the connections between brain cells) develop rapidly, becoming more dense and more numerous (Gallagher 13). There is an overproduction of synapses. A one year old child, for instance, has roughly "150 percent more synapses than an adult" (13). The reason for the over production is unclear, but it is likely to facilitate adaptation to the environment so that the brain has enough material to be able to adjust to any of the potential environments in which it may find itself. It will be better able to cope with whatever demands are present there (13). As such, there is also a process for weeding out or pruning whatever connections do not prove useful. Pruning is a normal process that is "based on activity-dependent stabilization" (Chugani 186). Recurrent neural

activity (within a given circuitry) “will result in stabilization of those circuits rather than elimination during the pruning process” (186). However, there are circumstances (i.e., impoverished environments) in which over pruning may occur (Gallagher 14; Peterson interviewed by D’Arcangelo 69). Finally, after the synapses are in place, another process called myelination takes place, in which “the brain surrounds and insulates” the axons (a thread-like part of the neuron) which in turn allows for faster conduction of impulses and signals (Peterson interviewed by D’Arcangelo 69). Moreover, different areas of the brain myelinate at different times throughout the life span; hence different capacities “become efficient at different ages” (69). With this brief summary of early brain development as background, I turn now to a discussion of the pre-conditions of choice.

#### **2.4: Pre-condition--Micronutriture**

Many factors are necessary for the human brain and its processes to develop and remain functional. Nutrition is one such factor. General adequate nutrition is very important for the growth of the brain and its processes that are involved in choice in engagement. One must of course have adequate caloric intake in order to have the energy to function in the environment. We need energy in order to obtain energy for ourselves in the next hour, day, and week. However, none of us starts off this cycle of energy/nutrient attainment and expenditure by ourselves. During our early months and years, we are entirely dependent on others to start off the cycle, to give to us what we will need to eventually develop the capacity/ability to carry out the brain functions involved in choice. We don’t come into this world as choosers. We begin with a

genetic potential and become choosers or not, and whatever else we will become, due to the interaction between our genetic predispositions and the environment. Without adequate nutrition, a child will not have the energy to explore her environment and interact with others; and both of these factors are very important for the development of the capacity for choice. I will return to a discussion of food insecurity and the effects of malnutrition in section 2.8. In what follows, I will focus upon five micronutrients: choline, folate, iron, iodine, and the essential fatty acids. Scientists have found choline and folate to be generally indispensable for normal brain function. *Without these (and perhaps many others), the development of neural processes of choice may not even get off the ground.* Without the latter three, people experience decreased capacity in regard to the cognitive, social, and emotional processes that are crucial for choice.

Choline is important for numerous functions that underpin choice, such as the “structural integrity and signaling functions of cell membranes”, the development of the “brain and spinal cord structure and function”, and the development and maintenance of memory (Zeisel, “Choline” 229). Adequate choline intake during the fetal and postnatal period has significant positive impact on brain development and function (Zeisel, “Fetal” S131), whereas a deficiency is strongly associated with brain damage or neural tube defects (Zeisel, “Choline” 229). The implication for the overall development of the neural processes of choice then is clear. Many (but not all) women of childbearing age do have some ability to synthesize this vital nutrient (while most men and postmenopausal women do not); however, the fetus’ and

lactating infant's demand for choline is so great that it often depletes the woman's stores (Zeisel, "Fetal" S134). A case study in California "found that women in the lowest quartile for daily choline intake had a 4-fold greater risk of having a baby with [a neural tube defect] than women in the highest quartile" (S132), and another study found that only ten percent of older children, women, men, and pregnant women in the U.S. have adequate daily intake of choline (Jensen et al 1b219).

Memory features large in components (a), (c), (d), and (f) of choice and choline is strongly implicated in both the development and maintenance of memory. Studies on rodents have shown that rats deprived of choline in utero experienced greater cell death in the hippocampus (the memory network of the brain), while the opposite was the case if the pregnant rat's diet was sufficient in choline (Zeisel, "Fetal" S132). In another study, working memory was enhanced in rodents that received choline supplements (S133). While it is best to be cautious when generalizing from studies performed on animals, there is increasing evidence that choline supplementation affects human memory as well. Three separate experiments on adults showed that explicit memory, logical memory, and working memory are significantly enhanced by choline supplements (Zeisel, "Choline" 238-39). Another study showed that choline may be beneficial for older adults who have memory difficulties as well (239).

Given, first, that choline deprivation is strongly associated with neural tube defects in the human fetus/infant, and, second, that the findings in the animal models clearly demonstrate a direct and positive correlation between choline and memory, it

is unlikely that any ethics review board would approve a complete or partial choline deprivation experiment on humans. Thus, one cannot with certainty imply that partial choline deprivation is associated with hippocampus cell death in humans. Yet, such a scenario is likely given the present state of evidence. Due to its role in facilitating the structural integrity of the brain and neural system and in at least enhancing working memory, choline is clearly a pre-condition of choice.

Folic acid (or folate), a type of B vitamin, is also implicated in human brain development. It is estimated that adequate “folate intake by the mother during pregnancy can prevent 50% or more of neural tube defects” (Zeisel, “Fetal” S132), which result in brain, skull, and spinal cord malformations. One study found that folate supplementation given to women “who had previously had a child with a neural tube defect lowered the risk of recurrence by 72%” (Zeisel, “Choline” 236). One solution—folate fortified wheat flour—is cost effective and feasible, given that the expense is merely “\$1.50 US dollars per metric ton of wheat flour” and “the consumption of wheat flour is greater than that of any other grain” worldwide (Maberly et al, 8-9). However, despite efforts to promote the fortified flour and make it available, about 4 billion people worldwide lack access (8). Since the U.S. began fortifying foods (such as cereals and breads) with folate in 1998, the incidence of neural tube defects within the U.S. population has declined by 26%, and similar initiatives in Chile and Canada yielded declines of 40% and 42%, respectively (9). However, a recent study in the US demonstrated that the group of women who “account for nearly one third” of births in the US (5) and who “have the highest rate

of unintended pregnancies” (7), is also the group that is least informed about folate and least likely to take a supplement (5). Thus, the potential consequences for choice are significant both in the US and abroad.

Iron may be involved in multiple brain functions that facilitate choice, such as the formation of myelin (the white matter that speeds neural impulse conduction), and the synthesis of two neurotransmitters, dopamine (required for functions of the central nervous system) and serotonin (which helps to regulate mood and the emotions) (Kretchmer et al 998S; Beard 1468S). For instance, iron anemia negatively affects emotional stability (Kretchmer et al 998S) which is essential for component (e) of choice. However, iron deficiency has an even greater influence on choice through its connection with the cognitive faculties. Studies consistently indicate that younger children with an iron deficiency “have alterations in attention span, lower intelligence scores, and some degree of perceptual disturbance” (998S), and older children exhibit “decreased attentiveness, narrow attention spans, and perceptual restriction” (998S). Even adult brain functions appear to alter according to variations in iron (998S). But attention—or better yet, *amplified attention*—is crucial for component (d) of choice. A person with inadequate iron intake might be described as being at risk with regard to choice. This is important because iron deficiency is a problem worldwide “with an estimated 2.5-5 billion people . . . afflicted” (Beard 1468S), and it is an especially acute concern for children. As “many as 40-45% of children” are deficient or anemic (Kretchmer et al 998S). In the United States alone, it is estimated that roughly 50% of pregnant women may be at risk (National Institutes of Health).

A deficiency with regard to the fourth micronutrient, iodine, is a general bane to the processes of choice; it often results in mental retardation, spastic paralysis, deaf-mutism, and decreased visual capacity (Kretchmer et al 997S). Researchers estimate that some 20 million people alive today could have been spared significant and irreversible brain damage if their mothers had had adequate access to iodine prior to conception and during pregnancy, as often the damage is done before the end of the second trimester (997S-998S). Where iodized salt (an inexpensive and practical remedy) is readily available, such as in the U.S., the problem is rare and controlled; however, in developing countries, another 20 million are currently at risk (997S). Indeed, researchers estimate that the majority of the population (approximately 80 to 100%) of New Guinea are afflicted resulting in a predominance of mental retardation (998S).

Lastly, the essential fatty acids, omega-6 and omega-3 (the latter, in particular), appear to have a significant effect on the development of neural tissue, the development of cognitive faculties, the capacity for theory of mind, as well as the lifelong maintenance of cognition—each of which are crucial for the components of choice. First, the fatty acids are a key element in neurogenesis (the formation of brain cells), myelination, synaptic function (Birberg-Thornberg et al 34), and perhaps synaptogenesis (Bouwstra et al 317). Adequate supply of the fatty acids during the fetal and postnatal period promotes neuro-protection (it makes “nervous tissue less susceptible to damage” (Gustafsson et al 1280)), neurological development, and ultimately learning and behavioral control (Birberg-Thornberg et al 34; Gustafsson et

al 1280). Second, the fatty acids are implicated in the growth of cognition. For instance, infants who received a supplement containing omega-3 and omega-6 exhibited better problem solving skills than did their cohorts whose formula did not include the supplement (Wainwright 337). Another study showed that giving omega-3 supplements to pregnant women and nursing mothers positively influenced their children's IQ measures at four years of age (Gustafsson et al 1281). Researchers found that approximately 76% of the variability in the children's IQ scores (at age 4) could be accounted for by the duration of breastfeeding, its omega-3 content, and the gestation week of the infant (1285). Part of the issue is the proportion of omega-6 to omega-3 that is present in the body and diet; inordinately high levels of omega-6 and low levels of omega-3 are undesirable (1285). A study regarding the capacity for theory of mind and cognition found that high levels of omega-6 are negatively correlated with the capacity for theory of mind (perhaps causing difficulties with component (d)), while high levels of omega-3 are positively correlated with increased cognitive capacity (Birberg-Thornberg et al 37). As such, high omega-3 levels are also positively correlated with a capacity for components (a), (c), (d), and (f).

This correlation between high levels of omega-3 and enhanced cognitive capacity holds true for middle age and older adults as well. In middle age subjects, high omega-3 intake is related to a low risk of cognitive decline or impairment, whereas a high intake of saturated fats is associated with greater risk (Kalmijn et al 275). Older adults with greater plasma proportions of omega-3 were significantly less likely to experience a decline in cognition and motor capacity (Dullemeijer et al

1483). And multiple studies have linked high omega-3 intake with a decline in the risk of Alzheimer Disease (Kalmijn et al 275; Barberger-Gateau et al 1921).

These five micronutrients—choline, folate, iron, iodine, and the essential fatty acids—are critical for the development of the brain and its functions. As such, they are essential for and *pre-conditions* of the neural processes of choice. Without choline and folate, there is a significant risk that a fetus/infant will not develop either the brain structure or processes that are necessary for choice to occur. Without iron, children and adults suffer with regard to cognition and emotional stability. Iodine deficiency often results in mental retardation or other symptoms that to varying degrees interfere with a person's potential capacity for choice. Low levels of omega-3 may result in cognitive deficits, whereas high levels of omega-6 are associated with a decreased capacity for theory of mind. Thus, it is not just that a person requires adequate caloric intake if her capacity for choice will be enabled (although this is surely true), she must have nutritious food as well. Anyone who is concerned about people as choosers (i.e., most liberal theorists) has an important reason to be concerned about people's nutritional status. People are physical beings; one cannot separate choice, or any other mental faculty, from the physical apparatus that facilitates it.

I have considered only five nutrients that feature prominently in the neurological literature. There are likely many more that either directly or indirectly affect choice. Before turning to the next precondition of choice (nurture/stimulation) it is important to note first the physical and conceptual vulnerability of the

infant/child with regard to these nutrients, as well as the utter dependency of the infant/child in obtaining them. Each person reading this (and I presume that my reader has a high level of cognitive, social, and emotional attainment) was once vulnerable to nutritional deficit in utero or during childhood. If a person can engage the intricate processes involved in choice, it is because someone else provided these vital nutrients for her. And in every case, this provider obtained the nutrients through engagement in the world. In adulthood, each of us is profoundly vulnerable to deficiency in the latter three micronutrients. Moreover, this physical vulnerability translates into a conceptual vulnerability as well. Deficits in cognition, emotional stability, and theory of mind limit one's capacity to partake of and contribute to *conceptual interaction* (to be further elaborated in Chapter 3) that occurs among people in all cultures.

### **2.5: Pre-condition—Nurture/Sensory Stimulation**

These micronutrients are of course just the tip of the iceberg with regard to what is required to enable a capacity for choice. The person's cognitive, social, and emotional neural processes come to be through the interaction between her genetics and the physical/conceptual environment. And many aspects of these environments impact the processes of choice. In this section, I consider the effect of sensory stimulation (and nurture, as one type of stimulation) upon the components of choice. Stimulation is a precondition of choice because our early interactions with the world help to build the structure and functionality of the brain; without it, the neural systems involved in choice atrophy or are excessively pruned. As I will explain, it is because

of this that each of us has been and is both physically and conceptually vulnerable to sensory deprivation. Moreover, in our early years, it is always someone else (a caregiver, teacher, playmate, and so forth) who provides the stimulation that is so vital for our cognitive, social, and emotional processes. Even in adulthood, we are vulnerable to the effects of isolation and deprivation. I will, first, discuss the relevance of sensory stimulation for choice; second, present a success story—that is, a case in which the stimulation provided is adequate to contribute to an enabled capacity—regarding choice; and third, describe the affect of deprivation, enrichment, and some scenarios in between the two.

However, before proceeding, an explanation regarding the method I will use in some instances to relate the impact of sensory stimulation to the capacity for choice is in order. There are various studies that demonstrate the effect of what I call the preconditions of choice on humans; however, none of them (at least to my knowledge) considers the consequences of such things specifically on the capacity for choice. Instead, they speak in terms of emotional, social, and cognitive deficits (some of which can be tied directly to the components of choice), but, more often, researchers utilize testing, most notably measures of IQ, in order to gauge the impact of deprivation/enrichment. The problem for my project is that IQ testing does not necessarily measure a person's capacity for choice. The two are not one and the same thing. Nevertheless, there is a way in which choice and IQ are positively correlated. Neuroscientists take it that “the amount of material that can be held in working memory is highly correlated with scores on intelligence tests” (Wexler 53; see also

Geary 277), as is the capacity to “consciously manipulate” this material (Geary 277). And both of these are prefrontal processes. Working memory and manipulation of information are key to four ((a), (c), (d), and (f)) of the six components of choice. Thus, since no scientist has, as yet, developed the notion of a choice quotient, in what follows, I will take IQ to be a partial and tentative measure of whether a person’s capacity for choice is being enabled.

Neuroscientist and psychiatrist, Bruce E. Wexler,<sup>13</sup> explains that from birth to early adulthood, the brain is dependent on sensory stimulation in order to develop both its physical structure and functional organization (2). As stimulation occurs, the brain “recreates in itself a representation of environmental input” (40), which, cumulatively and over time (through processes that will be discussed in conjunction with the success story), forms a person’s inner structure or inner world (137 and 143) that largely conforms to the nature and complexity of the external stimulation (40). Without such input, synapses are excessively pruned (Gallagher 14; Peterson interviewed by D’Arcangelo 69) and neurons die (Wexler 5). Indeed, Wexler explains that entire “information-processing structures” (41; that are made up of neurons, multi-neuronal ensembles, as well as multi-ensemble systems (19)) atrophy in the absence of sensory stimulation (41). This, in turn, negatively influences the functional organization of the brain because the balance of neuronal activity shifts in response to

---

<sup>13</sup> Wexler received his B.A. from Harvard in 1969 and his M.D. from Albert Einstein College of Medicine in 1973. He is currently Professor of Psychiatry at Yale Medical School and Director of the Neurocognitive Research Laboratory at the Connecticut Mental Health Center.

the deprivation (43). All of this then affects what neural processes—including whether those necessary for choice—are active and functional in a given person.

To a very large degree, we are the sum total of our interactions with the world. Wexler notes that humans often have an exaggerated sense of having unique qualities possessed by the self that unfolds through development. However, he explains that the relation between a person “and the environment is so extensive that it almost overstates the distinction between the two to speak of a relationship at all” (39). Our emotional, social, and cognitive thought processes are thoroughly dependent upon environmental input (39). And if it does not appear this way to us, on Wexler’s view, it is because we cannot detect, track, and sum all the subtle and countless “environmental influences on our development and thought, any more than we can count and track the different molecules in the air we breathe” (40). Even the stomach is more autonomous with regard to the environment than is the brain (40).

During the first months and years of development, the brain is highly plastic and it conforms to and internally recreates the situation in which it finds itself. The question for my purpose is, then, whether that situation includes factors that foster a capacity for choice. Wexler points to three broad avenues<sup>14</sup> through which a person develops an inner world that recreates that to which she is exposed during development. He focuses mainly on what I would call a success story with regard to choice. He describes, for instance, how a caregiver may be instrumental in helping an

---

<sup>14</sup> Wexler describes two additional types of stimulation: turn-taking and internalization. As all five types overlap, for my purposes, I take it to be sufficient that the most important aspects of these two types are briefly discussed within the other three categories.

infant/child acquire and build well-functioning prefrontal lobes, the part of the brain most implicated in choice. The three broad types of stimulation are: (x) instrumental caregiving,<sup>15</sup> (y) imitation, and (z) play (Wexler 98). Instrumental caregiving includes at least three sub-categories as well: (x1) adjusting and training infant physiology, (x2) creating the environment in which development takes place, and (x3) providing cognitive and motor functions that the infant/child has not yet developed (98-99).<sup>16</sup>

The instrumental caregiver helps to (x1) adjust and train the infant's physiology by repetitively talking to, positioning, holding, and touching the infant (Wexler 99). For instance, by consistently holding her the same way before bed or providing gentle rocking motions when she is distressed, the adult trains the child to react in certain ways to mundane activities or to distressing events (99). The latter issue is especially important, because as the infant becomes familiar with the rocking, the simple movement will induce "neural activity in the infant that leads to reestablishment of equilibrium" (99). Through these types of interactions, self-regulation and emotional stability begin to develop in the child (99). The child learns a skill; that is, to begin to control her thoughts, emotions, and actions. This skill is significant with regard to choice, because the capacity to self-regulate is an important precursor to the capacity to override internal and external stimuli (necessary for

---

<sup>15</sup> Wexler's term for this is "instrumental parenting" (98). I use the term instrumental caregiving, instead, in recognition that different caregiving situations arise in different contexts and cultures. A caregiver may be, for instance, a daycare worker, a grandparent, an extended family member, or tribesperson, or many from these same (or similar) categories.

<sup>16</sup> I have combined three of Wexler's subcategories—"Creating New Objects in the Rearing Environment" (100), "Directing and Shaping Attention" (101), and "Language and Other Symbolic Media" (104)—into one subcategory, (x2) creating the environment in which development takes place.

components (a), (c), (d), and (f)) and emotional stability is necessary if one will have an effective emotional response (component (e)). In enabling the child to calm herself under stress, the caregiver helps to shape her cognitive and emotional processes.

It is also important to note that the caregiver does not determine in isolation what types of activities will be conducive to restoring the infant/child's emotional equilibrium. She utilizes her own experiences (presumably, especially the patterns that were developed in her through her interactions with her own caregiver as a child) whether or not these were conducive to enabling a capacity for choice for her. Moreover, as Wexler points out, she likely has recourse to discussions with "other adults caring for the infant," with adults caring for other infants, and "with individuals designated as experts by the larger social group" (100). One might say that she doesn't go it alone; there are always others, either in her past or present, who influence the way that she trains the infant's physiology—and, hence, the way that she trains the infant's capacity for self-regulation and emotional stability as well.

Humans are the only species that significantly (x2) create the environment in which their young grow, develop, and learn. For my purposes, there are three different aspects of this issue that are important for choice. The instrumental caregiver provides human-made objects, directs the child's attention, and brings the child into the human community of language users; and there is increasing evidence that these activities, by exposing the child to the human-created world, affect the structure and functionality of the brain. With regard to the first activity, fMRI testing has shown that "repetitive use of human-made objects . . . is associated with actual

changes in brain structure” (Wexler 101). That is, the toys, musical instruments, television shows, computers, household objects, etc. to which a child is exposed affect and alter the child’s psychobiological development (100-101). Moreover, there is evidence that exposure to and competence with written language and other complex human-made artifacts “appears to increase brain functional capability as measured by intelligence tests” (101). For example, there was a “substantial difference (6 points) in IQ between rural and urban populations in the United States . . . during the 1930s and 1940s” (73), with the latter consistently out scoring the former; however, this difference all but disappeared as rural communities became less isolated through mass communication, improved their schools, and utilized technological advances in farming (73). Moreover, when Virginia closed its public schools in an attempt to avoid school desegregation, “the IQ scores of the children dropped by approximately 6 points per missed year of school compared with children of similar backgrounds who were in school” (73). Presumably, it was, at least partly, the greater exposure to complex human-made objects and concepts that made the difference.

Although one has reason to be skeptical of the notion that one such factor explains these differences in IQ (several factors, as I will explain, are candidates and they may perhaps coalesce), additional evidence points in the same direction. The average IQ in the U.S. is rising at “about 3 IQ points per decade” (Neisser et al 89), with each generation out performing the one before. A similar phenomenon is apparent in all other countries for which adequate longitudinal data is available

(including “England, Scotland, France, Norway, Sweden, Belgium, the Netherlands, Denmark, Germany, Japan, and Israel” (Wexler 71-72)).

A panel of intelligence researchers (a task force created by the Board of Scientific Affairs of the American Psychological Association (Neisser et al 77)) entertained 4 possible reasons for the phenomenon: (1) “increases in test sophistication”, (2) “modern improvements in nutrition”, (3) “the very definition of intelligence”, and (4) the complex and “striking cultural differences between successive generations” in an increasingly modernized world (Neisser et al 90). They argued that the “consistent IQ gains . . . seem too large to result from” (1) (90). They found (2) and (3) to be more probable. With regard to (2), they noted that “large nutritionally-based increases in height have occurred during the same period as the IQ gains”; there may have been “increases in brain size as well” (Ibid., 90). With regard to (3), James Flynn (who first documented the rising IQ phenomenon (Neisser et al 89)) argued that if the gains in IQ were actual, the countries listed above ought to be experiencing “a cultural renaissance too great to be overlooked” (Flynn cited in Neisser et al, 90). Since this does not appear to be the case, Flynn proposed that “what has risen cannot be intelligence itself but only a minor sort of ‘abstract problem solving ability’” (90). The panel found (4) to be the most plausible explanation. They argued:

Daily life and occupational experience both seem more “complex” . . . today than in the time of our parents and grandparents. The population is increasingly urbanized; television exposes us to more information and more perspectives on more topics than ever before; children stay in school longer; and almost everyone seems to be encountering new

forms of experience. These changes in the complexity of life may have produced corresponding changes in complexity of mind, and hence in certain psychometric abilities (90).

Now, if either (2), (3), (4), or a confluence of these factors is responsible for this IQ gain, it is relevant to this discussion of the preconditions of choice. Nutrition, I have argued, is vital, as are abstract problem solving abilities. However, it is quite likely that a significant portion of the gain is attributable to the impact that the ever increasing complexity of daily life has on the human brain. Thus, it seems to be that when the instrumental caregiver makes available human-made objects, including complex artifacts like written language, in the child's environment, the child's neural processes are both structurally and functionally enhanced. Then, in so far as IQ scores are correlated with a capacity for choice, this latter capacity is enhanced as well.

The instrumental caregiver intervenes in the child's activities such that the intervention ultimately grows the attentional capacity of the child. First, by interacting with the adult, the infant learns to follow the adult's gaze, eye movements, and pointing gestures (Wexler 101), and these attentional mechanisms then permit the child selective attention over objects whether near or at some distance. Through such seemingly mundane interactions, the caregiver influences what, with regard to incessant sensory stimuli, "infants are most aware of, become most familiar with, and think most about" (102). That is, the instrumental caregiver in part determines what types of neuronal activity the infant/child will have. But, since such activity both makes and maintains neural connectivity (recall that in the absence of it connections, neurons, and systems atrophy), the caregiver is actually shaping the circuitry of the

infant/child's brain. Some possible connections weaken or decline; other possible connections, those that are important to the caregiver(s) amplify (103). According to Wexler, the infant's neural wiring is then

shaped by what adults [around her] are interested in and direct the infant's attention toward, features which themselves are the product of the [adults'] own childhood experiences and the continuing effects of their adult social community (103).

Because selective attention is necessary for components (a) and (c) while amplified attention is critical for components (d) and (f), in training the child's attention capacity, the caregiver contributes to enabling the child's capacity for choice. Again, if the main caregiver(s) is deficient—due to her own upbringing—in these neural processes, the child in her care will likely remain deficient as well unless someone else (who has a capacity for choice) interferes.

When the instrumental caregiver brings the child into the community of language users, she both further develops the child's attentional capacities and provides “a vocabulary and structure for thought” (Wexler 104-05). As noted earlier, exposure to written language appears to increase cognitive capacity (as measured by IQ tests), and this is done through its impact on the structure and functionality of the prefrontal cortex (105). Both spoken and written language, as social modes of interaction, are important, first, because competence with them allows the child to participate with the caregiver in making finer distinctions than can be made with gestures (104), and the ability to make distinctions is crucial for determining what possibilities one will consider and for comparing them (components (a) and (c)).

Second, through language use, the child learns to contemplate a past event or absent object (Ibid., 104), which is a key for components (a) and (d); and, third, it allows persons who have never been present (and perhaps never will be) in the child's immediate physical environment to exert influence on the child's attentional development (104). I will return to this third point after discussing (y) and (z).

The last point regarding instrumental caregiving regards (x3) providing cognitive and motor functions that the infant/child has not yet developed. Much like what was discussed for (x1) and (x2), this provision helps determine what functions the child develops, especially with regard to the prefrontal processes. The instrumental caregiver and child participate in a variety of shared activities, geared to the child's level of accomplishment (increasing in difficulty as the child progresses), in which the caregiver provides "frontal lobe functions for the child" (Wexler 109). These functions include "setting goals, selecting strategy, collecting necessary tools . . . , focusing and sustaining attentions, and executing fine motor" skills (107). Of course, goal setting, strategizing, and sustaining attention are all included in the components of choice ((a), (c), (d), and (f)). The caregiver may, for instance, utilize a toy in which different shapes are to be inserted into a box with holes of the same shape. The adult demonstrates the desired action, guides the child's hand, encourages the child to perform steps of the activity by herself, and rewards the child for success (107-08). The same sort of steps might be taken in teaching a child to cook, weave, or utilize tools. The point is that the caregiver holds a plan (whether she is conscious of it or not) and integrates the child's actions into it, even if the child has no notion of

the cognitive benefit. Through these types of activities, the caregiver's frontal lobes become "functionally linked with the lower brain centers and sensory, motor, and association cortices of their . . . children" (109). And the child's frontal lobe neural activity is developed and shaped in the process (109).

The second broad category of stimulation is (y) imitation. Imitative behavior is common in many species, but it is most common and most pronounced in people, perhaps due to the longer human maturation period (Wexler 113). Although the tendency to imitate is strongest prior to puberty (118), it remains an important source of behavior in adults—as pervasive fads, shifts in styles, and the “technique and impact of advertising” clearly demonstrate (116). With regard to development, Wexler explains that imitation is “a direct and concrete mechanism” through which the infant/child's brain processes are shaped by the “particular mix of adult features, structures, and behaviors” that surround the child on a daily and ongoing basis (113). Imitation is an important factor in developing one's inner world because it operates consistently throughout the period of development (and beyond) (115), it is crucial for language acquisition (117), and, most importantly for my purpose, it both utilizes and shapes the “frontal and parietal lobes” (114). The child imitates caregivers and siblings regarding the way these others feel, think, pay attention, and, in general, organize themselves and their activities in the world (121-122); thus, imitation significantly affects the neural processes and subsequent behavior of the child. The child's imitation of others will then influence the kinds of things that she finds to be possibilities (components (a) and (b)) upon which to act.

The last main avenue of stimulation is (z) play. For mammals in general, and humans in particular, play is an important part of cognitive development. For instance, when a rat pup is isolated and prevented from playing between the twentieth and forty-fifth days of life, the deprivation affects the pup's cognitive capacities (Wexler 132). Play for merely an hour each day was found to protect against these cognitive losses (132). However, as Wexler points out, the affect of play on human cognition is likely to be much greater because people play for years not days and human play activities are much more widely varied. Moreover, human play behaviors are "primarily cognitive and essentially social" (133). As noted earlier, humans create much of the environment in which children develop, and this in turn affects children's cognitive capacities. This, of course, holds true for the objects (i.e., toys), games, and situations of play as well. The imaginative component of play also serves the purpose of allowing the child to see past her concrete environment (component (a)) and to learn to participate in cultural processes and rules (Ibid., 135), which is relevant for component (b).

In explaining the impact of (x) instrumental caregiving, (y) imitation, and (z) play, Wexler has offered something of a success story for choice, at least in so far as sensory stimulation and nurture are concerned. Each of these broad avenues of stimulation affect the prefrontal cortex; and it is this area and its processes that both "regulate the activity of the brain itself" (Wexler 105) and, if the capacity is enabled, allow one to *override the bottom-up functions in order to make a choice*. As explained in section 2.2, the prefrontal cortex is something of a supervisor or

executive of the brain. The stimulation that is available in one's environment structures this area (and many other areas) such that it "recreates in itself a representation of [that] environmental input" (40). Through (x), (y), and (z), the child develops an inner structure or inner world that largely conforms to the nature and complexity of the external stimulation to which the child is exposed (40). If the environment is sufficiently rich and complex; the neural structures and processes of choice will then be established. If the environment fails to provide, (as I will explain further below) entire "information-processing structures" atrophy (41).

Before turning to a not-so-successful story for choice, it is important to note the degree to which a person is dependent upon and vulnerable to sensory stimulation. The vulnerability is both physical and conceptual; one will not be entertaining many concepts unless the physical structure of the brain is intact and functional. And, of course, each child is thoroughly dependent upon her caregiver(s) for the initial stimulation and then upon many others throughout her childhood. But upon whom does the caregiver depend? As noted with regard to (x1), the caregiver does not go it alone; there are always others, either in her past or present, who influence the care that she gives the child. She certainly has the influence of her own past upon which she most certainly would act (perhaps with no intention of doing so at all). The caregiver's own inner world and prefrontal functions were developed by someone else; and, since these prefrontal functions are the supervisory controls operating in her brain, she will use them to influence the child. If her early environment was enriched, she will have more to offer the child in her care. But is this the entire story? Is it just

that prefrontal functions are passed from caregiver to child in an endless chain? Consider the complexity, novelty, and technological advances that every culture experiences to at least some degree in the modern age. This type of complexity cannot be explained if we maintain that prefrontal functions are passed in this linear way. Other influences and interaction must be present. As Wexler points out, the caregiver has many influences upon her; she was, in her early years, molded by parents, caregivers, teachers, siblings, and friends; she has others who help care for the child or others who offer her advice on child rearing (Wexler 100). She is also influenced by her adult friendships and affiliations; she may read, watch television, listen to the radio, attend religious services, and so forth. All of these may impact her in such a way that she may bring them (consciously or not) to the activities by which she structures the prefrontal cortex of the child. Remember as well that the caregiver is not the only early influence. Before reaching maturity, the child herself will have contact with teachers, siblings, peers, and many others. Moreover, consider the content of (x2) and (x3). It is partly the use of human-made objects and artifacts (such as toys, musical instruments, and language (spoken and written)) that help to facilitate the process, and many people, both known and unknown to the child, have taken part in the creation of these objects. Through the daily activities of life, especially if the environment is rich with variety, the child is influenced (via her interaction with these objects and artifacts) by these others and the ideas that they helped make embodied in the objects. Countless others, in both direct and indirect ways, have an effect upon the child's prefrontal development.

In the success story, the instrumental caregiver facilitates, along with the child's imitation and play activities, the development of the child's prefrontal lobe which enables all sorts of mental abilities, including the neural processes involved in choice. However, it is not difficult to imagine different scenarios or even point to some existent contexts that would be less than conducive. Not every caregiver has the resources, knowledge, desire, and neural processes to facilitate development in this way. Clearly, if no one intervenes—that is, if no one cares for the child at all—she will die. But there are different qualities of intervention (using whether or not choice is enabled as a measure of quality). As such, I turn now to a discussion of the affect of sensory deprivation, enrichment, and some of the many possible scenarios in between.

In response to obvious ethical concerns, controlled experiments regarding the effect of sensory deprivation on human development cannot be carried out (scientists have studied the “natural” experiments of society, and these will be addressed momentarily); but experiments on non-human animals are instructive, in general, with regard to the effect of deprivation and enrichment. Animal models demonstrate that deprivation, with regard to a certain mode of sense, decreases an animal's sensitivity to that type of perceptual object. Presumably, the neural circuitry that facilitates that type of perception atrophied. However, when scientists study the effect (on monkeys and cats) of a generally impoverished environment, in which input for all sense organs is significantly lessened though none is entirely deprived, they find the animals to “have smaller brains, with the greatest reduction in the cerebral cortex”

(Wexler 51). That the greatest reduction is seen in the cerebral cortex is important because the cerebral cortex includes many of the areas involved in the “higher” functions for cats, monkeys, and humans (including the prefrontal cortex). Studies have also shown that monkeys raised in merely “less enriched environments” (in contrast to more complete deprivation) perform poorly on tests “requiring planning, strategy, and the mental manipulation of information” (52). All of these employ the functions of the frontal lobe, and, in humans, they are important for components (a), (c), (d), and (f) of choice. However, monkeys raised in enriched environments “have increased connectivity among neurons” and perform quite well on the same tests (52). Notably, humans with frontal lobe impairment tend to perform poorly on similar tasks depending on the location/type of the impairment (53). Wexler explains that, for mammals, the

survival of individual cells, the number of dendritic branches and synaptic connections among cells, the structural organization of cells groups, the functional response characteristics of individual cells, and the competence of neural functional systems all depend profoundly on the extent and nature of environmentally induced activation (58).

As such, it is not simply that the brain (or its cells) contains some predetermined instructions regarding organization that becomes actualized through stimulation; rather, environmental stimulation actually shapes the brain both structurally and functionally (58)!

According to Wexler, there are at least three good reasons to believe that the animal models hold for humans as well. First, the length of time that it takes for humans to reach “sensory, motor, and cognitive maturity” is much longer than it is for

other mammals (Wexler 59); for humans, there is a longer period in which affectation may occur. Second, the animal models show the greatest positive or negative impact is sustained in the cerebral cortex and this is the region in which humans show the most brain growth when compared with other primates (59). Third, although scientists cannot do direct controlled studies on the effects of enriched and deprived environments on humans, they can and have done descriptive studies of “natural” societal experiments, and the results of these, as I will explain, consistently accord with the findings of the animal studies (60).

The first case I will consider involves profound global deprivation. During the 1970s and ‘80s, some 100,000 children were “warehoused under extreme situations of neglect” in Romanian orphanages (Wilson 473). In a political decision to foster population growth, birth control and abortion had been banned. Many poor parents were unable to care for all of their children and relinquished some to institutions (usually within the first month of life). Conditions varied at different sites, but, in general, deprivation prevailed; there was a “lack of adequate nutrition, minimal interpersonal contact, and little to no sensory stimulation” (474). Caregiver to infant ratios were around 1 to 10, and hence the infants spent some 20 hours per day unattended in their cribs; for children past three, the ratio was about 1 to 20 (Chugani et al 1290). When the news broke, some families in the West adopted children out of the institutions. Upon adoption, researchers found that most of the children had significant cognitive and motor delays. Testing showed that most “were functioning at levels half their chronological age” (Wilson 475). Scientists began longitudinal

studies of the adoptees, and testing showed that, after care in the adoptive home, many of the children experienced improvements cognitively and psychologically (this testing was done at ages four and six (Beckett et al 697)). One drawback of this study, for my purpose, is that since the deprivation experienced was global, one cannot be sure how much of the children's cognitive, social, and emotional deficits may be due to sensory deprivation (including a lack of nurture) and how much may be attributed to, say, malnutrition and lack of healthcare. Surely the children's difficulties stem from all such factors. However, as researchers found that the effect of malnutrition "tended to be *less*, rather than greater, in those who experienced the most prolonged institutional deprivation" (Beckett et al 707), the influence of sensory deprivation was significant.

At this point in the study, researchers believed that the length of deprivation and extent of recovery were inversely related; the longer the persistence of deprivation, it was presumed, the less likely the child would be able to reach expected cognitive ability (Wilson 477; see also Beckett et al 697-98). However, when the children were tested again at age eleven, the outcomes were somewhat different than expected. Findings indicated that group 1, the children who were adopted from the institutions prior to six months of age, were the least effected (Beckett et al 705). They had scores on IQ testing that were "on average some 15 points" higher than those who were adopted later; moreover, their scores were comparable to those included in the control group (Beckett et al 705). The control group was made up of children from the same age group, who had experienced no neglect, and who were

adopted before six months of age from institutions or foster care within Britain during the same time period (699). That group 1 emerged relatively unscathed is something of a puzzle to researchers, but one proposed reason seems most likely. Although many areas of a new born infant's brain are active from birth or within 2 to 3 months (determined via PET scan that displays glucose metabolism in various parts of the brain), the "frontal cortex is the last brain area to display an increase in glucose consumption" (Chugani 184). The different areas in the frontal cortex increase functional activity at various times between 6 and 12 months; the relative lack of harm, then, may be due to the fact that the cognitive and supervisory areas of the brain were not yet in a state of active development.

Unfortunately, children in the other experimental groupings (group 2 consists of those adopted between 6 months and 2 years and group 3 includes those adopted between 2 and 3 ½ years) experienced significant impact from the deprivation. The original improvement demonstrated by the latter two groups, during the earlier testing sessions, stagnated after age 6. Only those children who experienced the greatest cognitive impairment at age 6 made any notable gains by age 11 (Beckett et al 706). The average IQ score at age 6 was 86 for group 2 and 77 for group 3, while at age 11 it was 86 and 83, respectively (702). And this was in spite of the fact that all attended school between ages 6 and 11 and all were adopted by fairly affluent people in Britain most of whom were dedicated "in their commitment to effective child rearing" (708). For the sake of comparison, it is instructive to note that the average score at age 6 was 102 for group 1 and 105 for the control group, while at age 11 it was 101 and 105,

respectively (702; 100 is the mean IQ score and scores of less than 86 are considered borderline (Duyme et al 8790)). Thus, in so far as IQ score is positively correlated with a capacity for choice, one may conclude that persons who experience global deprivation between 6 months and 3 ½ years are significantly at risk with regard to developing a capacity for choice.

Two additional studies of Romanian orphans, who were adopted into families in the US, augment the study described above and strengthen the connection between deprivation and a risk for choice. In the first, the adoptees (at nearly nine years of age) appeared to be functioning at roughly the same level as the children who were adopted into British families. They exhibited the same types of cognitive and behavioral deficits and their test scores were similar (Chugani et al 1297). Behavioral and cognitive testing showed deficits in attention, “verbal and visual memory”, cognitive efficiency, and impulse control (1294). This study however focused not on cognitive testing but on the results of PET scanning which yields images of the brain’s functional processes. The researchers were concerned with glucose metabolism as an indication of degree of functionality. The results “showed significant regional decreases of . . . glucose metabolism bilaterally in prefrontal cortex, the medial temporal structures (including amygdala and hippocampus), the lateral temporal cortex, and the brain stem in orphans compared to the control group” (1295). That dysfunction occurred in the prefrontal cortex and hippocampus (involved in components (a), (c), (d), (e), and (f) of choice) and the amygdala (component (e)) further supports the notion that severely deprived persons are at risk

for choice. The second study indicates a possible reason for the adoptees continued difficulties with social attachments. Even after approximately three years in the adoptive homes, many children exhibited difficulties in “establishing social bonds and regulating social behavior” (Fries et al 17237); symptoms included insecure attachment with the adoptive parents, difficulty establishing friendships, indiscriminate friendliness, and willingness to wander off with strangers (17237). Recall from Wexler’s success story that emotional stability and the ability to self-regulate (factors that are important for components (a), (c), (d), (e), and (f)) are dependent upon and established through a person’s initial bond with a responsive caregiver. Obviously, responsive caregiving is something that these adoptees lacked in their early years. Researchers found the Romanian adoptees to be deficient in two neuropeptides (vasopressin and oxytocin) that are “critical in the establishment of social bonds and regulation of emotional behaviors” (17237). Researchers postulated that the deficiency in the neuropeptides both resulted from neglect in the institution and partially explains the persistent social and emotional difficulties of the children (17237). Moreover, the children in these three studies are lucky in the sense that they were removed from the neglectful environment at a relatively young age; but they are few in number when compared to the some 100,000 who grew up in the institutions. I could find no systematic study of those who were not adopted. Anecdotal evidence indicates that some have received help from charitable organizations; others apparently live on the streets.

The Romanian orphans offer a glimpse into the effect of deprivation on young children, but, as Wexler points out, even adults react negatively to sensory deprivation. Wexler considers multiple studies in which adults volunteered to undergo various levels of sensory deprivation for stipulated durations. After only one hour, most subjects began to complain that the experience was unpleasant (Wexler 76); after 72 hours, participants reported seeing lights and shapes, as well as “objects, people, or animals” (80). Moreover, following the deprivation, researchers found the subjects “performance on more complex vigilance and cognitive tasks” to be impaired (80). Thus, while the developing brain requires stimulation for growth, integrity, and functional operation, the adult brain needs input in order to function properly (5).

I turn now to a study regarding sensory enrichment. This longitudinal study undertaken in the early 1970s, was intended to test whether “systematic, high-quality early education” could either prevent or reduce the “cumulative developmental toll experienced by socially defined high-risk children” (Ramey and Ramey 478). According to Craig T. Ramey and Sharon L. Ramey, children, who are at risk for developmental delays that are associated with high-risk socio-economic backgrounds, tend both to enter primary school less prepared and to experience more difficulties with school performance. Children who do not have a home environment that fosters learning experiences in the children’s early years “are likely to start kindergarten approximately 2 (or more) years behind their agemates” who come from more advantaged environments (475). Ramey and Ramey explain that developmentally

delayed children do benefit from attending first-rate kindergartens; however, they are “unlikely to be able to advance a full 33 developmental months in only 9 calendar months—that is, an amount sufficient to close the achievement gap” (476). In fact, since these disadvantaged children spend evenings, weekends, and summers in high-risk environments, by the end of second grade, they are more likely to be 3.5 developmental years behind their more advantaged classmates (476-477). *The original developmental delay becomes amplified rather than diminished!* These students then are “those most likely to become inattentive, disruptive, or withdrawn” (473); later, they are more likely “to engage in irresponsible, dangerous, and illegal behaviors” and are less likely to finish high school (473). Moreover, the phenomenon is not isolated. Ramey and Ramey are concerned because children “with major delays in language and basic academic skills . . . attend schools in every state; they are not concentrated in only a few large urban school districts or in desperately poor rural districts” (472).

The study involved “111 children in North Carolina”, all of whom were from low socio-economic backgrounds (Ramey and Ramey 478). All families had low income (“below 50% of the federal poverty line”); the mothers had low levels of educational and intellectual attainment (“about 10 years of education[,] . . . with an average IQ near 80”); and about 75% of the parents were unemployed and single (478). In order to isolate the effects of enrichment program, children in both the control and the experimental groups received adequate nutrition and “free or reduced-cost medical care throughout the first five years of life” (478). Families received

social services such as referrals for housing assistance, job training, and mental health problems. (478). Children in the experimental group were enrolled in the (“full-day . . . , five days per week, . . . 50 weeks per year”) enrichment program by age 6 months, which they attended until kindergarten (478). The program sought to emphasize (1) encouraging the growth of the children’s exploratory behaviors, (2) mentoring their basic intellectual skills, (3) celebrating their developmental advances, (4) rehearsing and extending their new skills, (5) protecting them from “inappropriate disapproval, teasing, and punishment”, (6) communicating with them responsively and richly, as well as (7) guiding and limiting their behavior (473). Now, when these goals are compared with activities described in Wexler’s success story, many similarities are apparent. The teachers in the program sought to create a learning environment in such a way that the children would develop the emotional stability, the self-regulatory processes, and the cognitive and motor functions that are necessary for components (a), (c), (d), (e), and (f) of choice. Much like Wexler’s instrumental caregiver, the teachers’ activities were aimed to have an impact upon many of the cognitive, social and emotional processes that are involved in choice.

The results of the experiment clearly indicate the importance of sensory enrichment and nurture on intellectual attainment and the capacity for choice. At the beginning of the program, all children (including those in the control group) performed similarly and within normal range on cognitive testing (Ramey and Ramey 480). However, from that point forward, “there was a precipitous decline in the control-group” performance, such that by 18 months of age, the children in this group

“were performing at the low end of the normal range” (480). At four years of age, only 45% of children in the control group had IQ test scores in the normal range, whereas “over 95% of the children in the treatment group [were] in the normal range of cognitive abilities at all tested ages” (481). Throughout the preschool period, “the treatment group averaged approximately 14 IQ points higher than the control group” (480). Researchers followed the children throughout the years in public schooling and into early adulthood. The experimental group continued to significantly out score the control group in math and reading; by the time the children were 15, only 12% of the experimental group, as opposed to nearly half of the control group (48%), were enrolled in special education classes (486). In early adulthood (age 21), 70% of the experimental group, in contrast to 40% of the control group, held skilled jobs or were enrolled in college (486). The implications for the development of the capacity for choice in this study are clear. Previous studies in the U.S. have demonstrated that maternal education and intellectual attainment level is strongly correlated with a child’s cognitive ability level (482). That is, children of mothers with less than a high school degree perform least well on cognitive testing (and have an “average IQ [of] around 85—the same average that appears in almost all inner-city schools throughout the United States”), while children of mothers who have completed high school, some college, and finally four years of college perform incrementally higher (482). Given that the average IQ score of the mothers in this study was around 80 and that most of them had not finished high school, the tentative positive correlation between IQ scores and a capacity for choice implies that these children were all greatly at risk

with regard to choice. The outcomes for the control group—the lower IQ, reading, and math scores—bore this out. The intellectual attainment of the experimental group, on the other hand, was greatly enhanced; and, given the fact that the study was controlled, one can be quite sure that it was the enriched environment and the intensive attention that made the difference for the young people in the experimental group.

Two additional adoption studies, when considered in conjunction with the enrichment study above, shed further light on the issue of environmental enrichment. Both of these studies deal with the association of socio-economic status (SES) with the IQ scores of adoptees; and since SES may negatively influence many factors—such as the quality (or in some cases, quantity) of nutrition, healthcare, schooling, environment, and disposable income—these two adoption studies do not isolate the effect of environmental enrichment. However, this is not a great concern for my purpose for two reasons: first, because the effect of an enriched environment is certainly part of what is meant by improved or higher SES, and, second, because the other factors mentioned above are directly related to the other preconditions of choice. If IQ is positively correlated with capacity for choice and any of these factors impact what these two have in common (that is, working- and long-term memory and conscious manipulation of information), then these factors are relevant to choice.

The first study was concerned with the testing outcomes for children in four different scenarios: (1) those born into a low SES and adopted into a high SES, (2) those born into a low SES and adopted into a low SES, (3) those born into a high SES

and adopted into a high SES, (4) and those born into a high SES and adopted into a low SES. The children were tested at about 14 years of age (Capron and Duyme 553). The study demonstrated that the quality of the environment (defined by the parents' SES) made a significant difference in the IQ scores of the children (553). Those in group (3) scored highest (average score: 119.6; range: 99-136), then group (4) (average: 107.5; range: 91-124), group (1) (average: 103.6; range: 91-125), and, lastly, group (2) (average 92.4; range: 68-116) (Capron and Duyme 553). If one considers the range of IQ scores for group (2), it becomes apparent that being born into and raised within a low SES can in itself put one at risk for choice. Given that those in group (1) scored, on average, some 11 points higher than those in group (2) (children who began life in a similar situation), it demonstrates that the factors included in the notion of SES have a substantial influence on choice. Moreover, consider the drop in IQ that is associated with beginning life in a high SES and being adopted into a low one. While either pre-natal or genetic factors do appear to make a difference, the study demonstrates that "improvement in performance is clearly caused by change—low SES versus high SES—in the postnatal environment" (553).

The last study I will discuss regarding enrichment also concerns the effect of the adoptive parents' SES on the adoptees. The children in this study experienced abuse or neglect by their biological and/or foster parents during their early years and had been placed in multiple foster families and/or institutions before being adopted between ages 4 and 6 (Duyme et al 8791). Most of the biological mothers had experienced social disadvantages, such as single parenthood, joblessness, and

homelessness (8791). Prior to adoption, authorities tested the IQs of the children and they scored within the range of greater than 60 and less than 86 (8791). The adoptive parents were unaware of the children's IQs prior to adoption (8791). For the study, the adoptive parents were divided into three socio-economic groups (low, medium, and high SES) according to the adoptive father's occupation (8791). Results of IQ testing on the adopted children at age 14 showed that the average IQ gain for all of the children included in the study was 13.9 points; however, the SES of the parents was shown to make an important difference (8791). The children who were adopted into a low SES gained on average 7.7 points, while those adopted into middle and upper SES gained 15.8 and 19.5 points, respectively (8791). Since the average score prior to adoption was 77.6, the children who were adopted into a low SES would still score in the borderline range. Those who were placed into high SES situations scored roughly average. If one considers then the positive correlation between IQ and choice, while all of the children were originally at risk with regard to developing a capacity for choice, those who were adopted into a low SES (presumably, a less enriched environment when compared with the types of things that would more than likely be available to those in a high SES) continued to be at risk. Those fortunate enough to enter the more enriched (high SES) environment fared much better with regard to IQ and thus likely fared better with regard to a capacity for choice as well.

All of these studies—regarding deprivation, enrichment, and scenarios in between—demonstrate that sensory stimulation and nurture are preconditions of choice. Deprived circumstances, as I have discussed, fail to foster choice; over

pruning, smaller brain size, and/or impairment with regard to cognitive, emotional, or social functions significantly reduce the likelihood that a person will develop the requisite neural processes. Enriched environments, on the other hand, develop and enhance these same processes. Because controlled studies on humans are impossible, scientists cannot claim to know the precise impact of one type or degree of deprivation when compared with another. It is reasonable to suppose that effects show up on a continuum in which some contexts promote the neural processes of choice, while those at the other end do not. Numerous other possibilities exist in between. Presumably there is a threshold above which at least a minimal capacity for choice is enabled. Given the state of the research, this threshold will not be established with precision herein. With regard to IQ scores and their positive correlation with choice, the threshold would likely be above scores that are included in the borderline range. Adequate environments would then foster IQ scores that are above this cutoff.

## **2.6: Precondition—Education**

We are free only if we know, and so in proportion to our knowledge. There is no freedom without choice, and there is no choice without knowledge,—or none that is not illusory. Implicit, therefore, in the very notion of liberty is the liberty of the mind to absorb and to beget (Justice Benjamin Cardozo cited in Kumar 239).

Wexler argues that education is “most appropriately seen as a human extension of play” (134); and, although if one took a poll of middle-school students in the U.S. they would likely beg to differ with Wexler’s position, education is most certainly an extension of the process of sensory stimulation and nurture that begins,

for many, in infancy. Education is a precondition of choice because, if it is done well, it further develops the neural processes of choice and provides content for one's deliberations. In this section, I will discuss, first, what type of education is sufficient to enable one's capacity for choice, and, second, one factor that may often impede the process of education—that is, stress and its corresponding higher levels of cortisol. Other factors that may impede the process of education as well as the development and/or maintenance of the neural processes of choice—such as violence, malnourishment, lack of sleep, and lack of overall health, will be addressed in sections 2.7 through 2.10.

Recall the definition of choice. For component (a), a person must be able to entertain multiple, and often non-physically present, possibilities. For (c), (d), and (f), she must be able to perform complex mental manipulations. Now consider (b). Each person has a *subjective relation* to different possibilities in her environment. That is, in order to consider something as a possibility, she must have been exposed to it or to something similar enough to extrapolate from the non-identical case for the present application, she must know at least some aspects of it or know how to find out about its aspects, and she must have an understanding that this possibility applies to her. That is, she needs content which applies to her own case.

But there is also the issue of *novelty*. Recall, from section 2.2, that action may be facilitated by both “bottom-up” processes—neurological sources of activity that are either (1) “purely physiological” or (2) “physiological sources mediated by conditioned associations” (i.e., learning) (Deacon 434)—and “top-down” processes—

that is, “end-directed behaviors” (435)—that are a confluence of the many cognitive, social, and emotional processes that make up a capacity for choice. Now, not many activities, and certainly none that enable a person to fulfill particular non-trivial interests (like getting that important job, writing a dissertation, or understanding a person from another culture), can be carried out on the basis of (1). (2) is a more interesting case; these sources of behavior enable one to deal with what one has specifically already learned—that is, (2) allows one to do precisely what one has been *conditioned* to do. As a source of behavior then, (2) is useful if one’s environment is perfectly stable, if it contains no change or novelty. It might be, in fact, all one would need if one lived in, say, a traditional society that had no contact with the outside world (although novelty, perhaps in the form of famine or floods, could still occur). But if history is an indication, as soon as contact with people from other societies occurs, change and, thus, novelty appear and must be dealt with if one will be able to fulfill particular non-trivial interests. Since there likely is no such untouched society and since, even if there were, the rest of us deal with novelty (changing environments) all the time, the processes that comprehend and manage novelty are quite important. The capacity for choice, as a top-down function, is, in large part, a personal capacity to recognize, react to, and deal with novelty either in a way that is largely in keeping with one’s prior background or in a way that makes some sort of a break with previous experience. It is always a confrontation with novelty that calls the explicit or top-down functions of choice into play.

And it is on the basis of experience—and to a large extent on the basis of the content one learned through the process of education—that one comes to recognize novelty or not. If a person is uneducated, it is possible that (i) she will take everything to be novel or (ii) that she will miss novelty when confronted with it. (i) is most likely to occur with children. One might argue for instance that it is partly the constant confrontation with novelty that structures the child’s developing brain (an enriched environment offers exposure to a variety of new (novel) experiences) and prepares it for future novelty, while a deprived environment fails to do so. (ii) is more likely in adulthood (this point is defended further in section 2.11). After one’s initial developmental period (early years, grade school, and high school), one is much more likely to miss novelty when exposed, especially if one has received an inadequate education and is unaware of it. Recall the example given in Chapter 1. I once had a chance to engage with a seemingly bright, but under-educated, woman in a conversation about a then current political race. Some twelve years prior, she had graduated from an inner city high school and had more recently completed training in cosmetology. When I suggested to her that I had heard on the news that a certain candidate was “ahead in the polls”, the woman questioned me: “Oh, you mean he gets to vote first.” The woman did not recognize that I was using, what was to her, a novel meaning of the word poll, because she lacked information—that is, content—about campaign polling activities. She had an inadequate subjective relation to the information at hand; she had not had exposure, and neither was she able to extrapolate from a non-identical case. Since her exposure to relatively mundane

information about the political process in her own country was limited and since she was unable to extrapolate from context or other known information, it is reasonable to assume that her experience and education had left her at risk for choice.

Another scenario is possible with regard to a person's subjective relation to possibilities and information around her. A person may be taught that certain possibilities, while existent and applicable to some others, do not apply to her. One might argue that this is the case with many people around the world. Many girls, for instance, are taught only enough to complete household tasks when the cultural intersubjective conceptual understanding holds that women ought to work primarily or exclusively in the home. Another example would be the case in which children are taught religious doctrine that do not respect person's as being capable of choice. Religious doctrines may encourage women to believe that they ought to be subservient to men, that a woman's word is worth half as much as a man's, that a woman ought only to get half of what a man gets in inheritance, and that women ought to accept such decrees without question. These notions, if internalized, may restrict a woman's choices in that such notions may create for her a subjective relation to some possibilities that, for practical purposes, puts them out of reach. She will likely not find possibilities that are contrary to these doctrines applicable to her case.

Therefore, if education will be adequate to help facilitate a capacity for choice, it will be broad-based. It will include exercises that further develop the neural processes involved in choice. In addition to the basics (like reading and math), it will

include, for instance, practice at problem solving and separating off irrelevant information. It will develop attention span, as well as memory, planning, and strategizing. However, if education will adequately enable a capacity for choice, it will also impart at least a basic understanding of the knowledge (content) that human beings have, over the centuries, cumulatively amassed. Each person does not have to learn all things in depth. For instance, the young woman in the example above does not have to know all the intricate details of every obscure mathematical theorem; but in order to understand what is novel, both with regard to her situation and the situation in the world, she must know that such theorems exist and how to find out more about them if she needs/wants to do so. She is certainly going to have to know about the meanings of different words in her own language. One does not have to know how to speak and read every language; but if a person lives in a traditional society, she will be at a huge disadvantage in recognizing novelty (and hence be at a disadvantage for enacting her capacity for choice), if she is not literate and fluent in the language of the people in the non-traditional society with whom her society has contact. These people impact her world. She must know a bit of what they are about, as well as how to read their writings and communicate with them. These issues are important because, according to the most recent UNESCO statistics, about “one in five adults” is illiterate, and two-thirds of these are women, “while 72 million children are out-of-school” (UNESCO). Moreover, an adequate education must include the notion that all persons are choosers (or at least potential choosers). It will

teach children to respect themselves and others in this regard, in spite of the fact that cultural practices or religious doctrines may contradict this message.

One last condition must also be met. Consider the information regarding the preconditions of choice that has been presented thus far. A child needs micronutrients, stimulation in an enriched environment, nurture, and an education if she will develop the capacity for choice. In every case, others provide these things for her. Recall also that parents from disadvantaged environments tend to reproduce these same environments for their children. If the capacity for choice will be promoted, educators must address how it is that choice is enabled for another person. For instance, that many women of child bearing age in the U.S. are unaware of their potential children's folate requirements sets up a scenario in which choice is likely not to be fostered. Their educators have done them a disservice in not imparting this information. As I will establish in the following sections, a large portion of the world's people live in conditions that are insufficient to provide the preconditions of choice for their children and for themselves (recall that adults require on going attainment of the preconditions). Education should at least provide for them the information regarding what they should shoot for should their conditions improve.

I turn now to a discussion of stress, one of the many factors that can get in the way of education, in particular, and choice, in general. Under stressful conditions, humans (and many other animals) produce a stress hormone called cortisol. Cortisol is useful in some situations and for short periods of time; it, for instance, is part of the body's flight or fight reaction that is necessary for self preservation. A problem

occurs, however, when stress is intense or chronic. The studies discussed below help to illuminate this problem.

Two studies indicate that enduring intense or chronic stress may significantly affect memory function—thus, stress has a negative influence upon many of the components of choice. Research on animals has shown that the high levels of cortisol that accompanies intense stress results in the animals having fewer connections among neurons, “loss of neurons”, as well as decreased neuronal regeneration in a section of the hippocampus (Bremner 798). This is in keeping with human studies that have demonstrated that people suffering from posttraumatic stress disorder (PTSD) have deficits or alterations in both declarative memory (remembering facts, lists, and so on) and nondeclarative memory (“memory that cannot be willfully brought up into the conscious mind, including motor memory such as how to ride a bicycle”) (Bremner 798).

J. Douglas Bremner conducted the two studies mentioned above. The first involved Vietnam combat veterans with PTSD and the second concerned adults who had been physically or sexually abused during childhood (800-01). Compared to the control group, the veterans were found to have “deficits in short-term verbal memory”, paragraph recall, “immediate and delayed recall,” and retention (800). Moreover, “an 8% decrease in MRI-based measurement of right hippocampal volume” was also found (800); that is, these subjects had suffered a physical reduction in the memory network of the brain. The childhood abuse victims were found to have “deficits in immediate and delayed recall and . . . retention, while

problems with their “short-term memory . . . were significantly correlated” with the previously suffered level of abuse (800). Tests demonstrated that these abuse victims had a “12% reduction in left hippocampal volume” when compared to controls (801). Since the hippocampus is one of the only brain regions that continues to experience neurogenesis (production of neurons), Bremner believes the difference in the location and extent of damage between these two groups may be due to the developmental stage in which the insult to the hippocampus occurred (801). Other types of stress (that are at least seemingly less traumatic) are associated with hippocampus impairment as well. For instance, high levels of cortisol and hippocampal atrophy has also been noted in patients with major depression (801).

The studies discussed above indicate that people who have undergone extreme stress, resulting in PTSD, have multiple memory deficits. This puts them at risk for nearly all of the components of choice. However, another study demonstrated that cortisone (a substance that is quickly transformed into cortisol) administered to normal and healthy subjects without PTSD interferes with some memory functions as well. The subjects viewed a list of German nouns for the explicated purpose of freely recalling as many words as possible 24 hours later (de Quervain et al 313). At the time of the free recall testing, they were given either 25 mg of cortisone or a placebo (313). The same process was completed again two weeks later (with a different set of German words) with subjects receiving whichever treatment they did not receive in the earlier test (313). The results showed significant impairment in free recall for subjects who received cortisol when compared to their own scores after receiving the

placebo (313). The study showed then that pharmacologically induced acute stress impairs “retrieval of declarative long-term memory” (313). Since the body produces cortisol in response to stress, presumably other (non-pharmacologically induced) stressful situations—such as “examinations, job interviews, combat[, or] . . . courtroom testimony” (314)—may produce similar results.

The findings of these two studies (above) are quite relevant then to everyday life and its many stressors. Bremner points out, for instance, that many inner cities in the U.S. are “plagued by an epidemic of urban violence that affects our nation’s children on a daily basis” (802). Since the hippocampus is both very active during the process of learning and negatively influenced by stress, the stress incurred as a result of this daily violence likely adversely affects these children’s chances of receiving an adequate education. The same types of worries would be applicable to children (and adults) who live or have been raised in war zones or areas of violent conflict. A study showed, for instance, that “Lebanese teenagers with PTSD related to exposure to bombings and violence in civil war had deficits in academic achievement” when compared to subjects in control groups (Bremner 802). And, of course, either memory or educational deficits (or both) greatly put one at risk with regard to developing a capacity for choice. Educational psychologist, Kathleen Cranley Gallagher, is concerned because more mundane stressors, such as chronic or frequent hunger, may increase cortisol levels in school children, leading to problems with memory, self-regulation and “controlling negative emotions and behavior” in the school environment (15). Other researchers point out that the “life conditions . . .

associated with low socioeconomic status . . . and differences in emotional support in the home” create a stress response in children that explain “a significant portion of the variance in children’s verbal, reading, and math skills” even when other factors (such as maternal education, health, and nutrition) are taken into account (Nobel et al 78). Moreover, high cortisol levels are often found in children whose mothers are both depressed and of low socioeconomic status (79-80), and more intense stressors, such as violent home environments, are associated with lower IQ test scores in children (80).

Education is an important precondition of choice. Without it, the neural processes of choice may not fully develop and persons may lack the content that is necessary for their deliberations. If choice will be enabled, children must be taught both that people are choosers and the ways in which choice is enabled. And stress, one of many possible impediments to education, needs to be eliminated if children will receive an adequate education.

### **2.7: Precondition—Absence of Violence**

In the previous section, I considered the effect that high levels of cortisol (due to intense or chronic stress) may have on human memory. Bremner’s studies indicate that *violence*—in the form of combat or the experience of abuse—is implicated in this type of offense to choice. This section will deal more directly with the phenomenon of violence, because research studies have exposed three interrelated ways in which it has a negative impact on choice: (i) exposure to violence is strongly associated with decreased activity in a region of the prefrontal cortex, making such exposure a

specific affront to the witness' capacity for choice; (ii) persons who witness violent acts become more prone toward carrying out violent acts in the future, creating more offenses to choice for themselves, victims, and witnesses; and (iii) other offenses to choice (such as, poor attachment to caregivers, punitive parenting techniques, and exposure to lead in childhood) also often foster situations in which violence becomes more probable. (i) and (ii) relate primarily to reactive aggression (also called impulsive or affective aggression)—that is, violence that is “initiated without regard for any potential goal” (Blair 199). In general, persons are conditioned toward reactive aggression by extensively viewing violence or by developing/existing within “harsh, threatening and unpredictable” environments (Qouta et al 232); though, as I will explain, even short exposures to virtual violence (i.e., violent media) have been shown to have a negative impact on the neural processes of choice. (iii) concerns, to varying degrees, both reactive and instrumental aggression. Instrumental aggression is violence enacted purposefully or “instrumentally to achieve a specific desired goal” (Blair 199); it tends to develop in situations in which there is a breakdown in moral socialization (202), where a person is “encouraged to use aggression as a way of achieving his or her goals” (Qouta et al 232). I will discuss these three issues in turn.

Regarding (i), a recent clinical study indicates that exposure to violence is associated with decreased activity in the lateral prefrontal region of the brain, specifically the right lateral orbitofrontal cortex (ItOFC). This area is responsible for managing “context-dependent regulation of behavior” (Kelly et al 4), including cases in which a person needs to “suppress or change” her behavior “based on changing

external cues” in the social environment; it is also involved in the detection of one’s own or another’s social norm violation (4) and—in conjunction with the “amygdala, anterior cingulate cortex,” and other interconnected regions—in regulation of emotion and reactive aggression (Davidson et al 591; see also Kelly et al 4-5). As such, this area is important for components (d) and (e) of choice.

Researchers utilized fMRI technology to test the impact of “violent, fearful, or neutral” clips from “mainstream commercial motion pictures”—either depicting realistic physical violence (such as, “shootings, stabbings, and other kinds of physical assault”), “strong facial expressions of terror without the presence of an explicit aggressor or threat”, or “non-aggressive physical interactions, such as dances or sports”, respectively—on subjects who viewed the media in a controlled clinical setting (Kelly et al 1). Results of the study indicate that the subjects experienced three neural responses to the violent context that have a negative impact with regard to choice. These responses did not occur with regard to the fearful or neutral contexts. Specifically, repeated exposure to the violent stimuli was accompanied by: first, an attenuation of activity within the ItOFC, indicating impaired top-down or explicit control in suppressing, changing, regulating, or inhibiting behavior according to context-dependent external social or environmental cues; second, a “decrease in the functional interaction between [ItOFC] and the amygdala”, indicating impaired emotional control and regulation; and, third, an increased response in the neural “network downstream of the amygdala” (Kelly et al 1) that is related to motor planning and “initiation of actions” (3-4), indicating that one who witnesses violence

has increased tendency to act without the inhibitory influence of the ItOFC. The offense to choice is then clear. The experience of violence puts one at risk for components (d) and (e) of choice because witnessing violence initiates decreased activity in the prefrontal cortex, decreased communication between this region and the emotional network of the brain, and an increase in an area that is responsible for action undertaken without the supervisory control of the prefrontal cortex. Violence encourages a neural response that circumvents action based on explicit neural functions and encourages activity based on *conditioned* or *implicit* processes. It promotes action in the absence of the neural processes of choice.

Regarding (ii), research also indicates that persons who witness and/or experience violence become more prone toward carrying out violent acts in the future; this, in turn, creates more offenses to choice for the one enacting the violence, the victims, and other witnesses. In general, viewing violence in a virtual or actual context appears to promote reactive aggression; however, one study that focused on Palestinian children who witnessed severe military violence and destruction indicates that the children also became prone toward instrumental aggression and aggression enjoyment. I will consider first the impact of media violence and then that of actual violence.

A recent survey of the research regarding violent media and aggression in viewers/users confirms a positive link between the two no matter what type of research method was employed (Anderson and Bushman 2377). The effects of such media on behavior is not minor; “they are larger than the effects of calcium intake on

bone mass or of lead exposure on IQ in children” (2377). Of course, it is unlikely that violence has a single cause; researchers tend to “view violence as the end result of multiple risk factors that may include a biological vulnerability—either genetic or created in the prenatal environment—that may be brought out or reinforced by the social environment” (Holden 580). Even in chronically violent individuals, at least half of the risk for violence can be attributed to environmental factors (580).

Environmental risk factors include (but need not be limited to) exposure to virtual or actual violence (in the home or neighborhood), childhood neglect, low socioeconomic status and/or parental education level, some psychiatric disorders, and low IQ (Huesmann S6; Moretti et al 385; Johnson et al 2469; Holden 580; Copeland et al 1668). As such, many of the risk factors for violence are the same as many of the risk factors to choice in general; however, since witnessing violence is both an offense to choice and a significant risk factor for further violent behavior, the phenomenon deserves prominent consideration.

The study cited above (with regard to point (i)) indicated that witnessing media violence is accompanied by a threefold offense to choice; however, since the neural responses that accompany this offense have, in previous studies, been “associated with greater reactive aggressive tendencies,” researchers correlated the subjects’ “right ItOFC response magnitudes with” answers on an aggression questionnaire (Kelly et al 3). Results demonstrated that less activity in the right ItOFC was “characteristic of those individuals with greater reactive aggressive tendencies” (3). This result “was unique to the violent condition”; that is, the correlation did not

hold regarding subjects' reactions to fearful or neutral media (3). Even for "less aggressive subjects," activity in the right ItOFC diminished until it "became comparable to [that] of the more aggressive subjects, whose responses were consistently small" (3). Of course, exposure to violent media is likely not "a sufficient catalyst for the emergence of criminal aggression" (Kelly et al 5; otherwise, given the level of violence that is common in American mainstream media, most of us would be violent criminals); however, when persons have been conditioned toward violence via multiple risk factors, the impact of media violence is sufficient to be significant among them.

Other studies confirm that exposure to violent media increases the likelihood of violent behavior. For instance, "early habitual exposure to media violence in middle-childhood predicts increased aggressiveness 1 year, 3 years, 10 years, 15 years, and 22 years later in adulthood, even controlling for early aggressiveness" (Huesmann S10).<sup>17</sup> Researchers studied a group of children for three years during middle childhood; the results of a follow-up 15 years later indicated that children who ranked in the highest quartile for viewing violent media during middle childhood carried out considerably more violent acts in adulthood than those who had viewed less violence:

11% of the males had been convicted of a crime (compared with 3% for other males), 42% had "pushed, grabbed, or shoved their spouse" in the past year (compared with 22% of other males), and 69% had

---

<sup>17</sup> Since violent behavior during childhood "is a much weaker predictor of higher subsequent viewing of violence", it is very unlikely that the positive association "between aggression and violent media use was primarily due to aggressive children turning to watching more violence" (Huesmann S10).

“shoved a person” when made angry in the past year (compared with 50% of other males). For females, 39% of the high-violence viewers had “thrown something at their spouse” in the past year (compared with 17% of the other females), and 17% had “punched, beaten, or choked” another adult when angry in the past year (compared with 4% of other females) (S10).

Other studies regarding media and aggression have yielded similar results (see Johnson et al). Moreover, the counterpart of virtual violence—that is, actual violence—has significant impact as well.

Empirical research indicates that witnessing actual violence encourages reactive aggression and possibly instrumental aggression; just as viewing violence in a virtual format tends to increase aggression, so does “growing up in an environment filled with real violence” (Huesmann S6). A study among British males incarcerated for violent offenses indicated that childhood conduct disorder, interparental tension, and interparental violence “were each associated with adult social violence, whereas the strongest predictors of adult partner violence were . . . childhood physical abuse, interparental violence and family violence” (Hill and Nathan 334). Another study found that, girls who witness their mothers’ aggression toward the latter’s intimate partners are “significantly more aggressive toward friends”, as are boys who witness their fathers’ aggression in a domestic setting (Moretti et al 385). When either sex child observes mother’s violence toward her partner, the former also exhibits “higher levels of aggression toward their romantic partners” (385). Other studies demonstrate the unfortunate impact of witnessing or being victimized by military violence. Researchers found that Croatian preschoolers who observed warfare and atrocities

demonstrated no discernable increase in aggressive behavior during the preschool years; however, at a 10 year follow-up, “the children and adolescents exposed to severe war trauma in preschool age showed higher level of aggressive behavior than less exposed” children (Qouta et al 232). Another study found increased aggression “among Israeli preschoolers . . . who witnessed [a] terrorist attack” (232).

Two studies focused on the effects of war and exposure to violence on Palestinian children. The first (study A) was conducted during a period of relative calm in 1997 and the second (study B) was carried out during a period of intense violence and unrest in 2005. Study A found that “exposure to severe military violence was associated with higher levels of aggressive and antisocial behavior” for children of all age groups (Qouta et al 239-40). Younger children demonstrated a higher level of aggression than older children when they experienced direct victimization (236). This study also found that “supportive and non-punitive parenting practices” mitigated against a child’s tendency toward aggression, even if the child witnessed violence or was severely victimized (240; this point was not addressed in study B). In study B, children who witnessed severe military violence not only exhibited a greater tendency toward reactive violence, but also increased levels of proactive violence and aggression enjoyment (240); and, interestingly, direct victimization “was not associated significantly with any of the three child aggression measures” (239). Instead, and this result held for both studies, “it was the witnessing of atrocities toward others that was decisive for child aggression” rather than victimization (241).

The argument with regard to (i) is that a person who observes virtual violence (witness 1 or W1) experiences an offense to her personal capacity for choice. Due to obvious ethical concerns, the impact of real or actual violence cannot be tested in a clinical setting; thus, it is not possible to determine whether the same offenses to the neural capacity for choice are present with actual violence. Chances are, however, that they do occur, given that virtual experience is not likely to have more influence than actual experience; the reverse makes more intuitive sense. Moreover, it appears that witnessing violence is the deciding factor and this is present in both the virtual and actual contexts.

The point with regard to (ii) is that when W1 observes violence, W1 is encouraged to enact violent behavior in other situations; thus, W1 is more likely to create an offense to choice for others (i.e., W2, W3, W4, and so on). But the tendency to act violently in itself points to the fact that a personal offense to neural processes of choice as occurred. Consider. The issue being discussed here is not a tendency to act aggressively only when a threat is present; an aggressive response in the face of a violent threat indicates that the organism is functioning normally. Rather, the present issue is that “experiments unambiguously show” that witnessing violence in a virtual context raises the risk of aggressive behavior immediately afterward—for “preschoolers, elementary school children, high school children, college students, and adults” (Huesmann S10)—no matter whether such action is conducive to the environmental context or not. And there is ample evidence that exposure in childhood increases the risk of violence in all contexts during adulthood. But aggression that

does not serve to protect the organism is indicative of “dysfunctional emotion regulation” (Qouta et al 242); as such, it indicates that an offense to component (e) of choice is present.

Neither is the issue solely that children (and to some extent, all people) imitate what they see. This is of course true, since imitation exerts a powerful force upon the structure and functionality of the brain (see section 2.5) and children have a “tendency to mimic whomever they observe” (Huesmann S8). However, there are also two more extensive worries. First, by observing “family, peers, community, and mass media” throughout childhood, the child develops social scripts that will later “automatically control social behavior once they are well learned” (S11) and schemas for understanding the world (S8). When violence becomes a conditioned part of the child’s script, violent behaviors may be “imitated long after they are observed” (S8); moreover, “extensive observation of violence has been shown to bias children’s world schemas toward attributing hostility to others’ actions” (S8) whether or not these actions are in fact hostile. Secondly, after repeated exposure to violent media, negative emotions, that are at first automatically experienced by the viewer, “decline in intensity” (S8). The “child becomes ‘desensitized’” toward violence and “can think about and plan proactive aggressive acts without experiencing negative affect” (such as, increased heart rate and perspiration and emotional discomfort) (S8). Violence can become a normal part of the person’s social scripts and schemas that can be acted on without personal distress. The point is that viewing violence *conditions* a child toward violence; given her *implicit* neural circuitry, she will have a tendency toward enacting

aggressive behavior. Since kids in the U.S. spend roughly to 3 to 4 hours a day watching television, with about 60% of programming containing violence (40% heavy violence) (S8-S9) and since the majority of kids in the U.S. play video games and “94% of games rated (by the video game industry) as appropriate for teens are described as containing violence” (S9), many young people in the U.S. may be at risk for components (d) and (e) of choice.

Regarding (iii), other types of offenses to choice may also foster violence in individuals who experience the offense. And, as is the case with point (ii), these individuals may then undertake aggressive actions that offend choice for witnesses or those subjected to the aggression. My intent here is not to list all possible offenses to choice that foster aggression; rather, I will consider three examples: the effect of (x) poor attachment to caregiver(s) and/or a breakdown in moral socialization, (y) punitive and/or aggressive caregiving, and (z) exposure to lead.

Researchers have linked the first of these offenses to choice, (x) poor attachment to caregiver(s) and/or a breakdown in moral socialization, to bullying behavior in children and adolescents. In section 2.5, I considered what I called a success story with regard to caregiving and choice. The story demonstrates the ways that caregiving has an effect upon whether a person will develop a capacity for choice and the Romanian orphans’ story illustrates what may happen in the stark absence of such instrumental caregiving. Other scenarios are also possible when the early interaction between child and caregiver are in some way inadequate. The instrumental caregiver helps to develop the structure and functionality of the infant/child’s brain,

including the supervisory controls and emotional stability. Recall that it is through consistent, calming, and repetitive interaction with one's caregiver that one begins to develop self-regulation and emotional stability (Wexler 199). These things are of course crucial aspects of choice; however, bullying behavior—that is, a certain type of instrumental aggression—may begin to develop in the child when there is an early deficiency in this type of interaction between a child and her caregiver. Studies show, for instance, that nearly two-thirds of bullies are insecurely attached to their caregivers (Monks et al 583; while roughly the same number of victims are securely attached (585)). Researchers postulate that “an insecure attachment profile may provide an individual with the initial motivation to be aggressive”, since those who suffer with insecure attachment “may behave particularly aggressively as a reflection of the internal working model of attachments” (583). Although a caregiver/child relationship in which the latter is poorly attached is possible under different circumstances, the outcome is extremely probable under conditions of neglect. This is relevant for many young people in the U.S., since, in 2006, approximately 581,000 children were victims of neglect and another 59,700 were victims of emotional or psychological abuse (U.S. Department of Health & Human Services iii). But early interactions with one's instrumental caregiver not only foster self-regulation and control, they also help the child develop the emotional stability in general and the social emotions, such as sympathy and empathy, in particular. However, male children, who bully frequently, “were found to be deficient in both affective and total

empathy” (Jolliffe and Farrington 547),<sup>18</sup> while those who bully violently demonstrated low “total empathy” (540). That is, research indicates that bullies tend to be adept at both theory of mind (the capacity to understand others’ mental states) and cognitive empathy (the capacity to understand others’ emotional states) (Gini 535 and 536). However, bullies tend to “disengage self-sanctions and justify the use of aggressive behaviors” (536) such that they either are not bothered by others’ distress or are deficient in the capacity to vicariously experience others’ emotions (Jolliffe and Farrington 540). Research suggests that instrumental aggression, such as bullying, is “related to a breakdown in moral socialization” (Blair 202). Either “there has been a lack of . . . formative learning experiences”—that is, learning not to harm others by “either personally committing . . . or viewing another commit . . . a moral transgression and then being ‘punished’ by the aversive response of the victim’s distress”—or the “neuro-cognitive architecture mediating moral socialization is dysfunctional” (202). In either case, the amygdala (part of the emotional network of the brain) is involved and one who is deficient with regard to empathy (or any emotion on the spectrum) is at risk with regard to component (e) of choice. Thus, while bullies do not appear to be significantly at risk for component (d)—that is, they appear to enjoy significant cognitive and social skills (Monks et al 573)—the research

---

<sup>18</sup> Empathy is generally defined as “an affective trait”—the capacity to “*experience* the emotions of another person”—a “cognitive ability”—the capacity to *understand* “the emotions of another person”—and as a combination of the two (Jolliffe and Farrington 540). Thus, when one is deficient in affective empathy, one is it not necessarily deficient in cognitive empathy as well.

indicates that some bullies—specifically, bullies who transgress frequently or violently, are deficient in empathy and are, as such, at risk for component (e).

As was noted with regard to point (ii), when a person has a tendency to behave aggressively, she will also have a tendency to offend others' capacities for choice. This is evidenced by the cognitive and emotional states of the victims of bullying as well as those of persons who alternate between bullying and victim behaviors (bully-victims). While bullies advocate more "normative beliefs that [are] . . . tolerant of antisocial behaviour" (Marini et al 559), indicating that they have developed social scripts and world schemas that include acceptance of aggression, victims are less inclined to do so. However, victims were much more inclined toward "difficulties related to anxiety, depression and self-esteem" (551), indicating that they too may be at risk for component (e) of choice. Moreover, while bully-victims share the victims' tendency toward depression, they may also experience an array of difficulties including:

internalizing problems, peer rejection, a relative lack of close friendships, greater acceptance of deviance, less supportive and involved parents, [and] less optimal temperament characteristics such as hyperactivity and negative emotionality and reactive aggression (552).

The offense to the victims' and bully-victims' capacities for choice, at the hands of the bully, is then clear.

The second and third offenses to choice, (y) punitive and/or aggressive caregiving and (z) exposure to lead, also create situations under which persons are conditioned toward aggression and violence. For instance in one study, caregiver

practices that included “punitive interactions”—such as, threatening and yelling—were associated with the child’s “oppositional, hyperactive, [and] aggressive” behavior as well as depression, while “physically aggressive” caregiving “specifically predicted child aggression” (Sheehan and Watson 245). Many other studies have also confirmed this association between “[a]ggressive behavior in children” and “harsh, physical punishment used as parental discipline” (245). The only discernable positive outcome of this type of caregiving is “immediate compliance by the child”; all other outcomes are negative (245).<sup>19</sup> Moreover, researchers have located a “reciprocal effect” between child aggression and aggressive discipline; that is, while the former has been shown to predict the latter, a use of the latter has also been shown to predict an increase in the former (253). But, as I have pointed out in the other cases, since children who are subject to punitive and/or aggressive caregiving have a greater tendency to enact violence against others and since witnessing (or experiencing) violence is a direct offense to the witnesses’ capacity for choice, the initial offense to choice tends to beget another.

A similar scenario exists with regard to exposure to lead during childhood. The absence of exposure to lead is clearly a pre-condition of choice, because lead exposure during childhood is associated “with volume loss in considerable portions of the prefrontal cortex,” specifically in the “ventrolateral prefrontal cortex . . . as well as the anterior cingulate cortex . . .” in adult male subjects (Cecil et al 0743-0744;

---

<sup>19</sup> Some research suggests that “aggressive discipline is used more frequently and is less harmful (at least in terms of subsequent child aggression) in minority (particularly African American) households” (Sheehan and Watson 253).

female subjects did not present with significant volume loss). “[W]hite matter degeneration and volume reduction in . . . gray matter” have been documented in adults exposed to lead in a work environment (Bellinger 0690). Lead exposure is also associated with impaired “general intellectual and executive function,” “attention deficit hyperactivity disorder,” impulsiveness, antisocial behavior, aggression, and violence (Cecil et al 0742-0745). Thus, since lead exposure is linked with decreased volume in the prefrontal cortex and impaired cognition and behavioral control, exposure puts one, particularly males, at risk for components (a), (c), (d), and (e) of choice.

However, as noted, exposure increases the risk of antisocial, aggressive, and violent behavior in the one exposed. One longitudinal study demonstrated that exposure to lead during childhood (determined by “blood lead concentrations” of 250 children that were sampled at select intervals from birth to six years of age) is “associated with higher rates of total arrests and/or arrests involving violence” (Wright et al 0732). Participants in the study were raised in areas of Cincinnati, Ohio in which housing was known to be contaminated with lead (0732). When the subject’s criminal records were examined in early adulthood (subjects were between 19 and 24 years of age), “[a]pproximately 55% of participants (62.8% of males, 36.3% of females) had at least one arrest” (0735). Of the 800 arrests that researchers

identified in the records, 108 or 14% “were for violent offenses” (0735).<sup>20</sup> Thus, in addition to putting persons at risk for choice, lead exposure during childhood increases the risk of antisocial, aggressive, and/or violent behavior in adulthood. Subsequently, those who witness or experience this violence are also put at risk for choice.

Thus, research demonstrates three interrelated ways in which violence negatively influences choice; that is, (i) exposure to violence is accompanied by a decrease in activity in the area of the prefrontal cortex that is responsible for changing behavior in context, detecting social norm violations, maintaining emotional stability, and suppressing reactive aggression, (ii) witnessing violence increases the risk of subsequent violent acts being perpetrated by the witness (creating additional offenses to choice), and (iii) other offenses to choice (such as, poor attachment to caregivers, punitive parenting techniques, and exposure to lead in childhood) also often foster situations in which violence becomes more probable. As such, the existence of violence both puts persons at risk for choice and at risk for violence; the absence of violence and the factors that promote it are then pre-conditions of choice.

## **2.8: Precondition—Adequate Nutrition**

In section 2.4, I discussed five micronutrients without which the neural processes of choice may not even get off the ground. In this section, I address the effects more generally of malnutrition and food insecurity. Worldwide some “146

---

<sup>20</sup> The other percentages were as follows: “90 (11%) involved theft or fraud, 216 (28%) involved drugs, 35 (5%) were for obstruction of justice, 211 (27%) were related to serious motor vehicle offenses, 35 (5%) were for disorderly conduct, and 82 (11%) other” (Wright et al 0735).

million children under five . . . are underweight” and undernourished (experience “insufficient food intake” to the point of hunger); they are short for their age, dangerously thin, and/or experience a deficiency in necessary micronutrients (Unicef, *Nutrition 5*). They are at great risk for cognitive and emotional deficits, disease, and death; hence, they are also greatly at risk with regard to developing a capacity for choice. Nearly three quarters of them reside in 10 countries: India, 57 million; Bangladesh, 8 million; Pakistan, 8 million; China, 7 million; Nigeria, 6 million; Ethiopia, 6 million; Indonesia, 6 million; Democratic Republic of the Congo, 3 million; Philippines, 3 million; and Vietnam, 2 million (Unicef, *Nutrition 5*). Of course, socioeconomic status makes a huge difference regarding who is subjected to hunger, because, “on average, children living in the poorest households are twice as likely to be underweight as children living in the richest households” (10). According to the most recent estimates, every year “undernutrition contributes to the deaths of about 5.6 million children under the age of five” (3).

During 2006 in the United States, 12.1 percent of the population—that is, 35,500,000 people—“lived in food-insecure households” (the heads of these households reported either uncertainty or inability regarding sufficient food acquisition); 12,600,000 of them were children, and 430,000 of these children resided in households ranked very low with regard to food security (Nord et al 15). Again, the trend in industrialized countries with regard to socioeconomic status (SES) and food security is clear. Studies consistently indicate that food availability and quality are

positively correlated with SES (Ricciuto and Tarasuk 186)—that is, people in the higher SES groups consume more nutritious food (194).

Consider then the effect of these nutritional deficiencies and disparities upon the capacity for choice. From the neurological perspective, severe malnutrition is associated with decreased myelination (Levitsky and Strupp 2214S) and decreased interconnectivity in the hippocampus (2215S). Recall that myelin surrounds and insulates axons (part of the neuron) which allows for faster conduction of impulses and signals. A decrease in myelin is important then for choice, since a myelinated axon transmits “information at considerably higher speeds than” those that are nonmyelinated (2214S). Given that presumably large amounts of information must be quickly processed during components (a), (c), (d), (e), and (f) of choice and given that memory is involved in each of these as well, the degree of myelination and hippocampus interconnectivity are certainly relevant.

Moreover, research has shown that severe malnutrition is also associated with testable deficits in cognitive capacity (Liu et al 598). One study involved 1,559 children (from Mauritius), 22.6% of whom were determined, according to four criteria (vitamin B2 or A deficiency, protein malnutrition, protein-energy malnutrition, or anemia), to be malnourished (Liu et al 594). The other 77.4% served as the control group (594). The children were given cognitive testing at ages 3 and 11. The study found the malnourished children had deficits in cognitive capacity at both ages and that the deficits largely remained constant over the 8 year span of the study (597). Moreover, at age 11, findings indicated the extent of the deficit was associated

with number of criteria manifested. For instance, IQ scores decreased (on average and when compared with the control group) 3.3 points if one criterion was present, 9.0 points for two, and 15.3 points when three (or more) were manifest (598). This was in spite of the fact that researchers controlled for 14 confounding factors, such as parental education level, marriage status, age, and health (597).

Another study demonstrated the positive impact of protein-energy supplementation on malnourished children. All of the children in the study, made up of two groups aged 12 months and aged 18 months, were malnourished (Pollitt et al S88). The children were given one of three nutritional supplements: supplement E was “a source of high energy and micronutrients”, M “was a source of low energy and micronutrients”, and S “was a source of low energy” (S81). The latter supplement functioned as the control. Those who received E among the 12 month old group “walked at an earlier age, had higher [cognitive] scores . . . and showed more mature social-cognitive and emotional regulator behaviors” (S80) (positively influencing components (a), (c), (d), (e), and (f)) when compared with those who received M or S). Those in the E group showed increased vocalizations and play behavior and decreased fussing (S89), which would better enable them to take advantage of whatever stimulation their environment has to offer. Results were similar for the 18 month old group, in that those who received E showed improved social cognition and better regulation of emotions (S80).

Mild to moderate malnutrition is also linked, though perhaps indirectly, with deficits in cognitive, social, and emotional processes. Since mild to moderate

malnutrition most often “covaries with a host of other developmental risk factors,”—such as, a higher risk for disease and illness, “inadequate psychosocial rearing” (a less enriched environment and interactivity with others), and environmental stressors, (Wachs 2246S)—it “appears to be a necessary but insufficient condition” for producing cognitive and behavioral deficits (2245S and 2247S). The mildly malnourished child is, for instance, less likely to interact with her environment (her activities and exploration are curtailed) and less likely to interact richly with her caregiver(s) (2246S). That is, the mildly malnourished child may not interact with her instrumental caregiver (recall Wexler’s success case) if she has one and may not undertake the imitation and play that help to develop her prefrontal capacities. She will also be less likely to reap the full benefit of whatever educational opportunity is afforded by her environment. For instance, “higher intake of energy and total protein” (2247S), as well as higher intake of calcium and vitamin B-12 (2248S), are associated with “higher levels of toddler mental performance and symbolic play” (2247S); moreover, calcium is linked with more attention seeking in female school aged children, and vitamin B-12, vitamin B-6, calcium, and copper are all associated with higher activity levels in school aged males (2248S). Other studies show that children with high levels of calcium are less likely to incur cognitive impairments when exposed to lead, and high zinc levels may make children less susceptible to such impairment from “high body-cadmium levels” (2249S). Thus, better nourished children have, on several counts, a lower risk with regard to developing a capacity for

choice. They are more likely to obtain enrichment from the environment and they are less likely to experience cognitive impairment.

Even for adults, short term nutritional deficiencies have a negative impact upon the capacity for choice. Researchers studied a group of adults voluntarily undertaking a 12 to 16 hour fast. When compared with tests of the same individuals' capacities during non-fasting, the results indicated that the participants had significant "memory and verbal deficits" in the midday, whereas "visual spatial deficits were more pronounced later in the day" (Doniger et al 812). Moreover, general deficits in accuracy were significant for both problem solving and nondeclarative recognition memory (812). However, one might argue that problem solving, especially in the case where novelty is present, is precisely the moment of choice. Thus, even a short-term nutritional deficiency may negatively affect the maintenance of a previously developed capacity for choice. The good news is that, with only a few exceptions (such as the issues of myelination and hippocampus connectivity mentioned above), the effects of malnutrition seem to be in large part reversible (Levetsky and Strupp 2213S). This is an important finding given that millions of people in the world—such as those who live in conditions that fail to provide and those who suffer from eating disorders—are undernourished.

## **2.9: Precondition—Sleep**

Sleep deprivation has been shown to negatively affect all three types of neurological processes—cognitive, social, and emotional—involved in a person's capacity for choice. Without sleep, people have difficulties in forming new memories

(whether they are tested behaviorally or neurologically) and in consolidating memories and making general inferences from previously learned information; they also show deficits in maintaining socially adequate responses to frustration and in maintaining an effective emotional response to aversive stimuli. I will discuss the impact of each briefly and in turn.

Many studies “have demonstrated the need for sleep after learning for the consolidation of memory” (Yoo et al, “Deficit” 385). Findings indicate that sleep “plays a critical role in . . . procedural learning” and substantial evidence points to the fact that sleep is essential for “conditioned learning in animals and declarative memory in humans as well” (Walker and Stickgold 126). That is, subjects demonstrate a deficit in retaining learned material if subsequent sleep does not occur. In one such study, “[p]articipants learned . . . individual premise pairs (. . .  $A > B$ ,  $B > C$ ,  $C > D$ ,  $D > E$ , and  $E > F$ )” until they were proficient in reporting them from memory (subjects were not informed about the possible inferences embedded in the pairs) (Ellenbogen et al 7723). The subjects were divided into four groups; some were tested, for inferential ability regarding the information, after twenty minutes (group 1), while others were tested after 12 hours and no sleep (group 2), and 12 hours with sleep (group 3). Group 1 made inferences roughly the same as would be expected if their responses were merely given by chance (7725). There was no significant difference between groups 2 and 3 regarding the ability to make an inference across one degree of separation (that is, the ability to infer one hypothetical syllogism ( $B > D$ )) (7725). However, only 69% of group 2 were able to infer two degrees of

separation (B>E), whereas 93% of group 3 were able to do so (7725). Thus, first, only those experiencing a “prolonged consolidation delay . . . demonstrated relational binding” of the pairs, creating the capacity to make “successful transitive inference judgments” (7725); and, second, those whose delay included sleep incurred a significant inferential advantage. These findings regarding sleep and human cognitive functions have, of course, significant implications for choice. Memory is necessary for nearly all the components and the capacity to generalize from learned material is imperative for component (d). Additionally, a person is at risk for all the components of choice if she has not learned content that is relevant to the choice at hand.

Other studies indicate that prior sleep loss is also associated with deficits in encoding new memories. One study found both behavioral and neurological impairment in subjects who had lost only one night of sleep; they were “awake during day 1, night 1, and day 2” before being presented with new information to be learned (encoded) (Yoo et al, “Deficit” 385). The control group slept normally. Both groups were then tested for recognition retention on the fourth day to allow the experimental group to recover from their sleep loss (385-86). Results indicated that the experimental group had, on average, a “19% deficit” in recognition (386). At the level of behavior, they had “less enduring memory representations” (386). A neurological deficit was also apparent through fMRI testing. The experimental group experienced both “impairment in hippocampal activation” (386 and 387) and decreased activity in “the right dorsal-middle lateral prefrontal cortex” (388). With regard to the latter (recall that the prefrontal cortex is involved in all “higher” cognitive processes),

researchers proposed that the experimental subjects experienced a “failure of higher-order associative binding at the time of encoding” due to impairment of the prefrontal cortex (389). The subjects were not it seems making the types of associations that facilitates holding the information in memory.

A third study demonstrated that sleep deprived persons exhibit deficits in maintaining socially adequate responses to frustration when compared to their own tendency to manage frustration in a non-sleep deprived state. The researchers in this study point out that the prefrontal cortex, the part of the brain that is responsible for inhibiting socially inappropriate behaviors, shows significantly reduced activity (as measured by glucose metabolism) within as little as 24 hours without sleep (Kahn-Greene et al 1434). Their goal was to demonstrate what two nights of sleep loss entails behaviorally with regard to this inhibitory activity. Participants were twice shown (once at base-line and once after sleep deprivation) cartoons in which one of two characters was experiencing a frustrating situation (1435). A caption was supplied for the first character, but the second caption bubble was blank, and participants were told to fill in the blank with their first response (1435-36). Given the participants own responses at base-line, after sleep loss, they were much more likely “to direct blame or hostility outward toward people and objects in the environment” and were much less likely offer responses in which a “character apologizes or offers amends in order to alleviate the problem” (1438). Since the experiment was designed to extract responses from participants that were, as much as possible, in keeping with how they would perform in real life under sleep deprived conditions (1436), the study

demonstrated that sleep deprived individuals experience difficulty in behaving in socially appropriate ways and in inhibiting aggressive and hostile responses to frustration (1440). This finding is important for component (e), and may have implications for (d) as well.

Lastly, a fourth study showed that sleep deprived persons have deficits in their capacity to maintain an effective emotional response to aversive stimuli. The subjects in the study were assigned to either an experimental group (awake from day 1 through night 1 and day 2 at the point of testing) or a control group (not sleep deprived) (Yoo et al, “Human” R877). During fMRI brain scans, all were shown “100 images from a standardized picture set” that ranged from “emotionally neutral to increasingly aversive” (R877). Recall from section 2.2 that having an effective emotional response (component (e) of choice) involves neural activity in both the amygdala (especially if the stimuli in question is aversive (R877)) and the prefrontal cortex (among other brain regions); the former processes “emotionally salient information,” while the latter exerts “an inhibitory, top-down control” of the former (R877). The study demonstrated that while all subjects had “similar amygdala activation . . . for the most neutral pictures,” those who were sleep deprived exhibited over 60% more amygdala activation when viewing aversive pictures than those who had slept (R878 and R877). Moreover, the experimental group demonstrated significantly less “connectivity between the amygdala and the MPFC” (medial-prefrontal cortex) than non-sleep deprived persons; instead, those deprived of sleep showed greater connectivity between the amygdala and the “autonomic-activating centers of the brain” (R878).

That is, the connectivity was with the areas responsible for functions over which one, in general, has little control—especially if the prefrontal cortex is not inhibiting action. Since sleep deprived persons have more activity in the amygdala and decreased connectivity between the amygdala and the prefrontal cortex, it is quite unlikely that they would be capable of having (e) an effective emotional response.

Sleep, then, is an essential component for developing and maintaining a capacity for choice, because our cognitive, social, and emotional neural processes are dependent upon sleep. We all know that significant stressors (e.g., exams, financial worries, or the death of a loved one) can cause sleepless nights and whenever such loss of sleep occurs, we are, for some period of time, at risk with regard to choice. But there are also cases in which access to sleep is infringed upon in a more systematic way. For instance, during war, one side (or both) may specifically attack or bomb the other side (perhaps even civilian communities) during the nighttime hours, specifically preventing most, if not all, of the community from obtaining the sleep that is requisite for choice. In many cases of war, women are a target for rape, perhaps especially at night; moreover, even if such a traumatic event occurred during the day, it certainly has the potential to affect subsequent sleep. Whenever such events occur, choice is being systematically infringed.

## **2.10: Precondition—Overall Health**

Choice requires that one be able to override or inhibit internal stimuli (especially component (d)), but, when the body is in poor physical health, inhibiting this stimuli may be difficult or impossible. Moreover, if disease is prominent during a

child's period of development, she may not be able to partake of the environment and education in the way that develops the processes of the prefrontal cortex. Some instances of disease are, at least at this point in human history, not within human control. However, many diseases that are preventable—those that could be controlled or eradicated through proper health care, immunizations, clean water, and adequate sanitation—negatively influence people's capacities for choice around the world on a daily basis. For instance in 2004, approximately “1.4 million children under five died from the six major vaccine-preventable diseases” (Unicef, *Immunization* vii). Globally, there are some “27 million unvaccinated children” (ix); more than 8 million of them reside in India, more than 3.5 million in Nigeria, and nearly 5 million in Pakistan, China, and Indonesia combined (ix). In many countries (Vanuatu, Papua New Guinea, Lao People's Democratic Republic, Haiti, Central African Republic, Gabon, Equatorial Guinea, Liberia, Somalia, and Nigeria), “less than half of all infants are vaccinated” (viii), and this is in spite of the fact that immunization is “one of the most . . . cost-effective ways of ensuring that children survive their early years” (vii).

Lack of clean water and adequate sanitation also contribute the global disease burden. Currently, about 1 billion people (roughly one-sixth of the world's population) do not have access to adequate drinking water; another 2.6 billion lack adequate sanitation (Unicef, *Water and Sanitation* 1). And more than 1.5 million children die each year from disease related to one of the two (1). Of course, nearly all of them live in developing countries. Moreover, in both developing and industrialized

nations, it is nearly always the case that rates of “morbidity and mortality are higher amongst the poor than the rich” (Armélagos et al 761). Poor women are more likely to have babies of low birth weight, which puts the children at a greater risk for cognitive and learning problems (Reichman 97-98), as well as mental retardation (Case and Paxson 155; Reichman 94). Poor children in developing countries “are known to scavenge” for necessities, which exposes them to contaminated water and food, disease, and environmental toxins (chemicals, for instance, that have been transferred from the industrialized nations) (Suk et al 237). And poor children, in general, are more likely than children from affluent families to have “asthma, frequent headaches, heart conditions, kidney disease, epilepsy, digestive problems, mental retardation, and vision and hearing disorders” (Case and Paxson 156). All of these conditions curtail one’s ability to inhibit stimuli (components (a), (c), (d), and (f)) and/or one’s chances of receiving adequate stimulation and/or education. As such, overall health is a prominent precondition of choice.

### **2.11: Key Concepts**

Before proceeding, I must make clear that I do not pretend to have captured a full list of the pre-conditions of choice. There are at least three reasons why this is the case. First, many other factors—such as drug and alcohol abuse, eating disorders, or chronic or extreme pain—may get in the way of choice. Second, the scientific research reviewed above is ongoing; future research may reveal factors (e.g., additional vital nutrients) that will need to be added to the list as information is discovered. As such, at any given moment, a complete list may be impossible to

provide. And, third, humans, like all of the world's creatures, are evolving within their environments. Thus, it is at least conceivable that human potentiality could change as well, in which case the list of the pre-conditions would change accordingly. Still, I have attempted to delineate the main factors that, according to current scientific research, may hinder choice.

Recall Beauvoir's notion of human ontology from Chapter 1. Human ontology was described as an account of the phenomena that show up upon examination of human life. I explained that, for Beauvoir, it functions as an implicit thought experiment through which one attempts to get at factors that all humans have in common. However, I proposed that, instead of relying on this type of thought experiment, a pragmatic approach would be to undertake an analysis of the physical and conceptual factors that influence choice and structure experience. The foregoing scientific examination of the pre-conditions of choice was *part* of this endeavor (the remainder of the analysis will be taken up in Chapter 3). I also explained in Chapter 1 that Beauvoir's notion of having an apprenticeship in freedom is related to (although not the same as) my account of the pre-conditions. Beauvoir maintained that a person's capacity for choice could be hidden from her view; that is, that given the conditions of a person's facticity (physical and/or conceptual environment), it is possible, and even likely (in some situations), that she might not know of, or not know the scope of, her capacity for choice—and, hence, her capacity for freedom. On Beauvoir's account, if someone is left to wallow in ignorance, the goal is to set her “in the presence of [the] freedom” that she already has (*Ethics* 98). I have argued

(specifically, in the discussion of education (section 2.6)) that this may be the case in some instances; ignorance is certainly not conducive to a capacity for choice.

However, ignorance is not the only issue. There are many different situations in which humans are at risk for choice and many factors must obtain for a particular person if she will develop a capacity! Thus, the appropriated version of Beauvoir's theory expands upon the notion of having an apprenticeship; it is only if one receives the *pre-conditions* that one will have the requisite neural processes and content. *With regard to being a chooser, a person will be considered to be in a state of well being if and only if she has received the preconditions in sufficient amount throughout development and in an ongoing basis during adulthood.* Attainment of the pre-conditions is a continuous process. However, just as different persons may have different genetic predispositions such that they require different amounts of the pre-conditions, so too may different persons require different amounts of them in adulthood and as they enter old age.

Throughout this chapter, I have introduced several notions that are key to the arguments that will be presented in Chapter 4. As such, I want to revisit these notions to make explicit their relation to my project. They are: trivial and non-trivial interest, novelty, the development of an inner world (i.e., conditioned neural processes) including both implicit and explicit neural systems, the importance of choice to the notion of humanity, interference and interdependence, and one's prior interest in the pre-conditions of choice.

I noted first off that each of us has needs and wants that constitute, for each, interests. A quick survey of one's own behavior and extrapolation from the observation of others should bear this out. Most want at least the basics, such as an income adequate to sustain life. Many want more than the basics, such as luxury goods, prestige, and power. There are, of course, many different possible scenarios. But the fact is that we need and want things (and situations) and we go about trying to obtain them—that is, we attempt to fulfill particular interests—through engagement with others, concepts, and objects in the world (the interdependent structure of engagement will be addressed further in Chapter 3).

Now, I have mentioned (in sections 1.5 and 2.1) that people have particular non-trivial interests. As such, I need to explain the difference between trivial and non-trivial interest. Recall that the executive functions that feature large in the neural processes of choice are “automatically activated” when implicit neural processes are insufficient to deal with the information presented in the environment (Geary 215). That is, the neural processes of choice, as explicit or top-down processes, come into play when a person is presented with what is to her a novel situation. Accordingly, I define trivial interests as those that may be fulfilled without confronting novelty, while fulfilling non-trivial interests involves, in every case, recognizing, reacting to, and dealing with novelty (the notion of novelty is explained further below). Thus, since the neural processes of choice are invoked by confrontation with novelty, fulfilling any given particular non-trivial interest will involve the neural processes of choice; implicit processes are sufficient for attainment of trivial interest. What will

count as novel for particular persons will not necessarily be the same as for others. As I noted in section 2.6 and will examine further below, the capacity to recognize novelty will depend upon the state of one's neural processes and the extent of the content that one has at one's disposal.

I distinguish three types and two sources of novelty. The three types of novelty—objective, intersubjective, and subjective—have their origin in one or both of the two sources—human interaction and evolutionary forces.<sup>21</sup> Objective novelty regards the case in which, with regard to all humans, new objects, concepts, and practices are present ('no one has had prior experience with  $x$ '); the intersubjective regards what is new for a given culture or cultural sub-group ('no one in culture  $y$  or cultural sub-group  $z$  has had prior experience with  $x$ '); and the subjective regards what is new for a given person ('person  $a$  has not had prior experience with  $x$ '). For instance, when the U.S. dropped an atomic bomb on Hiroshima during World War II, the situation was *objectively* novel; that is, no one on earth had had prior experience with atomic weaponry during warfare. Individuals and groups had to extrapolate from non-identical previous experience to deal with the aftermath. A similar point may be made with regard to global warming. None of us has had first hand experience with prior rising global temperatures. It is an objectively novel problem. Moreover, if a solution is forthcoming, it will also be novel (innovative) and be both arrived at and implemented intersubjectively, lest many of us be unable (due to rising sea levels and

---

<sup>21</sup> There is another possible source of novelty—an extra-atmospheric occurrence (such as, the interaction of other objects in the solar system (e.g., asteroids) with our planet)—that is much less common than the other two sources. As such, this scenario will not be considered herein.

erratic weather patterns) to fulfill our interests. When Cortés and his party arrived at the shore of what is now Mexico and initiated contact with the Aztecs, all concerned experienced *intersubjective* novelty. Neither group had had prior experience with the other; however, as history demonstrated, the Aztecs were at a distinct disadvantage in their dealings with Cortés. They lacked knowledge of Cortés' intent and of European invading forces in general. They were unable to extrapolate from prior experience in order to foresee the possibility that their way of life might be decimated. Since they lacked this content, they were hindered in their capacities to deal with novelty, to make choices, and to continue to fulfill their particular interests (their pursuit of both trivial and non-trivial interests was curtailed). When my under-educated friend (mentioned in section 2.6) was confronted with the word 'poll', she was confronted with *subjective* novelty. This word and its multiple meanings were present (and common) within her culture, yet her own prior experience had left her at a disadvantage in determining at least one of its common meanings. Her presumed interest in effective communication was not fulfilled. One might also experience this type of novelty by traveling to a new city and attempting to navigate the roadways and subways there. Whether one is up to dealing with these possibilities (getting from point A to point B) depends upon her particular neural processes and content.

Novelty is, of course, everywhere around us, and it most often has its source in *human interaction*. Novel situations develop when cultures meet (and, more often than not, clash) or when, say, one philosopher utilizes another's writings for a place to begin her work or when she asks for a critique from another in order to develop a

new thought or theory. It becomes present when a computer programmer receives complaints from end-users about the functioning of a program and subsequently begins to innovate to solve the problem. It occurs for other (non-U.S.) cultures when goods either conceived of or manufactured by U.S. firms show up in their market places. It occurred for Indians when McDonalds was opened in India and for Mexicans when Taco Bell opened in Mexico. Global climate change, the novel concern that potentially affects us all, has also resulted from human interactivity. Examples abound. From these and similar interactions, new concepts, words, objects, technologies, environmental situations, and so forth come to affect our lives. Novelty may also have its source in evolutionary forces, though these biological innovations appear to occur at a much slower rate than do the outcomes of human interactivity. The point is that novelty, especially the first type, is objectively inescapable. It actually *is* around us. As such, each of us, no matter the state of our neural processes or the extent of held content, will be confronted with it. Novelty is a part of our world.

As explained in section 2.5, one's neural processes and content are thoroughly dependent upon environmental input (Wexler 39). To a very large degree, we are the sum total of our interactions with the world. If one has nourishment and sleep, and an absence of stress, disease, and toxins, then one is better situated to reap the benefit of whatever stimulation/nurture and education are available in one's environment. Of course, the stimulation, nurture, and education must themselves be adequate to further develop the executive neural systems, and it is through all of these things combined

that one comes to have adequate personal resources. Socio-economic status itself greatly predicts whether one will receive some preconditions, such as nutrition and education; but education (which requires the other pre-conditions) greatly predicts one's capacity to change one's socio-economic status. If, for instance, a person is ill-nourished during her period of development, she will later be at a disadvantage in obtaining nourishment and education. If she is under-educated, later she will be at a disadvantage if she wants to improve her life through education. Her neural processes were not optimally developed in her youth. Presumably, at least some of these obstacles may be overcome. If the neural systems in question have not atrophied due to nutritional or stimulatory deprivation, there remains a possibility of recovery. Although in most areas of the brain we do not generate new neurons (one such exception is the hippocampus), we can develop new connections between neurons throughout life in response to the demands of the environment. Thus, for instance, if a person is merely under-educated, with sufficient help, she may be able to further develop the neural pathways and learn the content that are required for choice; however, this scenario becomes less and less likely if she has also been malnourished, subjected to violence or abuse, systematically deprived of sleep, or exposed to toxins.

Whatever the environment has afforded a given person, she has developed what Wexler termed an *inner world* that was cultivated throughout the process of development. This is because the brain "recreates in itself a representation of environmental input" (Wexler 40), no matter what that input may have been. The earlier discussion of the pre-conditions of choice (sections 2.3 through 2.10)

demonstrates that the pre-conditions need be present in order for a capacity for choice to be part of one's inner world; but, an inner world of some sort will be actualized in any case (at least when the environment provides such that a person persists in her existence). As I have explained throughout this chapter, each of us begins with a genetic potential and we become what we are through the *interaction* between that potential and the surrounding environment; this is true for all of us. Through this interaction, those who persist come to be persons with certain unique qualities. This is because the interaction—with one's caregivers, family, teachers, friends, and so on—affords each of us different experiences (Wexler 40). That is, a person comes to have a particular inner world made up of certain kinds of neural processes and content in a way that is dependent upon what this interaction has afforded her.

What we come to be and what we come to learn is, especially in our early years, beyond our control (Wexler 143). As I explained earlier, the brain is structurally and functionally shaped—that is, *conditioned*—through the interaction between genetic potential and the environment, and, of course, both the implicit and explicit systems are developed through the process. However, when the prefrontal cortex reaches maturity (sometime between 20 and 25 years of age (242)), a different situation emerges. At this point, a person's "internal structures select and value sensory input that is consistent with them" (155). Studies have shown, for instance, that people prefer external stimuli that are consonant with their internal structures. We tend to "aggregate into affiliative networks with other like-minded individuals" (145), with regard to political alliances, religious and club memberships, and so forth;

we tend to fill-in “incomplete or ambiguous stimuli” with “information from internal sources” (150); and we have pleasant or unpleasant emotional reactions to stimuli merely based upon familiarity or unfamiliarity, respectively (151-158). This is why (as noted in section 2.6) a mature person, who lacks education, is more likely to miss rather than recognize novelty when she is exposed to it. She is taking the world, as far as she can, to reflect her inner world. Having been exposed to fewer types of things and fewer distinctions, she attempts to make everything fit within fewer categories. The one who is most likely to recognize novelty then is the one who has experienced an enriched environment made up of many different kinds of objects, people, and experiences. She will be making finer distinctions regarding her environment and she will be more likely to recognize anything that is incongruent with her varied experiences. Moreover, the notion that there can be and are new things will be part of her content. In short, she has more to work with.

Three types of scenarios seem possible. First, (A) the implicit systems may be conditioned such that one can recognize novelty (of any type), and call into play adequately conditioned and developed explicit systems that are capable of reacting to and dealing with novelty. Second, (B) the implicit may invoke the explicit, but the latter may be inadequate. Or, third, (C) the implicit may be unable to recognize novelty such that the explicit systems are not invoked (in this case, it is likely that the explicit systems would also be inadequate). If a person has had the pre-conditions of choice and thus also has the cognitive, social, and emotional neural processes involved in choosing, she has been taught to think in a way that is, as much as

possible, *non-dependent*. To be sure, as Wexler points out (40), there is no case in which one's neural processes are entirely separate from (that is, independent of) the environment, but, when one has reached maturity, there are greater and lesser degrees of dependency. A person with a capacity for choice can conceptually remove herself from her immediate environment in order to project herself into different possible futures; she can extrapolate—given her neural processes and content—to another non-identical or, perhaps, even radically different case; she has an effective capacity to change her activities or her environment in order to fulfill particular non-trivial interests. So while her neural processes and thought will never be independent, in that they in every case derive from her interaction with her environment, they need not be dependent either.

Persons in the second and third scenarios ((B) and (C)) are not so well situated, because, in either case, they act purely from the implicit neural systems. They are fully prepared to do exactly what they have been trained to do during their period of development, but they lack the capacity to extrapolate and go beyond. One might object though that these persons have preferences and certainly select them. They determine, for example, whether or not to get up and walk across the room and whether to eat spaghetti or pizza for dinner (among other things). Are they not making choices? Not according to the definition of choice set out in section 2.2. Instead, such a person is selecting a preference from among objects and activities with which she is already familiar. We all (even those of us who have a capacity for choice) engage in *preference selection* on a daily basis. In such cases, novelty is not

present. Here, a person need only utilize her implicit neural systems to carry out whatever task is before her. Preference selection is then sufficient to fulfill particular trivial interests, but that is all. Where novelty is present, a capacity for choice (not for preference selection) is required to fulfill particular non-trivial interests.

Since many factors affect development, many different outcomes are possible within these three broad types. A person who has experienced intense deprivation with regard to nutrition and nurture (and who thus experiences corresponding cognitive deficits, social difficulties, emotional disturbances, and responses to stress) will be in very different place with regard to choice than either a person who has received most of the preconditions but who also experienced physical abuse in her home or another for whom all the preconditions except adequate educational exposure are present. While all three are disadvantaged, one presumes that the latter person is better off. Since so much is involved, it will be best to conceive of the multitude of possibilities as being on a continuum, with non-survival on one end and a full capacity to innovate in the face of novelty at the other. The threshold for choice will then lie somewhere between the two, although somewhat closer to the latter (choice is not at the end of the continuum because a capacity for choice concerns *dealing with* novelty which need not be the same as *innovating* when it is present). For heuristic purposes, I distinguish five areas on the continuum (as science advances, finer distinctions may become possible).

*Area 1* includes those situations in which the pre- or post-natal environment fails to sustain life or where little more than what is necessary to sustain life is

present. This area includes, then, those with neural tube defects and those who die young from lack of one or more of the preconditions; it also includes those who experience early global deprivation, mental retardation due to early micro-nutrient deprivation, and disabling disease that prevents most interactions with the environment. These people either will not develop a capacity whatsoever for choice or they are severely at risk and are most unlikely to do so; they will also be limited with regard to preference selection and attainment of trivial interest—that is, their daily activities will likely be limited—given the conditions under which their development occurred.

*Area 2* involves those situations where many of the preconditions are present but certain key ingredients, that facilitate both one's neural processes and educational opportunities, are missing. People in this area may be suffering, for instance, from chronic mild malnutrition, intense or chronic stress, the effects of child abuse, the fallout of situational violence, and/or systematically inflicted lack of sleep. Two issues are apparent here. First, it is important to note that the research indicates that merely being from a low socio-economic background puts one at risk for some of these things. And, second, it does not appear possible, given the current state of the neural research, to make the desired distinctions within this area. By my estimation, it includes far too many possibilities. For instance, surely one who has experienced a relatively short episode of intense stress is better off with regard to choice than another who has been exposed to such a stressor for an extended period of time (the age at which one experiences the stressor may also be relevant). The problem is that

there does not at present seem to be a way to compare whether someone who suffers from chronic mild malnutrition is better or worse off than someone who is chronically exposed to violence. As such, area 2 includes people who may be severely to moderately at risk for choice and who will likely be able to fulfill many more trivial interests through preference selection than those in area 1.

*Area 3* consists of two kinds of conditions. First, it includes those situations in which all of the preconditions are present except for adequate education. It seems to me that a person from this category would be significantly better off than a person from either area 1 or area 2, because presumably many of the neural processes involved in choice will be present and active, though perhaps not sufficiently developed. What this person lacks is practice at utilizing these neural pathways (such practice literally grows the pathways) and content for her deliberations. She may even be able, to a small extent, to deal with certain kinds of novelty, those instances that do not stray too far from that which is familiar, especially if she can attempt to dispel whatever form of novelty confronts her. Second, area 3 also involves cases where a capacity for choice has been enabled (all the preconditions have been present during development), but the current environment, during adulthood, does not allow for maintenance of it. Presumably, once appropriate conditions are restored, the capacity will be as well. As such, persons in this area are only mildly at risk for choice. Moreover, what they will be able to attain through preference selection will be significantly more than persons in either areas 1 or 2, since their environment has provided significantly more for them.

*Areas 4 and 5* include those situations in which all of the preconditions have been provided throughout development and, moreover, continue to be present in adulthood for maintenance of the capacity. Thus, not only do these persons have well developed implicit systems, they also have a full capacity for choice. I maintain a distinction between the two areas because they are separated by the degree to which the persons involved are prepared to deal with novelty. Persons in area 5 are fully prepared to *innovate* when confronted with new or complicated situations; they are able, via interaction with others and the environment, to devise new concepts, objects, and procedures that may be implemented by themselves and others. Those in area 4 are more likely to imitate what those in area 5 have implemented, but are able to do so in an effective way. Of course, then, persons pass from area 4 to 5 and back. A person who is prepared to innovate in one context of life will likely imitate adaptations that others have created in other contexts. The point is that persons in areas 4 and 5 are capable of innovating and/or adapting to novelty. They have a fully developed capacity for choice and are, as such, fully capable of attaining both their trivial and non-trivial interests. Alternately, the people in areas 1 and 2 are more likely to miss novelty when they are confronted with it; they will be restricted to preference selection and attaining only the trivial interests that were addressed during development. Although those in area 3 will be able to attain more trivial interests, they are more likely to be ill-equipped to deal with novelty even if they are aware of its presence.

I turn now to the notion of humanity that has so far been left implicit in what has been presented. As I pointed out in section 2.2, the executive neural processes—that result from the potentially well developed and well connected prefrontal cortex—and mental functions—such as, amplified and sustained attention, extensive working and long-term memory, inhibition of irrelevant stimuli, simulation of multiple possibilities, putting oneself in the place of another, and responding effectively to emotional stimuli—involved in the capacity for choice are unique to humans. While non-human animals have intricate and highly developed neural processes that are well-suited to facilitate these animals flourishing in their own niches, non-human animals seem to be restricted in general (via the types of neural functions at their disposal) to considering their own physical state and the actual or potential physical context around them (Deacon 426). Humans, on the other hand, have, *by virtue of their genetics*, a *potential capacity* to conceptually detach from their physical surroundings. That is, on earth only the human has the capacity (if it is enabled) to escape concrete thinking in order to build mental models that include multiple non-physically present possibilities at once. And this capacity not only makes the human unique, it also opens to her the possibility of freedom. She can think of and do something radically different than the options present in her immediate environment (she can, for instance, forego many daily opportunities in order to focus all of her energy upon obtaining a distant goal, such as traveling to a distant continent, obtaining a degree in higher education, or writing a book). And this capacity is the reason why she has the dignity of self-determination. Moreover, as I have argued,

these neural processes are how we get along in the world—that is, fulfill our non-trivial interests—and how we adapt to an ever changing environment and/or change it to suit ourselves. Since the neural processes of choice are what makes us unique, are what enable the possibility of freedom and the dignity of self-determination, and are how we come to be able to flourish in an increasingly novel environment, these processes also are the core of our humanity. The capacity for choice is the essential component of humanness itself.

The notion that humans are dignified in that they are *choosers* is central to the tradition of liberal philosophical theorizing. Thus, many readers may intuitively accept the argument presented above. Still, before proceeding, I will consider two objections to the argument. First, the notion of uniqueness, one might argue, is not strong enough to provide grounds for a lofty notion like humanity. Surely we have other unique qualities, such as the capacities for reason and communication through symbolic language, that are just as well suited to uphold the notion. Second, what if humans possessed some other unique attribute, like a genetic potential to acquire the capacity to balance chairs on their noses? Should we then take it that chair balancing is the core of our notion of humanity? Certainly, we do have these other unique qualities, but we have four good reasons—namely, (1) that choice is a unique capacity, (2) that it enables the possibility of freedom, (3) that it defines dignity via self-determination, and (4) that it functions as our primary adaptive strategy—to accept choice as the appropriate candidate. Neither of the other two options (rationality and symbolic communication) accord with all four of these reasons.

The philosopher, whose domain of study precisely is reasoning, has historically separated the rational or cognitive portion of what I call choice (usually ignoring the emotional and social aspects of it) and divorced it from its evolutionary purpose of enabling adequate functioning in the world. In separating off cognition, this philosopher (for instance, Kant) considered reason as an end in itself and forgot its quite practical origin. This is perhaps fine as long as the philosopher would also remember that the emotional and social neural processes are a significant part of functioning in the world. Many philosophers (such as those who study practical and/or strategic reasoning) recognize that while the human reasoning capacity may well be unique, it cannot alone enable freedom and define dignity; first, because every potential action is run past the emotional system of the brain before the action is executed (component (e)), and, second, because there are always others who figure into our mental models (component (d)). That is, in order to determine the best course of action for myself, I always have to take into account the possible actions of others. Freedom and the dignity of self-determination require the emotional and social neural processes as much as they do the cognitive. So while, cognition is an important part of our adaptive strategy, it alone cannot suffice.

It may also be possible to argue (perhaps even successfully) that language use is part of what makes humans unique, that the use of it over the millennia has helped develop the abstract reasoning and social neural processes involved in choice, and that it is a significant part of our adaptive strategy. Terrence Deacon, for example, argues for all three of these points (among other things) in *The Symbolic Species*.

However, even if one concedes all three points, one problem remains. Language use does not in itself explain the dignity of self-determination. Although we may find dignity in our ability to speak, human dignity requires the notion of being non-constrained. If I hold a person in chains or if I subject her to slavery, it is first and foremost her dignity I offend, because she takes herself to be a person who could do other than my bidding. She can, via the processes I have delineated throughout this chapter, come to be a non-dependent thinker and she finds dignity in this possibility. Our own neural processes find dignity in the notion that they are potentially unconstrained via the capacity to plan and execute a non-dependently determined course of action. So, while language use may be intimately connected to the capacity for choice (many of the neural processes involved in language are also those active during choice), it does not satisfy all of the criteria laid out above.

But what of the second objection? If balancing chairs were a unique attribute of humans, would it not thereby also be a candidate for the explanation of humanity? In formulating this objection, the philosopher is using cognition (part of what makes her human) to assess the suggestion. Chair balancing only looks like a silly substitution for the core of humanity, because cognition is subjecting the substitute to its own criteria of judgment. That is, if chair balancing were a unique attribute of humans in general in virtue of our genetic predispositions and were central to our evolutionary adaptation, we would have developed a multitude of neural processes that support the practice. It would not look silly, but instead like a sensible mode of activity, just as now the suggestion that reason is central to humanity looks sensible to

the philosopher. Our own neural processes make it appear so! But as noted above, it is not the case that one type of neural function facilitates the human's unique capacity for freedom, dignity, and adaptation to novelty. The neural processes that support emotional and social behavior must also be included.

A person who has received the pre-conditions of choice enjoys great advantage in her day to day activities in the world. Her unique potential has been enabled; she has the capacity to be free and to live in a dignified way; she is well situated to recognize, react to, and deal with novelty as she unavoidably confronts it in her environment. A person who has not received the pre-conditions, on the other hand, experiences great disadvantage. Her unique attribute, her very humanity, is offended; her potential is thwarted. To her detriment, she will have difficulty with or no capacity for making choices; she may not even recognize novelty in her environment, however unavoidable such a confrontation may be. She is ill-equipped to fulfill her own non-trivial interests, and her attainment of trivial interest may be limited. If she will develop a capacity for choice, she will need significant help. But in this aspect of her condition is she any different than one who has received the pre-conditions?

There is not one single person who has received the pre-conditions that did so on her own. All of us require help. That is, each of us requires *active interference* because we are born into and develop within an *interdependent* world (the notions of inactive interference and interdependence will be addressed in Chapter 3). Consider the case of a new born just entering the world. She has before her as many potential

outcomes as all the different scenarios I have discussed in this chapter and more. She has the potential to incur neural tube defects, mental retardation, cognitive deficits, or difficulties with regard to theory of mind from a deficiency in micronutrients; she may receive adequate or inadequate stimulation, nurture, and education, or none at all; she may or may not experience stress, malnutrition, sleep, disease, and sanitary environmental conditions. She may come to have the neural processes of choice; she may be constrained to preference selection. She begins with a potential trajectory toward each and every scenario. The thing that makes the difference is active *human interference*! Obviously, if no one actively interferes at all, she will, unimpeded, follow a trajectory toward death. If someone obstructs the path toward this potential outcome by giving her nutritious food, care, and an education, she is set on the course toward becoming a chooser. The point is that in every case, no matter what potential is actualized, interference is required. She will not become anything on her own. Even her thoughts (content) are dependent upon her environment. If a person persists in her existence, interference happens. The question regards its quality.

This child is physically and conceptually vulnerable; she is utterly dependent, as are all of us in our youth. Shall we say, for instance, that it is the responsibility of the caregiver(s) to provide for all of her needs? Of course, there really is no case in which the caregiver does this by herself. Being able to give the pre-conditions is dependent upon having first received them (recall that persons project their internal structure onto the world). If one can facilitate for another the pre-conditions of choice, countless others—caregivers, siblings, extended family, friends, and so on—

have intervened in her life. And, at least in modern society, many more people are involved. One relies on the farmers not to deplete (via overuse or chemicals) the nutrients from the soil so that the food that is produced will be life sustaining. One counts on manufacturers to produce non-toxic and safe goods. One depends upon teachers and school administrators to impart useful and accurate information. One utilizes objects, including the concepts that are embedded in those objects, in everyday life as well as in helping another to develop. These objects, as discussed at length in section 2.5, strongly influence the child's (and to some extent, the adult's) neural processes. Moreover, in learning language, innumerable others impact the child's thought. That is, all of us are part of an interdependent web of interconnections and interactions that either provides for each the pre-conditions or not. No caregiver ever provides or fails to do so on her own.

We each have numerous non-trivial interests on an on-going basis because novelty is objectively a part of life. As such, we have a prior interest in the pre-conditions of choice. And since we need the pre-conditions throughout adulthood, this prior interest is unceasing. Thus, we also have a prior interest in all these others who interfere in our lives and either help or hinder our chances at receiving the pre-conditions. Through no fault of their own, millions upon millions of people in the world have been left without access to one or more of the pre-conditions. Their very humanity is thereby offended. They are at best capable of preference selection and attainment of trivial interest. The many scientific studies discussed throughout this chapter demonstrate that intervention in these situations is possible. We can create

situations in which the pre-conditions are available to everyone. The question is whether we have a reason (perhaps even a moral imperative) to do so.

## **Chapter Three: The Conditions of Choice and the Impact of Culture**

### **3.1: Introduction**

I have shown, in Chapter 2, how one comes to obtain the pre-conditions of choice. Each of us is initially entirely dependent upon others in the process; each has no say whatsoever in what others do for us or regarding what they are able to do given the knowledge and resources (or lack thereof) previously provided for them. If one receives the pre-conditions, one becomes increasingly capacitated in obtaining them for oneself and providing them for others in the future and also becomes more and more likely to develop a capacity for choice. Barring currently non-preventable genetic malformities, all of us have the potential to develop a capacity for choice. But for many, this potential has not been or will not be actualized, because millions upon millions of people live without some or many of the pre-conditions. And, since choice is the core of the notion of humanity, these persons' humanity or personhood is thereby offended. This is, at least *prima facie*, a problematic situation, since what they lack is active human interference and since those of us who enjoy an actualized potential only do so because of the interference we have received. Part of the issue is that persons whose potentials have not been actualized will be at a disadvantage in fulfilling their own non-trivial interests—that is, in conceiving of, recognizing, and dealing with novelty in their daily engagements with the world. While the prior chapter was concerned with certain features of the environment whose presence or absence affect a human's neural processes of choice, this chapter will focus on an analysis of the structure of the impacting environment. The issues that will be

addressed are: engagement and its overwhelmingly symbolic attributes; an argument against the idea that persons are or can be self-reliant; as well as an analysis and description of intra-cultural interdependence, the conditions of choice, and inter-cultural interdependence.

### **3.2: Engagement and Symbolic Interpretation/Contribution**

*Engagement* (or what Beauvoir called disclosure), recall from section 1.5, is the interpretation and contribution of objects and/or signification throughout the daily activities of life. It is a basic description of what people do in every culture and every situation around the world. As such, it is part of the structure of human experience in general. On a practical level, engagement is the on-going activity of life—communication with others, obtaining what one needs or wants (such as the pre-conditions), caring for oneself and one's dependents, and so forth—through which each attempts to fulfill her particular trivial or non-trivial interests. These engagements are part of what it takes to get along in the niche humans fill on earth. We work, play, cooperate, compete, and converse and, in doing so, we create the *objects present in* and the *concepts relevant to* human life. In any action or inaction, one *interprets* some object and/or signification that is present to one's neural processes and *contributes* in response some further object and/or signification. Since interpretation occurs on an ongoing basis as one perceives the environment, determines what is there, and how it will be understood, how any particular person engages will depend upon what neural processes and content she has at her disposal. The nature of her engagement is then dependent upon what she has experienced and

been exposed to in her background (such as the pre-conditions of choice). The signification or meaning that a person projects is an outward expression of the *interaction* between her inner world—the neural processes and content that were cultivated during the process of development and which she cannot help but employ—and situations in the external environment. Her response is then affected by whether or not the internal and external environments cohere or conflict (this notion will be addressed further in section 3.4).

It is important to understand that any response at all (even, as I will explain, inactivity or an apparent lack of response) is a contribution. It is clear that a contribution occurs when a response is active; for instance, persons contribute when they create objects via cooking, carrying out hobbies, manufacturing, creating artwork, and so on. Each of these activities contributes both some object and some meaning. That is, in each case, such a creation includes some projection of *signification* (meaning or concept) on the part of the creator (and on the part of the perceiver). It is not possible to contribute a physical object without adding meaning as well; one cannot produce a piece of art without affirming, denying, adding to, altering, or somehow making reference to some previously created object or meaning. However, it is possible to project a concept into the environment without adding some new object. When I behold a work of art, pausing in front of it for a shorter or longer period of time, indicating that I find it worthy of my attention or not, I project the signification that accords with my activity (or apparent inactivity) without producing

any new object. Whether I create, behold, ignore, or altogether avoid the artwork, my action or inaction projects some signification.

More mundane examples may be useful. Perhaps a stranger stops me on the street to ask for directions. In responding, I interpret the request (the words that this other has uttered) and I contribute both my response (the directions) as well as the signification that helping this stranger (and strangers in general) is worthwhile. If I ignore the request, I contribute something quite different; I may indicate, for instance, that I believe that my immediate goals (e.g., getting to the store or work on time) are more important than this person or helping others. If I witness two children playing ball on a warm sunny day in the park and I do nothing but watch their activity with a contented facial expression, I project into the world a signification that says I approve of and perhaps enjoy watching their activity. If I, on the other hand, intercept the ball and throw it into a nearby pond, my actions express disapproval of the children's game. The precise reason for my action, presuming that it was undertaken purposively (I didn't catch the ball while inadvertently stretching my arms to reduce fatigue and then sneeze, accidentally propelling the ball into the pond), may not be obvious; but, at the very least, my actions express some sort of personal displeasure with the children's activity. Perhaps I also demonstrate that within my inner world I have developed a dislike of children, games, or play. If their caretaker then throws me into the water after the ball, she expresses both a disapproval of my actions and an internal disposition not to tolerate any bullying of those in her care (and maybe others). If she is not the children's caretaker but is merely passing by and undertakes

the same action in response to mine, she displays an intolerance of bullying in general. If she merely gazes at me as I appraise my deed (if she displays no anger, frustration, or bewilderment at my action), she offers her tacit approval. Likewise, if, after just happening upon the scene, I witness one child attack or bully the other and I attempt to stop the child's actions by yelling "hey, stop that", my action expresses disapproval of bullying. If I watch the scene with a worried facial expression, my action indicates both my disapproval and an apparent belief that further action will be ineffective or unjustified. If I ignore the children and/or display no discomfort while watching, I offer my implicit assent.

These examples provide evidence that inaction as well as action (including words and facial and bodily movements) project meaning; both add signification to other actions and events in the world. I will return to this notion again in section 3.4. The main point for the moment is that each activity or inactivity makes a conceptual contribution for two reasons: first, because each activity or inactivity expresses a preference selection or choice (depending upon what neural processes and content the person has at her disposal and whether novelty is present), and, second, because humans are such that they *interpret* actions and inactions as having such meaning (if a given person is the only one present, she still interprets her own action). The first point has been largely covered in section 2.11. When a person undertakes an action or not, she does so based, in part, upon her inner world. Many of her actions/inactions are preference selections; some, if she has had the pre-conditions, are choices. Whatever she does or does not do will be largely in keeping with the potentiality of

her own internal structures. The second point above has not yet been fully addressed. As such, I will briefly consider what type of interpretation is most common to humans, why this is the case, and what that entails regarding the structure of engagement (interpreting and contributing).

Following Terrence Deacon, I differentiate three types of interpretive processes that correspond to the three types of signs (described in the next paragraph below) distinguished by Charles S. Peirce.<sup>22</sup> Peirce defined a sign as “[a]nything which determines something else (its *interpretant*) to refer to an object to which itself refers (its *object*) in the same way” (“Signs” 239); that is, a sign determines an interpretant to assume a relation to the object in the same way that the sign itself is related to the object. According to this definition, there are three components to every sign: the *object* under consideration, the *sign* which refers to the object, and an *interpretant* which is a particular sort of response to the sign. As Deacon explains, the interpretant is the process that enables one to determine what the sign refers to (Deacon 63). That to which the sign refers will be dependent upon the type of interpretive process that is present in the response to the sign. The song of a bird, for instance, may be a sign to another bird of the same species that the former is ready to mate; for a cat, the same song may be a sign indicating a potential meal in the vicinity; whereas, for a person, the song may call to mind previous experiences of bird songs, it may point to an annoying creature that often or periodically makes a

---

<sup>22</sup> Peirce was a philosopher and scientist who is often referred to as the founder of American Pragmatism.

noise that precipitates waking from a peaceful sleep, or it may, perhaps, symbolize the beauty of nature. The different interpretations of the sign depend upon the different processes that are present for the bird, the cat, and the human, and this, of course, is determined to a large degree by the type of physical apparatus the being in question has with which to carry out the interpretation.

As noted above, Peirce distinguished three broad types of signs: the icon, the index, and the symbol (“Signs” 239), and a sign can be all three depending on the capacity of the interpretant (for instance, in the example above, the same person may have, within a second or two, entertained all three of the noted interpretations which correspond to the three types of signs). An *icon* is a sign which represents in virtue of a *similarity* between the sign and its object (Peirce, “Neglected Argument” 270; “One, Two, Three” 181). As Deacon explains, “pictures of all kinds are iconic of what they depict” (Deacon 71), but the resemblance need not be visual. Iconic interpretations may be of scents, sounds, textures, and tastes as well. When the human, in the example above, determined that the bird song was similar to other bird songs she had previously heard, she interpreted the sign (bird song) as an icon. The second type, an *index*, is a sign that represents in virtue of a stable representation (Peirce, “Neglected Argument” 270)—via co-occurrence or by physical or temporal contiguity—such that the sign is taken to be *indicative* of the object. A thermometer indicates the temperature much like a windsock does the direction of the wind (Deacon 71); a paw print on the ground suggests that an animal has previously passed by. Deacon points out that most “forms of animal communication have this quality,

from pheromonal odors (that indicate an animal’s physiological state or proximity) to alarm calls (that indicate the presence of a dangerous predator)” (Deacon 71). Three of the interpretations in the bird song example above—the second human response as well as the responses assigned to the bird and the cat—are also indexical. The bird song indicates a potential mate, dinner, and irritation for the bird, cat, and human, respectively, due to previous and repeated associations. The family dog scratches at its bowl to express its desire for food, because food has been repeatedly served in the bowl; if food is instead consistently served in a pile in the corner, the indexical association between the food and the bowl will be lost and the dog will (after some time) cease scratching on the bowl. Lastly, for Peirce, *symbols* are signs “that represent their [o]bjects essentially because they are so interpreted” (“Neglected Argument” 270); that is, a symbol represents its object in virtue of *convention* or *agreement* (whether implicit or explicit). This is the case with the last human response in the bird song example; the person in question takes the song to symbolize her conception of the beauty of nature. It is also the case with many (if not most) other human actions and inactions. Speech is always symbolically interpreted (unless it is directed at a being (such as a dog) that lacks the ability for symbolic interpretation), as are written words, business contracts (my signature is a symbol of my willingness to fulfill the contract), marriage contracts, and nearly all other cultural artifacts. A marriage certificate symbolizes the union of two people (although the exact specifications of that union may be different in different contexts), a religious ceremony symbolizes a group’s shared beliefs, and an assigned grade may be said to

symbolize the achievement or perceived effort of a student. A person's silence (for instance, sitting quietly in a corner) during a social gathering (i.e., inactivity with regard to cultural expectations within the situation) may be interpreted by others as signifying the person's snobbery, shyness, or ineptitude in social situations, depending on the neural processes and content of the interpreters (others at the gathering) and other signs that may be obtained from the context or situation.

Cultural artifacts, objects, activities, inactivities, events, and situations gain meaning from the tacit or express agreement that they *shall* have such meaning or signification, and they are interpreted as such because humans—the beings who have developed an inner world that includes the symbolic significations in question—are the interpreters! As Deacon explains, the human species is predisposed toward symbolic interpretation for the same reason that people can, under certain circumstances, develop a capacity for choice. That is, many of the same neural processes that facilitate choice also enable symbolic interpretation. Humans have a relatively easy time dealing with symbols when compared to non-human primates (studies of chimpanzees have shown that primates can be taught to use symbols in a limited way (Deacon 401)), due to the human's "disproportionately enlarged . . . prefrontal cortex and a shift in connectivity favoring prefrontal connections in other [neural] systems" (255). A well developed prefrontal cortex enables a person to understand and manipulate "higher-order associative relationships" (264), and this capacity to hierarchically categorize is essential for an efficient use of symbols. The process by which a person's inner world is developed was considered at length

throughout Chapter 2. What happens to a person during development actually structures the functional processes of her brain. Then, since symbolic interpretation is dependent upon these functional processes, people raised in enriched environments may have greater capacities for symbolic interpretation (they may generate and understand more of it), while those from disadvantaged environments may have lesser capacities. However, as Deacon points out, barring those of us who are completely neglected during our early years, most of this variation is above the threshold necessary for the acquisition of some symbolic interpretive capacities (412). For instance, nearly all of us, including many of those with genetic malformities and even most of the Romanian orphans, are capable of speech. Then, although people are also usually quite capable of interpreting iconically and/or indexically, since *humans are such that they tend to interpret symbolically, their contributions—made up of the intended signification put forth by the conveyer and the signification received by the interpreter—will also tend to be symbolic in nature*. In general, we see the world from a symbolic/conceptual point of view, in which every activity, inactivity, and object has some signification or meaning.

*Culture* itself may be defined as a *shared evolving system of meaning* (Staub, *Psychology of Good* 289; see also Strauss and Quinn 10), such that members of a culture will tend to agree on a range of possible interpretations regarding what is present in their environment. This is because people not only develop within and internalize cultural significations during their period of development, they also, through their contributions throughout their lifetimes, change cultural meanings

across generations (Rogoff 37); that is, people and the varied and multiple influences of culture mutually create each other (37). However, while people in every culture (or sub-culture) share meanings, their significations are not necessarily shared across cultures. For instance, when a person in the U.S. clenches her fist and extends her thumb upward, she symbolizes her approval of some action or event, while in most parts of the Middle East the same gesture signifies an expletive. At this point in the analysis, it is clear, however, that people all over the world do have at least two things in common: first, they are meaning interpreters and contributors and, second, they accord importance and prominence to their own symbolic understandings (this latter point will be addressed again in section 3.6).

As I will explain (in section 3.4), these shared systems of evolving significations create a conceptual interdependency within communities, such that a meaning contributed by a given person may come to affect the others who share her system; some contributions may also have significant consequences for choice. Moreover, since, in the modern world, members of different cultures necessarily come into contact (people, products, and ideas now cross cultural boundaries and national borders on a daily basis) a novel type of conceptual interdependency (born of sharing ideas and the conflict that often happens during contact between the different types of inner worlds created in different cultures) also occurs. This latter type of interdependency will be discussed in section 3.6, but first I will need to address the notion of self-reliance (since some version of it is held in many sub-cultures of the U.S. and in most Western cultures) in order to show that those who take the concept

of self-reliance to be applicable to the self are actually part of an interdependent web of actions, objects, and signification.

### **3.3: Self-reliance versus Interdependence**

In the U.S. (and other Western cultures), adults tend to acknowledge the fact that as children they were dependent; they could not have supplied, for instance, their own food, clothing, and schooling. However, upon reaching adulthood, people tend, in general, to *think of themselves* as being self-reliant; they see themselves as independent persons who rely upon their own resources, judgments, and capabilities. They tend to try to instill the same respect for self-reliance in their children. Middle-class parents in the U.S. often “report that it is important for a child’s developing independence and self-reliance to sleep apart” from parents which is said to help “reduce the baby’s dependence” (Rogoff 195). The American adolescent is culturally encouraged to separate from her parents in order to ““stand on [her] own two feet’ and be self-made” (194). However, adults in many other cultures and communities hold a notion of themselves that is quite contrary to this conception. In Japan, for instance, “great attention is given to continued reciprocity and primary ties with family” (194); their general view is that “cosleeping facilitates infants’ transformation from separate individuals to be able to engage in interdependent relationships” (198). Others, such as the Kaluli of Papua New Guinea, have a view of themselves as being both connected and autonomous. Since they value both, they cultivate in children a “responsibility to coordinate with the group” while giving them “the freedom to do otherwise” (202). In the U.S., children are taken as dependent creatures that must,

eventually, separate; in Japan, they are believed to be independent beings that must be brought into the fold; in Papua New Guinea, children must be taught a balance between interdependent and autonomous behaviors. It would seem then that there are many concepts available by which to organize people's understandings of the relations between them. A group may organize themselves around a concept of self-reliance, connectedness, or something between the two.

However, my goal in this section is to deconstruct the concept of self-reliance. I argue that, no matter the conception that persons in different cultures may hold regarding the status of their relatedness to others, all persons are, in fact, interdependent, where *interdependence* is defined as a need for tacit and/or express coordination with others for conceptual understandings, physical necessities, and possessions. Alternately, *dependency* is defined as reliance upon another or some particular set of others for conceptual understandings, physical necessities, and possessions; and *self-reliance* is, then, defined as relying only upon the self in attaining these things. Moreover, I demonstrate that a person who maintains that she is self-reliant in this respect commits a *performative contradiction*. In section 2.11 I argued that persons, who have/have had the pre-conditions, have a capacity to think and act in a way that is *non-dependent*. That is, a person with choice can conceptually remove herself from her immediate environment in order to *extrapolate* beyond the conditions in which she finds herself and beyond the concepts being employed by those around her. Thus, if the deconstruction of the concept of self-reliance is successful, it does not entail that any person is necessarily dependent. Persons with

choice are *non-dependent* even if it can be shown that self-reliance (as defined above) is a concept that is inapplicable to any human activity/inactivity.

I begin by considering a descriptive example, constructed by Claudia Strauss and Naomi Quinn. I should note that these authors' purpose in providing the example (to offer a descriptive example in social-psychology) is very different from my own purpose in using it. Strauss and Quinn explain how the members of an American middle-class nuclear family may come to have the conceptual understanding that they are, and should be, self-reliant and that others should be as well. Through their own up-bringsings, the fictional parents in the example, Paula and Michael, have come to hold the notion that self-reliance is appropriate and desirable (Strauss and Quinn 112-113). That is, via their interaction with parents, teachers, television, clubs, friends, and so forth, Paula's and Michael's *inner worlds* have come to include a strong belief that persons should undertake action/inaction that is interpreted (by themselves and by others in their cultural group) as being consistent with the concept of self-reliance. Thus, the first thing to note, and this is clear from the analysis in Chapter 2, is that neither Paula nor Michael nor any other person in a similar situation has acquired the concept of self-reliance on her own. *Many others have instilled this very public and shared notion within them during their period of development.* Strauss and Quinn point out that when young people frequently encounter concepts (such as the desirability of self-reliance, certain religious beliefs, or particular political affiliations) at home, summer camp, "day care, school, and extracurricular activities . . ." (the point being, in nearly all of the settings with which they come into contact), it

not only reinforces the perceived truth and importance of the notion in question, it “also broaden[s the] . . . definition” of the concept (Strauss and Quinn 119). The encountered notion then becomes an extremely important part of the affected person’s inner world (112-120);<sup>23</sup> and, as Wexler points out, persons experience discomfort or distress when they entertain information that conflicts with the internal structure that was cultivated in them during development (Wexler 170 and 201). We tend to aggregate with others who, through their behavior and words, exhibit similar inner worlds, utilize information from our inner worlds to make sense of “incomplete or ambiguous stimuli”, and prefer objects, actions, people, and events merely if they are familiar and cohere with the representations we hold within ourselves (145-158). That is, we feel an affinity with other persons who exhibit, via their actions/inactions, a belief in and an acceptance of concepts that are the same as or similar to the concepts we hold.

Strauss and Quinn refer to this phenomenon as “elective affinity” (120). In this example, Paula and Michael, recreate and reproduce, both intentionally and unintentionally, the “patterns of experience”, from their own upbringings, in order to instill similar beliefs/concepts in the next generation (112-113). They gravitate toward “rhetoric and products that appeal to their understandings about self-reliance”, reject the notion that “we live in an interdependent world or that we must help the poor”, and only provide support for institutions and politicians that invoke these same assumptions (120). They select objects and activities, both for themselves and for

---

<sup>23</sup> Strauss and Quinn use the word “schema” (112-120) instead of inner world or internal structure.

their children—such as backpacking, reading “*Nancy Drew* books”, and watching “television programs such as *Little house on the prairie* and the continuous stream of movies such as *Home alone* (and more recent ones . . .)”—that “celebrate . . . and confirm” the value they place on the concept of self-reliance (120). One might note that, in doing so, they also tacitly disconfirm, both for themselves and for their children, any values that appear to be inconsistent with the value they place this concept.

In considering this description of the way in which Paula and Michael have acquired, maintained, and re-generated the notion of self-reliance, an important point becomes clear. That is, *they did not, at any point during the process, do it on their own*. They utilized all sorts of media and objects that embody ideas cultivated and put forward by other people, and they utilized these ideas to affirm and facilitate those they already held within their inner worlds. They did not rely upon themselves; instead, *they relied upon a multitude of cultural influences, upon which their notion of self-reliance is interdependent, in order to nourish, affirm, and propagate their and their children’s belief in the concept of self-reliance*. Because they acted with tacit (though perhaps not explicit) coordination with many others for their conceptual understanding, Paula’s and Michael’s notion of self-reliance and the activities they undertook to support it are shown, in fact, to be quite *conceptually interdependent*.

Moreover, since the concept of self-reliance means (in part) relying upon the self for conceptual understandings, Paula and Michael’s activities are actually inconsistent with the notion of self-reliance. They commit, via their actions/inactions,

a *performative contradiction*. They act on a concept that means ‘I rely only on myself’; yet, in doing so, they tacitly rely on many other people. And that is because humans are, in every case, interdependent with others regarding our conceptual understandings; we come to have concepts, both in childhood and adulthood, due to our interactions with others and the environment. Accordingly, *we are affected by the concepts of others*; we take up the concepts of others into our inner worlds and these concepts influence our understandings, significations, and activities. And what would be the case if one did not do so? One who does not take in and act on the concepts of others is a non-functioning, illiterate, mute blob of flesh; she is dead. Even the Romanian orphans took up the concepts of their “caretakers”; unfortunately, the only concepts to which they were exposed were ones like ‘I (or we) do not respond to the cries and needs of institutionalized children’. The orphans learned such concepts and their brains developed accordingly.

Consider whether Paula’s and Michael’s activities were physically self-reliant. Of course, the analysis in Chapter 2 has shown that their conceptual and physical well-being is dependent upon the actions of many others in their past. As adults, we can only maintain, diminish, or improve upon the physical health and capacities that others began for us. But Paula and Michael are part of a web of physical interdependency in many other ways. Presumably, they have jobs they perform and thus rely upon others to pay them (their employers, in turn, rely upon Paula and Michael to produce some product or service). Paula and Michael use these funds (via

an interdependent financial system)<sup>24</sup> to buy the many physical objects—food, housing, clothing, backpacks, televisions, movies, books—involved in carrying out the activities that maintain and promote the notion of self-reliance. But it is likely that, in every case, someone else (or many others) created or manufactured these objects. If the parents cook food from scratch, the ingredients were grown by others (if grown in a home garden, the seeds, plants, and fertilizers likely came from the store); if they built the house themselves, the materials were manufactured by others. Others made the material for their backpacks and sewed them. The parents rely upon these others not to have included toxic materials that might one day damage the health of their children. In the same way, they rely upon farmers to not deplete or contaminate the soil (via overuse or chemicals) so that the parents may give healthy and non-toxic food to their children. Of course, others made the television, wrote the books, acted in, directed, and produced the television shows and movies. In this way, Paula and Michael exist within a web of people and activities with which they tacitly coordinate in order to attain their physical necessities and possessions; as such, they are *physically interdependent*. If they deny this, once again they commit a *performative contradiction*. All the people they implicitly relied upon are both conceptually and physically interdependent within the same web.

In arguing that Paula and Michael (and all the rest of us) are conceptually and physically interdependent, I do not mean to imply that any one of us is necessarily

---

<sup>24</sup> The United States economy is, for instance, greatly influenced by the opinions of investors and the spending patterns of consumers.

dependent (although via circumstance, many people—for instance, children and the elderly or those with diseases, severe autism, or Down’s syndrome—are dependent). *The inapplicability of the concept of self-reliance does not entail dependency.* As I explained in section 2.11, if a person has had the pre-conditions of choice, she will have a capacity to think in a way that is *non-dependent*; that is, such a person may, during her deliberations, utilize the concepts she obtained from others and her environment, but she need not be constrained by them. When novelty is present, she will have the *capacity to extrapolate*—given her neural processes and content—to another non-identical or, perhaps, even radically different case. The utilized concepts are not hers alone. She is not conceptually self-reliant. But *she can add something*; that is, she can make a non-trivial contribution (one involving novelty). Thus, while there is no case in which she is self-reliant, *her engagement with and in the interdependent context can be substantial.*

But perhaps all of the relevant scenarios have not been entertained. Consider then an extreme case: that of a hermit who lives high atop a mountain. Perhaps, at age 20, she broke away from her family and society and hiked into the wilderness, carrying only what she could hold on her person. She has had no contact with any human since. She cut down trees and fashioned them into logs to build her home. She grows or gathers her own fruits and vegetables and makes her own tools that she uses for hunting. She has no reading materials, no television, and no radio. She does not appear to be part of the web of interdependency that is described in the example above. Surely she is self-reliant. One might point out, however, that there are two

significant ways in which she is not. The first regards the environment in which she and all the rest of us live. While she does not utilize the objects produced in modern society (except those she took with her), she will still receive impact from many of its practices. If a nearby society allows over hunting of game, dinner may be hard for her to come by. As global warming continues, drought may ensue and water may become scarce for her (alternately, she may be inundated with rain). Depending on where she is, smog may hang about her home. The second way in which she is undeniably interdependent involves her past. If she is able to do the things described above, it is because she has had the pre-conditions of choice (including an education regarding how to survive in a difficult environment). Novel situations would surely come her way and she would have to innovate to deal with them and survive. Thus, like the rest of us, she would at each moment be in an interdependent relationship with each of the multitude of influences in her own past.

We exist in a conceptually and physically interdependent context whether or not we want to acknowledge it and whether or not we want to create concepts and organize ourselves in ways that help us to believe otherwise. And this is the case for all people in any culture around the world. People implicitly or explicitly coordinate in order to provide for their conceptual understandings, physical necessities, and possessions. But existing in an interdependent context and understanding that we do so are two separate things.

### 3.4: Intra-Cultural Interdependence

In section 3.3, I argued that, although one can be non-dependent if one's capacity for choice is enabled, it is never the case that persons are self-reliant. I also introduced the notion of interdependence. We are interdependent because we must coordinate with others, in a tacit or express manner, in order to acquire the concepts relevant to and the objects utilized in daily life, and the mode of this coordination is engagement—the (generally) symbolic interpretation and contribution of signification. Because we exist in an interdependent context, we also impact each other. This section will offer further analysis of the affectation that can and most often does occur due to our conceptual interdependence. Specifically, I will focus on the way in which the concepts held by some can come to be efficacious in helping to determine the behavior of others. For heuristic purposes, I will discuss the relevant impact with regard to those who share a culture (impact for those who do not will be addressed in section 3.6). With regard to intra-cultural conceptual interdependence, I will offer eight reasons in support of the *Interference Thesis* (IT) which holds:

A person can be (and often is) affected by others who share her *culture* or *sub-cultural groups*, because whatever types of activities/inactivities that are often undertaken by members of the culture, that do not meet with sufficient *disaffirmative active interference*, will tend both to continue and to propagate. This is because, due to *active affirmative interference* and *quasi-active affirmative interference*, these activities and inactivities will come to *impact* and *change* other members of the culture/sub-culture, who, in turn, will have a tendency to act upon them.

The IT—a thesis regarding human action, inaction, and interaction—might be considered as analogous to Newton’s first law,<sup>25</sup> because the IT holds that the types of activities and inactivities that are common will continue unless they receive adequate opposition (or force). Then, given this aspect of intra-cultural interdependence, any concept, *including those that denigrate choice or humanity*, can come to be a common cultural concept upon which to act. Of course, concepts that esteem choice may become common via the same avenue. Persons with choice need not be constrained by either type of concept; the concern is, as I will explain, that those without choice are constrained by two sets of interference and that persons with choice will tend to abide by group concepts unless novelty is present. A particular sort of cultural concept (the group self-concept) also affects whether persons with choice are able to enact choice, but that will be addressed in section 3.5. Before proceeding, I will define several terms—those utilized in the IT above, such as culture, group, sub-group, interference (three types), cultural concept, impact, and change—that are important features of the analysis.

And in section 3.2, I argued that, in general, human action and inaction are accorded symbolic meaning (determined by convention or agreement) because humans are such that they tend to interpret symbolically, and I stipulated that *culture* will be taken to be a *shared evolving system of meaning*. Those who share a culture (whom I will call a *group*) take actions, inactions, objects, situations, and events to

---

<sup>25</sup> Newton’s first law holds: “Every body perseveres in its state of being at rest or of moving uniformly straight forward, except insofar as it is compelled to change its state by forces impressed upon it” (Cohen, 152).

have certain sorts of meanings (given by what is possible within the system) because they are in implicit or explicit agreement with others in their group that it will be such. Group members need not, and often do not, share all meanings; rather, it is the system that is shared. *Sub-groups (sub-cultures)* are sets of persons within the larger culture/group who share more specific meanings. A group or sub-group may develop around the notions of “ethnicity, religion, nationality, race, family, political affinity, or in other ways” (Staub, *Psychology of Good* 14). Many groups/sub-groups develop a combination of explicitly stated rules and implicit beliefs, values, norms, and/or mores that help to organize or guide members’ affiliation with other members, but other groups develop merely with regard to the implicit. A university has explicit regulations, for instance, as does the Catholic Church, but both have implicit norms as well. Members of groups/sub-groups that have developed regarding race or other informal affiliations, on the other hand, are generally guided by implicit understandings. Actions, inactions, objects, and so on can (and often do) have different significations in different cultural and sub-cultural contexts and the meanings accorded in these contexts may be both rich and intricate. I will not be concerned here with these intricacies, but instead will deal only with the *notion of consistency*. That is, for any given meaning, the set of other significations with which it is consistent will be said to affirm the meaning; those that are inconsistent will be said to disaffirm it. Since *persons act or refrain from acting according to the significations or concepts they hold*, action and inaction will be said to affirm or disaffirm—that is, in some fashion interfere with (impede or obstruct that with which

it is inconsistent)—some other meaning accorded to another action, inaction, object, and so on.

Earlier (in section 2.11) I explained that all of us require active interference in order to live and obtain the pre-conditions of choice (for instance, if no one actively interferes with a new born, she is on a path toward certain death). Here, I elaborate on this notion of *interference* and distinguish three types: *affirmative active interference* (AAI), *disaffirmative active interference* (DAI), and inactive or *quasi-active interference* (QAI). AAI is activity that actively affirms the concepts (meanings or significations) included in one's and/or another's inner world(s) and/or cultural understandings (defined below) regarding the activities, inactivities, objects, and so forth within the environment (e.g., telling a child “good job” in order to affirm her actions, watching children play ball in the park with a contented facial expression, or buying Girl Scout cookies in order to support the activities of the Girl Scouts of the USA). DAI is activity that disaffirms such concepts and/or cultural understandings (e.g., telling a bully to “stop that”, intercepting the children's ball and throwing it into a nearby pond, or casting a “no” vote on a bill that will prevent homosexuals from marrying). Inactivity, as I explained via examples in section 3.2, also has an affirmative function, because humans are such that they interpret inactivity as having such meaning. The idea is that if a person observes or knows of some action/inaction and does nothing, she indicates that she takes that action to be appropriate or at least that she believes it is not worth her time to actively intervene. *Inactivity is tacit approval*. Then, since, as I will explain further below, undertaken activity has a

tendency to be repeated unless actors experience disaffirmation (for the moment, think of a child who will continue to get into the cookie jar unless her activity is actively disaffirmed or the fact that if *action* is not taken to stop violence in American schools, it will, all else being equal, continue to occur), an absence of DAI actually affirms specific concepts and actions and/or the general tendency toward some type of action. As such, QAI affirms in a way that is very similar to AAI. Both AAI and QAI offer an implicit disconfirmation of whatever is inconsistent and both affirm the status quo. DAI works opposite of AAI and is required if a change in a course of action/inaction will occur.<sup>26</sup>

When many of the people of a culture (or sub-culture) interpret an activity, inactivity, object, etc. in the same (or in a similar) way, that interpretation, as a concept, will constitute a *cultural* (or sub-cultural) *concept or understanding*. I define *impact* as the effect that any of the three types of interference has upon the inner world of a given person and/or a cultural concept. Impact results from the confirmation (through AAI or QAI) or a disconfirmation (via DAI) of a previously held concept, and thus is accompanied by *change* either within people's inner worlds (they come to hold an understanding in a way that is stronger or less strong as a result of interference and impact) or with regard to objects, activities, inactivities, etc. in the

---

<sup>26</sup> This is not to say that DAI must be dramatic (or violent) to be effective. Recall, for instance, from section 2.5 that merely directing a child's hand helps to guide her behavior (as well as to develop her prefrontal neural structures); a caregiver does not have to slap her hand to get the job done. Likewise in the adult public world, in many situations peaceful protest is more likely to be effective than violent protest. This is because violent action affirms violence. While violence may be necessary in some cases, even then it is likely that peaceful disaffirmation could have been effective if it was undertaken earlier.

environment. That is, people's interpretations of such things may alter or people may alter the objects, activities, and situations themselves, so that they accord with the relevant impact. Change may or may not be easily ascertained.

I turn now to a discussion of the eight reasons—supported by information gained from social psychology and psychiatry/neuroscience—offered in support of the IT. That is, I will explain why a person, as a member of a group and sub-groups, experiences interference, impact, and change during the course of daily life such that she is likely (and overwhelmingly likely if she has not had the pre-conditions) to act in accordance with the cultural/sub-cultural concepts with which she comes into contact. The degree of likelihood is to a great extent determined by whether or not a person has a capacity for choice. Without this capacity, a person is ill-equipped to create, conceive of, recognize, and deal with novelty. She is not going to be *extrapolating* from observed behavior and cultural concepts in order to come up with novel ways of doing things. She will be constrained to follow others in her group/sub-group. If group/sub-group understandings and behavior change too much, she will have difficulty in adapting. The person with a capacity for choice, on the other hand, is not so constrained. She can conceive of and undertake activities/inactivities that are different from those enacted by others (or not) when novelty is present. Of course, merely having such a capacity does not imply it will be used. A person with choice can follow others utilizing mere preference selection (and she will unless novelty is present); she can also do so by choice. At the end of this section, I will consider

further the role that having a capacity for choice may have in mitigating against the tendencies described in the IT.

The first point (in support of the IT) regards the ways in which humans both come to be and come to know themselves. That is, groups create people and people create groups (Rogoff 37), such that personal identity is dependent upon the group and sub-groups to which a person belongs (Staub, *Psychology of Good* 352). Social psychologist, Ervin Staub<sup>27</sup> distinguishes three types of identities—personal, social, and group self-concept (352)—that intermingle and coalesce. *Personal identity* refers to “the ways in which individuals answer the question, Who am I?” (352) and the attributes that are a part of a person’s inner world that due to interpersonal experience was not shared by others. Much has been said thus far about how a person acquires an inner world; many cultural, sub-cultural, and interpersonal influences (that is, AAI, QAI, and DAI from others) have contributed to her internal structures. *Social identity* concerns “the extent to which individual identity is . . . connected to . . . the group”

---

<sup>27</sup> Staub’s life-long work focuses on how persons and groups come to act in violent (evil) or caring (good) ways. In the following analysis, I do not assume Staub’s definitions of good and evil; rather, my project seeks to establish that what is consistent with choice is moral and that what is inconsistent with it is immoral. I do, however, utilize Staub’s work to isolate and describe general tendencies in personal and group behavior. Staub received his Ph.D. from Stanford University in 1965; he has taught at Harvard, Stanford, the University of Hawaii, and the London School of Economics and Political Science; he is currently Professor of Psychology at the University of Massachusetts at Amherst. “He has worked in varied projects in field settings, including the development of a training program for the State of California after the Rodney King incident to reduce the use of unnecessary force by police, teacher training to create classrooms that help children become caring and non-violent, a project in Amsterdam to improve Dutch-Muslim relations, a project in New Orleans to promote healing and reconciliation in the wake of Katrina, a project in Western Massachusetts to train school children in active bystandership in the face of aggressive behavior by their peers towards other peers, and since 1998 varied projects in Rwanda, working with communities, national leaders, journalists, as well as radio dramas and other educational programs in Rwanda, Burundi and the Congo, to promote healing, reconciliation and the prevention of new violence” (“Ervin Staub”).

(352). As I discussed in section 3.3, groups and sub-groups may have different ways of organizing people's understandings of the relations between them. These interdependent notions, translated into AAI, QAI, and DAI, then impact the way that person's understand themselves. Lastly, the *group self-concept* refers to the way that members of a group or sub-group "perceive and experience their group" (352). They may take themselves, for instance, to be strong, weak, hardworking, or relaxed, when compared with other groups. As Staub explains, the first two types of identity gain content from the third, such that a person's answer to the question "Who am I?" is informed by her interactions with other individuals and sub-groups; in turn, the third type of identity is maintained by the content of the other two (352). Since part of what persons act on are the notions of themselves that they have obtained through the AAI, QAI, and DAI of others, they have a bias toward engaging in the same types of activities that other group/sub-group members do.

The second reason concerns the fact that each of us is at every moment in an interdependent relationship with each of the multitude of personal and cultural influences from which we have received interference and impact. A person has to use the past and present as a *springboard* toward the future, because her actions, in every case, stem from the interaction between the structures and meanings within her inner world and the cultural objects and significations around her. That is, she must use her internal structures in conjunction with cultural/sub-cultural concepts in order to do *anything*. She cannot use the internal structure of another; she has no immediate access to it. She cannot use concepts with which she is completely unfamiliar. While

cultural contributions to thought are omnipresent and critical, they are easily ignored. James Wertsch offers a helpful example on this point. He asks the reader to consider a multiplication problem (343 x 822). Normally, if a person is asked to display her calculation, it would look something like this (Wertsch cited in Rogoff 278):

$$\begin{array}{r} 343 \\ \underline{822} \\ 686 \\ 6,860 \\ \underline{274,400} \\ 281,946 \end{array}$$

Wertsch's question is this: was it really the reader who provided a solution to the problem?<sup>28</sup> In order to “see the force of this question” consider how the solution might be arrived at without “placing the numbers in the vertical array used above. Most of us would be stumped at this point” (278-79). And that is because the “spatial organization, or syntax, of the numbers . . . is an essential part of a cultural tool without which we cannot solve this problem” (279). Wertsch suggests that the appropriate response to the question regarding who solved the problem is, “I and the cultural tool I employed did” (279). Note also that countless people over the centuries contributed to the utilized method (it is built upon counting and adding) and many other people contribute to the context during development in which a child learns to multiply (the child was fed, clothed, nurtured, and stimulated to get her this far). The number of people involved is enormous. Each person utilizes what is available at the moment; that is, she uses what others have largely constructed, both

---

<sup>28</sup> If so, the reader would be conceptually self-reliant in her calculation, although not in what it means to multiply two numbers.

with regard to her internal structures and the external world. It is what she has to work with. As such, at any given moment each person is experiencing significant impact via the AAI, QAI, and DAI contributed by many other people and she is engaging in behavior that is influenced by it.

The third and fourth points stem from the fact that, as adults, people prefer actions, inactions, objects, other persons, and so on merely because they are familiar and thus consistent with their internal structures. During childhood, a person's neural structures are quite flexible (Wexler 143 and 171); young persons have the ability to adapt to whatever the situation is in their environments (even the subdued cognitive, social, and emotional processes exhibited by the Romanian orphans was the outcome of an adaptation). Children are, however, disadvantaged (when compared to adults with choice) with regard to changing or acting on environmental input. As a person reaches adulthood, her neural processes become more fixed (143 and 171).<sup>29</sup> Change within her inner world, at this point, becomes less likely, but by no means impossible.

As a result of this, she will, in general, act on the world in one of two ways; the ramifications of her behavior correspond to the third and fourth reasons. One possibility (the third reason) is that, since her "internal structures select and value sensory input that is consistent with them" (Wexler 155), she attempts, as far as she can (that is, until she is confronted with DAI that cannot be ignored), to take the world to be consonant with her inner world (143). She tends to ignore, discredit, re-

---

<sup>29</sup> I take it that entry into adulthood is a gradual process that becomes complete as a person's prefrontal cortex reaches maturity (some time between the ages of 20 and 25 (Wexler 242)).

interpret, and forget discordant information (169) and alters her “perception and experience of the external world” according to her structures (143). In short, she treats other people as if they fit her world. When she behaves toward others as if they had her structures, she often elicits a response that is consistent (Wexler 143; Staub, *Psychology of Good* 244). Studies show, for instance, that treating others as if they were aggressive or competitive evokes from them an aggressive or competitive reaction (Staub, *Psychology of Good* 106 and 244). In another study, researchers treated subjects as if they were expected to be helpful; when the expectation was clearly defined, 100% of the subjects responded in kind (88).<sup>30</sup> Thus, in many cases, a person’s behavior toward others constitutes effective interference that will often be followed by impact and change in the other. This person’s actions also impact and change her own subsequent behavior. Since her actions were effective, she has performed AAI for herself. She is affirmed in her belief that other people are aggressive, competitive, helpful, and so on; she will be more likely to treat others in a similar manner in the future.

Rather than treating others and situations in the world as if they fit her structures, she can (when she has experienced sufficient DAI from others) act on the world to change it. This is often the case with young people entering adulthood.

Wexler explains that, even though interpersonal experiences create differences between persons, broad cultural concepts impact many young people in a similar way

---

<sup>30</sup> When researchers altered the conditions of the study and were ambiguous regarding the expectations that were conveyed to the subjects, many fewer acted to help the person in distress (Staub, *Psychology of Good* 88-89).

and create generational cohort sub-groups who share many sub-cultural understandings and symbolic interpretive processes (142). To the extent that this sub-group's structures are in agreement with the cultural concepts of previous generations, they may act to maintain what is already present. If the cohort experiences discordance, they may attempt to enact DAI in order to alter "events in the external . . . world in such a way as to increase the likelihood that subsequent events will be consistent" with their inner worlds (143). Remember that each generational cohort group has been influenced via many sources, only some of which were manifest for their parents' generation. Moreover, since inter-cultural contact has become common in the modern era, due to travel, immigration, and mass media and communication, some of this interference likely derived from influence from other cultural groups. Then, when individuals and whole cohort sub-groups reach maturity and act on the world in an attempt to make it consonant with their sub-cultural concepts, to the extent they succeed, they create *novel* cultural and sub-cultural concepts upon which *others now must act*. Others, in previous (if still living) or subsequent generations, must react, via AAI, QAI, or DAI (or perhaps some combination of them), depending upon whether these new concepts cohere or conflict with their own internal structures. The events during the 1960s and '70s in the U.S. are a recent and clear example. Young people (cohort sub-groups of flower children, war protesters, civil rights advocates, and feminists) sought to change the concepts upon which anyone could act. The end of the Vietnam War, the Civil Rights Act, and the Second Wave of the Women's Movement attest to a substantial success. Current

trends in society—for example, the erosion of support for affirmative action and feminism and the rise of fundamentalist Christian concepts—indicate that significant DAI has occurred in response. In any case, the novel concepts projected by a generational cohort sub-group both alter the rearing environment for the next generation (ensuring that the cycle will continue) (Wexler 6) and impact and change others who share the culture.

The fifth reason in support of the IT regards the case in which a person selects (according to preference selection or choice) the sub-groups to which she will belong (membership in some sub-groups are not a matter of selection). As a person reaches adulthood, since she has been affected by the interference of so many persons (all of whom belong to sub-groups), she holds many cultural and sub-cultural concepts, some of which may create in her a tendency to select one sub-group while others incline her toward others. The point is that since she selects sub-group affiliations on the basis of her internal structures (Wexler 167, Staub, *Psychology of Good* 17-18) and since she desires consonance between her inner and external worlds, she will select groups that tend to provide AAI or, at least, QAI in support of her previously held concepts. She will, in turn, provide the same function for other sub-group members. There will be a tendency, then, for all members of the sub-group to both hold stronger to these beliefs (impact) and act more often in accordance with them (change). A recent string of suicides in Japan demonstrate this type of affectation. According to Japanese officials, internet sites—that is, self selected online sub-groups—are encouraging the suicides. The sites tell people how to kill themselves by

mixing different household cleansers and detergents and releasing toxic fumes into a closed space (for instance, a car or bathroom). Site users are told to post signs warning others to stay away. At least thirty suicides by this method occurred in the first four months of 2008. In one case, a 14 year old girl failed to seal her bathroom window; 90 people in her apartment complex were sickened by the fumes (“Girl’s Suicide”).<sup>31</sup>

Sixth, as Staub explains, groups and sub-groups tend both to “socialize and resocialize” their members (Staub, *Psychology of Good* 18; see also Wexler 168) according to the evolving understandings of the group/sub-group. When persons act on the explicit or implicit concepts held by the group, they learn from their own actions (Staub, *Psychology of Good* 7 and 303). Persons provide interference and impact and evoke change for themselves that accord with notions held by the group. In this way, concepts held by other members become part of the individual’s inner world, because it is difficult to experience “participation in an activity as alien. People begin to see their engagement as part of themselves” (326). If, for instance, people perform helpful acts, they begin to see themselves as helpful; they also begin to see those who have been helped as worthy of it (326). People “observe their own actions and draw inferences” from them (326). Their views of themselves and others change. If persons either perpetrate harm against another or merely watch harm inflicted without doing anything to stop it (that is, if they merely perform QAI), the

---

<sup>31</sup> In 2006, 32,155 people in Japan committed suicide, “giving the country the ninth highest rate in the world” (“Girl’s Suicide”).

same sort of scenario evolves (327-28). It is inconsistent to view the other as unworthy of harm while either inflicting or watching it. People are thus more likely to devalue the victim and value themselves more as one who dishes out the appropriate response to an unworthy person (328). The point is that when we act in accordance with understandings of others in our sub-group, we learn from our actions (again, we affirm or enact AAI for such understandings for others as well); and, due to this socialization process, members become more and more likely to undertake actions that are consistent with the group's/sub-group's concepts (326).

Seventh, for many persons, group and sub-group affiliations are so important to personal identity, that they may alter their “beliefs and perceptions in order to remain in agreement with the attitudes and behavior of other group members” (Wexler 170). This may be especially the case when a person has joined the group in order to satisfy a previously unfulfilled need, such as the need for security or the pre-conditions of choice (Staub, *Psychology of Good* 17).<sup>32</sup> For example, a person who was not necessarily inclined toward violent behavior may join a gang in order to gain security and support in obtaining the pre-conditions (an attempt to get access to food and clothing in an environment that does not support attainment of them) (17). “Once a member, if the gang engages in violence, this person is likely to participate due to . . . her connection to the other members and commitment to the [sub-]group” (17).

Rather than severing ties with other sub-group members—at the risk of internal

---

<sup>32</sup> Staub's definition of the basic need for security includes the need for, what I call, the pre-conditions of choice (see *Psychology of Good* 56). Staub discusses several psychological needs, but he takes the need for security to be most fundamental (61).

dissonance and/or ostracism for non-compliance to group rules and norms (Wexler 167)—persons experience interference and impact from others. They tend to change accordingly. Avoidance of dissonance is important because people experience distress, and sometimes dysfunction, when their inner worlds cannot be reconciled with external reality (170); self-alteration is more effective for the organism. Since persons also feel distress from ostracism (think of the stress and upheaval involved in losing one's job or the loneliness of being cast out of an implicitly formed sub-group, such as a high school clique, for not dressing according to what is "in"), the threat of dissonance and ostracism are powerful socializing forces which often equate to the experience of interference, impact, and, change.

The last reason I will offer in support of the IT is that individuals rely upon and utilize the interpretations of others as a ground or test for their current beliefs. Persons are, of course, most likely to look to other members of their group/sub-group for the information that either affirms (AAI) or disconfirms (DAI). As Staub explains, in order to function (that is, engage) effectively, "we must perceive reality as accurately as possible" (Staub, *Psychology of Good* 87). In order to do so, people "check their reactions by comparing them to others' behavior" (87), and rely upon the comparison such that "[e]ven a sense of sanity seems dependent on . . . perceiving and interpreting events as other people do" (87). That is, we, in reality, need the reactions of others in order to make sense out of the world. Thus, a person tends to absorb the "worldview propagated by the group" (14) or sub-group; then, as noted

multiple times above, she experiences interference and impact and has a significant tendency to change according to group expectations.

Three additional considerations are also significant. First, it is important to point out that the eight reasons that lend support to the IT display the *dynamic* mechanisms involved in many persons sharing a culture. The processes described are ongoing and they involve (at least to some extent) every person and sub-group that make up the largest cultural group. Interference is everywhere, because we all are, at nearly every moment, providing it in one way or another. Second, recent research indicates that a concept upon which to act may travel through a sub-group as if it were contagious; for instance, studies have shown that social network dynamics have a significant impact upon the incidence of obesity and smoking behaviors in the U.S. Researchers “evaluated a densely interconnected social network of 12,067 people assessed repeatedly from 1971 to 2003 as part of the Framingham Heart Study” (Christakis and Fowler 370). The study kept track of the social ties between the participants and found that “people are strongly influenced by those in their social sphere” (Hodes qutd. in Fox, 1). Take 2 persons: A and B. If, in the study, A noted B as a friend and if B became obese, the chance that A would become obese increased by 57% (and by 71% if A and B are the same sex); if both reported the friendship, either had a 171% increased risk if the other became obese (Christakis and Fowler 376). Researchers also found that social dynamics impact smoking behavior. Take three smokers: “A, B, and C. A and B are friends, and B and C are friends, but A and C do not know each other. If C quits smoking, the chance that A will quit goes up by

30 percent, regardless of whether B also quits” (Christakis qtd. in Fox, 2). Influence was significant between spouses, siblings, friends, and co-workers; when one in the category quit smoking, the other or another was 67%, 25%, 36%, and 34%, respectively, more likely to quit as well (2). Moreover, when researchers considered who quit and when, they found that “people quit in domino effect until almost the entire group of family and friends did not smoke” (Cox 1). And third, in many cases, group/sub-group members need not be immediately present to each other for interference, impact, and change to occur. I, for instance, have experienced significant interference from many scholars in writing this chapter, without being in the physical presence of or personally conversing with a single one (it came in the form of reading and referring to their work). We experience impact from members of our group/sub-group through modern media and mass communication. The Japanese suicide sub-group members, for instance, only communicate in a virtual context. A recent spate of recorded beatings in the U.S., that either were or were intended to be posted online, demonstrates that the persons providing interference need not be present to those they impact. On March 30, 2008, eight teenagers in Florida taped their brutal beating of a 16 year old girl. Over the five weeks that followed, five more beatings were recorded in different parts of the U.S. In most cases, witnesses to the beatings could be heard or seen encouraging (providing AAI for) the aggressors as was the case with the Florida tape. That the attacks were recorded for the purpose of posting them online indicates that the attackers were utilizing shared concepts to guide their actions. Cultural and sub-cultural concepts are embedded in our television shows, movies,

video games, music, and so on and all of these are media by which interference is conveyed. Televangelists, for instance, persuade their viewers to donate (collectively) millions of dollars each year. Television, radio, and magazine advertising are interesting incidences of the phenomenon. In these cases, an explicit group forms (an advertising firm or a department within the manufacturer's company) with the sole purpose of learning the concepts held by different sub-groups in order to persuade them to consume. If the advertiser can project the notion that all members of the sub-group are buying a product or that they will "be better" or be better off if they do so, a new concept that supports buying the product will become a sub-cultural understanding. The interference by the advertiser may constitute manipulation or coercion if it is known that many or all members of the sub-group have not had the pre-conditions of choice (as I will discuss below, such persons may be significantly or totally constrained by the interference they receive from other group/sub-group members). A more sobering example involves media that depicts violence. Recent studies (that were noted in section 2.7) show that the impact young people experience from watching violence on TV and in movies is positively and strongly associated with a greater tendency to commit violent crimes in adulthood. Thus, there are many instances in which immediate personal contact with members of one's group/sub-group is not necessary for affectation to occur.

In view of this analysis, what can be said for choice? I only spoke above in terms of tendencies, but when taken together, do the eight reasons that support the IT entail that persons are constrained by the actions of others? The analysis showed that

each person has at least two categories of interference to which she is subject. She has her own inner world (which, of course, is in every case developed through interpersonal and group interaction) and the current meanings she receives through interference from the other members of her group and multiple sub-groups. However, if she has a capacity for choice, she will be able, when novelty is present, to utilize this interference (that embodies many concepts) in order to *extrapolate* and possibly move beyond to an understanding that is based upon, but *not fully dependent on*, these two sets of interference. She will be able to think and behave in a way that is *non-dependent*, however *interdependent* she will always remain.

If a person does not have this capacity or if it is not fully developed, she will be, to a greater or lesser extent (depending on how many of the pre-conditions she received), constrained by the two sets of interference. One can use experience from daily life to understand this sort of constraint. Some children and teenagers, for instance, are in a similar situation in that, even if they will come into a capacity for choice when they mature, they seem excessively influenced by sub-group pressure, as two recent incidents attest. In one case, between six and nine third graders (they were all either eight or nine years old) at Center Elementary School in Georgia planned to attack their teacher because she had admonished one “for standing on a chair” (Bynum); they brought with them a steak knife, duct tape, handcuffs, and a paper weight, among other items, with which to carry out the deed. They were quite organized (one student was to cover the windows and another was to clean up after the attack). Now, while it is possible that one or even a few of these children has

learned to solve problems through violence, surely not all of them has. One presumes that those who have not become so disposed were persuaded by the dynamics of their sub-group to participate (specifically via some or all of the eight tendencies discussed above). In another case, a teacher at a Baltimore school alleges she was attacked by a student, while many other students (presumably, those in the student's sub-group) cheered the student on, providing sufficient AAI to affirm the student's action (a video of the attack later "showed up on MySpace" ("Teacher Says")). Luckily, other teachers exerted DAI in order to stop the attack, but AAI certainly played a role in the student's actions.

Many adults—those who have not received the pre-conditions and who lack a capacity for choice—will be in a similar, though perhaps more permanent, position when it comes to being constrained by interference. Recall from section 2.11 that, since a lack of different pre-conditions affects people in different ways, people's circumstances may be placed on a continuum (*areas 1* through *5*). Those who have been severely deprived (*area 1*) will likely be entirely constrained by the two sets of interference. Most of those in *areas 2* and *3* likely will be as well; however, some in the latter category may be only partially constrained. They may be able to recognize and deal with novelty, in order to break away from the influences of groups and sub-groups, if the situation does not differ greatly from what they have previously known. Such a person may then be able to extrapolate from cultural concepts in some instances. For instance, maybe she will recall from her own experience, that she cried out from pain inflicted by another. Then, if she can make a small but momentous

mental leap, she may realize that the cry emanating from the teacher being attacked is the same sort of thing. Instead of providing AAI for the attacker, she may exert DAI instead. A person from *area 4* or *5* may, in fact, act in a way that is consistent with her group's and sub-group's concepts; she will be most likely to do so when other members' actions/inactions affirm the concepts she holds in her inner world. In that case, novelty is not present for her and she will merely need to utilize preference selection. However, when novelty (perhaps an inconsistency between her previously held concepts and those of her group or a concept put forward by another group member that she had never before considered) is present—that is, when she experiences DAI due to the activities of others—she need not be constrained to do so. She has a capacity for choice. She is, thus, *non-dependent* and capable of *extrapolating* from and moving beyond the concepts she holds internally and those embodied in the behavior of others. I will argue in section 4.4 that these group dynamics can under certain circumstances—when sub-groups are left without the pre-conditions of choice and/or when cultural or sub-cultural concepts denigrate choice—put many other persons in the group at risk for choice. Since persons without choice are constrained by their inner worlds and the interference they receive from others, there can be significant consequences to failing to help provide others within one's group with the pre-conditions of choice.

### **3.5: The Conditions of Choice**

I have addressed, thus far, many factors that affect whether a person will develop a capacity for choice. Part of what I have argued is that we do not become

capacitated without considerable interference from others. That is, if a person develops this capacity it is because she has received the appropriate kind of care from a group or sub-group; she must have been nurtured, fed, educated, and so on or she simply will not have the neural processes involved in choice and the content needed for her deliberations. In each case, the concepts a person utilizes in her deliberations either are or are derivative of cultural/sub-cultural concepts and these concepts did not derive from thin air. Each has an historical context to which a multitude of average people and scholars have contributed. But the last two sections point to another side of the issue. Not only are we not self-reliant, we also receive interference—resulting in impact and, often, change—from others on an ongoing basis. We are part of groups/sub-groups and other members help to determine our actions. Thus, others can restrict a person’s choice, even if that person has a capacity to choose.

Consider the case of Nazi Germany. The dominant Nazi cultural concepts held that it is appropriate and desirable to persecute and kill Jews and homosexuals (among others). Surely many Germans (that is, sub-group members of the German population) held notions that were inconsistent with these concepts, but relatively few undertook disaffirmative active interference to stop the Nazis or to save the persecuted. Some of those who failed to help—that is, those who offered QAI for the Nazis—remained inactive out of fear for their own safety. But another reason is that, in order enact DAI, helpers “had to distance themselves from their group” (Staub, *Psychology of Good* 314). Staub explains that often helpers belonged to sub-groups

that were marginal with regard to the larger group or that held “strong moral and humanitarian values” that were inconsistent with Nazi concepts (314). These factors helped them to choose action that was inconsistent with concepts being employed by the group at large. For most others, deviating from dominant group concepts was too difficult, due to some or all of the eight reasons that were offered in support of the IT, in addition to fear of retaliation. Those, who did not deviate, offered AAI or QAI on behalf of the Nazi concepts.

Not every choice is as dramatic as helping to determine whether another person lives or dies. Moreover, not every choice involves separating from the group. A person with a capacity for choice may choose to abide by the cultural/sub-cultural concepts that are present in her environment. She may encounter, for instance, a novel concept and determine in her deliberations that the concepts being employed around her are the best avenue to take. But this is an easy choice. My concern in this section is with things that get in the way of enacting choice, that is, when cultural conditions are such that meaningful choice is not possible or when the cost of a given course of action is so high that to take it would be to incapacitate oneself with regard to choice. In these cases, a person is faced with choosing what is inconsistent with either the informal or formal institutions set up by her group or sub-group.

Having a capacity for choice greatly increases a person’s chances of employing non-dependent thought such that she need not be constrained by group concepts. However, in this section, I consider what types of cultural concepts are conducive to choice such that they allow persons the leeway to deviate from informal

and formal cultural institutions without extensive personal cost to the particular chooser. Informal institutions concern implicit norms or group self-concept, a notion introduced in section 3.4, and the formal regards the political laws or the explicit rules to which group members are subject. Of course, since in many cases the former (perhaps a religious doctrine) becomes enshrined in the latter (law), the two categories should not be taken as entirely distinct or separate. When both types of institutions respect members as choosers, members will be said to live within the *conditions of choice*. The conditions of choice result from a multitude of actions and inactions that are consistent with and promote choice for particular human beings and that are manifest at a group or institutional level. Persons, who have a capacity for choice and who live within the conditions, will be said to have an *ability to choose*. That is, such a person is able to *knowingly* and *purposefully* utilize her capacity to enact choice—*its use is not impeded and she is not compelled, via incapacity, ignorance, cultural constraint, and/or force, toward revealing and contributing trivial or limited objects and/or significations, in the present or in the future*—and she will have the best chance of fulfilling her non-trivial interests. She exists in a state of freedom.

In section 3.3, I argued that there are many ways to organize people's understandings of themselves, and I offered three examples: middle-class Americans, who see themselves as self-reliant; the Japanese, who tend to view themselves as extremely connected; and the Kaluli of Papua New Guinea who view members of their group as both connected and autonomous. Staub distinguishes three types of

group self-concepts—individualist, embedded, and connected (Staub, *Psychology of Good* 354)—that correspond to these three examples, respectively. Recall that group self-concept (GSC) is of key importance to persons who share a culture because the other two types of identity (personal and social) gain content from the GSC. One might consider the GSC to be similar to a story that a group creates in order to explain the group's identity to its members and to other groups. Of course, details of the story evolve throughout the life of the members and throughout the existence of the group.

As a heuristic device, I offer the *stir-fry analogy*. I have argued that persons are interdependent because they must coordinate, in a tacit or express manner, for conceptual understandings, physical necessities, and possessions. I have also argued that persons receive impact on an ongoing basis from others in their group/sub-groups. That is, persons take up the concepts of others and change—come to hold prior concepts in a way that is stronger or less strong—due to this interference. One way to understand these phenomena is to think of group members as being vegetables in a stir-fry; the sauce is the system of meaning that the members share. As the stir-fry simmers, the vegetables take on, to some extent, the flavors in the sauce; they also, depending on their own characteristics, change the flavor of the sauce in return. All vegetables are impacted by the interaction, but since the sauce is thin and mild, no vegetable that has a strong flavor is smothered or changed completely. Vegetables that either lack flavor or are extremely porous are inundated by the flavor of the sauce. Persons with choice are like strong flavored vegetables; they maintain their

unique qualities (their inner worlds) and contribute novelty as they are tossed about in the mix. If their flavor is sufficiently strong, they can change the sauce (meanings in the system) in their area of the pan (sub-group level) or even throughout (group level). Persons without choice are like flavorless porous vegetables; they can be pulled any which way according to the impact they receive and they are unable to add anything novel to the sauce. No matter a person's capacities, we are all in the stir-fry. In what follows, I will relate the three different types of GSC to this analogy, to the way in which the different GSCs shape people, and to whether people, subsequent to the shaping, are more or less likely to be able to go against group norms and cultural concepts—that is, whether they will be *able* to enact choices that embody concepts that are inconsistent with these notions.

The members of groups who hold an individualist GSC (IGSC) tend to view themselves as autonomous beings who “stand on their own” and “effectively fend for themselves or their families” (Staub, *Psychology of Good* 354; see also 534). They tend to deny the existence of the kind of intra-cultural interdependence I described above. With regard to the stir-fry analogy, their story maintains that the vegetables are laid out on a huge platter with none touching the next. They acknowledge the sauce (lest they would also need to deny language and communication), but they take themselves to be relatively unaffected by its presence. According to their story (to borrow Daniel Dennett's word), they are “self-makers” (*Freedom Evolves* 277; I will address Dennett's position on moral choice after the main arguments in Chapter 4).

So what might the affect of this story be upon the choices of those who live within an IGSC? The issue is that because the IGSC tends to deny the extent and importance of the connections that exist between persons, persons in such cultures may find it difficult to turn to the group for support. However, as Staub points out, they still, along with all other people in the world, have a need for connectedness (Staub, *Psychology of Good* 534).<sup>33</sup> In times of difficulty (such as economic hard times during which some of the pre-conditions may be hard to attain), persons with an IGSC are more likely to become frustrated (534) and blame themselves for their difficulties. The prominence of this view may be compounded when the IGSC includes concepts like “capable persons provide for themselves” (like Paula and Michael do in the example given in section 3.3) or when sub-group concepts, like “the world is a just place”, intermingle with the IGSC (just world notions are prominent features of some religious doctrines and if the world is just, persons, no matter their circumstance, get what they deserve).

The impact on choice, though, is different for different persons within the IGSC, depending on whether their capacities for choice have been enabled and on the context in which the choice/preference selection is taking place. Recall that person’s circumstances may be placed on a continuum (*areas 1* through *5*). The IGSC is conducive to choice for most persons from *areas 4* and *5*, unless another is specifically attempting to disable their capacities for choice (see below). These

---

<sup>33</sup> In so far as the need for connectedness is a cultural concept, it may be a less central need for those with an individualist GSC (Staub, *Psychology of Good* 534). However, since connectedness is also a basic human need, it will not be absent.

persons have the capacity to innovate, to effectively utilize the innovations of others, or both. They can manage most of what comes their way and may even innovate in order to find novel ways to fulfill the need for connection. These, and other innovations, are generally tolerated (or even encouraged) by the IGSC. Some will likely recognize their interdependence and create situations in which this aspect of life is respected. Persons from *area 1* will not fare well with regard to choice regardless of their GSC. And, while the IGSC group likely will not produce more persons in *area 1* than other types of groups, the IGSC group may produce more than is necessary. Recall that many *area 1* cases are preventable; but, since the IGSC encourages persons to stand alone and provide for themselves, persons without choice may not have the resources to enable choice for another and may not be able to obtain those resources in adequate amount from others in the group. And one must have choice in order to enable it for another. Persons from *areas 2* and *3* will, most likely, become the most frustrated and experience the most personal difficulty when economic hard times hit. They will not have the capacity to innovate and will not be well suited to fully take advantage of the lead that those from *areas 4* and *5* might demonstrate. Their frustration may even increase due to the innovation initiated by those with choice. Without the neural processes and/or content involved in choice, people from *areas 2* and *3* are at an exceptional disadvantage because they do not have the means to even nominally “stand on their own” and “effectively fend for themselves or their families”.

As noted above, the context in which the choice or preference selection takes place is also an important consideration. That is, when others are specifically attempting to disable the capacity for choice of a person with an IGSC, the former may have significant success because the latter is not prone to use others in her group for support. Torture and brainwashing, for instance, are specific attempts to disable the choice of another. Staub offers an example in which having an IGSC was a detriment to choice in this context. “American soldiers who became prisoners of war in the Korean War had more difficulty in resisting brain washing than, for example, Turkish soldiers” (*Psychology of Good* 354), who, one might argue, come from a more embedded GSC. The difference seemed to be that the “former were trying to face it alone while the latter supported each other” (354). Advertising (especially in the U.S.) may also be seen as an attempt to use persuasion (and perhaps exaggerated claims) to circumvent choice. For instance, if each member of an implicitly formed sub-group—say, young women between the ages of 20 and 30—are each experiencing the persuasive tactics of the advertisers alone, they will be more likely to succumb, perhaps even to their own disadvantage, when they are led to buy products that they do not need and/or cannot afford. After all, many ads emphasize that those who buy their product will be part of an exclusive club and/or that they will “be better” or be better off. In short, the IGSC is a mixed bag when it comes to helping to facilitate an ability to choose for its members. Those with a capacity for choice may fare well in many contexts; the exception might be the case in which others are specifically trying to circumvent their capacities. Those without choice will

be easily manipulated in nearly all contexts, a situation that is exacerbated by their decreased capacity to use other group members for support.

The embedded GSC (EGSC) is “characterized by a strong connection to other people that also embodies dependence on the group and an inability to separate” (Staub, *Psychology of Good* 354). With regard to the stir-fry analogy, this cultural story maintains that the sauce is both so strong and flavorful that it inundates all vegetables and so thick that the stir-fry is more like a quiche. Rather than downplaying the connections between persons, this story depicts them as overwhelming. Persons with an EGSC may find it “especially difficult to speak out against and oppose the direction the group” is taking (354); if the group begins, for instance, to scapegoat, vilify, or discriminate against a sub-group or persons in another culture (a possible response to what Staub calls difficult life conditions), group members will be “more likely to remain silent and go along” (354).

So what is the impact of the EGSC on the possibility of choice for members? Persons from *areas 2* and *3* will have much in common with their counterparts in the IGSC. Since they, to varying extents, lack a capacity for choice, they are easily manipulated and tend to follow which ever direction is put forth by the group or its leaders. However, given their GSC, they are much more likely to use their relationships with others effectively and they will be much less likely to blame themselves for what is beyond their control. Persons from *areas 4* and *5* will have less in common with their counterparts in the IGSC, because the EGSC tends to be intolerant of innovation that is inconsistent with cultural concepts. Of course, EGSCs

vary in this respect in different contexts. One might well argue that both Iran and Saudi Arabia have EGSCs. However, the Shi'a Muslim religion, which is prominent in Iran, accepts, in general, that religious scholars and leaders may innovate and offer new direction (even with regard to theology), while the Sunni Muslim religion, which is prominent in Saudi Arabia, generally forbids such change (they hold that Allah has not and will not provide further revelation). As such, the Iranian EGSC may encourage innovation (at least to some extent),<sup>34</sup> whereas the Saudi EGSC strongly discourages it. Moreover, both tend to backup their position with effective informal and formal methods of control (such as, ostracism or incarceration in response to deviation). Another example might be the Japanese kamikaze pilots during World War II. While surely at least a few of them would have chosen not to die, pressure from the group forbade that option. The flip side is that persons with an EGSC are less susceptible to brainwashing since they can use each other for support (unless one wants to argue that this type of GSC is brainwashing in itself).<sup>35</sup> Where innovation is frowned upon, persons in *area 1* may be more numerous than need be, since new methods and techniques that prevent such difficulties may not be undertaken. In short, persons without choice may be in a better position in the EGSC because they can more readily obtain help from others; however, the EGSC may, in effect, prevent

---

<sup>34</sup> Iranians generally see a man with female tendencies (or vice versa) "as someone who is consciously acting dirty" (Eshaghian cited in Barford). However, Iranian clerics are increasingly recommending "sex-change operations to those who are troubled about their gender" (Fathi) and Iranian physicians have become quite adept at performing the operations. "Iran carries out more sex change operations than any other nation in the world except for Thailand" (Barford).

<sup>35</sup> If the EGSC is to be considered brainwashing, perhaps because it does not depict reality (the notion that people are not as constrained as vegetables in a quiche), it seems that the IGSC is brainwashing as well (the notion that people really are not as disconnected as the cultural story would have it).

persons with choice from choosing to employ concepts that are inconsistent with group norms. Such persons may resort to hiding behavior that is inconsistent or offering QAI (however reluctantly) in support of the status quo. Of course, they may also take the contrary option, but, in many cases, choosing otherwise may simply be too costly.

The connected GSC (CGSC) views the individual as both interdependent and autonomous. With regard to the stir-fry analogy, the CGSC is a closer representation of reality (when compared to the IGSC and/or the EGSC), because it allows for the fact that humans need others both to develop and maintain a capacity for choice and for the possibility that persons may want to choose what is inconsistent with group norms (at times, it may be in their *prior interest* to do so). Since the CGSC encourages both interdependence and autonomy, its members are neither likely to downplay and ignore their need for connection to others nor likely to “relinquish their own identity” in service of group concepts (Staub, *Psychology of Good* 355). Persons from *areas 4* and *5* will be able to choose (without the cost they would pay in an EGSC) a course of action that is inconsistent; moreover, they can innovate when the need arises. However, they, like the rest of us, cannot do it alone. Recall that we gain our identity and world understanding from others and that ostracism and loneliness pose a threat to us all. Persons with choice need some sub-group, however small, to provide AAI for their actions; the CGSC accommodates this need. Presumably, those from *areas 1*, *2*, and *3* would fare better as well. Given the relative emphasis on

connection, such persons would likely receive more help from the group in addition to support that may allow them to function in an autonomous manner.

When a proposed decision entails selecting between following implicit norms of the group and risking one's capacity for choice, the decision is not a meaningful choice. In the case of the EGSC, for instance, persons who act in ways that are inconsistent risk ostracism and persecution from group members. But connection is a basic need. Recall from section 2.5 that attachment to instrumental caregivers is required in order for choice to even get off the ground (it is necessary in order to develop an effective emotional response). Research regarding the Romanian orphans attests to the outcome of a lack of attachment. Recall also from section 3.4 that identity, knowledge, novelty, personal change, worldview, and even a sense of sanity are dependent upon connection to a group/sub-group(s). Thus, even the maintenance of choice depends on an attachment to others. As such, the implicit structure of the group matters immensely. However, as I will explain, so does the explicit structure and institutions. If we want to enact choice, we need the pre-conditions and beneficial cultural concepts, but we also need to live with laws that respect us as choosers.

What use to a person, for instance, is a capacity to choose to travel alone, if the law to which she is subject forbids her to do so? What practical application does an education have if the law impedes one's ability to make use of it? In Iran, women have the right to an education (many take advantage of it too, since about 62% of college students are women); they are formally restricted, however, when it comes to practically applying what they have learned, because the law bars women "from work

that is ‘dangerous, *difficult* or harmful’” (italics mine) and it “grants the husband the right to forbid his wife from accepting a job that is incompatible with the interests of the family or her dignity” (Ertürk 9). A recent news article highlighted the fact that homosexuals in Iran also lack the conditions of choice due to discrimination and outright persecution. The article described the crisis of a gay Iranian man who is currently seeking asylum in Britain. His plea for help began in 2006 (he was in Britain attending school) “when he learned that his partner in Iran had been arrested, charged with sodomy, and hanged” (“Gay Iranian”). While being tortured, the partner had revealed his name; thus, if the man is returned home, he will surely face the same fate. Other examples abound. In the U.S., while homosexuals are not hanged (by the government), they are (in most states) forbidden to marry. As such, they are denied the many practical and financial benefits that the law accords to heterosexual married couples.

A listing of all the laws conducive to choice seems impossible to provide. The following should be considered a partial and general list that is open to revision.

Persons thrive and are able to make choices when laws provide for:

- choice in movement, which includes the ability to leave a non-conducive environment and be fully accepted in one that is
- choice in verbal and written communication of concepts, that are in keeping with or contrary to group norms and laws, to any sub-group, to the group, or

to other groups (to be limited by respect for one's own and all others' capacities for choice)

- choice in sub-group affiliation, including religious affiliation if said religion includes only notions that respect all persons as choosers
- truthful representations of world and cultural events, objects, and reality (as far as information regarding reality can be ascertained from scrupulous scientific reasoning and testing), and so forth in the media and advertising
- conceptual and physical privacy that is consistent with others enjoying the same in order to facilitate deviation from one's GSC
- existence without arbitrary interruption, search, and/or seizure
- a judiciary process where persons are considered innocent until shown to be guilty
- bodily integrity, including an absence of torture, brainwashing, and cruel or inhumane punishment
- fair and equal treatment for all persons (no matter race, ethnicity, gender, capacity, sexual orientation, religion, or other group/sub-group category), while taking into account that some members have particular needs according to circumstance
- participation in making or contributing to the laws to which one is subject
- economic security at the level that is needed to provide the pre-conditions adequately for the self and for dependents

- all of the pre-conditions, including nutrition, education, clothing, shelter, overall health, absence of fear, absence of virtual and/or actual (emotional or physical) violence, and so on.

Each provision, I will argue in Chapter 4, ought to be limited only by the *prior interest* that each person has in choice. A capacity for choice is developed in conjunction with many others, but it remains, in a particular way, quite personal. That is because if one has not personally had the pre-conditions of choice, living within a cultural structure that is generally conducive to choice will be irrelevant to her personal situation. If a given person does not have the requisite neural structures, she will not be able to choose in any case. On the other hand, even if she has had the pre-conditions, if either cultural concepts or laws restrict choice, one still may not have a reasonable ability to choose. Four scenarios are possible: first, both the pre-conditions and the conditions of choice may be present for a person; second and third, one may be present while the other is absent; and, fourth, neither may be present. The only case in which a person will be said to have an ability to choose—that is, to exist in a state of freedom—is in the first scenario.

### **3.6: Inter-cultural Interdependence**

Inter-cultural interdependence is in many ways analogous to intra-cultural interdependence, because many of the same tendencies driving the latter are present in the former although they may manifest in different ways. As I will explain, since in the modern world members of different cultures necessarily come into contact

(people, products, and ideas now cross cultural boundaries and national borders on a daily basis), a novel type of conceptual interdependency (born of sharing ideas and the conflict that often happens during contact between the different types of inner worlds created in different cultures) also occurs. This interdependency may take the form of cooperation between members of different cultures; alternately, it may take the form of conflict. Persons all over the world prefer the concepts that are dominant in their own cultures. Consonance between persons' inner and outer worlds is a neurobiological imperative (Wexler 230). However, when they come into contact with other's concepts, they experience interference (AAI, QAI, or DAI) with regard to their own concepts, impact from the resulting interaction, and change (whether they come to hold their own understandings in a way that is less strong or more so).

Persons are intra-culturally interdependent (some are dependent) because they share culture (a system of meaning) and they must engage in tacit or express coordination with each other for conceptual understandings, physical necessities, and possessions. Throughout this process of engagement they experience interference and impact and, given the eight reasons that support the IT, they tend to change accordingly. Some concepts promote cohesion among members of the group (or sub-group), while others promote conflict. In the U.S., for instance, the concepts and symbols involved with the 4<sup>th</sup> of July holiday encourage a spirit of camaraderie, while other concepts, like those that are hotly contested in the evolution vs. creationism or the pro-choice vs. anti-choice debates, engender conflict between opposing sub-groups. When persons A and B hold in common some concept that is sufficiently

important to both, they will tend to belong to the same sub-group. However, when A affirms a concept that B vehemently disaffirms, they will tend toward different sub-groups and a potential for conflict exists between them (think of the polarization that existed in the U.S. during the Civil War). Conflict becomes a possibility because people are neurologically attracted to what is familiar simply because it is familiar. Both A and B then attempt to control the types of concepts that are common culturally (and perhaps those reflected in law), and when A and B act on concepts that disaffirm those held by the other, they create interference that impacts the external reality of the other. For instance, A may want the scientific theory of evolution to be taught in science classes in the U.S., while B may advocate teaching the religious notion of creationism; if the latter's wishes come to be a dominant cultural concept, A will experience discordance between her inner world and external reality (A's environment will be altered in a way that is inconsistent with her neurological structures). Since this type of situation is possible even where persons share culture, when one culture's system of meaning largely disaffirms another—that is, when culture A experiences predominantly DAI from culture B (and vice versa)—the potential for conflict is even greater.

I will first consider the case in which two cultures have in common large parts of their systems of meaning or GSCs and then the one in which the GSCs predominantly clash. Of two cultures, A and B, A may feel an affinity with the symbolic conceptual understandings of B and vice versa, in which case A and B may form something of a sub-grouping within the larger grouping of the world's cultures.

In this case, a significant portion of the concepts that make up A's shared system of meaning provides AAI, or at least QAI, on behalf of B's cultural concepts as B's do for A's. Here, cooperation is likely to occur between the two (consider, for instance, the significant cooperation that exists between the U.S. and Britain). They will tacitly or expressly coordinate with each other regarding conceptual understandings, physical necessities, and mutual protection from threats. These interdependent relations ensure that interference, impact, and (often) change will occur. In much the same way that person A can affirm the worldview of person B (reason #8 in support of the IT), members of group A can affirm the worldview or system of meaning held by those in group B. Recall that members of the two groups do not have to be present to each other for interference, impact, and change to occur. The policies they hold and the goods, products, and media they exchange and share (including television shows, movies, video games, music, internet exchanges, and so forth) all embody the concepts they have in common. Interference will not be hard to come by.

Now, conflict is possible (though it need not be violent) even between groups with similar worldviews. The U.S. and Canada, for instance, share peaceful relations and "hundreds of years of cultural heritage" (Wexler 240); but these commonalities have not stopped Canadians from feeling threatened by the encroachment of certain American concepts. Canadians, like all other persons in the world, prefer their own concepts and meanings simply because they are familiar. But the U.S. has become a major exporter of its own concepts, i.e., media and popular culture (all the things listed above and more). These things bring with them interference and impact that

encourage change, especially for young persons who (in every culture) adapt to whatever concepts are common in their environment (recall that the prefrontal cortex is developing until between the ages of 20 to 25). Canadian officials have taken steps to protect Canadian culture. For instance, the 1991 Canadian Broadcasting Act states that “each broadcasting undertaking shall make maximum use, and in no case less than predominant use, of Canadian creative and other sources” (cited in Wexler 238). Others, who also share much in common with the U.S., are acting in kind. The European community is concerned, for instance, about “resisting the invasion of United States Culture” such that it has issued “a directive requiring that at least half of television air time be dedicated to European-made programs” (Wexler 239).

Consider the greater tendency toward conflict that often occurs when cultures with dissimilar GSCs come into contact. Within this conflict, interdependency still occurs, though in somewhat altered form, because it is not that A and B experience AAI or even QAI from the other. Since they are dissimilar, each will receive mainly DAI. With regard to conceptual interdependency, it becomes more difficult for either A or B (or both) to create or maintain their external environments in a way that is consonant with their inner worlds. Thus, when A experiences interference, impact, and change due to interaction with B, A may attempt to control or eliminate the concepts put forward by B (as B will do for A’s concepts as well).

In this type of scenario, although the cultures’ respective concepts and symbolic understandings are inconsistent with each other, each wants their own concepts (much like person A and B in the example above) to prevail. Members

desire what is familiar to them (especially adult members, since their neural processes have become more fixed (Wexler 143 and 171)). But when one comes into contact with the other, say via international politics or an exchange of goods or media, both experience inconsistency. Their worldviews or GSCs—literally, the way that members come to define themselves and the concepts they utilize to function in the world—are disaffirmed (constituting affronts to points 1, 2, and 8 in support of the IT). Neither side will be likely to select (by preference) or choose to form a sub-grouping with the other (point 5).

Since each requires consonance, A and B may (in accord with point 3) attempt to ignore, discredit, re-interpret, and forget information about the other group; that is, A may take B, as far as possible, to fit into A's worldview (as B may as well). Historical examples of this type of coping mechanism abound. The first English people who migrated to North America not only named their new home "New England", they also took the Native Americans to be "the lost tribes of Israel described in European religious texts" (Wexler 203). When Captain James Cook and his entourage arrived "off the coast of Hawaii at the start of the annual 2-week-long celebration of the return of the deity Lono", the Hawaiian natives took Cook to be Lono (204-206). The Hawaiians treated him like a king, until, upon leaving the island, Cook had difficulties with his ship and was forced to quickly return. This early return failed to concord with the Hawaiians' understanding of Lono's behavior; they killed Cook, burnt his body in sacrifice, and divided his remains (206). When Belgium colonized Rwanda, the Belgians attempted to understand the Rwandans

“according to the Hamitic myth propagated by [John Hanning] Speke” (the British explorer), which encouraged the Belgians to regard one Rwandan tribe, the Tutsis, as superior to another, the Hutus (209). According to Speke, the Tutsis “more closely resembled . . . a superior race descended from the biblical King David” (209). The fact that the Belgians supported a “Tutsi domination of the Hutus” for roughly sixty years contributed to the angry sentiments that inflamed the Rwandan genocide in 1994 (210). Thus, there are many historical examples that illustrate the tendency of group A to explain the existence of group B in a way that accords with A’s symbolic understandings. These examples also demonstrate, however, that such attempts at interpretation do not often work. Group B has its own sets of valued cultural understandings; when these are significantly different from A’s, members of A are often unable to sustain this forcing of B into A’s conceptual mold. In such cases, conflict results.

Alternately, (in keeping with point 4) rather than treating B as if its concepts fit with A’s, A can attempt to act on the world in such a way as to keep or make the external world consonant with A’s dominant concepts. That is, A may try to force B to accommodate A’s concepts (or vice versa). The fact that A’s young people will easily adopt B’s understandings exacerbates A’s problem. The presence of B’s worldview may become an *existential* threat to A’s, and conflict between A and B (that may offend the capacity for choice for members on one or both sides) becomes extremely likely. There are many historical and contemporary examples of such behavior. The Roman Catholic Church, for instance, during the middle ages held the

Inquisition in an attempt to rid Europe of concepts that were heretical—that is, inconsistent—with the teachings of the Church. The Crusades provide another poignant example. For some two hundred years, European Christian soldiers set out to regain control of Christian holy places in the Middle East from Muslim rule. Christian leaders encouraged the soldiers to recapture Christian symbolic monuments that were “polluted by . . . foul practices . . . [and] enslaved to pagan rites” (Robert of Rheims cited in Wexler 217). They fought for the “reward of martyrdom” (Guilbert of Nogent cited in Wexler 217) but did not limit themselves to attacking merely Muslims. That they also targeted both the Jews and Wends, who have little else in common with Muslims besides advocating belief systems that are inconsistent with Christianity, indicates that a significant part of the motive of the Crusaders was to “eliminate alternative belief systems” (Wexler 221). In essence they were fighting “to control the opportunity to create external structures that fit with their internal structures and to prevent others from filling” their environment with inconsistent concepts (Wexler 230-31).

More recent examples are prevalent. When British teacher, Gillian Gibbons, allowed her class of 7 year olds in the Sudan in the Fall of 2007 to name the class teddy bear Muhammad, she found herself jailed for “inciting religious hatred” (a crime punishable by “up to 40 lashes” (“Sudan Charges”)), surrounded by angry crowds calling for her death (Britten), and facing a Sudanese judicial system that wanted to prove a point regarding what kinds of concepts would be allowed in the Sudan. Many Sudanese believed that naming the teddy bear Muhammad was

religious blasphemy as well as an insult to the Prophet Muhammad and Islam; their actions against Gibbons were clearly an attempt control the concepts being taught to their children as well as those that are present in the environment. A similar point may be made regarding the Danish cartoons, published in September 2006, that depicted the Prophet Muhammad “wearing a turban shaped like a bomb with a lit fuse” (Shadid and Sullivan). The Muslim public outcry and the conflict that followed in several countries around the world—including, protests “stretching from Europe through Africa to East Asia”, 12 killed in Afghanistan and 5 in Pakistan, embassies burned, and ambassadors withdrawn—indicate a broad “collision in worldviews” (Shadid and Sullivan). Such collisions can be violent. Over two years after the cartoons, the Danish embassy in Pakistan was bombed in revenge (Thomas, G).

Other examples include roughly 600 Christian families fleeing from Mosul, Iraq in October 2008 “amid threats by Muslim extremists to convert to Islam or risk death” (“Christian Families”). On October 20, a young British, Christian aid worker, Gayle Williams, was gunned down in Kabul, Iraq as she walked to work; her crime, according to the Taliban, was preaching Christianity (“Taliban”). During the same period, an American woman was being held in Iran on the pretense of a traffic violation through her apparent “real crime” was traveling to Iran to gain information for her master’s thesis on women’s rights in Iran (“U.S. Student”) and a 24 year old male journalism student in Afghanistan was sentenced to “20 years in prison . . . for asking questions in class about women’s rights under Islam” (“Afghan Court”). In

each of these cases, the basic issue is an inconsistency and subsequent conflict between two concepts; advocates of one attempt to force it on advocates of the other.

Prior to orchestrating the attacks on the New York World Trade Center in 2001, Osama bin Ladin had long been offended by U.S. policies, such as the U.S. maintaining troops in Saudi Arabia (“the home of Islam’s holiest sites”), sanctioning Iraq after the first Gulf War, and supporting Israel in its actions against the Palestinians (9/11 Commission 48-49). His grievances against the U.S. have, however, become much deeper. In bin Ladin’s view, the U.S. culture is “the worst civilization witnessed by the history of mankind”; his goal is to force the U.S. to “abandon the Middle East, convert to Islam, and end the immorality and godlessness of its society and culture” (51). The concepts embodied in American policies, practices, and products are to him (and his followers) so inconsistent with his own that they must be denounced and dismantled. As such, the attacks on the world trade center were spawned, in part, by a sub-group’s (i.e., al Qaeda) attempt to rid the world of a competing system of meaning. In the U.S., politicians were busy making sure that al Qaeda’s attack would fail in its intent; while Bush encouraged Americans to keep flying and buying, then Defense Secretary, Donald Rumsfeld, explained that Americans “have a choice – either to change the way we live, which is unacceptable, or to change the way that they live; and we choose the latter” (Bacevich). The administration of George W. Bush managed to sell the war against Iraq to a significant portion of the American public, in part, by claiming that it is in U.S. interest to spread democracy and “freedom” to other parts of the world. That this

justification proved useful indicates that many American people would prefer the world to be dominated by concepts that are familiar to them. I will return to a discussion of the pre-conditions and violent sub-groups (such as al Qaeda) in section 4.4. For the moment, my concern is with the fact that both parties to the attack on 9/11 consider the other's worldview as one that is so inconsistent (with their own) that it simply cannot be countenanced. Both intend to force the other into accommodating their own concepts. Groups (and their members) are inter-culturally interdependent because the concepts of one group constitute interference that impacts and can change the symbolic environment of the other.<sup>36</sup>

In inter-cultural interdependence (as with intra-cultural), there is a dynamic system at work. Each group wants its own system of meaning to prevail. In general, each group has choosers (though one group may have more than others)—persons who can extrapolate and move beyond an existing situation or conflict (though choosers are not constrained to do so)—and (at least at present) non-choosers—persons who are constrained by their inner worlds and the cultural concepts they encounter on a daily basis within their own sub-groups/group (the two main forms of interference). Given the dynamics of intra-cultural interdependence, choosers on both sides are inclined to hold more tightly to their own concepts (at least where sub-groups and the group affirm them); and, on both sides, non-choosers cannot help but think their own concepts are the correct ones, i.e., the one's that ought to prevail in

---

<sup>36</sup> The current world economic crisis has demonstrated the extent to which the economies of the world are interdependent, but that discussion will be left for another endeavor.

the world. Moreover, since non-choosers are *constrained* by the two main forms of interference, they will act in accordance with them even if those actions offend choice and its pre-conditions (that is, what is in each person's *prior interest*) for themselves and any other person. If cultural concepts affirm peace (and this concept also fits within the non-chooser's inner world), the person without choice will act peacefully. If cultural concepts affirm war, terror, and torture—things that are specific offenses to choice (see section 2.6 and 2.7)—she will act accordingly if her inner world also allows for these offenses to choice. And remember since she is without choice, offenses to choice have been common in her life. She is accustomed to affronts to her humanity. As such, she will often respond with behavior that is harmful or inhuman (I will return to this topic again with specific examples in section 4.4).

In Chapter 4, I will argue that each person has reasons that are in her prior interest to help provide the pre-conditions of choice for all people in the world. If one considers just this section on inter-cultural interdependence some of these reasons become apparent. In modern times, the cultures of the world inevitably come into contact. While choosers may prefer their own cultural concepts, they can choose to override this tendency when they are faced with novelty. They are well placed to innovate when interference and impact change the culture to which they are accustomed. They have at their disposal what it takes, if they so choose, to engage cooperatively on the international scene. Non-choosers are not well situated to do so. Thus, conflict may be more likely when persons are left without the pre-conditions of choice. But one other issue is also apparent at this juncture. If two cultures intend to

engage peacefully and cooperatively, each must respect the concepts and symbolic understandings of the other. Where they do not, conflict and violence become more likely (and violence is an offense to choice). As such, there is a prima facie case for helping to provide the pre-conditions of choice for others, while at the same time doing so in a way that does not conceptually offend those receiving help (i.e., the point will be to provide culturally appropriate food and education as far as this is possible without offending either the others' cultural concepts or choice in general).<sup>37</sup> Moreover, once persons are choosers, they will be in a position to *establish the conditions of choice for themselves* in a way that accords with their own understandings. Thus, the premise will be that, so long as members of group B have access to the pre-conditions, members of group A ought, in order to avoid conflict with B, provide QAI toward B's concepts as well as with regard to the way that members of B choose to set up the conditions of choice for themselves.

As noted earlier, Chapters 2 and 3 were intended to perform a similar function in the appropriated theory as the notion of human ontology did for Beauvoir's theory. Human ontology is a description of the basic being of humans—what they are, including their unique qualities such as choice, as well as how they live and get along in the world. The Beauvoirean theory relies upon an implicit thought experiment in

---

<sup>37</sup> In some cases, it may not be possible both to help educate persons in other cultures, while at the same time failing to offend their cultural concepts and choice in general. Recall from section 2.6 that some religious ideas offend choice (e.g., teaching young women that they are to be subordinate to men). A dilemma may then occur if these ideas are embedded in the culture. One cannot teach such concepts without offending choice and one may offend cultural concepts if one does not teach them. Since, as I will argue in Chapter 4, choice is the basis of all justification, this dilemma must be resolved in favor of choice (while being as sensitive as possible to cultural concepts).

order to establish these things; however, that method leaves the theory open to a charge of arm chair philosophizing and it fails to establish the basic premises with clarity. The present theory relies instead upon the latest and most general scientific information regarding the being of humans. We are potentially choosers, via our genetic makeup, but that potentiality is fulfilled for an individual only if the pre-conditions are present for her in sufficient amount over her lifespan. In the absence of the pre-conditions, persons fail to develop the neural structures of choice; in the absence of the conditions of choice, persons may be constrained by cultural concepts and understandings.

## **Chapter Four: Arguments in Favor of Choice and Freedom**

### **4.1: Introduction**

In the previous two chapters, I have provided the reader with significant information regarding choice. The human capacity for choice is a neurobiological function that, given circumstances in the environment, may or may not be enabled for a given individual. A multitude of influences determine the outcome. Where the pre-conditions are present, persons tend to develop a capacity for choice. Their humanity is fulfilled. Alternately, in the absence of the pre-conditions, well being, humanity, and free will is offended or absent. Without the pre-conditions, persons are conditioned such that they are constrained by their inner worlds and the sub-groups to which they are attached. They are not capable of acting except in accordance with those constraints. Moreover, even a person with choice may be unable to enact choice if she does not live within the conditions of choice. Of course, since the conditions of choice are determined by the symbolic and conceptual understandings of the group, since members of each group have a neurological affinity with their own understandings, and since conflict is likely where the members of one group offer DAI with regard to the concepts of another, there is a prima facie case for offering at least QAI toward other groups' worldviews (exceptions will be considered momentarily).

One should note that I have not taken for granted the ethicist's basic phenomenon. In essence, I have challenged the notion that philosophical undertakings ought to be based less on empirical inquiry than on logical reasoning. While that may

be the case regarding certain subjects (perhaps metaphysics and philosophy of language are well suited to this approach), ethical and social/political philosophy concern *people*—the way people should live and the way they ought to treat each other. That is, these two philosophical concerns have real life consequences and empirical inquiry is part of what it takes to develop an adequate understanding of what is at stake. If ethical arguments are based, for instance, on ill information or unwarranted assumptions, the ramifications are not limited to a failed or flawed theory. Such a failure may translate into an offense to the very humanity of actual people.

In this chapter, the scientific information, compiled, analyzed, and interpreted in the previous two chapters, features as the basic premises in the three main arguments and is also utilized in order to critique the assumptions used in some opposing views. Sections 4.2 through 4.4 contain the three arguments. The first—the argument from consistency—regards types of interference a person will provide *if* she behaves in a way that is consistent with her own prior interest in choice. The argument does not address why she should behave in this manner, since that issue is taken up in the second and third arguments: the justification argument and the argument from consequences. These offer separate reasons (that are in each person's *prior interest*) for all to be consistent. After each argument, I will consider objections that are specific to the argument in question. After all three have been presented, I will deal with objections—such as those that may stem from concerns about just deserts, norms of non-interference, and special obligations—that may be applicable to

the arguments taken together. Lastly, I will argue that the existence of personal interests and special obligations give us significant reason to prefer setting up and contributing to systems that help provide the pre-conditions to all and I will consider briefly what ramifications the appropriated theory might have for political theory.

#### **4.2: The Argument from Consistency**

The argument from consistency maintains that any person, *who is acting from mere consistency*, will engage in interference that helps provide the pre-conditions of choice for all persons and the conditions of choice for persons within one's cultural group.<sup>38</sup> Reasons for being consistent (that are in one's prior interest) will be addressed in the second and third arguments. I begin the argument with a thought experiment for the reader's consideration (it is to be undertaken by any person who has had and continues to have the pre-conditions and who is aware of the interdependent context of engagement). Suppose that shortly after birth, infants have a brief period of incredible lucidity. During this time, it is as if the infants had reached neurological maturity and as if all the pre-conditions and the conditions are and had been (during a period of development) present for them. The lucid infants would have well developed cognitive, social, and emotional neural processes and significant content to utilize during their deliberations. During this brief period, the infants would

---

<sup>38</sup> The argument from consistency is based upon and in some ways analogous to John Rawls' original position thought experiment (see Rawls 136-150).

be in a state of *well being* (as the notion was established in section 2.11).<sup>39</sup> Now, suppose a researcher has gone to visit with a random sampling of the infants. The researcher explains to them that they will, throughout their lives, have particular interests; each will have needs and wants and must engage with others and objects in the world in order to satisfy them. Novelty—the presence of which designates an interest as non-trivial—is also, she explains, present in the world. It is an objective part of reality that in many instances cannot be avoided. The infants easily infer from this information that many of their particular interests will be non-trivial. The researcher tells each about her personal interest in receiving the pre-conditions; that is, that each person is able to fulfill her non-trivial particular interests only if she has received the pre-conditions of choice and that she will have the best chances of doing so if she lives within the conditions. Each infant then notes her own *prior interest* in obtaining the pre-conditions, in sufficient amount, both during development and throughout adulthood. It is through receipt of the pre-conditions that she will come to develop and maintain a capacity for choice, a capacity that (recall from section 2.11) makes humans unique, that enables freedom and self-determination, and that functions as the primary human adaptive strategy. Without a capacity for choice she will be constrained, in adulthood, to think and do what others will train or *condition* her to think and do once her period of lucidity ends. She will be unable to separate from sub-group/group activities and unable to fulfill her non-trivial particular

---

<sup>39</sup> The analysis in Chapter 2 explains that some infants are unable, due to a lack of micro-nutrients or the presence of toxins, drugs, and so on in utero, to experience this state of well being. Thus, for the moment, I exclude these unfortunate situations from consideration in the thought experiment.

interests. The researcher also explains that persons tend to affiliate with groups and sub-groups, that the actions/inactions of the members greatly impact the actions of others, and that collectively the members of sub-groups/groups set up the conditions of group life. It is an ongoing process in which some conditions were initiated previously, but current contributions can change them via affirmative or disaffirmative interference. These others *can* set up conditions that are conducive to choice and such situations greatly increase one's chances of being able to enact choices. They *can* make the pre-conditions of choice hard to come by and they *can* contribute concepts and laws that make choice costly from a personal perspective. Since cultural conditions help to determine whether or not persons receive the pre-conditions, some contributions may make choice impossible.<sup>40</sup> Lastly, the researcher points out to the infants that the pre-conditions and conditions of choice matter for each person no matter her situation in life (that is, without regard to her socio-economic status, race, ethnicity, gender, religion, sexual orientation, or other sub-group/group category). All persons benefit from them and suffer without them. Before the period of lucidity ends, the researcher asks the infants whether they would like to have both the pre-conditions and conditions throughout their lives. In view of all this information, would any lucid infant choose to decline receipt of them? To do so would be unreasonable; it is *self-defeating* to act in a way that is contrary to one's

---

<sup>40</sup> This is the case when cultural concepts hold some sub-groups of persons in low regard, perhaps failing to provide them with access to food, education, or other vital pre-conditions.

own *prior interest*. And just as declining them is self-defeating for the infant, so would it be for the reader or any other human.

Each has this prior interest in the pre-conditions. That is, each who receives them reaps a multitude of benefits from holding a capacity for choice. But, it is also the case that each can come to have such a capacity *in virtue of belonging to the set or class of beings who have attributes for choice that can be enabled*. All and (at least at present) only members of this class (those that are genetically human) are potential choosers. That is, in order to develop a capacity for choice, one must (1) be genetically human and (2) receive the pre-conditions. If one will be consistent, it will be with regard to these two criteria. While a sub-group or a group may have a relatively self-contained system by which it enables choice for its members, no member has a *potential* for choice in virtue of belonging to a sub-group or group. Each *can* develop choice due to species membership. Thus, *if* a person acts from consistency, it will be with reference to all members of her class or species. She will *not* be consistent if she limits her concern to those who belong to a particular sub-group (for instance, family or friends) or group.

Moreover, with regard to (2), all members are in the same position, in that each requires (at least) the pre-conditions if their attributes for choice will become a capacity and each has a better chance of enacting choice—she will be *able* to choose and live freely—if she lives within the conditions of choice. The only way in which any member receives the pre-conditions and conditions of choice is through the *interference* (AAI, DAI, and QAI) she receives from others. Thus, *if* any member of

the class is *merely consistent*—*if she realizes her own needs and that others of her class have the same sorts of needs*—she will undertake interference that enables choice both for herself and for all other members of the class.

Intra-cultural promotion of choice takes the form of engaging in AAI regarding activities that further both the pre-conditions and conditions (e.g., food and nutrition programs, parenting classes, school and educational resource improvement, laws that establish equality, and so forth) and DAI with regard to any activities that denigrate choice (e.g., child abuse or neglect, media violence, low educational standards, bullying and the contexts that foster it, and so on). Intra-cultural QAI constitutes consistent behavior only in cases where the preservation and promotion of choice is secure. However, the analysis in section 3.6 demonstrates that inter-cultural promotion of choice will require a somewhat different tactic. The pre-conditions of choice must be provided (via either AAI or DAI) universally for members of other groups (as well as for one's own) in order to remain consistent. However, since a group of people who have had and have the pre-conditions are well placed to establish the conditions of choice for themselves, since a group's cultural concepts are of prime importance to its members (such that conflict is likely between groups who hold contrary symbolic understandings unless each group respects (offers QAI toward) those of the other), and since such respect diminishes the likelihood that members of other groups will enact DAI with regard to one's own choices, other cultures' GSCs and group understandings (concepts that establish group and personal identity as well as whether the conditions of choice are present) ought to be respected

as much as possible. That is, in general, QAI is the consistent response with regard to other cultural groups unless the pre-conditions are not present for any or all within that group or unless some cultural group is undertaking interference that impedes the presence of the pre-conditions for another group.

The argument from consistency maintains that each consistent person (hereafter, CP) will help provide interference such that the pre-conditions of choice will be made available to all other members of her class and such that the conditions of choice will be present for members of her own group. However, there are three objections that one might raise that are specific to the argument. One might contend, for instance, (1) that some members of the class of humans do not have the genetic potential that is required to develop a capacity for choice, (2) that some do not want to receive the pre-conditions, or (3) that some members of one's cultural group do not want the conditions. The concern with regard to (1) is that mere consistency may not be enough in some cases. The worry with regard to (2) and (3) is that a CP who provides the pre-conditions or conditions for others who reject them (henceforth, rejecters) may be offending rather than encouraging choice. If the CP offends choice, she is no longer consistent. I will consider each objection in turn.

With regard to objection (1), it is true that at present there are (genetically human) persons who will fail to develop a capacity for choice even if the factors that I have included among the pre-conditions of choice are present for them. I am referring to those who have currently non-preventable genetic malformities and diseases. This is, on the face of it, a concern for the appropriated theory because the notion of

consistency does not appear to apply to these cases in the same way as it does for those without genetic problems. I respond, first, that co-membership in the class creates many commonalities between persons. If a person has had the pre-conditions, she will be able to utilize her capacity for choice (that is, she can extrapolate) to put herself in the place of the other in order to recognize the other's needs. And secondly, due to ongoing innovations and discoveries in the biological sciences and technology, it is becoming more likely that we will in the future be able to prevent such malformities or overcome them as more stringent efforts to help are employed. For instance, many scientists have been looking for a specific gene that might be implicated in the onset of schizophrenia; however, a recent study indicates that "a myriad of different glitches in many genes" may be involved (Dunham). While the research does not provide specific answers to the problem (about 1% of the world's population is afflicted (Dunham)), it does shed new light on how the disease might be prevented or treated (Walsh et al, 4). A recent case regarding therapy for severe autism also offers some hope. Although professionals had labeled 13 year old Carly Fleischmann "moderately to severely cognitively impaired", with the help of a speech pathologist, she has become able to communicate her thoughts by using a computer (McKenzie). Carly has demonstrated that she understands her surroundings and people's communications with her, and that she is not cognitively impaired. Thus, in the case of genetic malformities (or those that are created due to interaction with an inhospitable environment), consistency entails more than providing the pre-conditions. It requires caring for disadvantaged persons, while at the same time

working to provide them with either a normal genetic base line or the means to overcome their difficulties (for instance, medications and therapies) so that the pre-conditions can be helpful for them. That is, in some cases, consistency involves providing more interference than it does in others.<sup>41</sup>

With regard to objection (2), two types of circumstances seem possible: either (i) the rejecter has not had/does not have the pre-conditions or (ii) she has had and continues to have them. I argue that, in the case of (i), the rejecter acts from a maladaptive preference selection. Since the rejecter cannot choose, the CP must continue to help provide the pre-conditions, even against the rejecter's preference, if she will remain consistent. Persons with a capacity for choice may also reject further receipt of pre-conditions. With regard to (ii), the question regards whether there is a case in which it is reasonable for the rejecter to decline the pre-conditions such that the CP may fail to help provide and still remain consistent. Since any rejection of the pre-conditions is self-defeating, there is only one type of case in which it is reasonable—that is, when rejection serves the choice of another or a group/sub-group. Then, the CP must, in order to remain consistent, support (via AAI) this rejecter's actions.

Consider (i), the case in which the rejecter has not had and/or does not have the pre-conditions of choice. In order to understand her behavior (e.g., declining

---

<sup>41</sup> When resources are scarce such that we cannot simultaneously provide the pre-conditions for persons with and without genetic malformities, it will be in the interest of choice to provide for the latter first. This way there will be more choosers to help provide for the non-choosers. However, this strategy may have repercussions (as I will explain in the argument from consequences) and should be used only temporarily and as a last resort.

nutrition or education), recall from section 2.11 that a person who lacks the pre-conditions is constrained to utilize preference selection. She may have many wishes and desires, but she does not have a capacity for choice. Thus, she cannot *choose* whether or not she wants the pre-conditions and this situation is, in and of itself, an offense to her humanity. Her preference, determined by conditioning during development and/or by her interactions with the group/her sub-groups, is an adaptive preference (also called a deformed desire). Adaptive preferences generally have a “fox and grapes’ structure, that is, if the grapes are out of the [person’s] reach,” she develops preferences that preclude a desire for the grapes by “declaring them sour anyway” (Cudd 180). While all adaptive preferences need not be harmful to the person (180-81),<sup>42</sup> in this instance her desire points to a maladaptation. She is selecting a situation that will bring her harm rather than well being.

An example may prove helpful. Consider an upper-class Saudi Arabian woman. The Saudi GSC holds that upper-class women ought to have a limited education, one might argue, in order to keep them docile in a restrictive environment. They are not permitted, for instance, to venture outside their homes without a culturally appropriate male escort. Now, it would *not* be puzzling if a woman from this sub-group were to maintain, if asked, that she prefers her lifestyle, including its limited education, to all others. Recall that persons generally have a neurological preference for what is familiar merely because it is familiar. However, via this

---

<sup>42</sup> One may decline a specific food, for instance, due to an allergy or individual taste. As long as other foods are available to her by which she may fulfill her nutritional needs, she suffers no ill consequence.

preference, she effectively rejects a pre-condition (education). Since education is crucial to the development of choice—it grows neural processes and provides content for deliberations—she literally does not know what she is missing. She cannot *choose* her lifestyle or any other. The same goes for all other persons who either do not have or have not had what it takes to develop a capacity for choice. They are not in a position to make a choice regarding whether or not to receive the pre-conditions. Although their maladaptive preferences may be understandable given their situations, the CP must help to provide them with the pre-conditions in order to remain consistent.

Of course persons with choice (case (ii)) may also choose things that are contrary to choice. Nothing forces a person with a capacity for choice to use it in service of her own well being. Rather than utilizing choice, for instance, she may merely be following the concepts projected by others in her group/sub-group. However, the lucid infant thought experiment demonstrates that rejection of the pre-conditions is self-defeating. And since human self-defeat is always a defeat of choice (or at least a potentiality for choice), what is self-defeating for a chooser cannot also be consistent with choice. Hence, the CP must help to provide for this person as well. However, there is one type of exception and it occurs when the rejecter is providing (through her rejection) interference that serves choice, either for another person, a sub-group/group, or the class of humans. If a parent, for instance, gives up her dinner in order to offer food to her hungry child or if a firefighter forgoes sleep in order to save a family from a burning building, they both reject a pre-condition in the interest

of choice.<sup>43</sup> The rejection is DAI with regard to an existent situation that offends or threatens someone's capacity for choice. When Mahatma Gandhi went on a hunger strike, he did so for sake of the choices of many others in his group; he sought no less than to change the GSC of his own culture. In these types of cases, how will the CP remain consistent? Should she lull the firefighter to sleep and force feed Gandhi? While she must help to feed the parent to remain consistent, she need not also retrieve the food from the child. These are acts in service of choice, and, if the CP will remain consistent, she will offer affirmative active interference (AAI) in support of this type of rejecter.

The worry with regard to objection (3) is that some persons within the CP's cultural group may not desire to have the conditions of choice. If a person without the pre-conditions declines to live within the conditions, she exhibits a maladaptive preference selection. This type of scenario was discussed above. However, when a person who has the pre-conditions declines, she could have chosen otherwise. Ought the CP abide by her choice? Groups share the conditions of choice in a collective manner; one cannot will the conditions of choice only for the self. As I explained in section 3.6, offenses to choice, due to the interdependent context of intra-cultural life, tend to spread and propagate. Thus, the CP cannot be sure that she can consistently provide the conditions for some members of the group and not for other members.

---

<sup>43</sup> Of course, the parent and the firefighter in these examples can only forfeit these pre-conditions for a relatively short amount of time or they act in a way that is contrary to choice. The parent's capacity to nurture and educate the child will decline in short order if food is not present in sufficient amount; the firefighter who works without sleep will become groggy and incapacitated becoming less and less useful to those he intends to help.

Thus, the CP will work to provide the conditions for all members of her group whether or not they prefer it or choose it to be so.

The argument from consistency maintains that *if* one is consistent, one will help to provide interference such that all persons—all members of her class, no matter their genetic attributes—will receive the pre-conditions of choice; the one exception is that she need not provide the pre-conditions for a rejecter who chooses to forgo the pre-conditions in service of choice. Moreover, the CP will work to create the conditions of choice for all members of her cultural group and, in general, provide QAI toward others' group concepts. However, why is it that any person has a significant reason that is in her prior interest to be consistent? This question is addressed by the following two arguments.

#### **4.3: The Justification Argument**

Foundational justifications—those that ground or warrant others—are notoriously difficult to establish. J.S. Mill's argument for the principle of utility and Descartes' search for foundational truth are but two prominent and controversial attempts. I explained in Chapter 1 that the appropriated theory I am defending does not aim at founding an immutable truth, such as what is "good" in and of itself or what is incumbent upon any rational agent, no matter her attributes or situation. The reason is that the theory takes evolution seriously. If the universe, the world, and the world's inhabitants are evolving, the desire to hold anything or any grounding notion as thoroughly unchanging is likely futile. As such, the theory seeks no more than to

address a current time slice. If either persons or their situations change significantly, the theory will have nothing more to say about how they ought to behave.

The appropriated theory does, however, leave open the possibility of a primary justification, some concept that, at this point in human history, warrants some actions/inactions while leaving others without warrant.<sup>44</sup> This notion is choice.

Earlier, I argued that choice is the core of our notion of humanity because it is unique to humans, it enables freedom, defines dignity via self-determination, and it functions as our primary adaptive strategy. The neural processes of choice are also the way in which humans can create, recognize, deal with, and adapt to novel situations. The justification argument (below) holds that, in addition to these important functions, choice is also the basis of and method toward justification in general and further that justifications that offend choice are without warrant. I set aside justifications that are purely descriptive (if one is asked “Why do you believe that the object before you is a table?”, one might respond, for instance, with a descriptive justification: “Because it has four legs that support a platform”) and address only those that purport to give reasons for action/inaction.

Consider now why we make justifications and how it is that we do so. The overwhelming tendency to justify is given by our inclination, due to pre-frontal processes, to act or not according to concepts (symbolic understandings of the world).

---

<sup>44</sup> Justification is often used as a success term (the notion that  $x$  (as a justification of  $y$ ) successfully warrants  $y$ ), but this is not the usage I am employing. Rather, to justify will refer to offering a reason for action/inaction; the notion of warrant will refer to whether others have sufficient reason to accept the justification.

We then want other concepts to lend support or credence to the prior concept. For example, say that a person is driving in the middle of the night and comes upon a red light. No other traffic is present. Perhaps she stops, as is required by law, and patiently waits for the light to turn green. If, later, someone asks why she waited for the light, she might explain that she has respect for the law or that she did not want to get caught disobeying. Perhaps a few minutes later, another driver comes across the same intersection and again the light is red (no traffic is present). If she stops for a second, looks around to make sure no one is coming, and then proceeds through the intersection, she will need to supply a different type of reason for her interlocutor. She may explain that, even though she broke the law, she acted cautiously; since no person (herself or another) was hurt by her action, she finds her action to be acceptable. In the first case, the person appeals to respect for or fear of the law to justify her action and, in the second, she utilizes the notion of no harm, no foul. Although the two appeals are different, they both intend to lend warrant to a prior concept (“I will stop for the red light” or “I will run the red light”, respectively). Of course, one may also offer a justification prior to or during an action/inaction; timing is not the issue.

But how does one come to make such a justification? As running or not running red lights are common enough occurrences in modern society, the drivers need not have conceived of the supportive concepts on their own. Due to interactions with others (either during development or with their multiple sub-groups), the drivers will likely have a multitude of such concepts at their disposal. However, when cars

and stoplights were novel, some persons *extrapolated* from previous and similar experiences (likely from whatever etiquette was common in operating horse drawn transportation) in order to create novel justifications, ones that are applicable to current cases. These persons utilized amplified and sustained attention regarding the issue at hand, engaged their working and long-term memories (the latter to pull up similar and relevant experiences and the former to remain aware), separated off irrelevant stimuli, simulated different possibilities, imagined the responses of others, and considered their own emotional responses to the alternatives. That is, persons who create *novel justifications* utilize their *capacities for choice* and project beyond existing justifications in order to provide warrant for action and inaction in new circumstances. In our own era, persons are working to create new justifications for behavior in novel situations all the time. Novel inventions and discoveries—such as, nuclear weapons (who should have them and when, if ever, should they be used?) and advances in genetic science (who should have access to a person’s genetic information: an insurance company or employer?)—necessitate it.

Choice, then, is the basis of and method toward any novel justification, and every justification was at some point novel. Thus, choice is a necessary condition of any and every justification and the pre-conditions of choice are also pre-conditions of a capacity to justify in novel situations. In the previous section, I noted that one can come to have a capacity for choice *in virtue of belonging to the set or class of beings who have attributes for choice that can be enabled*. The same is true of a *capacity for justification*. Cats, dogs, and non-human primates cannot acquire such capacities;

they do not have the neural apparatuses (attributes) that support having and conveying symbolic concepts. Humans do. Moreover, a person does not have such attributes in virtue of belonging to a group or sub-group. The conditions established within group life may determine whether an attribute is enabled, but group membership does not determine whether the attribute is present. The attribute is unique to the members of the human *species*.

Given this information, consider the justification argument.<sup>45</sup> When person *a* offers a *novel* justification *w* (either to herself or another member of the species), she implies that she takes *w* to be of value. If it were not of value to her, she would have no reason to offer it and the other (or she) no inclination to accept it (this point is considered further below). She also implies that whatever is a *necessary condition* of *w* is also of value; it is inconsistent to imply that something is of value while also maintaining that any or all of its necessary conditions are not also of value. Without the latter, the former literally cannot come to be. Thus, since *x* (a capacity for choice) is a necessary condition of offering *w*, and *y* (receipt of the pre-conditions) and *z* (species membership) are necessary conditions of *x*, person *a* also implies that she takes *x*, *y*, and *z* to be of value. Then, if *w* is inconsistent with valuing *x*, *y*, or *z* (or any combination there of), person *a* commits a *performative contradiction*. She implies that *w* is not of value. However, a justification that entails a performative

---

<sup>45</sup> This argument is inspired by, though not at all the same as, Alan Gewirth's argument (see "The Justification of Morality" 245-247).

contradiction cannot also have warrant. Thus, a novel justification is warranted if and only if it is consistent with imparting value to all of its necessary conditions.

At least three concerns are present at this juncture. (1) What does valuing  $x$ ,  $y$ , and  $z$  mean and entail? (2) Does the same conclusion follow (regarding warrant) if the justification in question is common or no longer novel? And (3) what if the person who offers the justification does not (from a personal perspective) intend to convey that her justification is of value? Does she still commit a performative contradiction? I will consider each of these concerns in turn.

With regard to (1), one generally demonstrates that one values something (holds it in high regard) by actively sustaining it, helping others to sustain it, or at least not accepting its demise without attempting to bolster it. A person may be said, for instance, to value her children if she feeds, nurtures, and educates them (and so forth) because these things sustain the children and promote their well-being; if she neglects them, her assertion that she values them is empty.<sup>46</sup> Similarly, one's claim that one values democracy is empty if one neglects to vote, tries to suppress other votes, or fails to prevent/disaffirm others' attempts at voter suppression. To exhibit that one values something one must actively engage in its favor. Thus, if a justification will have warrant it must be consistent with actively engaging in the world in favor of choice, receipt of the pre-conditions, and membership in the species.

---

<sup>46</sup> There may rare exceptions to this point. For instance, in Haiti at the time of this writing, the food shortage is forcing some mothers to decide which of their children to feed and which to let starve (Blake). Their decision need not be made according to which children they value more; they may perhaps choose the strongest child since she may have the best chances of survival in the long run.

And throughout Chapters 2 and 3 I have discussed the kinds of things that a personal capacity for choice requires in order to be developed and sustained. To intra-culturally value a person's capacity for choice is to help provide her with the pre-conditions and the conditions of choice, while to do so in an inter-cultural context is to help provide the former.

But perhaps one need only be concerned with one's own capacity for choice and one's own receipt of the pre-conditions, and merely be pleased that one is a member of the species. Is that enough to count as valuing  $x$ ,  $y$ , and  $z$ ? Recall that each person's capacity for choice was developed in an interdependent context of engagement and that if such a context was not in place neither would the capacity. To value one's capacity is to at least value the contribution of the vast network of persons (farmers, manufacturers, teachers, parents, family members, friends, peers, and so forth) who enabled it; and given the type of beings humans are, the way to express that value is to help make sure each of those persons has and can maintain their personal capacities as well. To value the pre-conditions is to respect the people who help provide them as well as to conserve (and utilize wisely) the resources that are involved and necessary. But what could it mean to value one's species membership? To value membership in a club is to undertake activities that support the collective endeavor of all the members (for instance, pay dues and take part and engage); analogously, to value one's membership in the species is to support the endeavor that all members (at least potentially) have in common: choice. Choice differentiates us from other species, enables our freewill and dignity, functions as our

primary adaptive strategy, and allows us to create, recognize, and deal with novelty. The way to value one's species membership then is to support other members in the attainment of choice. Moreover, the relevant criterion—species membership—offers no non-ad hoc means of discriminating between members. To value species membership is to support all other members. That is, *a novel justification is warranted only if it is consistent with imparting value to all members of the human species and their need for the pre-conditions in order to develop their capacities for choice which is also the capacity to justify*. Thus, for a novel justification to have warrant, it must accord with humanity and all that the term implies. The person who puts forward an unwarranted novel justification denies or rejects the root of her own humanity: she denies that she belongs to the class of beings who can make and accept justifications. And any action or inaction that relies on this justification for grounding or support is also without warrant.

But what if (2) the justification is common or no longer novel? Or what if (3) the person offering the justification does not, from a personal standpoint, intend to convey that the justification she offers is of value? In these cases, does the offerer of an unwarranted justification still commit a performative contradiction? If a justification is novel, it has been initiated by a chooser; but that need not be the case with one that is well established. A common justification may be taken up by another chooser (other than the one who originated it) or by a non-chooser if it has been present in either's background and/or sub-groups. The chooser may adopt it via choice or preference selection, while the non-chooser may only do so through

preference selection. However, the mode in which the justification is adopted by the person who offers it is not at issue. If the justification is utilized in the same type of circumstance as it originally was, it will retain the same warrant or lack thereof that it had in its original occurrence. If it is used in a different type of circumstance, then extrapolation was required on the part of the offerer in which case it is a novel justification. With regard to the third worry, the performative contradiction does not occur in virtue of the offerer's intent. The individual may not intend to impart value to the justification she utters; perhaps she is depressed and fails to find anything to be of value or maybe her utterance is intended sarcastically. But this is not the point because the intent to impart value to one's offered justification for action/inaction is part of the conventional meaning of offering it. Value is part of the concept of justification. Moreover, *x*, *y*, and *z* are, *in fact*, necessary (physical and conceptual) conditions of the justification in question. It does not matter whether the offerer is aware of this necessity or whether she intends to impart value to them. As such, every justification, whether it is novel or common and without reference to the intent of the offerer, must accord with valuing choice, the pre-conditions, and species membership if it will have warrant.

Since humans share the root of their humanity in common, an executed unwarranted action/inaction offends the humanity of each (just as a warranted justification respects and values the humanity of each). Thus, the person who enacts the offense invites DAI from any or every other member or the human species. This DAI is warranted in that it is consistent with a warranted justification. Every person

has a prior interest in tolerating all and only interference that is concordant with choice; persons who undertake DAI against the offending justification/action/inaction are CPs who act in the service of choice. Therefore, each person has a significant reason—one that is in her *prior interest*: the interest each has in fulfilling her own non-trivial interests and in virtue of her own humanity—to will only what is consistent with choice. Each ought only to undertake the types of interference that are delineated in the argument from consistency—that is, help to provide the pre-conditions of choice for all persons and the conditions of choice for persons within one’s cultural group. Those who do not do so (i) denigrate their own humanity and that of all others, (ii) act or not according to an unwarranted justification, and (iii) *invite justified censure and disaffirmative active interference*, that is sufficient to stop the unwarranted action/inaction, from any other person. Every other person is warranted in curtailing the activities/inactivities of one who does not provide AAI (or QAI where appropriate) in support of choice.

Being a CP is in the *prior interest* of every human. Any person who acts without warrant, even one who has not had the pre-conditions and so cannot choose whether or not to use a particular justification, invites DAI. The CP need not *blame* one without the pre-conditions for her action; the notion of blame seems applicable only to cases in which a person could have chosen otherwise. In this sense, a person without choice cannot be responsible for the interference (AAI, QAI, or DAI) she provides. However, since undertaken action tends to continue and propagate through the mechanisms discussed in support of the IT (see section 3.4), the CP cannot engage

in QAI in the face of offenses to choice while still remaining consistent. The theory does not necessarily call for sympathy or mercy for one who offends choice without having a capacity for it herself, unless these are avenues in context that promote choice. However, if the offender lacks choice, the CP has a responsibility to help enable the offender's capacity if at all possible. In such cases, rehabilitation is called for. But, even a person without choice who acts or not according to an unwarranted justification leaves herself open to justified DAI.

But perhaps the basic premise of the argument—that choice is the basis of and method toward any novel justification—is incorrect. Perhaps justifications spring from religion or divine revelation, cultural beliefs or concepts, scientific experimentation, or just the everyday experience of life. With regard to the first possibility listed above, the appropriated theory specifically rejects the inclusion of supernatural considerations. However, even if it were true that a deity were the ultimate source of justifications, it would always be persons receiving, cognizing, interpreting, believing, and applying the concepts or justifications. Persons would still need to utilize the neural processes of choice upon receipt of every revealed novel justification. The same type of reasoning applies to the other three proposed sources as well. It is always persons engaging with and creating cultural concepts, undertaking scientific endeavors, and experiencing the ongoing activities of life. And whenever novelty is present, persons utilize the neural processes of choice to recognize and deal with it. The novelty itself likely originated from human

interactivity as well. Thus, all the proposed alternatives lead back to the argument's original premise.

The justification argument gives each person an important personal reason that is in her prior interest to act in ways that are consistent with choice. In the next section, the argument from consequences arrives at a similar conclusion by taking a different path. Before continuing, however, it is important to consider the limits of one's personal responsibilities to choice. Since the justification argument hinges on each person's prior interest in choice, this interest also provides criteria by which actions/inactions will be considered obligatory, permissible, impermissible, and supererogatory. It is obligatory to help provide the pre-conditions for all and the conditions within one's cultural group. This personal responsibility is limited only by one's own need to develop and/or sustain one's capacity for choice and that of others who specifically rely on one to provide the pre-conditions. This latter responsibility to conceptually and/or physically dependent persons will be lightened by all other people having a responsibility to help one fulfill the obligation. Thus, one is obliged to keep for oneself whatever possessions, resources, income, or wealth that is necessary to meet one's obligation to oneself and dependents. Anything beyond what is *necessary* ought to be given up to help others. It is not permissible to give up what is necessary to sustain one's and one's dependent's capacities, because to do so would be to offend choice and invite DAI. When the situation is such that the pre-conditions are secured for all on an ongoing basis and all in the culture enjoy the conditions—that is, when *choice equilibrium* has been attained—it will be permissible to keep

whatever is not necessary to sustain the equilibrium. In this scenario, giving more is supererogatory. Anything that is consistent with all persons having choice is permissible; anything that offends choice, either for oneself or for any other, is generally impermissible, unless one is enacting DAI to prevent another from offending choice. When the choices of different people come into conflict, as they undoubtedly will, the dispute ought to be settled according to which of them either better serves choice or promotes greater opportunity for choice in the future. I turn now to the argument from consequences.

#### **4.4: The Argument from Consequences**

What if persons exist in situations in which they cannot obtain the pre-conditions of choice? Are there any consequences? Certainly there are significant consequences for the person who lives with such a deficit. She will be ill-equipped to recognize and deal with novelty, unable to fulfill her non-trivial particular interests, and unaware that she has a prior interest in the pre-conditions. She will be constrained to use preference selection, to engage in activity/inactivity that is the same as or similar to what she was conditioned to do during development and/or to imitate the actions/inactions of others in her sub-groups. She will be conceptually (and, in some cases, physically) dependent. However, the question I address in this section is whether there are repercussions for others in her cultural group or other cultural groups. More specifically, will a person who lacks the pre-conditions (and who thus lacks or is at risk for choice) have a significant tendency to enact DAI with regard to the pre-conditions or conditions of choice for others because she does not have a

personal capacity for choice? Given the analysis in Chapter 2 (section 2.11), the answer to this question will likely be different for persons who have different deficits in the pre-conditions. A person (from *area 1* on the continuum) who is extremely weak from severe malnutrition, for instance, will likely enact QAI (quasi-active interference) in every situation with which she comes into contact (that is, she will not be active). Of course, persons may, due to circumstances, change areas on the continuum. When food prices rose dramatically around the world during the spring and summer of 2008, rioting broke out in Haiti, Egypt, Ethiopia, Ivory Coast, and other places. They still had the energy to demand this important pre-condition of choice. As they experience sustained hunger, they will be less able to do so. Persons from *areas 4* and *5* are not at issue here because they have choice and only differ from each other with regard to a capacity to innovate. This section is concerned then only with persons in *areas 2* and *3*, those who suffer, for instance, from the effects of mild malnutrition, neglect, abuse, exposure to violence, lack of education, and so forth. In section 3.4, I argued that persons from *areas 2* or *3* (along with those from *area 1*), to a greater or lesser extent, will be *constrained* by two sets of interference: their inner worlds (the neural processes and content they have at their disposal given their periods of development) and the types of meanings (interference) they encounter through interactions with their group/sub-groups. As such, whether such a person enacts DAI with regard to others' choices (including interference that helps to determine whether others have adequate access to the pre-conditions) depends upon what she has been conditioned to do and upon what others around her do. All persons

provide and are subject to interference from others, but persons without the pre-conditions do not have choice with regard to the way in which they will be impacted and changed by said interference. They also have no choice with regard to the interference they enact in return.

Consider: if respect for choice has been prominent in the background of a person who has not had the pre-conditions during development (an unlikely scenario since she has not received the pre-conditions) and if persons in her sub-groups undertake interference in support of choice, she will have a great tendency to enact AAI and QAI in support of other people's choices. On the other hand, if she experienced denigration of choice—that is, her own humanity—during her childhood—if she was not well-nourished and hence does not know the importance of nourishment, if she is uneducated or under-educated, if she was exposed to neglect instead of nurture or violence as a form of stimulation—and if others in her sub-group(s) undertake interference (engage in activities/inactivities) that projects concepts that are *inconsistent* with the concept of choice, she will likely follow suit. That is, when a person's humanity has been or is offended, *she will often respond with behavior that is harmful to others or that is inhuman*. She is constrained by the two types of interference; she has no ability, like a person with choice, to extrapolate and move beyond.

Below, I utilize four examples regarding two types of activities that demonstrate this point. Each concerns current and ongoing issues in order to demonstrate to the reader that when some persons suffer without the pre-conditions

the risk to the reader's and other persons' capacities for choice increases. The argument is not about necessity but about probability; however, given how important choice is for each (it enables freedom, dignity, adaptation, and non-trivial interest fulfillment), any likelihood that one's capacity may be offended or disabled is too high. The first and second examples regard non-violent interference that impedes (or potentially impedes) others' access (either intra- or inter-culturally) to the pre-conditions of choice; the third and fourth examples concern violent interference in intra- and inter-cultural contexts, respectively. I will refer to a person engaging without the pre-conditions of choice as a PEWOP. I do not maintain that *all* of the interference projected by the PEWOP will interfere with the choices of others in general; often, only members of her immediate sub-groups (such as, family or those at her job) receive significant impact. If, for instance, the PEWOP fails to provide adequate nutrition for her children, it is the children who experience the *immediate* impact of her inaction. If the PEWOP is malnourished or under-educated, she will be less able to provide adequate stimulation for her kids and will be less able to solve problems at her work. Her employer will be affected due to her deficiencies (though she will experience a greater problem when she has difficulty keeping a job). The point is that in many cases those in close proximity to the PEWOP receive the immediate impact. But that does not mean that other members of the group receive no impact or that what they experience is insignificant.

The first scenario under consideration concerns the PEWOP's role in the production of the group's food supply, while the second regards the same role at the

inter-group level. A recent report, put out by the Pew Charitable Trusts and Johns Hopkins Bloomberg School of Public Health, points to the fact that some key conditions of choice are lacking in the United States (and other countries around the world) with regard to laws and practices that safeguard a healthy food supply and that prevent pathogens and toxins from affecting the public (Pew Commission on Industrial Farm Animal Production viii). And, as I will explain, since many of the workers in this industry are deficient in the pre-conditions (most notably with regard to education but likely in other ways as well), an important pre-condition of choice—overall health—is (or is potentially) being compromised for millions of people. The report specifically concerns the effect that industrial farm animal production (IFAP) has upon the well-being of rural communities, public health, and the environment.<sup>47</sup> It also explains that, prior to the rise of the large IFAP facilities (they have come into being within the last 40 to 50 years), poverty was already common in rural areas of the U.S.; in some cases, IFAPs were lured to specific areas with the hope that they would help provide jobs in poverty stricken communities (41). However, that has not been the case. Because “capital-intensive agriculture relies more on technology than on labor,” there are many fewer jobs in the areas dominated by IFAPs than there were when family farms were more common, and the jobs that do exist are “low-paid, itinerant jobs, which go to migrant laborers who are willing to work for low wages” (43). Recall from Chapter 2 that low socio-economic status and poverty strongly

---

<sup>47</sup> The report also addresses the welfare of the animals that are raised for human consumption; I will not, however, address that issue here.

predict the existence of risk factors for choice; persons with low SES are much less likely, for instance, to be well nourished and well educated. Indeed, inadequate rural educational systems are a significant contributing factor to rural poverty (41), and it is reasonable to assume that migrant workers, in general, fare no better when it comes to nourishment and educational opportunities. Thus, it is reasonable to assume that most IFAP workers do not have the pre-conditions of choice; they are PEWOPs.

The question is then will the PEWOP working at an IFAP be more likely to provide for or offend the choices of others? I am not concerned here with the actions of the IFAP owners (presumably, they have a capacity for choice and they use it in order to turn a profit). The concern is whether, when confronted with questionable health and safety practices, will the PEWOP blow the whistle (alerting USDA officials and/or the media) or will she take part in (contribute AAI) or overlook (enact QAI) activities/inactivities that contaminate the food supply and grow new diseases, putting thousands or millions at risk for choice? Unfortunately, according to the Pew/Johns Hopkins report, the latter is the case.

According to the report, current practices at the IFAPs put the public health at considerable risk by creating an environment where (1) pathogens may be “passed from animals to humans”, where (2) “microbes resistant to antibiotics” can emerge, and where (3) “food-borne disease” can spread (Pew Commission on Industrial Farm Animal Production 11-13). With regard to (1) and (2) workers carry the pathogens and microbes to others in the community (11; since many are migrant workers, how far and to whom might the microbes spread?), which is relevant to the choices of

many given that the CDC has “declared antibiotic-resistant infections to be an epidemic in the United States” (15). The problem is compounded by the fact that IFAP workers (as participants in an “agricultural activity”) are often exempt from mandatory participation in “public health monitoring, disease reporting, and surveillance programs” (11). Moreover, since many of the migrant workers are undocumented, they avoid such programs due to their legal status (11).

A recent item in the news demonstrates the PEWOPs role with regard to (3). A sting operation has brought to light that workers at the Westland/Hallmark Meat Packing Company have engaged in “‘clear violations’ of USDA regulations at a California slaughterhouse” (“USDA”). Federal law states that animals must be examined for chronic illness and be able to walk unaided to slaughter; if the animal cannot walk, it must undergo a second examination. The law is in place due to worries about mad cow disease, E. coli, and salmonella and because downed animals often have compromised immune systems and “sometimes wallow in feces, raising the risk of contamination” (“USDA”). *For over two years*, workers at the slaughterhouse had been “kicking [downed] cows, jabbing them near their eyes, ramming them with a forklift and shooting high-pressure water up their noses in an effort to force them to their feet” so they would be upright for the slaughter (“USDA”). Clearly, *these workers acted against their own prior interest*; but that is because they were apparently unable to *extrapolate* (a function of choice) in order to see themselves as victims of their own actions. If contaminated meat enters the food supply, the workers and their children are as likely as anyone else to consume it.

While about 143 million pounds of meat was recalled (enough to feed every person in the U.S. two hamburgers (“USDA”), officials are assuring the public that there were no reports of illness. That, however, is not surprising given that “IFAP monitoring systems are inadequate” which makes it “difficult if not impossible to trace infections to the source” (Pew Commission on Industrial Farm Animal Production 11). A significant portion of the recalled meat has gone into school lunch programs (“USDA”); but even government officials, according to Representative Rosa DeLauro of Connecticut, cannot find out which schools and retail outlets received it, because the IFAPs regard the information as proprietary (Doering). Other IFAP practices are also cause for concern. Because there are so many animals in close proximity, they produce more waste than the ecosystem can absorb (Pew Commission on Industrial Farm Animal Production 23). Animals raised in IFAPs produce about “500 million tons” of waste, more than three times all human waste in the U.S., and disposal of it is poorly regulated (23). As a result, manure is allowed to contaminate groundwater resources such that “over a million people” in the U.S. obtain drinking water from sources that show “moderate to severe contamination” (29). Due to the gases and fumes that are emitted, persons living close to the IFAPs have higher rates of “tension, depression, anger, reduced vigor, fatigue, . . . confusion”, and intellectual impairment (17-18), once again ensuring that those who will work at the facilities, even if they are not migrant workers, will be at risk for or without choice.

Recall that basic health (absence of pathogens, microbes, toxins, and contaminants) is one of the pre-conditions of choice because disease affects one’s

ability to inhibit stimuli as is necessary to carry out the neural processes of choice (see section 2.10). Thus, *the interference undertaken by PEWOPs who work in the IFAPs constitutes serious risks to choice for all members of the group.* Who in the cultural group will be affected? That is determined by the luck of the draw; it certainly is not determined, for instance, by socio-economic status. A person of high SES is vulnerable to either an antibiotic-resistant bug or contaminated meat.<sup>48</sup> One might argue that the owners of the IFAPs, and not the workers, are to blame for these offenses to choice. And that certainly is the case. The PEWOP has not had the pre-conditions and thus, in a very real way, could not have done other than participate in these activities. But that is precisely the point. Persons without choice are used to affronts to choice; such offenses are par for the course in the PEWOPs inner world. Moreover, PEWOPs are constrained to follow whatever activities are already underway in their sub-groups; if those activities offend choice as they do in the IFAP, the PEWOP will tend to provide AAI and QAI in support of those activities.

The USDA's proposed solution to this IFAP problem is to install cameras in the slaughter houses; but, while that may cut back on workers forcing downed cows into the food supply, it will not address the core problem. It is in the financial interest of the IFAP owners to undertake activities that offend choice (even their own) as long as there is a profit in doing so. The owners have choice; they can think of new tactics for profit making. And whatever their tactics might be, *they will have ready and*

---

<sup>48</sup> In so far as a person of low SES may be more likely to have a suppressed immune system, she may have a higher risk than a person of high SES.

*willing assistants—PEWOPS—as long as persons are left without the pre-conditions of choice.* Persons with choice may choose to work at an IFAP, but they will demand a living wage and will be more likely to balk at being sickened by toxins. The PEWOP is unaware of her own prior interests; she will offend them, as well as those of others, until she is informed and until she *can* choose to enact DAI with regard to the activities/inactivities of others in her sub-group(s).

The second example—the recent Chinese melamine-tainted milk and food scandal—demonstrates a similar point. Although complaints regarding contaminated infant formula began as early as March 2008, the full extent of the problem was not made public until September. As the scandal unfolded, “[t]wenty-two dairy brands [were] . . . found to contain melamine, an industrial chemical used to make plastics and glue” (Fan). Four Chinese infants died from “kidney stones caused by drinking tainted milk powder” (and perhaps two others earlier in the year), while more than 54,000 infants were sickened, “including 12,892 who [were] hospitalized” (Fan). Chinese products laced with melamine were found in Hong Kong, Japan, Singapore, Taiwan, Australia, Indonesia, the Philippines, South Korea, Vietnam, Russia, the Netherlands, and the United States, and more than 16 countries issued recalls or bans on Chinese dairy products or goods containing dairy. More recently, melamine contaminated eggs turned up in Hong Kong (the chemical “was present in nearly double the maximum permissible level” (Lister)) indicating that animal feed is also contaminated (3,682 tons of it had been located and destroyed by 11/02/08 (“China Seizes”)). Since melamine can, at high levels, cause kidney stones, kidney failure, or

death, the chemical constitutes an offense to choice (recall that overall health and the absence of toxic chemicals is a pre-condition). Moreover, since the chemical has been present in China's exports, the members of many groups may potentially be affected. This situation and others like it are inter-cultural problems for choice.

Such scandals are, unfortunately, not new for China. In 2004, “[t]hirteen babies died of malnutrition . . . and almost 200 were hospitalized in eastern [China] . . . after being fed substandard milk” (Lawrence and Jun). The milk had been watered down and actually “had no nutritional content” (though the label indicated otherwise); the “infants’ heads swell[ed] while their bodies starved” (Lawrence and Jun). In 2007, melamine-laced pet food exported from China was the cause of death for some 4,000 animals in the U.S. (Barboza).

No systematic report exists (like the Pew/Johns Hopkins report cited above) that can be utilized to explain all the factors at work in these scandals. However, evidence suggests that lax oversight, governmental imposed price caps, as well as poverty and ignorance are significant contributing factors. That is, while some blame may be placed squarely with choosers (I presume that governmental officials in charge of price caps and oversight have a capacity for choice), the preference selections of PEWOPs (persons who are at risk for or lack choice due to factors related to low socio-economic status and insufficient education) largely enabled the offense to choice. Recently, the “Chinese government has limited price increases of staple goods, including milk products, . . . to reduce the impact of inflation on consumers” (Lawrence and Jun). However, small farmers—who live off “farms as

small as a fifth of an acre” (Cha)—have difficulty making ends meet. They need to make a living with the few resources they have available. Other small businesses, such as milk collectors, are under the same sorts of pressures. Adding melamine to milk that has been watered down or to poor quality animal feed is useful to them, because the chemical falsely raises protein content in product testing (“Du Qunjun, a former salesman for several [Chinese] dairy factories,” indicated that previously “urea, a component of urine,” had been used for the same purpose (Fan)).

Since these small farmers and business people tend to lack education (which in itself qualifies them as PEWOPs), one might wonder how they came across this method of falsely increasing protein content. “China’s vast network of food research centers and laboratories”—whose “work on chemical use, pollution risks and genetically engineered crops is considered to be among the most advanced in the world”—produces large amounts of information regarding farming technology (Cha). The problem is that there is a gap between what is recommended in the research and the way that the technology is practiced in the “200 million farming households and 500,000 food-processing companies” (Cha). Small farmers have access to chemicals and pesticides, but little or no information about how to use them safely. For instance, one farmer, Li Xiujuan, says she understands little about the chemicals she uses on her crops except that “they are very strong . . . [and] kill everything” (quid. in Cha). Although the label specifies that the pesticide should be used at most twice per month, Li does not hesitate to apply it weekly when insects threaten her \$1300 annual income (Cha). Li and many like her “remain unaware that a problem exists”, even

though shipments of pesticide-laced produce from Li's province have been blocked from entering the U.S. and even though many of the small farmers fall ill and a few die from eating their own produce (Cha).

The research centers also publish information about “cheap additives that can boost the protein content of animal feed” in order to help “farmers and food producers maximize profit” (Cha). In 2003, *Feed Review* (a Chinese journal) published an article suggesting that melamine could be added to feed “for animals with more than one stomach, such as cows, that can convert such substances into protein” (Cha). Thus, it seems that the initial idea for adding melamine to boost apparent protein levels came from educated choosers who had an understanding of a safe way to utilize the chemical. The idea was then picked up in altered form by uneducated and economically desperate people who failed to understand what the ramifications of their actions would be. The farmers and small business people and their families are as likely as anyone else to ingest pesticide or melamine laden products. As such, it is clear that they are PEWOPs who do not have the capacity to *extrapolate* beyond the ideas that are propagated within their sub-groups.

The problem of poor official communication with the uneducated farming population is exacerbated by the fact that, in rural areas, pesticides and chemicals, such as melamine, are purchased from vendors who operate more “like old-time village apothecaries” (Cha). Although the Chinese government has initiated a program whose goal is to educate rural farmers regarding chemical safety, “experts estimate that those efforts are able to reach only 20 to 30 percent of farmers” (Cha).

Often, the farmers' only source of information is the person who runs the village apothecary (Cha), creating a situation in which PEWOP is leading PEWOP. Given the dynamics of the situation, “[i]t could take five or even 10 years’ before some companies stop adding the chemical to food products” (Yan quid. in Wong).

The first and second examples demonstrate that when a person's humanity is offended, when she is not taught about her own prior interest in choice and its pre-conditions, she will often provide interference in the world that fails to respect both her own humanity and that of others. Given the interference such persons have received, they will often respond with behavior that is harmful to others. And one does not have to be culpable (in the common sense) to experience the harmful repercussions; they are possible because humans live in an interdependent context in which the action/inaction of one impacts another. The persons in the first and second examples lack key pre-conditions of choice. They are uneducated or under-educated and, given their low socio-economic status, they likely lack other pre-conditions as well. They are constrained by their own inner worlds that were not conditioned to be capable of choice and the interference the experience from their sub-groups. If activities/inactivities that offend choice are common within these sub-groups, then, given the eight reasons that support the IT, they will likely follow suit. They may not know what kinds of things accord with choice. They are PEWOPs who are unaware of their own prior interest; they will offend this interest as well as that of others, until they are healthy and informed—that is, until they can choose to enact DAI with regard to that which offends choice.

The third and fourth examples concern violent interference enacted by PEWOPs that may negatively impact choice for victims and witnesses. In section 2.7, I explained that not only do some offenses to choice lead to violence, witnessing or experiencing violence is itself an affront to choice that, in some cases, encourages the witness to engage in violent behavior as well. If one considers the information in section 2.7 in conjunction with the eight reasons that support the IT (section 3.4), it is safe to say that violent behavior can be likened to a contagion that tends to spread within vulnerable sub-groups. Those who are most vulnerable are PEWOPs who have been conditioned during development via neglect, punitive caregiving, difficult life experiences associated with low socio-economic status, virtual or actual violence, and so on. Individuals who experience these affronts to their very humanity during development have an increased tendency (when compared to choosers) to respond later in life with behavior that is inhuman; they may engage in violent interference that offends choice for others.

I do not claim here (or anywhere else in this work) to explain and analyze all aspects of and antecedents to violence. Human behavior is as complex as all the multitude of influences that shape a person during development; an attempt to treat such a subject exhaustively would take a lifetime of research. I merely wish to explain the role that an absence of certain pre-conditions tends to play in conditioning a person toward violence and the way that subsequent sub-group affiliation and interaction with members of other sub-groups can channel that tendency. The risk to other people's capacities for choice increases accordingly.

Certain kinds of violence—for instance, violence that is spurred by poverty and despair in inner city neighborhoods—is usually easy for persons of high socio-economic status to avoid. For instance, although there were 30 gang and drug related shootings (6 were fatal) in Chicago during one weekend in April of 2008 and authorities project that Kansas City is on track to have its deadliest year in nearly a decade, most choosers in Chicago and Kansas City remain relatively unaffected. This is not always the case; innocent and unsuspecting persons of any SES can, for instance, be caught in the crossfire of gang violence or by a stray bullet from a drive by shooting, but such worries are remote for people of high SES given that they seldom visit the areas where gang violence is prevalent. However, random violence—cases in which members of the group have roughly equal chances of being subject to or witnessing violence or where there is no apparent pattern of victim or witness selection—is a threat to choice for members of all SES sub-groups. Any member of the group may be affected. I focus here on relatively recent cases of school, mall, or public shootings where there is sufficient evidence that the shooter is a PEWOP (to my knowledge no comprehensive report on the subject exists, so I will be relying on news reports). In many cases, the PEWOP is part of a sub-group that advocates violence, and in some cases interference from bullies (who have also experienced an offense to choice during development (see section 2.7)) is part of what encourages the PEWOP toward violence.

Random violence is not uncommon. For instance, during a (roughly) four week period in March 2008, two people were killed and 3 injured when they were

shot (in separate incidents) on California freeways. The only apparent motive was road rage and the evidence suggests multiple perpetrators. Similar incidents occurred in 2005 and 1987, in which 4 were killed/4 were injured and 5 were killed/11 were injured, respectively (Edds). On March 3, 2008, Alburn Blake opened fire in a Florida Wendy's during the lunch hour, killing one and wounding four before killing himself (Semple and Guerra). Isaac Zamora's mother explained that Zamora "is 'desperately mentally ill' and had been living in the woods" prior to his shooting rampage in Washington on September 2, 2008 "that left six people dead and four wounded" at eight different crime scenes ("Gunman's"). After turning himself in, Zamora explained to authorities that he had done what God had told him to do ("Shooting Spree"). In October 2002, the DC snipers, John Allan Williams and Lee Boyd Malvo, terrorized the D.C. area during a three week sniper shooting spree that left nine dead and three wounded ("Timeline: Steps"). On December 5, 2007, Robert Hawkins killed six and wounded two at the posh Von Maur department store in Nebraska; the shooting obviously traumatized the high-SES shoppers who generally know the store as "a retailer and respite at once, offering serenity along with upscale goods" (Saulny and Doty).

One might argue that the perpetrators of these types of incidents have intellectual, social, and/or emotional difficulties that cannot be wholly accounted for by a deficit in the pre-conditions during development and adulthood and, in fact, that may well be the case. Recall from section 2.7 that researchers tend to "view violence as the end result of multiple risk factors that may include a biological vulnerability—

either genetic or created in the prenatal environment—that may be brought out or reinforced by the social environment” (Holden 580). These perpetrators are likely to be chronically violent individuals; but even so, at least half of the relevant risk factors can be attributed to controllable environmental factors (580), such as exposure to virtual or actual violence, childhood neglect, low socioeconomic status, low parental education level, and so forth. But it is also the case that some individuals may require more help than others in order to attain a capacity for choice. Even if such individuals are born with a propensity toward impulsivity, anger, vindictiveness, or resistance to control, if their later behavior offends choice (which it is more likely to do when other risk factors are present as well), it is in the *prior interest* of every chooser to create an environment in which the biological tendency does not have an opportunity to develop. To not do so is to put one’s own humanity at risk.

Other examples demonstrate more clearly the role of the pre-conditions, violent sub-group influence, and bullying. The attack that Eric Harris and Dylan Klebold carried out on Columbine High School on April 20, 1999 left a dozen dead and two dozen injured (Janofsky). The two were fascinated by the film *Natural Born Killers* and were members of a school sub-group, The Trench Coat Mafia (an outcast clique), that was organized in part around playing violent video games, like *Doom* (a shooter game) (“Columbine Report”). Both were depressed and suicidal and felt ostracized from their high school community. They left behind a video of themselves in which they explained that their killing spree, which they hoped would “kick-start a revolution”, was in “retaliation for years of taunting” and bullying (Janofsky). Given

this evidence, they were PEWOPs (as evidenced by their depressive and angry states) who belonged to overlapping violent sub-groups (involved with violent games and movies) and who viewed themselves as victims of bullying (they clearly were ostracized by other sub-groups). Their actions, of course, traumatized thousands (offending choice for each<sup>49</sup> (recall the effects of stress (section 2.6))) who either witnessed the violence or were otherwise affected; they also initiated AAI in support of violence and killing that, as I will explain, would be carried out by other PEWOPs. They initiated a violent sub-group that so far has helped to channel PEWOP perpetrated, random violence for nearly a decade.

These factors present in the Columbine example (or some combination of them) are manifest in many other actual and foiled shooting incidents. Seung-Hui Cho had suffered with mental illness for years prior to carrying out the attack at Virginia Tech in which 33 died (including Cho) and 17 were injured (Davies 19-21). During early adolescence, he was diagnosed with selective mutism (21), though his problem with silence was apparent much earlier (Kleinfield). As a loner, he endured teasing and bullying from classmates; when he was forced to speak, they “mocked his poor English and deep-throated voice” (Kleinfield). According to one classmate, Cho merely ““took it and took it and took it”” (Williams quid. in “Cho’s High School”). In a video tirade he mailed to NBC prior to carrying out the second part of the massacre, Cho “praised the Columbine High School killers as martyrs” (Kleinfield); it was

---

<sup>49</sup> Kacey Ruegsegger, for instance, has suffered from posttraumatic stress since her “shoulder was shattered by a shotgun blast in the Columbine High School library” (Carter). Initially, she avoided being in public at all, but slowly she has been able to resume a more normal life.

known as early as his middle school years that he was fascinated with the Columbine shootings and “that he had fantasized about carrying out a similar mass killing” (Davies 21). A video game, V-tech Rampage, based on the VA Tech massacre is available for violent video game connoisseurs. On February 14, 2008, Steven Kazmierczak entered Cole Hall on Northern Illinois University campus and opened fire, killing five and wounding 17 before turning the gun on himself. Initial reports indicated that Kazmierczak was a “sweet, unassuming, overachieving grad student who inexplicably snapped” (Vann); they were wrong. Kazmierczak “grew up watching horror movies with his mother” (Vann); she didn’t want him to play outside, wouldn’t “let him play much with other children” (Vann). He had few friends; he was teased earlier because his hand would hang too limply when he focused on his work and later because his high school classmates knew of his suicide attempts (Vann). During his teenage years, he was on and off antipsychotic drugs and in and out of mental institutions (Vann). In college, he told his best friend about his fascination with the Virginia Tech and Columbine killings. He knew all the details; he “admired how Cho thought to chain the doors . . . [and] how Dylan and Eric planned to create confusion with the propane-tank bombs” (Vann). Both Cho and Kazmierczak obtained their weapons from the same online firearms dealer (Boudreau). The Columbine, Virginia Tech, and Northern Illinois shooters had at least three things in common: they had mental conditions exacerbated by environmental risk factors which qualify them as PEWOPs, they identified with violent sub-groups that helped channel their behavior, and they experienced additional insults at the hands of bullies.

These factors were present in other cases as well. A teen in Pennsylvania who has been arrested for planning a “Columbine-style attack on his old school” kept contact via email with Pekka-Eric Auvinen, who carried out an attack in Finland that left “eight people dead at his high school” (“Lawyer”). Finnish college student, Matti Juhani Saari, who killed ten people at his college in September 2008 posted a tribute to the Columbine shooters on YouTube (“Finnish Gunman”). A friend testified that 14-year-old Asa Coon had pleaded multiple times for help with bullying before he wounded two students and two teachers at his school in Cleveland on October 10, 2007; Asa was beat up for the last time just two days before (“Ohio School”). Five students were arrested in Columbus, Kansas in April 2006 for planning an attack on their school; police were tipped off due to MySpace communication about flak jackets and the anniversary of Columbine between one of the students and another in North Carolina (“Kansas Students”). A 15-year-old was arrested in September 2008 for planning an attack in a suburb of Oklahoma City. He had weapons and plans and had associations with hate groups through his MySpace account (Maynarich). Ryan Schallenberger was arrested in April 2008 when his parents called the police because “10 pounds of ammonium nitrate was delivered to their home” (the chemical “was used in the Oklahoma City bombing in 1995 that killed 168 people”) (“Police”). His diary contained plans along with “admiring notations about the Columbine killers” (“Police”). Three thirteen-year-old students in Florida were arrested in March 2008 for planning an attack against their school. The ringleader explained that “bullies pushed him over the edge” and that “he thought shooting his classmates was the only

way out” (“Accused School”). His MySpace page referenced Columbine. Richard Sonnen’s plan to attack his high school in 2005 was foiled by his mother who turned him over to police. She and her husband had “adopted Richard from a Bulgarian orphanage” when he was four (Zamost and Boudreau) (Bulgarian orphanages are known to have conditions that are similar to the conditions in Romanian orphanages (see section 2.5)). By age six, Richard alternated between exhibiting good behavior and telling his mother that he wanted to kill her; by the time he was in the eighth grade, he was “put on anti-psychotic medications” (Zamost and Boudreau). After his arrest (at age 16), Richard explained that he planned the attack as a “fitting payback to his high school classmates who Richard said relentlessly bullied him”; the Columbine shooters had become his heroes (Zamost and Boudreau). He spent nearly a year and a half in a mental institution and subsequently moved on to college; but roughly 72 hours after Virginia Tech, he made threats against his college and old high school. He had hoped to “pull off a sniper attack from a clock tower on the college’s campus” (Zamost and Boudreau). Police released him due to lack of evidence.

The third example demonstrates that when persons exist without specific pre-conditions of choice, when they have mental disturbances that are exacerbated by other risk factors, when they (due to conditioning) become affiliated with violent sub-groups, and when they experience further offenses to choice at the hands of bullies, they often respond with behavior that is inhuman. They create offenses to choice for others such that any member of the group may be affected. Similar dynamics are at work with regard to inter-cultural violence. In section 3.6, I discussed the tendency

toward conflict that exists when two cultures of sufficiently different types of GSCs come into contact. That tendency becomes even more pronounced when one offers DAI with regard to the other's cultural symbols and concepts. But inter-cultural DAI is only one factor involved in inter-cultural conflict, because just as it tends to be PEWOPs who carry out violent attacks that offend others' capacities for choice intra-culturally, it also tends to be PEWOPs who carry out (though not necessarily plan) inter-cultural violence. International terrorism is a case in point. Evidence, regarding 9/11 (specifically about the muscle hijackers) and child and female suicide bombers in Iraq, demonstrates that persons who experience a deficit in the pre-conditions are easily co-opted into groups that advocate inter-cultural violence. As such, when one offers QAI in situations in which persons are left without the pre-conditions, one's own capacity for choice may be put at risk.

The al Qaeda attacks on the United States on September 11, 2001 left significant physical and emotional wounds for many Americans. For instance, of the 71,437 "people enrolled in the World Trade Center Health Registry" (a number that constitutes only 17.4% of people who were eligible to enroll and that is made up of "rescue and recovery workers, lower Manhattan residents, area workers, commuters and passersby"), 3 percent had "developed new asthma, 16 percent had posttraumatic stress disorder (PTSD), and 8 percent had severe psychological distress" approximately three years after the attacks ("9/11's Health Effects"). These numbers are striking considering that the 71,437 are just a small portion of those who experienced impact. As I discussed in section 3.6, the 9/11 Commission Report

indicates that those who carried out the attacks had, on their view, experienced DAI to their important cultural symbols. The attack itself was aimed at what the planners of 9/11 took to be important symbols of American culture. However, the fact that some individuals (namely, the muscle hijackers) had experienced an absence of one or more of the pre-conditions and had become affiliated with violent sub-groups also played a role. My point here is not to maintain that those who planned and orchestrated the attacks were PEWOPs (though in some respects some of them may be); many of them are likely choosers. For instance, Khalid Sheikh Mohammed (KSM), “the principle architect of the 9/11 attacks”, was highly educated in the U.S. and he adapts well in different circumstances; according to the 9/11 Commission Report, KSM has “applied his imagination, technical aptitude, and managerial skills to hatching and planning an extraordinary array of terrorist schemes” (145). The neural capacity involved in these things indicates (at least via circumstantial evidence) that KSM has a capacity for choice. But evidence suggests that that is not the case for the muscle hijackers—the “operatives who would storm the cockpits and control the passengers” (227)—that participated in 9/11.

The 9/11 Commission Report explains that, in general, al Qaeda recruits tend to lack some of what I call the pre-conditions of choice. Although the oil states had experienced “an unprecedented flood” of oil related wealth during the 1970s and early ‘80s which allowed them to expand education and create domestic social welfare programs, by the late ‘80s “diminishing oil revenues” made the programs unsustainable (9/11 Commission 53). Across the Muslim world, secular education

became scarce and under-funded, religious education failed to provide students with necessary skills, and both “devoted little if any attention to the rest of the world’s thought, history, and culture” (53-54). Many young people, who were unable to make a decent living and unable to benefit from education, became “easy targets for radicalization” (54). Al Qaeda was able to capitalize on their misfortune. More specifically, of the muscle hijackers, “most were unemployed with no more than a high school education” (231). Four came from “an isolated and underdeveloped area of Saudi Arabia”, five more came from a poor “weakly policed area [that] is sometimes called ‘the wild frontier’”, and another “had very little education” (231-32). As such, most of the muscle hijackers were at risk for choice due to their low socio-economic status during development and poor educational opportunity.

Evidence also suggests that al Qaeda is recruiting vulnerable PEWOPs in Iraq in order to carry out suicide missions. For instance, in May 2008, “Iraqi soldiers rounded up six teenagers in northern Iraq who were being trained, against their will, to carry out” suicide bombings (“Officials”). Al Qaeda members had “threatened to rape [their] mothers and sisters, destroy [their] houses and kill [their] fathers” if the boys did not cooperate (“Officials”). Four of the six came from very poor families. There has also been nearly a quadrupling of female suicide bombers in Iraq (over 30 in 2008, but only eight in all of 2007) (Hussein and McElroy). For instance, on November 11, 2008, a “13-year-old girl blew herself up at a checkpoint in central Iraq . . . , killing four Sunni guards and wounding at least 15 civilians” (“13-Year-Old Female”). Earlier in the year, two “mentally disabled women were strapped with

explosives . . . [and] were blown up by remote control”; Iraqi authorities determined that 98 were dead and 200 were injured (“U.S.: ‘Demonic’”). Intelligence indicates that, in general, al Qaeda in Iraq is looking for young women “who are illiterate, are deeply religious or have financial struggles” (Damon, “Iraqi Woman”); that is, al Qaeda is looking specifically for female PEWOPs who are easily co-opted into the violent sub-group because they are “desperate and hopeless” (Damon, “Iraqi Woman”). Some desire revenge over family members lost at the hands of Iraqi or U.S. troops (Damon, “Iraqi Woman”). The strategy is working because PEWOPs who are used to violence and used to offenses to their own humanity will have little difficulty using violence to offend the humanity of others. Given their personal and environmental constraints, the child and female suicide bombers are literally not in a position to extrapolate and project themselves into alternate scenarios. They are without choice.

Beauvoir maintained that one cannot will freedom for the self without also willing it for all others. Given that all humans share the world in an interdependent way, on her view, willing that another ought to be restricted has an effect that is similar to restricting the self. Since the justification argument maintains that any and all others are warranted in stopping any other from offending choice, there is a way that this is true according to the appropriated theory; it depends on whether others actually carry out the justified DAI. The argument from consequences maintains that, in some cases, there can be repercussions when persons experience a deficit in the pre-conditions. Unfortunately, there are also cases where restricting another need not

create any constraint for the self. For instance, persons who are malnourished to the point of wasting will not be active enough to provide DAI with regard to others' choices. But as I have argued, that is not the whole story, because many others whose humanity has been/is offended are active participants in the world who have significant impact (as the four examples above attest). Each of us has a prior interest in receiving the pre-conditions on an ongoing basis and existing within the conditions throughout life. These things enable and maintain choice—that is, the attributes through which a person is capable and able to fulfill her non-trivial interests. We have such interests because novelty objectively exists in the world; it cannot be avoided. However, we live in an interdependent context and the existence of PEWOPs puts others at risk with regard to non-trivial interest fulfillment because PEWOPs have a tendency to offend choice.<sup>50</sup> As such, anyone who may be subject to the offense—that is, any chooser—has a significant personal reason (one that is in her prior interest) to help provide the PEWOP with the pre-conditions of choice. The argument from consequences maintains that by offering QAI or AAI with regard to contexts in which some persons (who are either within one's culture or in another) do not have the pre-conditions, one may be offering QAI or AAI of a situation that offends one's own capacity for choice. This is especially the case when some sub-groups

---

<sup>50</sup> One might argue that it is in a person's self interest to keep as many PEWOPs as possible in *area 1* on the continuum, so that they would not be capable of providing the kind of interference that is described in the argument from consequences. Instead of helping to give them the pre-conditions, one might attempt to horde as many of them as possible. The PEWOP then could only provide QAI and the chooser's prior interest would no longer be at stake. I respond, first, that such a chooser would be acting without justification (and thus would be inviting DAI) and, second, that the chooser would likely expend as much if not more energy depriving PEWOPs as she would in helping them (she would have to actively make sure that the PEWOPs are without the pre-conditions on an ongoing basis).

inadvertently or purposefully engage in ways that denigrate choice, because the PEWOP has been conditioned to accept such offenses. If the PEWOP is attracted to this type of sub-group she will engage in the offensive behavior as well, whether it be contaminating the food supply, helping to spread new infectious diseases, or perpetrating violence that is experienced/witnessed by others. When persons are left without the pre-conditions, when their own humanity is offended, they often respond with behavior that is harmful to others or inhuman. The reader might object that she has enacted no direct interference with such individuals; she is surely not to blame. While that may well be the case, it is not at all the issue. The point is that all chooser's capacities for choice are at risk due to the activities that the PEWOP is likely to undertake. Since each chooser has a prior interest in receiving the pre-conditions, each chooser also has a prior interest in preventing such situations—she ought to be a CP (consistent person as the term was defined in the argument from consistency) in order to protect her own personal capacity for choice.<sup>51</sup>

---

<sup>51</sup> I have argued that what is right from a moral perspective need not be what is commonly accepted or easily implemented; these may merely reflect prejudice or the interests of the powerful. Our moral intuitions likely stem primarily from early moral training and a thorough moral investigation should take that into account. In order to circumvent the existence of any tight circularity (the ethicist initially holds moral intuitions that are utilized both in creating the moral theory and in testing its conclusions), I have incorporated significant scientific information to ground the present account (it includes an inherent reality check). Thus, my primary concern is not with whether the appropriated theory accords with common moral intuitions. That being said, the theory yields many intuitive results. For instance, it may be said to “cash out” the Kantian notion of what it means to treat someone as an end and never solely as a means, in addition to considering the consequences of one's actions with regard to choice. It gives a decisive account of why it is wrong to lie (it offends choice), while maintaining the intuition that it may be necessary, on some occasions, to lie in service of choice (when asked, I do not have to disclose to the homicidal maniac the intended victim's location). It is in general wrong to kill because such actions always defeat choice; though it is permissible to kill a person (say Hitler) who wishes to squelch others' humanity (it would be better, from a moral perspective to prevent the situation). With regard to abortion, the optimal situation is the one in which every woman (and girl of child bearing

#### 4.5: Just Deserts

I have argued that it is in each person's *prior interest* to help provide the pre-conditions of choice for all other persons in the world and the conditions of choice for other members of one's culture; to fail to do so is to denigrate one's own humanity (as well as that of all others), to act (or not) according to an unwarranted justification, to invite justified disaffirmative active interference upon the self, and to put one's prior interest in choice at risk. However, in order to help provide assistance to others as the CP ought to do, persons of sufficient means are obliged to give up some portion of their income and assets; billions of persons exist in conditions that are not adequate to enable choice and each of them must be helped. According to the appropriated theory, one ought to keep, for oneself and one's dependents, enough to facilitate choice now and in the future, because one must have a capacity for choice in order to function well and assist others. By the same reasoning, one is not obliged to give up an eye, a kidney, or other organ to a sick person. Bodily integrity and personal health are basic pre-conditions of choice; although, one certainly is obliged

---

age) is educated, has full and affordable access to birth control, and the means to help develop choice for any child she chooses to bring into the world; still yet, abortion is permissible (even though it prevents a potential chooser from entering the world) if the woman has not chosen to initiate the pregnancy or if she is not capable or able to help facilitate choice for the fetus. It is permissible to euthanize a permanently comatose or terminally ill patient (the latter only if she is a chooser who has given consent) because choice cannot be restored or maintained (respectively). Torture is impermissible as a specific and purposeful attempt to disable choice; moreover, given the way a torturer must be trained (see Wolfendale 109), she would qualify as a PEWOP who ought not be countenanced. Homosexual marriage is permissible and should be supported, because any type of discrimination is an offense to choice. Pornography, media that depicts women as non-choosers, is impermissible. Animal cruelty is not to be tolerated because of what it does to and says about the perpetrator (she would qualify as a violent PEWOP). Action against global warming and pollution and for environmental conservation is a moral mandate given that a healthy environment is crucial for the development and maintenance of choice. Moreover, the appropriated theory is also capable of yielding an account of human rights that is commensurate with (nearly all of) the U.N. Declaration.

to fund research (or undertake innovative research if one is skilled enough) that seeks to cure disease and grow new organs from stem cells (or whatever method proves useful). But beyond security (including planning for adequate funds in retirement and for one's dependents' futures) and bodily integrity, what does the theory say is in the interest of choice to keep? Peter Singer points out that people in affluent societies spend incredible amounts of money on luxury goods that appear, on his view, to be of little moral significance ("Famine" 241). I largely agree with Singer,<sup>52</sup> although I come at my (similar) position from a very different direction. Surely persons do not need luxury items and abundant wealth accumulation in order to secure a capacity for choice; *what is not needed for choice should be shared*. In this section, I address two positions that maintain that persons are not obliged to give up income and wealth or forego luxurious expenditures in order to help others. The basic idea I will counter is that people *deserve* the resources they have acquired through their own hard work; they are entitled, then, to keep it, no matter the situations of others. I will consider Daniel Dennett's position first in some detail and then briefly address three points put forward by John Arthur.

In *Elbow Room*, Daniel Dennett argues that the process by which humans come to be responsible agents is analogous to a marathon, in which there need not be a specific winner and many losers because the process of the race "brings people

---

<sup>52</sup> One main difference between Singer's conclusion and mine is that he maintains that one should give "at least up to the point at which by giving more one would begin to cause serious suffering for oneself and one's dependents" ("Famine" 243); I hold that one ought to keep whatever is necessary to maintain choice for oneself and enable choice for one's dependents.

sooner or later to a sort of plateau of development” (96). Persons, he argues, are *self-creators* who are genetically skilled at self-improvement. Although different people have different initial starting points (determined by luck) and experience a different number of “lucky breaks” along the way (*Elbow* 95), Dennett argues that “luck averages out in the long run” (95) and that “everyone comes out more or less in the same league” (96). On this view, after reaching the plateau, persons are responsible for their actions; since they are self-makers, they deserve the place that they reach on the plateau and all that comes with it.

Dennett’s work and the theory that I have proposed have much in common. Both seek to demystify the notion of moral choice by explaining the phenomenon from a scientific point of view that takes seriously the notion that humans have evolved along with all the other creatures on this planet. As such, both theories attempt to explain human behavior and the capacity for free will in naturalistic terms. I have, then, found much to admire in Dennett’s work. That being said, I take issue with a significant portion of Dennett’s account of moral agency, first, because, as the analysis in Chapter 2 has shown, we are not *self-made* selves and, second, because he defines luck as that which is not projectable; however, much of what Dennett designates as luck is actually projectable, calculable, and preventable by those who have choice. Contrary to Dennett, it is simply not true that we all (even if we take “all” to mean only those in the U.S.) end up “more or less in the same league.” Some persons are made to be choosers; others, due to relatively predictable and calculable

factors, are not. I will first offer a brief account of Dennett's position and then raise specific objections.

Dennett wants to discredit two opposing notions: first, that we can never be responsible for our actions unless we are absolutely responsible for them (that is, that no one else is also responsible) and, second, (Sartre's notion) "that one chooses oneself *completely* by a 'radical choice' that brings none of yesterday's baggage along" (*Elbow* 83). Dennett is setting out a position that is somewhere between the two. He explains that each of us starts life with the same problem: "learning how to control himself or herself" (83). According to Dennett, "one starts in a certain position with certain limited resources, and must then bootstrap those resources somehow into a solution" (83). Children begin by accepting "by the book" answers to their problems (such as, "look before you leap, a stitch in time saves nine, don't cry wolf", and so on (86)) until such time as they graduate from this stage and move on to the "more imponderable questions" (like: "What kind of agent do I want to be or become?" (86)). At this point, much like "in the mid-game of chess," one leaves behind "by the book" solutions and strikes "boldly out into the territory of risky, heuristic reasoning" (86).

Since we strike out on our own, we are, according to Dennett, *self-made* selves, who are responsible for the selves we are and become in much the same way that a manufacturer is responsible for its product. Just as the manufacturer is responsible for "releasing [its] product to the public with whatever flaws it has", each person has "created and unleashed an agent who is [her]self; if its acts produce harm,

the manufacturer is held responsible” (85). On Dennett’s view, persons are responsible for their actions and deserve the consequences of them (pleasant or unpleasant) because persons are *self-makers* analogous to manufacturers of products.

Of course, if luck were to play a prominent role in Dennett’s self-making process, the notion of desert might be forced out. If an hundred dollar bill falls, completely unpredictably, from the sky into a person’s lap, this person will be hard pressed to maintain that she *deserves* to have it because she has earned it on her own (though if the owner cannot be ascertained, the law may allow her to keep it anyway). Generally, the notion of just deserts is said to apply to a person’s situation or not as a consequence of her own, unaided action; the person in this example did nothing but sit there. Dennett is concerned, then, about the role of luck. He argues that luck is not a significant concern in the race to personhood for two reasons: first, humans are skilled at self-improvement because if our genes did not include this quality we would not have made it this far in evolutionary history; and, second, since “luck is mere luck, not a genuine, projectible endowment” (*Elbow* 92), it evens out in the long run (because luck “is, after all, the same for everyone” (96)). Let’s consider Dennett’s position on luck more closely.

Dennett considers the quintessential instance of chance or luck: the coin toss. If there were a coin toss tournament, surely the winner would experience the illusion that she is a “lucky person” (rather than one who experienced luck on this occasion) (*Elbow* 93). He wonders whether there is an analogous “illusion of personal responsibility” in persons who take themselves to have free will. According to

Dennett, that is not the case because, throughout evolution, humans have developed the genetic capacity for self-control and responsibility. He explains:

[t]he big difference between us and the winner of the coin-tossing tournament is that while we cannot take personal credit for the success of our ancestors, our genes can. The contest our genes have won was a test of genuine prowess. You have to be good at something (in fact, good at things in general) to get through to the round that is playing today. . . . [S]kill, unlike luck, is projectible. And since the skills of self-control and deliberation have been put to a fairly severe test over the eons, there is a real basis in fact for you having high expectations about the deliberative skill, and more generally the capacity for self-control, of our fellow human beings (94).

Dennett takes humans to be skilled at self-creation and self-improvement because their genes, in most cases, ensure that they will be so. Although a few may be, “through no fault of their own” (94), defective or lacking in this skill, the rest are roughly on par with each other. They are able to reach the “plateau” of responsible agenthood.

In order to dispel any remaining doubt in the reader’s mind, Dennett considers two other types of *mere* luck: the initial cognitive endowments or character one is born with and the number of “lucky breaks” one may incur “during one’s period of self-creation” (*Elbow* 95). He asks the reader to imagine that life is like a marathon “in which the starting line is staggered” (95); those who are born early in the year have starting positions at the front of the pack, while those born late are in the back (up to 11 yards behind depending on one’s month of birth). Is such a set up “manifestly unfair” (95)? Dennett argues that the staggered starting line would be unfair if the race were a sprint; but in a marathon small initial advantages, such as

heightened cognition, “would count for nothing, since one can reliably expect other fortuitous breaks to have even greater effects” (95). Luck, according to Dennett, “averages out in the long run” (95).

In *Freedom Evolves*, Dennett revisits this “gradualistic bootstrapping account” of the self-made self (288). He adds a supplement to the earlier version because, in his words, the earlier account “underplays the role of *non*-fortuitous breaks in the race to responsible agenthood” (276). He had previously deemphasized that acquiring such personhood is “a team effort, with coaches and supporters playing important roles on the sidelines, enriching the environment with a kind of scaffolding designed (unconsciously) to bring out the best in us” (276). He acknowledges that persons who are raised with violence, deceit, or a lack of concern “tend to perpetuate those character traits” and that those raised with reason, truth, and love tend toward those traits instead (276). He also concedes that severe deprivation can initiate problems for attaining personhood, but he contends that no one “has yet shown that the difference between having two toys and having twenty toys or two hundred toys makes any noticeable long-term difference in how the infant’s brain develops” (274). In any case, for Dennett, the differences that exist between people due to their being raised “rich or poor, pampered or abused,” are of “negligible importance” with regard to the “threshold of moral responsibility” (274); according to him, “these differences in starting conditions vanish into the statistical fog as time passes” (274).

Dennett’s account is off the mark, I argue, because it fails to recognize four crucial points: first, that many factors must obtain if choice, much less moral choice,

will be enabled for a given person (that is, he neglects to fully analyze his primary phenomenon: choice); second, that person's are not self-made; third, that genetic endowments only supply a potential that must be actualized by environmental influence; and, lastly, that many (if not most) situations that impede a person's potential progress toward choice, rather than being luck, are predictable, calculable, and preventable. I will consider each point in turn.

Dennett maintains that persons begin to solve their problem of self-control by utilizing "by the book" solutions; subsequently, they strike out on their own by utilizing heuristic reasoning. A scaffolding, supplied by others, provides support and enrichment along the way. This vision of how one becomes a chooser—one who could have done otherwise and who is thus responsible—need not be construed as entirely incorrect. These components are present in the success story discussed in Chapter 2; however, Dennett's account is so bare bones as to be meaningless. Without a caretaker training and conditioning the infant to return to equilibrium after becoming upset, the latter will not develop self-control; without the requisite micronutriture, her brain will never be capable of controlling itself or anything else. Moreover, if one will become a chooser, one needs extensive nurture and stimulation, adequate education and sleep, an absence of stressors and violence, macro-nutrition, and overall health. And recall the interdependent context in which human life takes place. A caretaker does not provide the pre-conditions alone. She relies on her own past (if, in fact, such things have been included in her past) and many others in order to facilitate the child's learning process. By the time that a young person is able to

consider and understand “by the book” answers to her questions, countless others—from parents, caretakers, siblings, family members, friends, healthcare experts, and teachers to farmers and manufacturers—have taken part in constructing her inner world. As I explained, the functionality and the structure of the child’s brain are conditioned by her interactions with these others and their input and by what is available in the environment. Throughout the period of development, we are not self-makers, ready at any moment to strike out on our own. All the intricate, minute, and momentous interactions we have with the world *make us* what we are, and we have virtually no control over whether or not we become choosers.

Consider then Dennett’s view of the role luck plays for individual persons. First, one might note that his notion that “luck averages out in the long run” (*Elbow* 95) seems to be based on a bit of faith, but that will not be my main concern here. Rather, I will address two points: (1) whether there is reason to assume, along with Dennett, that persons are genetically skilled at deliberation, self-control, and self-improvement, and (2) whether the luck involved in a coin toss is sufficiently analogous to the “lucky breaks” that Dennett maintains occur in life. Regarding (1), recall that a person comes to be whatever she will through the *interaction* between her genetic attributes and all the interference she receives from her environment. She begins with a genetic *potential*, but that is all. Given that persons are raised and exist within all sorts of environments, some of which enable choice and some of which do not, we are not justified in assuming that nearly all persons are skilled such that they will necessarily become self-controlled, deliberative persons. We can assume that

most of us who have shown up at this point in evolution have a potential, maybe even a propensity, toward choice; but that potential is one that will lie dormant and wither if it is not enabled (recall that whole brain structures die without stimulation).

Consider (2). Dennett explains that phenomena that are not projectable, are on his view, to be counted as luck (*Elbow* 94). While the outcome of a coin toss, for instance, is surely “the *deterministic* outcome of the total sum of forces acting on the coin” (*Freedom* 85), this “total sum has no predictive patterns in it” (85). That is, the outcome of the toss may, in fact, be determined, but no one, no matter her vantage point, can call it since “no predictive patterns” are present. Two other kinds of things—one’s initial endowments and the “lucky breaks” one gets—fall into this category as well. It seems that, on Dennett’s view, there is no way to predict which endowments one will have to start with and how much positive interference one will get along the way. I have argued, along with Wexler, that we are the sum total of our interactions with the world. Persons often have an exaggerated sense of having *unique qualities*—such as, particular cognitive endowments or character traits—possessed initially by the self that unfold through development; but what we come to be is thoroughly dependent on environmental input (Wexler 39). An initial endowment is but a potential (some of which may have been actualized during the prenatal period). As such, if there is luck involved in whether or not one becomes a chooser, it will have less to do with what Dennett designates as initial attributes or starting points and more to do with what he calls “lucky breaks”. So let’s consider lucky breaks or the absence of them—things like affluence or poverty, caring or

violence, adequate or inadequate nutrition, nurture or neglect, stimulation or debilitation, education or ignorance, healthcare or rampant disease. Are these things non-predictable in a way that is sufficiently analogous to a coin toss? Recall that the coin toss lacks predictability *no matter the vantage point* that is taken. From the personal perspective of a new born, a child, or many persons without choice, the experiences of life may seem unpredictable and uncalculable. The world from that point of view may even appear totally willy-nilly, because one needs sufficient cognitive capacities in order to take stock of all the different factors that impact choice. But the analysis in Chapter 2 demonstrates that, from the scientific perspective of an informed observer, whether or not a person will develop a capacity for choice is not only relatively predictable and calculable, it is also within human control (though not initially and, later, only partially within control of the individual would-be chooser). We know a lot about what goes into making choice possible. We know that a child who shows up at a hospital with signs of abuse is at risk for further abuse and possibly death; we know, that if she makes it into adulthood, she will have emotional scars and decreased volume in her hippocampus. She will have a brain that has *adapted* to the experience of abuse. We also know that she is at heightened risk of subjecting her children to similar conditions.

Contrary to Dennett, we also know that there is a quantifiable difference, with regard to brain development, between having 2, 20, or 200 toys available for use and that these differences do not “vanish into the statistical fog as time passes”. However, it is unclear whether Dennett means for us to take this notion literally or whether he

takes the number of toys one has to be an indication of one's socio-economic status (SES). Thus, I will address both possibilities. With regard to the first interpretation, recall that there is increasing evidence that exposure to and use of human-made artifacts—such as, toys, musical instruments, written language, computers, and so forth—increases “brain functional capability as measured by intelligence tests” (Wexler 101) and that the capacities measured by such tests are positively correlated with a capacity for choice. Contact with these artifacts enhances a child's neural processes both functionally and structurally. Toys and other human artifacts make a difference! If the number of toys is said to stand for SES, even more evidence is available. One study showed that children who were born into low SES backgrounds and who were later adopted into a high SES, gain, on average, 11 IQ points; those who were born into high and were adopted into low lost an average of 12 points (when compared with those who remained in high SES). Another study demonstrated roughly the same increase (11.8 points) for disadvantaged children who were adopted by parents of high SES. Socio-economic status makes a difference, because the disadvantaged children who continued in a low SES remained borderline with regard to IQ and thus remained at risk with regard to choice. The differences neither vanish nor average out; they become exacerbated. So whether one interprets Dennett's statement literally or figuratively, there is a huge cognitive benefit in having 200, as opposed to 2 or even 20, toys. And as the research in Chapter 2 attests, we can predict and calculate, both at the individual level and at the level of the aggregate, who is at risk and what happens to people when they are left without the pre-conditions of

choice. As such, the “breaks” one gets in life do not seem to be so much about Dennett’s notion of luck after all.

In “Uneven Starts and Just Deserts”, Bruce N. Waller discusses Dennett’s marathon analogy “in which the starting line is staggered” according to birth month. Waller argues that, rather than initial differences evening out in the long run (as Dennett believes), they “are more often amplified” (Waller 210). The exploratory activities of the alert child is reinforced; “the eager student . . . receives extra attention;” but the “less talented teammate’s skills and stamina and confidence gradually erode on the bench” (210). He proposes that a “better analogy might be a horse race on a muddy track, in which the slow starters are additionally handicapped by the mud kicked onto them by the early speed” (211). Waller, I believe, is onto something here, but he does not take it far enough; that is, it is not just that confidence and stamina erode from sitting on the bench, but whole neuronal systems atrophy without appropriate nurture and stimulation (Wexler 19 and 41). Children who experience macro-malnutrition, for instance, really do incur decreased myelination, decreased connectivity in the hippocampus, and decreased cognitive capacity and emotional control.

I suggest a better analogy then would go something like this. The starting position in the marathon and whether or not there are any “breaks” (help from another) are largely determined by socio-economic status (low SES in the back, high SES in the front). Some begin at the back of the pack in a mud pit; of these, some are buried to the neck, others to the waist, and others to the knees. Due to the consistency

of the mud, all in the pit will sink deeper unless they receive help from someone at the front of the pack. Others, just outside the pit, are hobbled to prevent the ability to walk; some can pull themselves with their arms, others can crawl. Unless they receive help from those at the front, their torsos and limbs will be bloodied and burned by the rough, hot asphalt. Just ahead of them are people who can walk, maybe even run, but who have no shoes; their feet will be burned and only people at the front have an extra pair. Lastly, in the front rows there are three sorts of persons: those who can run and have sufficient resources (shoes, skilled trainers, food, and water); those who can run and who have abundant resources, far in excess of what is required; and those who not only can run and have abundant resources, but who have wings—they need only fly to the finish line. The people in the front rows are the minority of those present in the race and they are largely concerned only about their own performances. Only a few of them are inclined to help the majority who are buried, hobbled, or shoeless. Now, consider again Dennett's question: is this "manifestly unfair"? The appropriate answer would appear to be: Yes, no matter how one attempts to justify it. Dennett's account of moral responsibility as a justification for desert fails to note that much is involved in the development of choice. One never does it on one's own; thus, one cannot be self-made. Moreover, the factors that Dennett counts as luck are really projectable phenomena that determine whether or not choice will be enabled. They are calculable from the perspective of any chooser who has adequate grasp of the information and they are preventable if we choose to work together. Moreover, the present theory maintains that it is obligatory to do so.

Dennett's position entails that persons deserve what they are responsible for; they are responsible because, being self-made, they can take credit for the persons they have become. The present theory parses things differently. A person is responsible for an action and its consequences when she has a capacity for foresight (she can project herself into the future) and has reasonable knowledge (she does not act out of ignorance), and when she could have chosen otherwise. That is, a person is responsible when she has a capacity for choice; this may be reason to blame (a mild form of DAI) or praise (mild AAI) in the context of different situations. But can she also take full credit, in the sense of *deserving* the result of her action/inaction? Just desert arguments generally maintain that one can take full credit for something one has done entirely on one's own. However, the analysis in Chapters 2 and 3 demonstrates that even a person with choice does not act without reference to or on account of other persons. Recall that she has at her disposal an inner world that includes a well-developed and well-connected prefrontal cortex. If others had not provided the pre-conditions for her, that would not be the case. She cannot take full credit for herself; a multitude of others created her capacity for choice. Persons without choice cannot be responsible (deserve neither praise nor blame) and can take no credit for their current states. But the present theory does not rely upon a notion of desert to determine who gets what. Persons ought to receive the pre-conditions because all others have a prior interest in that being the case. Neither does it rely on desert to determine whose activities/inactivities ought to be terminated. One ought to enact DAI with regard to any thing that offends choice. The method of termination

will be different in different contexts. For instance, until reliable methods of rehabilitation are developed, murderers, rapists, child molesters, and other violent criminals need to be securely confined (imprisoned) to prevent them from harming choice for others. A death sentence (a permanent curtailment of the offender's capacity for choice) ought to be utilized only if there is no other way to stop future infractions. This is so whether or not the offender has a capacity for choice; the point is that the rest of us ought not countenance what this person has done and may do again (given what is most likely included in a violent person's inner world). But if choice can be enabled for a PEWOP offender, we ought to do so. Persons, on the other hand, who fail to give up their extra resources need to be compelled to fulfill their obligations. We ought to do these things because they are in our *prior interest*, not because persons deserve something in particular according to what they have or have not done.

Before considering whether norms of non-interference ought to mitigate against the appropriated theory's conclusion, I will consider briefly an argument set out by John Arthur in response to Peter Singer's position in "Famine, Affluence, and Morality". Arthur argues that certain bad consequences might follow from striking the (now common) notion of desert from our moral considerations. According to him, people "care too deeply about their own lives and welfare, as well as the welfare of loved ones" to accommodate a moral rule that instructs them to give away their possessions (Arthur 588). They would either "work less and produce fewer useful commodities, with the result that everyone's well-being would decline" or they would

fail to live up to their obligations (589). The latter might “lead to widespread guilt among those who don’t contribute” and/or create discord and resentment between those who do and those who do not help (589). Arthur believes that a moral code needs to be easily implemented given the current state of human behavior; he explains that it is “important that we not assume that people are *more* altruistic than they are” (588). He seems to take it that what is ethical must also be something close to what people already do and this is certainly an odd conception of morality. For instance, the Nazis were attempting to kill all Jews; would we declare the situation to be ethical if they could have been convinced to kill every other Jew or every third? Killing every third would be easier to implement given that the Nazis were trying to kill all. Thus, it is quite possible that what ought to count as ethical is far removed from how persons actually behave. The present theory argues that each person who has more than is needed to develop/maintain choice ought to give it up to help others; pointing out that most affluent people fail to do that or won’t want to is hardly poignant criticism. Each person’s obligation, due to a prior interest in choice, remains whether or not people work less, have a lower standard of living, or feel guilty. The analysis in Chapter 2 showed that people are basically what they are made to be. If ethical considerations entail that we need to make persons to be more altruistic, then that is what we ought to do. But since that type of solution is long term (it involves how we raise future generations), Arthur’s objections may be taken as important considerations regarding present implementation. It may well be difficult to convince affluent adults (who have, in their inner worlds, a desire for more than they need) to

give up their possessions. In practice, then, we may need to target media campaigns at such persons in order to make them respect their obligations to their own capacity for choice. If they feel guilty for noncompliance, then perhaps that may be used as leverage as well. Lastly, there is something correct in Arthur's last concern: according to the present theory, everyone has the right to provide disaffirmative active interference against anyone who fails to help. This will certainly foster discord between those who attend to the demands of their prior interest and those who do not. I will address this point again in section 4.8.

#### **4.6: Norms of Non-Interference**

Instead of (or in addition to) arguing that persons need not help provide the pre-conditions for others due to a consideration of just deserts, the interlocutor might argue that persons have a right to non-interference from others. That right, one might claim, blocks the inference to the conclusion in the justification argument or the argument from consequences. While helping others may be in a person's prior interest, given her rights, she need not do so and no one or no group (or government) has the right to force her to help. Norms of non-interference—what are often called negative rights—may derive from various justifications in different theories. My purpose here will not be to address each of those possibilities; instead, I will focus on one prominent sort of conception of such rights—the sort espoused by John Locke and, in slightly altered form, by Robert Nozick—and then address how the theory would respond to this type of objection. I will first briefly address Locke's and Nozick's positions and then argue that these notions of negative rights are

unwarranted because they assume, first, that all persons are choosers and, second, that they are somehow equal in that capacity.

Locke held that in the “state of nature” (a hypothetical scenario that is to be taken as prior to the advent of the state) persons are in “a *state of perfect freedom* to order their actions, and dispose of their possessions and persons, as they think fit,” without “depending on the will of any other” (*Second Treatise* 8; §4). Since each person is the workmanship of the same omnipotent creator and master, none is in a subordinate position with regard to any other; thus, “no one ought to harm” another’s “life, health, liberty, or possessions” (9; §6). Persons are, on this view, endowed “with like faculties” (9; §6); as such, they are (at least roughly) equal. Locke’s notion of negative rights is, then, grounded in an appeal to a divine deity; because persons are all created by and answer to the deity, they ought to refrain from acting in certain ways toward each other.

In *Anarchy, State, and Utopia*, Nozick utilizes an appropriated conception of Lockean negative rights—one that is thoroughly secular and does not rely upon a divine justification—as a basis upon which to build a case for a night-watchman or minimal state. He takes it that the Lockean conception of rights is a “strong formulation of individual rights” (Nozick xi) that may be utilized both as a starting point for his theory and as a reason to limit a state’s authority over its citizens. A person, on Nozick’s view, ought to be free from others’ interference so that she can *choose* how to order her affairs, what kind of activities she will undertake (including whether she will help others), and what she will do with what she has. He explains

that negative rights are side constraints on the actions of others that reflect the “Kantian principle that individuals are ends and not merely means; they may not be sacrificed or used for the achieving of other ends without their *consent*” (30-31; italics mine). Since, in merely protecting citizens, the state may prevent persons from doing exactly as they choose, the state may treat them as means and, as such, it is in need of substantive justification for its existence (xi).

I would not be the first to note that Nozick merely assumes that persons are such that they have the right to non-interference (see, for instance, Pojman 610); Nozick himself makes that point clear when he discusses his own philosophical discomfort at the “yawning” gap that is left in his work without a theoretical justification of negative rights (Nozick 9). This is at least a *prima facie* problem for Nozick since he encourages the reader to scrutinize her own presuppositions (x). However, his decision to forego offering a justification is not the focus of my criticism; rather, my concern is that Nozick’s conception of negative rights implies and presumes that persons are equally choosers, while the analysis in Chapters 2 and 3 has demonstrated that such a position is without warrant.

Consider: if one maintains that persons ought to be allowed to *choose* how to order their affairs, one also, at least, implicitly maintains that those persons have a capacity for choice. Moreover, the notion that individuals ought not to be treated as means without their *consent* also implies that the neural functions of choice are operative. A capacity for choice is a prerequisite of consent; otherwise, the person in question is constrained or limited in her response according to the interaction between

her inner world and the concepts now being proposed to her. Whether she offers her consent or not, such a person is compelled toward a particular, non-trivial preference selection. Consent is only meaningful if choosing otherwise (non-consent) is a possibility. While it may be true that persons ought to be treated as ends, they can only *be* ends if their capacities for choice are enabled. And since Nozick (along with Locke) wants negative rights to apply to everyone prior to the existence of the state, his position entails that persons are somehow at least roughly equal as choosers. Otherwise, considerations regarding fairness might take precedence. Nozick never considers that without micro- and macro-nutrition, nurture, stimulation, education, sleep, overall health, and the absence of stress and violence persons are either not choosers or are at grave risk with regard to choice and that millions or billions of people, some of whom will undoubtedly live under his night watchman state, are without these (or other) vital pre-conditions of choice. That is, he takes for granted his basic phenomenon: choice. We are not automatically, innately, or equally choosers, though most of us have a potential for choice that *can* be enabled.

Although Locke attempts to justify negative rights by an appeal to a deity, my objection is equally applicable to his position. Even if persons were divinely created, the deity apparently did not make them all equal with regard to choice. It remains a possibility that most of us are generally equal in our potential for choice—that is, that all may be equally choosers if the pre-conditions are present in adequate amount over the lifespan—but even that may not be the case. If we set aside those who, for reasons beyond our present control, are in *area 1* on the continuum, some persons, upon

receiving the pre-conditions, may end up in *area 5* and thus have the capacity to innovate, while others may remain in *area 4* and thus be more inclined to utilize the innovations of others. In any case, the present theory does not rely on a presumption of potential equality, because it appeals to reasons that each person has due to her prior interest in choice. Even if you and the other do not share perfect equality, the other is justified in stopping any offense to choice that you might undertake; moreover, if a person has been without the pre-conditions, she will tend to provide disaffirmative active interference with regard to others' capacities for choice, perhaps yours. When offenses to choice are common cultural concepts, anyone can be a target. However, Locke's and Nozick's conceptions of negative rights depend on two assumptions: that all persons are choosers and that they are at least roughly equals in the capacity. Scientific evidence simply does not support either assumption. Thus, neither is reasonable. Persons are made to be choosers or not according to the *interference* they experience from others. Then, since these presuppositions are without warrant, the notion of negative rights that rests upon them is as well. If persons have some particular set of rights prior to the rise of the state, they will not be the negative rights that Locke and Nozick promote.

Now, perhaps this notion of interference is not what Nozick has in mind. He would surely concede that infants and children need appropriate care even though he has not acknowledged that the pre-conditions are a prerequisite of choice. Presumably, he would respond that supplying the pre-conditions is the sole responsibility of the parents or family and that others need not be (and in most cases

are not) involved. This position amounts to a *denial* of the interdependent conditions under which all persons live. Some of us are physically and conceptually dependent, some merely conceptually, and others are interdependent; but no one is self-reliant. In a way, Nozick admits his own conceptual interdependency in the preface to *Anarchy, State, and Utopia*. He explains that he understands that some people will be opposed to the views that he is espousing, because he once was as well. “With reluctance, [he] found [him]self becoming convinced of . . . libertarian views, due to various considerations and arguments” (ix). With time, he grew “accustomed to the views and their consequences, and . . . now see[s] the political realm through them” (x). Now, if we paraphrase these sentiments utilizing the language of the present theory, Nozick held certain views given his inner world and the concepts with which he had come into contact in his early sub-groups. One presumes that a person of his professional stature likely did not want for the pre-conditions; thus, his capacity for choice was enabled. Then, because of exposure to “various considerations and arguments”—that is, contact with concepts that provided disaffirmative active interference with his early views—he experienced impact and change. He came to hold prior concepts in a way that was less strong and new concepts in a way that was stronger. By utilizing his capacity for choice, he used his inner world and the sub-cultural concepts with which he came into contact in order to *extrapolate* and form a new position (indeed, a whole theory). Thus, *in denying the interdependent context*, Nozick (like the fictional parents in section 3.4) commits a *performative contradiction*.

Consider the content that Nozick provides regarding negative rights. Nozick is concerned about others (1) harming one with regard to life, liberty, and health, or (2) impeding one's choices in what to do with one's possessions. The theory I have presented is also concerned with protecting each persons' life, liberty, and health; however, evidence does not warrant distinguishing between the three in the same way that Nozick has. That is, without all that is conducive to life and health (the pre-conditions), one will not have liberty (choice). But if we take Nozick to mean (as I believe that he does) that one should not (in general or without just cause) murder, enslave, infect another with a disease, and so on, I have no quarrel, as each of these types of interference is a specific offense to choice. One ought to keep in mind, though, that refraining from these types of things does not entail that those who are not dead, not enslaved, and/or not sickened will have a capacity for choice.

Consider (2). Is it the case that one ought not impede another person's choices regarding what the latter will do with her possessions? I have argued that no one has a negative right to dispose of her possessions as she sees fit, because the notion of negative rights is without warrant. The demand that others leave one's possessions alone is then merely a demand that others provide quasi-active interference (QAI). Since QAI is a tacit approval of the status quo (whatever activities/inactivities are already being undertaken), this position is equivalent to maintaining that the other ought to approve of whatever one does with one's income, wealth, and assets. But this other, I have argued, only has an interest in approving of what is consistent with choice and her responsibilities to it, because choice is in her prior interest and only

actions that are consistent with choice are justified. Thus, we have reason to leave another alone in her use of her assets if and only if she is giving whatever portion she does not need in order to help provide the pre-conditions of choice for all others.

#### **4.7: Special Obligations & Systems to Redistribute the Pre-conditions of Choice**

Throughout childhood and any period of physical and/or conceptual dependency, dependent persons rely on many others in order to obtain the pre-conditions of choice. Even if choice is enabled, we take part in intra-group, intra-sub-group, and personal interrelations in order to obtain them. This type of engagement is of the utmost importance to choice. But the theory I have put forward holds that it is in each person's *prior interest* to help provide the pre-conditions of choice for all persons in the world, no matter the other's distance or lack of group, sub-group, or personal relation. These two points seem taken together seem to create something of a dilemma for the individual chooser. She has to somehow fulfill her obligations to choice both for those who are either near to her and rely on her due to a conceptual and/or physical dependency (say, her children, her patients, her customers, or her students) and those who are in a dependent situation on the other side of the earth.

If she does not help in both situations, she dehumanizes herself, acts according to an unwarranted justification, leaves herself open to justified disaffirmative active interference, and puts her prior interests at risk. What might justified DAI look like? As noted earlier, if one is enacting interference that violently thwarts the choices of others (like, murder or assault), others are justified in completely limiting her freedom (i.e., putting her in prison). If she is not contributing to conditions that promote well

being for others, DAI might include a seizure of whatever portion of her assets she does not need to maintain support for herself (and her dependents) or it may mean forcing her to work in the redistribution of the pre-conditions. That is, if she does not contribute to the well being of all, others are justified in restricting the time and resources she would usually expend on fulfilling her trivial and non-trivial interests. If she opts to neglect those near to her and/or those who are dependent on her, she may help to actively create more PEWOPs within her group/sub-groups. Alternately, in neglecting those at some distance, she allows PEWOPs to be created in other cultures; and the argument from consequences demonstrates that neither of these options is in her prior interest.

How then will she fulfill both her special and her general obligations to choice and humanity? She can opt to limit the number of special obligations she creates in order to expend more energy on helping those at some distance. But for most of us, this is an unattractive option. Our special obligations are part of what creates value and love in our lives. Thus, for most persons, the best option will be to devote our personal energies (both the resources we are warranted in keeping and the bulk of our time) toward special obligations and whatever particular trivial and non-trivial interests that we desire to fulfill (as long as these do not offend choice), while at the same time contributing our excess resources and assets to *systems* that provide the pre-conditions of choice for all.

#### **4.8: The Politics of Freedom: Choice as a Justification for the State**

I have argued that norms of non-interference, as they are conceived by Locke and Nozick, are without warrant. While we do have reason not to harm others with regard to life, liberty, and health—such harms are specific offenses to choice—we also have reason to utilize our possessions, whatever is in excess of what is needed to enable and maintain choice, to help others. This section briefly addresses what our moral obligations to choice might look like in the political arena. I will merely discuss what the basic structure of a government that services choice will entail and leave a more detailed account for another endeavor. I argue that it is in each person's prior interest to only accept the authority of a government that provides the pre-conditions of choice for its citizens and helps to provide them for all others. A place for the conditions will be delineated as well.

Each person has a moral obligation to help provide what it takes to enable choice for all others. Choosers—especially those who are affluent and who currently have greater access to the necessary resources—will have a greater initial obligation due to practical considerations. Given that these persons, like most others, have special obligations (personal, social, and professional ties) and non-trivial interests, they may choose to initiate systems that fulfill their responsibilities to choice (the dilemma that compels this strategy is discussed above). And it may be that the most efficient way to distribute the pre-conditions is through political channels (although non-profit organizations may be able to manage the distribution as well).

As noted at the end of section 4.5, if compliance is voluntary, conflict will develop between those who do and those who do not comply. Moreover, anyone acting in service of choice is warranted in forcing the latter to fulfill her obligation. That is, in the absence of a group level agreement regarding how such matters will be handled, vigilante justice is justified. I will not address the full details of such a scenario, but clearly it would be costly regarding choice. One would have little time, energy, or resources available to pursue one's non-trivial self-interests if one is morally obliged to police one's neighbors. And anyone else is justified in policing you as well. Thus, there is a prima facie case for the group members to develop a system of justice based on choice with mechanisms to handle conflict and ensure compliance. That is, it is in the members' prior interest to agree to establish a government.

In order to determine what the basic grounding of the government might be, I return to the lucid infant thought experiment. Again suppose that, shortly after birth, infants experience a period of incredible lucidity. For a brief time it is as if the infants had reached neurological maturity and as if all the pre-conditions and conditions are and had been present for them. Recall that the researcher visiting them has adequately explained to them their prior interest in choice and the pre-conditions. If the researcher polled the infants regarding the type of government they would be willing to submit to, what would their response be? The infants know that after their period of lucidity ends they will be at the mercy of whatever situation exists in their environments. Even if it appears to them (given their current surroundings) that they

will receive the pre-conditions, they know that other infants, children, and adults exist in less than conducive situations and that it is in their own prior interests if no person is raised to be a PEWOP. If PEWOPs exist the infants' future moral obligations will be more extensive and costly and PEWOPs have a greater tendency to offend choice for others.

As such, it is in the infants' prior interest to agree to accept a government as legitimate only if it provides the pre-conditions to all of its citizens and helps to provide them for all persons in other groups as well. Moreover, given that persons cannot become choosers in the absence of the pre-conditions, a government that fails to provide them runs the risk of being coercive. PEWOPs cannot choose whether to accept any governmental authority, because they cannot choose. Additionally, it is only reasonable for the infants to accept political, economic, and legal systems that protect and promote choice; that is, it is in their interest to submit to a government whose laws are structured in accordance with the conditions of choice (see section 3.5).

#### **4.9: Conclusion**

Chapter 1 considered Simone de Beauvoir's ethical theory, including its structure, its strengths, and inherent flaws. Since Beauvoir conflated the desire to disclose with a desire for freedom, significant adaptation of her position was required. Moreover, for her, all persons have ontological freedom (which includes a capacity for choice). Although she acknowledged that some people exist in situations in which their freedom is hidden from view (and thus limited), she failed to acknowledge that

some may not develop a capacity for choice, freewill, and freedom. These are drawbacks to her theory; however, her work also includes a wealth of useful ethical notions. She was aware that choice cannot be taken for granted and she knew that it was important to consider the human's type of being, her needs, and her contexts in determining how she should live and treat others. Given that a person shares an interdependent context with her group and in some ways with members of other groups, given her own conceptual and physical vulnerabilities, given her own prior interest in non-trivial interest fulfillment, choice, and the pre-conditions, and given that competing theoretical notions—such as just deserts, norms of non-interference, and special obligations—fail to mitigate against the appropriated theory's conclusion, she ought to help provide all others with what it takes to enable choice. She ought to be a consistent person who acts in favor of the basis of every person's humanity.

When a person receives the pre-conditions, her capacity for choice is enabled. When she also lives within the conditions, she will be able to engage in a such a way that she *knowingly and purposefully* utilizes her capacity to enact choice—that is, *its use will not be impeded and she will not be compelled, via incapacity, cultural factors, and/or force, toward revealing or contributing trivial or limited objects and/or significations, in the present or in the future*. She will have the best ongoing chance of fulfilling her particular non-trivial interests and she will exist in a state of freedom. What choices will be said to be in her general interest will be limited only by the fact that she has a *prior interest* which delineates her responsibilities to choice.

## Bibliography

- “2 Freeway Shootings, 1 Fatal, Extend a String in California.” *New York Times*. New York Times, 31 March 2008. Web. 31 March 2008. <[ttp://www.nytimes.com/2008/03/31/us/31california.html?\\_r=1&scp=47&sq=&st=nyt&oref=slogin](http://www.nytimes.com/2008/03/31/us/31california.html?_r=1&scp=47&sq=&st=nyt&oref=slogin)>
- “8 Shot, 6 Dead in Shooting Rampage.” *KIROTV.com*. KIROTV.com, 2 Sept. 2008. Web. 2 Sept. 2008. <<http://www.kirotv.com/news/17373555/detail.html>>
- 9/11 Commission. *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States*. Web. 14 Dec. 2008. <<http://www.9-11commission.gov/report/911Report.pdf>>
- “9/11’s Health Effects Lingered for Years.” *Washingtonpost.com*. Washington Post, 10 Sept. 2008. Web. 10 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/09/10/AR2008091001846.html>>
- “13-year-old Female Suicide Bomber Kills Four Guards.” *Smh.com.au*. Sidney Morning Herald, 11 Nov. 2008. Web. 11 Nov. 2008. <<http://www.smh.com.au/news/world/13yearold-girl-blows-herself-up/2008/11/11/1226318591352.html>>
- “31 New Milk Powder Brands Found Tainted.” *CNN.com*. CNN, 1 Oct. 2008. Web. 1 Oct. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/10/01/hongkong.melamine.ap/index/html>>
- “78 Questioned in Powder Milk Contamination.” *CHINAdaily.com.cn*. China Daily, 12 Sept. 2008. Web. 12 Sept. 2008. <[http://www.chinadaily.com.cn/china/2008-09/12/content\\_7023990.htm](http://www.chinadaily.com.cn/china/2008-09/12/content_7023990.htm)>
- Aboul-Enein, Youssef. “The 2006 Usama Bin Laden Tape: Interpreting an Adversary.” *Global Crime* 7.3-4 (2006): 446-453. Routledge. Web. 1 June 2008.
- “Accused School Plot Ringleader Says Bullies Pushed Him Over the Edge.” *WFTV.com*. WFTV.com, 29 April 2008. Web. 29 April 2008. <<http://www.wftv.com/news/16056732/detail.html>>
- Adcox, Seanna. “Official: Parents Sought Counseling for Bomb Plot Student.” *ABC News*. ABC News, 21 April 2008. Web. 21 April 2008. <<http://abcnews.go.com/US/wireStory?id=4692527>>

- Adolphs, Ralph. "What Is Special about Social Cognition," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 269-285.
- "Afghan Court Spares Life of Inquisitive Journalism Student." *CNN.com*. CNN, 21 Oct. 2008. Web. 21 Oct. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/10/21/afghan.journalist.trial.ap/index.html>>
- Allen, Paul. "A Critique of Gewirth's 'Is-Ought' Derivation." *Ethics* 92.2 (1982): 211-226. Print.
- Anderson, Craig A. and Brad J. Bushman. "The Effects of Media Violence on Society." *Science* 295 (2002): 2377-2379. sciencemag.org. Web. 12 April 2008.
- Armelagos, George J., Peter J. Brown, and Bethany Turner. "Evolutionary, Historical and Political Economic Perspectives on Health and Disease." *Social Science & Medicine* 61 (2005): 755-765. Elsevier. Web. 21 Nov. 2006.
- Armstrong, Este, Karl Zilles, and Axel Schleicher. "Cortical Folding and the Evolution of the Human Brain." *Journal of Human Evolution* 25 (1993): 387-392. Print.
- Arthur, John. "Famine Relief and the Ideal Moral Code." *Ethics in Practice: An Anthology*, edited by Hugh LaFollette. Malden, Massachusetts: Blackwell Publishers Ltd, 2002. 582-590. Print.
- Augustine. *The Trinity*, translated by Stephen McKenna, S.S.S.R. Washington: The Catholic University of America Press, 1963. Print.
- Bacevich, Andrew J. "The 'Long War' Fallacy." *Los Angeles Times*. Los Angeles Times, 13 May 2008. Web. 13 May 2008. <<http://www.latimes.com/news/opinion/la-oe-bacevich13-2008may13,0,7251551.story>>
- Bakhurst, David and Christine Sypnowich (eds.). *The Social Self*. London: Sage Publications, 1995. Print.
- Barberger-Gateau, P., C. Raffaitin, L. Letenneur, C. Berr, C. Tzourio, J. F. Dartigues, and A. Alpérovitch. "Dietary Patterns and Risk of Dementia: The Three-City Cohort Study." *Neurology* 69 (2007): 1921-1930. Print.

- Barboza, David. "Asia Food Tainting Spreads, Leading to Recall in U.S." *New York Times*. New York Times, 26 Sept. 2008. Web. 26 Sept. 2008. <http://www.nytimes.com/2008/09/27/world/asia/27recall.html?em>>
- Barboza, David. "China's Contaminated Food Scandal Widens." *International Herald Tribune*. International Herald Tribune, 31 Oct. 2008. Web. 31 Oct. 2008. <<http://www.iht.com/articles/2008/10/31/news/china.php>>
- Barboza, David. "Second Chemical Eyed in Chinese Pet Food Scandal." *International Herald Tribune*. International Herald Tribune, 8 May 2007. Web. 10 Oct. 2008. <<http://www.iht.com/articles/2007/05/09/business/petfood.php>>
- Barford, Vanessa. "Iran's 'Diagnosed Transsexuals.'" *BBC News*. BBC, 25 Feb. 2008. Web. 25 Feb. 2008. <[http://news.bbc.co.uk/2/hi/middle\\_east/7259057.stm](http://news.bbc.co.uk/2/hi/middle_east/7259057.stm)>
- Bar-On, Reuven, Daniel Tranel, Natalie L. Denburg, and Antoine Bechara. "Exploring the Neurological Substrate of Emotional and Social Intelligence." *Brain* 126 (2003): 1790-1800. Print.
- Barry, Dan. "A Boy the Bullies Love to Beat Up, Repeatedly." *New York Times*. New York Times, 24 March 2008. Web. 24 March 2008. <<http://www.nytimes.com/2008/03/24/us/24land.html>>
- Beard, John. "Iron Deficiency Alters Brain Development and Functioning." *Journal of Nutrition* 133 (2003): 1468S-1472S. Print.
- Beauvoir, Simone de. *The Ethics of Ambiguity*, translated from the French by Bernard Frechtman. New York: The Citadel Press, 1964 [1948]. Print.
- Beauvoir, Simone de. "An Eye for an Eye." *Simone de Beauvoir: Philosophical Writings* edited by Margaret A. Simons, with an introduction by Kristana Arp. Urbana: University of Illinois Press, 2004 [1946]. 239-260. Print.
- Beauvoir, Simone de "Pyrrhus and Cineas." *Simone de Beauvoir: Philosophical Writings* edited by Margaret A. Simons, with an introduction by Debra Bergoffen. Urbana: University of Illinois Press, 2004 [1944]. 79-149. Print.
- Bechara, Antoine, Hanna Damasio, Antonio R. Damasio, and Gregory P. Lee. "Different Contributions of the Human Amygdala and Ventromedial Prefrontal Cortex to Decision-Making." *Journal of Neuroscience* 19.13 (1999): 5473-5481. Print.

- Bechara, Antoine and Reuven Bar-On. "Neurological Substrates of Emotional and Social Intelligence: Evidence from Patients with Focal Brain Lesions," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 13-40. Print.
- Beckett, Celia. "Health Problems in Children Adopted from Romania: Association with Duration of Deprivation and Behavioural Problems." *Adoption & Fostering* 27.4 (2003): 19-29. Print.
- Beckett, Celia, Barbara Maughan, Michael Rutter, Jenny Castle, Emma Colvert, Christine Groothues, Jana Kreppner, Suzanne Stevens, Thomas G. O'Connor, and Edmund J. S. Sonuga-Barke. "Do the Effects of Early Severe Deprivation on Cognition Persist into Early Adolescence? Findings from the English and Romanian Adoptees Study." *Child Development* 77.3 9 (2006): 696-711. Print.
- Beer, Jennifer S. "Orbitofrontal Cortex and Social Regulation," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 153-165. Print.
- Bellinger, David C. "Neurological and Behavioral Consequences of Childhood Lead Exposure." *PLoS Medicine* 5.5 (2008): 0690-0692. Open Access. Web. 28 May 2008.
- Berntson, Gary G. "Reasoning about Brains," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 1-11. Print.
- Birberg-Thornberg, Ulrika, Thomas Karlsson, Per A. Gustafsson, and Karel Duchén. "Nutrition and Theory of Mind—The Role of Polyunsaturated Fatty Acids (PUFA) in the Development of Theory of Mind." *Prostaglandins, Leukotrienes and Essential Fatty Acids* 75 (2006): 33-41. Elsevier. Web. 21 Nov. 2006.
- Blair, R. J. R. "The Roles of Orbital Frontal Cortex in the Modulation of Antisocial Behavior." *Brain and Cognition* 55 (2004): 198-208. Elsevier. Web. 22 May 2008.

- Blake, John. "As Children Starve, World Struggles for Solution." *CNN.com*. CNN, 18 Nov. 2008. Web. 18 Nov. 2008. <<http://www.cnn.com/2008/US/11/17/hunger.week/index.html>>
- Blitz, James and Jon Boone. "Murder of Aid Worker Raises Fears in Kabul." *FT.com*. Financial Times, 21 Oct. 2008. Web. 21 Oct. 2008. <[http://www.ft.com/cms/s/0/17b8d146-9f8-11dd-98bd-000077b07658.html?nclick\\_check=1](http://www.ft.com/cms/s/0/17b8d146-9f8-11dd-98bd-000077b07658.html?nclick_check=1)>
- Bodnar, Lisa M. and Katherine L. Wisner. "Nutrition and Depression: Implications for Improving Mental Health Among Childbearing-Aged Women." *Biological Psychiatry* 58.9 (2005): 679-685. Print.
- Boudreau, Abbie. "Gun Seller Offering Discounts to 'Save Lives.'" *CNN.com*. CNN, 24 April 2008. Web. 24 April 2008. <<http://www.cnn.com/2008/US/04/24/va.tech.niu/index.html>>
- Bouwstra, Hylco, D. A. Janneke Dijck-Brouwer, Jacqueline A. L. Wildeman, Hendrika M. Tjoonk, Jolanda C. van der Heide, E. Rudy Boersma, Frits A. J. Muskiet, and Mijna Hadders-Algra. "Long-Chain Polyunsaturated Fatty Acids have a Positive Effect on the Quality of General Movements of Healthy Term Infants." *American Journal of Clinical Nutrition* 78 (2003): 313-318. Print.
- Bremner, J. Douglas. "Does Stress Damage the Brain?" *Biological Psychiatry* 45 (1999): 797-805. ScienceDirect. Web. 14 Dec. 2008.
- Brice, Arthur. "China's Tainted Milk Scare Spreads Globally." *CNN.com*. CNN, 23 Sept. 2008. Web. 23 Sept. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/09/23/china.contaminated.milk/index/html>>
- Britten, Nick. "Crowds Demand Teddy Bear Teacher Is Shot." *Telegraph.co.uk*. Telegraph.co.uk, 3 Dec. 2007. Web. 3 Dec. 2007. <<http://www.telegraph.co.uk/news/worldnews/1571079/Crowds-demand-Teddy-bear-teacher-is-shot.html>>
- "Bully Concerns for Parents After Violent School Plot Uncovered." *WFTV.com*. WFTV.com, 17 March 2008. Web. 29 April 2008. <<http://www.wftv.com/news/15618651/detail.html>>
- Bynum, Russ. "Cops: 3<sup>rd</sup>-Graders Aimed to Hurt Teacher." *Google News*. Google News, 1 April 2008. Web. 1 April 2008. <<http://ap.google.com/article/ALeqM5g84E-NqKavdkNfL6nv-ixkYQFiSgD8VP88300>>

- Cacioppo, John T., Penny S. Visser and Cynthia L. Pickett (eds.). *Social Neuroscience: People Thinking about Thinking People*. Cambridge, Mass.: MIT Press. 2006. Print.
- Capron, Christiane and Michel Duyme. "Assessment of Effects of Socio-Economic Status on IQ in a Full Cross-Fostering Study." *Nature* 340 (1989): 552-554. Print.
- Card, Claudia (ed.). *The Cambridge Companion to Simone de Beauvoir*. Cambridge: Cambridge University Press, 2003. Print.
- Carter, Mary. "Columbine Survivor: Expect an Emotional Roller Coaster." *CNN.com*. CNN, 20 April 2007. Web. 9 Sept. 2008. <<http://edition.cnn.com/2007/HEALTH/04/19/shooting.columbine.survivor/index.html>>
- Case, Anne and Christina Paxson. "Children's Health and Social Mobility." *The Future of Children* 16.2 (2006): 151-173. Muse. Web. 15 Nov. 2007.
- Cecil, Kim M., Christopher J. Brubaker, Caleb M. Adler, Kim N. Dietrich, Mekibib Altaye, John C. Egelhoff, Stephanie Wessel, Ilayaraja Elangovan, Richard Hornung, Kelly Jarvis, and Bruce P. Lanphear. "Decreased Brain Volume in Adults with Childhood Lead Exposure." *PLoS Medicine* 5.5 (2008): 0741-0750. Open Access. Web. 28 May 2008.
- "Cell Phone Teen Beating Video Leads to Arrests." *TheBostonChannel.com*. WCVBTV.com, 16 April 2008. Web. 16 April 2008. <<http://www.thebostonchannel.com/news/15891314/detail.html>>
- Cha, Ariana Eunjung. "In China, Farming Advances Lie Fallow." *Washingtonpost.com*. Washington Post, 6 Aug. 2007. Web. 13 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2007/08/05/AR2007080501480.html>>
- Cheung-Blunden, Violet and Bill Blunden. "Paving the Road to War with Group Membership, Appraisal Antecedents, and Anger." *Aggressive Behavior* 34 (2008): 175-189. Wiley-Liss. Web. 7 May 2008.
- "Chilling Details of Rampage that Killed 6 Revealed." *KIROTV.com*. KIROTV.com, 11 Sept. 2008. Web. 11 Sept. 2008. <<http://www.kirotv.com/news/17441596/detail.html>>

- “China Finds More Brands of Tainted Baby Milk: State Media.” *AFP*. AFP, 16 Sept. 2008. Web. 16 Sept. 2008. <[http://afp.google.com/article/ALeqM5hLmS\\_IYOSFJkM4bmP9OKEPpUxdya](http://afp.google.com/article/ALeqM5hLmS_IYOSFJkM4bmP9OKEPpUxdya)>
- “China Says Company Knew of Tainted Milk for Weeks.” *International Herald Tribune*. International Herald Tribune, 13 Sept. 2008. Web. 13 Sept. 2008. <<http://www.ihf.com/articles/ap/2008/09/13/news/China-Baby-Formula-Recall.php>>
- “China Seizes Melamine-Tainted Feed.” *CNN.com*. CNN, 2 Nov. 2008. Web. 2 Nov. 2008. <<http://edition.cnn.com/2008/HEALTH/11/02/china.melamine/>>
- “Chinese Leader: Govt. Partly to Blame for Milk Scandal.” *CNN.com*. CNN, 18 Oct. 2008. Web. 18 Oct. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/china.milk.ap/index.html#cnnSTCext>>
- “Cho’s High School Classmates Recall ‘Kid Who Never Spoke.’” *CNN.com*. CNN, 20 April 2007. Web. 09 Sept. 2008. <<http://www.cnn.com/2007/US/04/20/shooter.childhood/index.html>>
- Christakis, Nicholas A. “Social Networks and Collateral Health Effects.” *British Medical Journal* 329 (2004): 184-185. *bmj.com*. Web. 5 Dec. 2007.
- Christakis, Nicholas A. and James H. Fowler. “The Spread of Obesity in a Large Social Network Over 32 Years.” *New England Journal of Medicine* 357 (2007): 370-379. *New England Journal of Medicine*. Web. 27 May 2008.
- “Christian Families Flee Mosul after Death Threats.” *CNN.com*. CNN, 20 Oct. 2008. Web. 20 Oct. 2008. <<http://www.cnn.com/2008/WORLD/meast/10/20/iraq.main/index.html>>
- Chugani, Harry T. “A Critical Period of Brain Development: Studies of Cerebral Glucose Utilization with PET.” *Preventive Medicine* 27 (1998): 184-188. Print.
- Chugani, Harry T., Michael E. Behen, Otto Muzik, Csaba Juhász, Ferenc Nagy, and Diane C. Chugani. “Local Brain Functional Activity Following Early Deprivation: A Study of Postinstitutionalized Romanian Orphans.” *NeuroImage* 14 (2001): 1290-1301. *Idealibrary*. Web. 23 Jan. 2008.
- Cockerham, William C. “Health Lifestyle Theory and the Convergence of Agency and Structure.” *Journal of Health and Social Behavior* 46.1 (2005): 51-67. *Research Library*. Web. 24 Nov. 2006.

- Cohen, I Bernard. *The Birth of a New Physics*. New York: W.W. Norton & Company, 1985. Print.
- “Columbine Report.” *CNN.com*. CNN, no date. Web. 9 Sept. 2008. <<http://www.cnn.com/SPECIALS/2000/columbine.cd/frameset.exclude.html>>
- “Cookies With Melamine Found in Netherlands.” *NewsVOA.com*. Voice of America, 30 Sept. 2008. Web. 30 Sept. 2008. <<http://www.voanews.com/english/archive/2008-09/2008-09-30-voa51.cfm?CFID=79633403&CFTOKEN=295022769>>
- Cooper, William S. *The Evolution of Reason: Logic as a Branch of Biology*. Cambridge: Cambridge University Press (1987). Print.
- Conley, Dalton and Kristen W. Springer. “Welfare State and Infant Mortality.” *American Journal of Sociology* 107.3 (2001): 768-807. Print.
- Cooper, William S. *The Evolution of Reason: Logic as a Branch of Biology*. Cambridge: Cambridge University Press, 2001. Print.
- Copeland, William E., Shari Miller-Johnson, Gordon Keeler, Adrian Angold, and E. Jane Costello. “Childhood Psychiatric Disorders and Young Adult Crime: A Prospective, Population-Based Study.” *American Journal of Psychiatry* 164.11 (2007): 1668-1675. Research Library. Web. 7 May 2008.
- Coricelli, Giorgio, Hugo D. Critchley, Mateus Joffily, John P. O’Doherty, Angela Sirigu, and Raymond J. Dolan. “Regret and Its Avoidance: A Neuroimaging Study of Choice Behavior.” *Nature Neuroscience* 8.9 (2005): 1255-1262. Nature Publishing. Web. 24 Nov. 2006.
- Cox, Lauren. “Pack Mentality Applies to Quitting Smoking Too.” *ABC News*. ABC News, 22 May 2008. Web. 22 May 2008. <<http://abcnews.go.com/Health/QuitToLive/Story?id=4905063&page=1>>
- Crocker, David A. “Hunger, Capacity, and Development.” *Ethics in Practice: An Anthology*, edited by Hugh LaFollette, pp. 591-601. Malden, Massachusetts: Blackwell Publishers Ltd, 2002. Print
- Cudd, Ann E. *Analyzing Oppression*. New York: Oxford University Press, 2006. Print.

- Cullity, Garrett. "International Aid and the Scope of Kindness." *Ethics* 105.1 (1994): 99-127. Print.
- Currie, Janet. "Health Disparities and Gaps in School Readiness." *Future of Children* 15.1 (2005): 117-138. Muse. Web. 20 Nov. 2006.
- Cziko, Gary. *Without Miracles: Universal Selection Theory and the Second Darwinian Revolution*. Cambridge, Massachusetts: MIT Press (1995). Print.
- Damon, Arwa. "Iraqi Mom Ridicules Cops Over Suicide Bombings." *CNN.com*. CNN, 25 Aug. 2008. Web. 25 Aug. 2008. <<http://www.cnn.com/2008/WORLD/meast/08/25/iraq.bombers/index.html>>
- Damon, Arwa. "Iraqi Woman Describes Daughter's Descent into Suicide Bombing." *CNN.com*. CNN, 6 June 2008. Web. 10 Dec. 2008. <<http://www.cnn.com/2008/WORLD/meast/06/06/female.bombers/index.html>>
- D'Arcangelo, Marcia. "How Does the Brain Develop? A Conversation with Steven Petersen." *Educational Leadership* 58.3 (2000): 68-71. Print.
- Davidson, Richard J., Katherine M. Putnam, and Christine L. Larson. "Dysfunction in the Neural Circuitry of Emotion Regulation: A Possible Prelude to Violence." *Science* 289-5479 (2000): 591-594. JSTOR. Web. 23 May 2008.
- Davies, Gordon K. "Connecting the Dots: Lessons from the Virginia Tech Shootings." *Change: The Magazine of Higher Learning*. Change, January-February 2008: 8-15. Web. 7 May 2008.
- Davis, Bob and Douglas Belkin. "Food Inflation, Riots Spark Worries for World Leaders." *Online.wsj.com*. Wall Street Journal (accessed from Google News), 14 April 2008. Web. 14 April 2008. <[http://online.wsj.com/article/SB120813134819111573.html?mod=googlenews\\_wsj](http://online.wsj.com/article/SB120813134819111573.html?mod=googlenews_wsj)>
- Daw, Nathaniel D., John P O'Doherty, Peter Dayan, Ben Seymour, and Raymond J. Dolan. "Cortical Substrates for Exploratory Decisions in Humans." *Nature* 441 (2006): 876-879. Print.
- "D.C. Sniper: 'Murder this Innocent Black Man.'" *CNN.com*. CNN, 7 May 2008. Web. 7 May 2008. <<http://www.cnn.com/2008/CRIME/05/07/dc.sniper/index.html>>
- Deacon, Terrence W. *The Symbolic Species: The Co-Evolution of Language and the Brain*. New York: W. W. Norton and Company, 1997. Print.

- DeLong, G. Robert. "Effects of Nutrition on Brain Development in Humans." *American Journal of Clinical Nutrition* 57 (1993): 286S-290S. Print.
- Dennett, Daniel C. *Elbow Room: The Varieties of Free Will Worth Wanting*. Cambridge: MIT Press, 1984. Print.
- Dennett, Daniel C. *Freedom Evolves*. New York: Viking, 2003. Print.
- De Quervain, Dominique J.-F., Benno Roozendaal, Roger M. Nitsch, James L. McGaugh, and Christopher Hock. "Acute Cortisone Administration Impairs Retrieval of Long-Term Declarative Memory in Humans." *Nature Neuroscience* 3.4 (2000): 313-314. Print.
- Descartes, René. *Discourse on Method and Related Writings*, translated with an introduction by Desmond M. Clarke. London: Penguin Books, 1999. Print.
- Descartes, René. *Meditations on First Philosophy*, translated, with an introduction, by Laurence J. Lafleur. Indianapolis: The Bobbs-Merrill Company, Inc, 1951. Print.
- Descartes, René. *The Philosophical Writings of Descartes*, translated by John Cottingham, Robert Stoothoff, and Dugald Murdoch. Volume I. Cambridge: Cambridge University Press, 1985. Print.
- De Silva, Mary J., Sharon R. Huttly, Trudy Harpham, and Michael G. Kenward. "Social Capital and Mental Health: A Comparative Analysis of Four Low Income Countries." *Social Science & Medicine* 64 (2007): 5-20. Elsevier. Web. 21 Nov. 2006.
- Doering, Christopher. "Lawmakers Demand USDA List Beef Recall Stores." *Reuters*. Reuters, 6 Mar. 2008. Web. 6 Mar. 2008. <<http://www.reuters.com/article/domesticNews/idUSN0649176520080306>>
- Doniger, Glen M., Ely S. Simon, and Ari Z. Zivotofsky. "Comprehensive Computerized Assessment of Cognitive Sequelae of a Complete 12-16 Hour Fast." *Behavioral Neuroscience* 120.4 (2006): 804-816. Print.
- Dower, Nigel. "World Poverty." *A Companion to Ethics*, edited by Peter Singer. Oxford: Blackwell Publishers Ltd., 2000. 273-283. Print.

- Dullemeijer, Carla, Jane Durga, Ingeborg A. Brouwer, Ondine van de Rest, Frans J. Kok, Robert-Jan M. Brummer, Martin P. J. van Boxtel, and Petra Verhoef. "n-3 Fatty Acid Proportions in Plasma and Cognitive Performance in Older Adults." *American Journal of Clinical Nutrition* 86 (2007): 1479-1485. Print.
- Duncan, Greg J., W. Jean Yeung, Jeanne Brooks-Gunn, and Judith R. Smith. "How Much Does Childhood Poverty Affect the Life Chances of Children?" *American Sociological Review* 63.3 (1998): 406-423. JSTOR. Web. 26 Nov. 2006.
- Dunham, Will. "Genetic Underpinnings of Schizophrenia Revealed." *Reuters*. Reuters, 27 March 2008. Web. 27 March 2008. <<http://www.reuters.com/article/scienceNews/idUSN2728018520080327?pageNumber=1&virtualBrandChannel=0>>
- Duyme, Michel, Annick-Camille Dumaret, and Stanislaw Tomkiewicz. "How Can We Boost IQs of 'Dull Children'? A Late Adoption Study." *Proceedings of the National Academy of Sciences of the United States of America* 96.15 (1999): 8790-8794. JSTOR. Web. 24 Jan. 2008.
- Edds, Kimberly. "String of Freeway Shootings in L.A. Area Has Left 4 Dead." *Washingtonpost.com*. Washington Post, 3 May 2005. Web. 9 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/articles/A32766-2005May3.html>>
- Eibner, Christine and Roland Sturm. "US-based Indices of Area-Level Deprivation: Results from HealthCare for Communities." *Social Science & Medicine* 62 (2006): 348-359. Elsevier. Web. 24 Nov. 2006.
- Ellenbogen, Jeffrey M., Peter T. Hu, Jessica D. Payne, Debra Titone, and Matthew P. Walker. "Human Relational Memory Requires Time and Sleep." *Proceedings of the National Academy of Sciences of the United States of America* 104.18 (2007): 7723-7728. National Academy of Sciences. Web. 26 Nov. 2007.
- Ertürk, Yakin. *Integration of the Human Rights of Women and a Gender Perspective: Violence Against Women* (Mission to the Republic of Iran). United Nations, 27 Jan. 2006. Web. 14 Dec. 2008. <<http://www.ohchr.org/EN/countries/AsiaRegion/Pages/IRIndex.aspx>>
- "Ervin Staub: Brief Biography." *Ervinstaub.com*. 5 April 2008. <<http://www.ervinstaub.com/>>

- Falco, Miriam. "USDA: Reinspection of Downed Cattle Was Key Issue in Beef Recall." *CNN.com*. CNN, 20 Feb. 2008. Web. 20 Feb. 2008. <<http://www.cnn.com/2008/HEALTH/02/20/downer.cattle/index.html>>
- Fan, Maureen. "China's Milk Scandal Hits Western Brands." *Washingtonpost.com*. Washington Post, 30 Sept. 2008. Web. 30 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/09/29/AR2008092900782.html?hpid=moreheadlines>>
- Fan, Maureen. "China's Tainted-Milk Crisis Grows Despite Official Claims." *Washingtonpost.com*. Washington Post, 28 Sept. 2008. Web. 28 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/09/27/AR2008092702797.html?hpid=sec-world>>
- Fathi, Nazila. "As Repression Eases, More Iranians Change Their Sex." *New York Times*. New York Times, 2 Aug. 2004. Web. 1 Sept. 2008. <<http://query.nytimes.com/gst/fullpage.html?res+9E0DE0D91F3DF931A3575BC0A9629C8B63>>
- "Feds: School Bomb Plotter Wanted to Kill Jesus." *CNN.com*. CNN, 29 April 2008. Web. 29 April 2008. <<http://www.cnn.com/2008/CRIME/04/29/teen.charged.ap/index.html?iref=mpstoryview>>
- "Female Suicide Bombers Target Pilgrims, Rally." *CNN.com*. CNN, 28 July 2008. Web. 28 July 2008. <<http://www.cnn.com/2008/WORLD/meast/07/28/iraq.main/index.html>>
- "Fight Between Teen Girls Caught On Tape: Police Seek Participants." *WLKY.com*. CNN, 17 April 2008. Web. 17 April 2008. <<http://www.wlky.com/news/15910955/detail.html>>
- "Finnish Gunman Kills 10 at College." *CNN.com*. CNN, 23 Sept. 2008. Web. 23 Sept. 2008. <<http://www.cnn.com/2008/WORLD/europe/09/23/finland.school.shooting/index.html>>
- Fitzpatrick, David. "Lawmaker: Nation's Food System Is Collapsing." *CNN.com*. CNN, 14 May 2008. Web. 14 May 2008. <<http://www.cnn.com/2008/US/05/14/meat.safety/index.html>>
- Fox, Maggie. "Kicking the Habit May Be Contagious, Study Finds." *Reuters UK*. Reuters, 21 May 2008. Web. 21 May 2008. <<http://uk.reuters.com/article/healthNews/idUKN214386620080522>>

- Fries, Alison B. Wismer, Toni E. Ziegler, Joseph R. Kurian, Steve Jacoris, and Seth D. Pollak. "Early experience in humans is associated with changes in neuropeptides critical for regulating social behavior." *Proceedings of the National Academy of Sciences of the United States of America* 102 (2005): 17237-17240. JSTOR. Web. 24 Jan. 2008.
- Frye, Marilyn. *The Politics of Reality: Essays in Feminist Theory*. Freedom, California: The Crossing Press, 1983. Print.
- Gallagher, Kathleen Cranley. "Brain Research and Early Childhood Development: A Primer for Developmentally Appropriate Practice." *Young Children* 60.4 (2005): 12-20. Print.
- Gauthier, David. "Morality and Advantage." *Ethical Theory: Classic and Contemporary Readings*, edited by Louis P. Pojman. Belmont, California: Wadsworth/Thomson Learning, 2002 [1967]. 551-558. Print.
- "Gay Iranian Given Hope by the UK's U-turn." *CNN.com*. CNN, 14 March 2008. Web. 14 March 2008. <<http://www.cnn.com/2008/WORLD/meast/03/14/iran.asylum/index.html?iref=newssearch>>
- Geary, David C. *The Origin of Mind: Evolution of Brain, Cognition, and General Intelligence*. Washington, DC: American Psychological Association, 2005. Print.
- Geertz, Clifford. *The Interpretation of Cultures*. New York: Basic Books, 1973. Print.
- Gewirth, Alan. *The Community of Rights*. Chicago: The University of Chicago Press, 1996. Print.
- Gewirth, Alan. "The Justification of Morality." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 53 (1988): 245-262. Print.
- Gewirth, Alan. *Reason and Morality*. Chicago: University of Chicago Press, 1978. Print.
- Gini, Gianluca. "Social Cognition and Moral Cognition in Bullying: What's Wrong?" *Aggressive Behavior* 32 (2006): 528-539. Wiley-Liss. Web. 7 May 2008.
- "Girl's Suicide Leaves Dozens Ill from Fumes." *CNN.com*. CNN, 24 April 2008. Web. 24 April 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/04/24/detergent.suicide.ap/index.html>>

- Golub, Mari S., Carl L. Keen, M. Eric Gershwin, and Andrew G. Hendrickx. "Developmental Zinc Deficiency and Behavior." *The Journal of Nutrition* 125 (1995): 2263S-2271S. Print.
- Goodenough, Ursula and Terrence W. Deacon. "From Biology to Consciousness to Morality." *Zygon* 38:4 (2003): 801-819. Blackwell-Synergy. Web. 14 Dec. 2008.
- Goodin, Robert E. *Protecting the Vulnerable: A Reanalysis of Our Social Responsibilities*. Chicago: University of Chicago Press, 1985. Print.
- Goodin, Robert E. *Reasons for Welfare: The Political Theory of the Welfare State*. Princeton, New Jersey: Princeton University Press, 1988. Print.
- Grantham-McGregor, Sally. "A Review of the Effect of Severe Malnutrition on Mental Development." *The Journal of Nutrition* 125:8 (1995): 2233S-2238S. Print.
- Grantham-McGregor, S. M., S. P. Walker and S. Chang. "Nutritional deficiencies and later behavioural development." *Proceedings of the Nutrition Society* 59 (2000): 47-54. ProQuest Nursing and Allied Health Source. Web. 14 Dec. 2008.
- Guesry, Pierre. "The Role of Nutrition in Brain Development." *Preventive Medicine* 27 (1998): 189-194. Print.
- "Gunman Kills 6, Wounds 4 in Shooting Rampage." *KIROTV.com*. KIROTV.com, 3 Sept. 2008. Web. 3 Sept. 2008. <<http://www.kirotv.com/news/1738449/detail.html>>
- "Gunman's Bloody Trail Leads to Six Bodies." *CNN.com*. CNN, 3 Sept. 2008. Web. 3 Sept. 2008. <<http://www.cnn.com/2008/CRIME/09/03/shooting.rampage.ap/index.html>>
- Guo, Guang and Elizabeth Stearns. "The Social Influences on the Realization of Genetic Potential for Intellectual Development." *Social Forces* 80.3 (2002): 881-910. Muse. Web. 21 Nov. 2006.
- Gusnard, Debra A. "Neural Substrates of Self-Awareness," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 41-62. Print.

- Gustafsson, P. A., K. Duchén, U. Birburg, and T. Karlsson. "Breastfeeding, Very Long Polyunsaturated Fatty Acids (PUFA) and IQ at 6 ½ Years of Age." *Acta Paediatrica* 93.10 (2004): 1280-1287. ESIG. Web. 28 Nov. 2007.
- Halabi, Yakub. "US Responses to Major Developments in the Arab-Islamic World: Evaluation of Role of Ideas." *International Studies* 43 (2006): 339-366. sagepub.com. Web. 28 May 2008.
- Hannaford, Robert V. "Deriving General Norms: A Reply to Samuels." *Ethics* 85.2 (1975): 142-147. Print.
- Hannaford, Robert V. "Justifying Moral Commitments." *Ethics* 79.4 (1969): 263-274. Print.
- Hannaford, Robert V. "Moral Reasoning and Action in Young Children." *Journal of Value Inquiry* 19 (1985): 85-98. Print.
- Hannaford, Robert V. "Patterns in the Growth of Meaning Drawn from the Behavioral Sciences." *Ethics* 74.1 (1963): 53-60. Print.
- Hannaford, Robert V. "You Ought to Derive 'Ought' from 'Is'." *Ethics* 82.2 (1972): 155-162. Print.
- Harris, Marvin. *Cannibals and Kings: The Origins of Cultures*. New York: Vintage Books, 1978. Print.
- Heher, Ashley M. and Caryn Rousseau. "Police Investigate NIU Shooter's 2 Sides." *Huffington Post*. Huffington Post, 16 Feb. 2008. Web. 9 Sept. 2008. <[http://www.huffingtonpost.com/2008/02/16/police-investigate-niu-sh\\_n\\_87011.html](http://www.huffingtonpost.com/2008/02/16/police-investigate-niu-sh_n_87011.html)>
- Held, Virginia (ed.). *Justice and Care: Essential Readings in Feminist Ethics*. Boulder, Colorado: Westview Press, 1995. Print.
- Helmke, Paul. "Esquire's 'Portrait' of the NIU Shooter." *Huffington Post*. Huffington Post, 16 July 2008. Web. 9 Sept. 2008. <[http://www.huffingtonpost.com/paul-helmke/esquires-portrait-of-the\\_b\\_113057.html](http://www.huffingtonpost.com/paul-helmke/esquires-portrait-of-the_b_113057.html)>
- Hill, Jonathan and Rajan Nathan. "Childhood Antecedents of Serious Violence in Adult Male Offenders." *Aggressive Behavior* 34 (2008): 329-338. Wiley-Liss. Web. 7 May 2008.

- Hoffmeyer, Jesper. *Signs of Meaning in the Universe* translated by Barbara J. Haveland. Indianapolis: Indiana University Press, 1993. Print.
- Holden, Constance. "The Violence of the Lambs." *Science* 289.5479 (2000): 580-581. JSTOR. Web. 23 May 2008.
- Holloway, Ralph L. "Brief Communication: How Much Larger Is the Relative Volume of Area 10 of the Prefrontal Cortex in Humans?" *American Journal of Physical Anthropology* 118 (2002): 399-401. Print.
- Holmes, Evelyn. "At Least 30 Wounded in Weekend Violence." *ABC News*. ABC News, 20 April 2008. Web. 20 April 2008. <<http://abclocal.go.com/wls/story?section=news/local&id=6091849>>
- Huang, Li-Tung, Ming-Chi Lai, Chih-Lu Wang, Chien-An Wang, Chin-Hwa Yang, Chih-Sung Hsieh, Chia-Wei Liou, and San-Nan Yang. "Long-term Effects of Early-Life Malnutrition and Status Epilepticus: Assessment by Spatial Navigation and CREB<sup>Serine-133</sup> Phosphorylation." *Developmental Brain Research* 45 (2003): 213-218. Elsevier. Web. 21 Nov. 2006.
- Hudson, W. D. (ed.). *The Is-Ought Question: A Collection of Papers on the Central Problem in Moral Philosophy*. London: Macmillan, 1969. Print.
- Huesmann, L. Rowell. "The Impact of Electronic Media Violence: Scientific Theory and Research." *Journal of Adolescent Health* 41 (2007): S6-S13. Elsevier. Web. 21 May 2008.
- Hume, David. *A Treatise of Human Nature*. Edited by David F. Norton and Mary J. Norton. Oxford: Oxford University Press, 2002 [1739]. Print.
- Hunt, Paul and Judith Mesquita. "Mental Disabilities and the Human Right to the Highest Attainable Standard of Health." *Human Rights Quarterly* 28 (2006): 332-356. Muse. Web. 26 Nov. 2006.
- Hussein, Aqeel and Damien McElroy. "'Mother of All Suicide Bombers' Warns of Rise in Attacks." *Telegraph.co.uk*. Telegraph.co.uk, 16 Nov. 2008. Web. 18 Dec. 2008. <<http://www.telegraph.co.uk/news/worldnews/middleeast/iraq/3464411/mother-of-all-suicide-bombers-warns-of-rise-in-attacks.html>>
- Husserl, Edmund. *Cartesian Meditations: An Introduction to Phenomenology*. Boston: Kluwer Academic Publishers, 1999 [1950]. Print.

- Idsoe, Thormod, Elin Solli, and Elena Maria Cosmovici. "Social Psychological Processes in Family and School: More Evidence on Their Relative Etiological Significance for Bullying Behavior." *Aggressive Behavior* 34 (2008): 1-15. Wiley-Liss. Web. 7 May 2008.
- Igneski, Violetta. "Perfect and Imperfect Duties to Aid." *Social Theory and Practice* 32.3 (2006): 439-466. Print.
- "I Knew Saari . . . He Was a Happy, Normal, Young Guy." *IRISHTIMES.com*. Irish Times, 25 Sept. 2008. Web. 25 Sept. 2008. <<http://irishtimes.com/newspaper/world/2008/0925/1222207747332.html>>
- Ito, Tiffany A., Geoffrey R. Umland, Eve Willadsen-Jensen, and Joshua Correll. "The Social Neuroscience of Stereotyping and Prejudice: Using Event-Related Brain Potentials to Study Social Perception," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 189-208.
- Ivanovic, Daniza M., Boris P. Leiva, Hernán T. Pérez, Manuel G. Olivares, Nora S. Díaz, María Soledad C. Urrutia, Atilio F. Almagià, Triana D. Toro, Patricio T. Miller, Enrique O. Bosch, and Cristián G. Larraín. "Head Size and Intelligence, Learning, Nutritional Status, and Brain Development: Head, IQ, Learning, Nutrition and Brain." *Neuropsychologia* 42 (2004): 1118-1131. Elsevier. Web. 21 Nov. 2006.
- James, Susan. "The Duty to Relieve Suffering." *Ethics* 93.1 (1982): 4-21. Print.
- Janofsky, Michael. "The Columbine Killer's Tapes of Rage." *New York Times*. New York Times, 14 Dec. 1999. Web. 14 Dec. 1999. <http://query.nytimes.com/gst/fullpage.html?res=9F06EFDF1E31F937A25751C1A96F958260>>
- Jensen, Helen H., S. Patricia Batres-Marquez, Alicia Carriquiry, and Kevin L. Schalinske. "Choline in the Diets of the U.S. Population: NHANES, 2003-2004." *The FASEB Journal* 21.6 (2007): 1b219. Print.
- Jolliffe, Darrick and David P. Farrington. "Examining the Relationship Between Low Empathy and Bullying." *Aggressive Behavior* 32 (2006): 540-550. Wiley-Liss. Web. 7 May 2008.
- Johnson, Jeffrey G., Patricia Cohen, Elizabeth M. Smailes, Stephanie Kasen, and Judith S. Brook. "Television Viewing and Aggressive Behavior During Adolescence and Adulthood." *Science* 295 (2002): 2468-2471. Sciencemag.org. Web. 12 April 2008.

- Kahn-Greene, Ellen T., Erica L. Lipizzi, Amy K. Conrad, Gary H. Kamimori, and William D. S. Killgore. "Sleep Deprivation Adversely Affects Interpersonal Responses to Frustration." *Personality and Individual Differences* 41 (2006): 1433-1443. Elsevier. Web. 21 Nov. 2006.
- Kalmijn, S., M. P. J. van Boxtel, M. Ocké, W. M. M. Verschuren, D. Kromhout, and L. J. Launer. "Dietary Intake of Fatty Acids and Fish in Relation to Cognitive Performance at Middle Age." *Neurology* 62 (2004): 275-280. Print.
- "Kansas City on Track for Record Killing Season." *CNN.com*. CNN, 16 Oct. 2008. Web. 16 Oct. 2008. <<http://www.cnn.com/2008/CRIME/10/16/kansas.city.violence.ap/index.html>>
- "Kansas Students Charged in Alleged Plot." *CNN.com*. CNN, 24 April 2006. Web. 9 Sept. 2008. <<http://www.cnn.com/2006/LAW/04/24/kansas.plot/index.html>>
- Kant, Immanuel. *Groundwork of the Metaphysics of Morals*, translated and edited by Mary Gregor, with an introduction by Christine M. Korsgaard. Cambridge: Cambridge University Press, 1997. Print.
- Kelly, Christopher R., Jack Gringand, and Joy Hirsch. "Repeated Exposure to Media Violence Is Associated with Diminished Response in an Inhibitory Frontolimbic Network." *PLoS One* 2(12): (2007): e1268. [www.plosone.org](http://www.plosone.org). Web. 16 Dec. 2008.
- Kelly, Morgan. "Inequality and Crime." *Review of Economics and Statistics* 82.4 (2000): 530-539. Academic OneFile. Web. 7 May 2008.
- Kirkpatrick, Sharon I. and Valerie Tarasuk. "Food Insecurity Is Associated with Nutrient Inadequacies among Canadian Adults and Adolescents." *Journal of Nutrition* 138 (2008): 604-612. Print.
- Kittay, Eva Feder. "Dependency, Equality, and Welfare." *Feminist Studies* 24.1 (1998): 32-43. Research Library. Web. 11 Sept. 2006.
- Kittay, Eva Feder. "A Feminist Public Ethic of Care Meets the New Communitarian Family Policy." *Ethics* 111.3 (2001): 523-547. Research Library. Web. 11 Sept. 2006.
- Kittay, Eva Feder. *Love's Labor: Essays on Women, Equality, and Dependency*. New York: Routledge, 1999. Print.

- Kittay, Eva Feder. "Love's Labor Revisited." *Hypatia* 17.3 (2002): 237-250. Muse. Web. 11 Sept. 2006.
- Kittay, Eva Feder. "At the Margins of Moral Personhood." *Ethics* 116.1 (2005): 100-131. Research Library. Web. 11 Sept. 2006.
- Kittay, Eva Feder. "Welfare, dependency, and a public ethic of care." *Social Justice* 25.1 (1998): 123-145. Research Library. Web. 11 Sept. 2006.
- Kittay, Eva Feder with Bruce Jennings and Angela A. Wasunna. "Dependency, Difference and the Global Ethic of Longterm Care." *Journal of Political Philosophy* 13.4 (2005): 443- 469. Print.
- Kleinfield, N. R. "Before Deadly Rage, a Life Consumed by a Troubling Silence." *New York Times*. New York Times, 22 April 2007. Web. 9 Sept. 2008. <<http://www.nytimes.com/2007/04/22/us/22vatech.html>>
- Kolb, Bryan. "Experience and the Developing Brain." *Education Canada* 39.4 (2000): 24-26. Print.
- Kramer, Matthew H. "Locke on Private Property: A Reply to Sreenivasan." *Locke Newsletter: An Annual Journal of Locke Research* 31 (2000): 179-194. Print.
- Kretchmer, Norman, John L. Beard, and Susan Carlson. "The Role of Nutrition in the Development of Normal Cognition." *American Journal of Clinical Nutrition* 63 (1996): 997S-1001S. Print.
- Krivo, Lauren J. and Ruth D. Peterson. "Extremely Disadvantaged Neighborhoods and Urban Crime." *Social Forces* 75.2 (1996): 619-650. HeinOnline. Web. 7 May 2008.
- Kumar, C. Raj. "International Human Rights Perspectives on the Fundamental Right to Education—Integration of Human Rights and Human Development in the Indian Constitution." *Tulane Journal of International and Comparative Law* 12 (2004): 237-285. Print.
- LaFollette, Hugh. "World Hunger and International Justice." *Ethics in Practice: An Anthology*, edited by Hugh LaFollette. Malden, Massachusetts: Blackwell Publishers Ltd, 2002. 560-562. Print.

- Lawrence, Dune and Luo Jun. "China Says 432 Infants Have Kidney Stones From Sanlu Formula." *Bloomberg.com*. Bloomberg Television, 13 Sept. 2008. Web. 13 Sept. 2008. <<http://www.bloomberg.com/apps/news?pid=20601081&sid=akpIvOdJIrWU&refer=australia>>
- "Lawyer: U.S. Teen Had No Warning of Finnish School Shooter's Plans." *CNN.com*. CNN, 12 Nov. 2007. Web. 09 Sept. 2008. <<http://www.cnn.com/2007/WORLD/europe/11/12/school.shooting/index.html#cnnSTCText>>
- Levitsky, David A. and Barbara J. Strupp. "Malnutrition and the Brain: Changing Concepts, Changing Concerns." *The Journal of Nutrition* 125 (1995): 2212S-2220S. American Society of Nutrition. Web. 14 Dec. 2008.
- Lewontine, R. C., Steven Rose, and Leon J. Kamin. *Not in Our Genes: Biology, Ideology, and Human Nature*. New York: Pantheon Books. 1984.
- Lieberman, Harris R., Gaston P. Bathalon, Christina M. Falco, F. Matthew Kramer, Charles A. Morgan III, and Philip Niro. "Severe Decrements in Cognition Function and Mood Induced by Sleep Loss, Heat, Dehydration, and Undernutrition During Simulated Combat." *Biological Psychiatry* 57 (2005): 422-429. Print.
- Lieberman, Matthew D. and Naomi Eisenberger. "A Pain by any other Name (Rejection, Exclusion, Ostracism) still Hurts the Same: The Role of Dorsal Anterior Cingulate Cortex in Social and Physical Pain" in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 167-187. Print.
- Linsenbard, Gail E. "Beauvoir, Ontology, and Women's Human Rights." *Hypatia* 14.4 (1999): 145-162. ProQuest. Web. 14 Dec. 2008.
- Liu, Jianghong, Adrian Raine, Peter H. Venables, Cyril Dalais, and Sarnoff A. Mendnick. "Malnutrition at Age 3 Years and Lower Cognitive Ability at Age 11 Years." *Archive of Pediatrics & Adolescent Medicine* 157 (2003) July: 593-600. [WWW.ARCHPEDIATRICS.COM](http://WWW.ARCHPEDIATRICS.COM). Web. 24 Jan. 2008.
- Lister, Tim. "Melamine Scandal Spreads to Chinese Eggs." *CNNhealth.com*. CNN, 3 Nov. 2008. Web. 3 Nov. 2008. <<http://www.cnn.com/2008/HEALTH/10/28/melamine.china.eggs/index.html>>

- Locke, John. *Essay Concerning Human Understanding*. Abridged, Edited, and Introduced by Maurice Cranston. London: Collier-Macmillan LTD. 1965 [1671].
- Locke, John. *Second Treatise of Government*, edited by C. B. Macpherson. Indianapolis: Hackett, 1980 [1690]. Print.
- Maberly, G. L. Grummer-Strawn, M. E. Jefferds, J. P. Peña-Rosas, and M. K. Serdula. "Trends in Wheat-Flour Fortification with Folic Acid and Iron – Worldwide, 2004 and 2007." *Morbidity and Mortality Weekly Report* 57.1 (2008): 8-10. Research Library. Web. 23 Jan. 2008.
- MacIntyre, Alasdair C. "Hume on 'Is' and 'Ought'." *Hume: A Collection of Critical Essays*, edited by V. C. Chappel. Garden City, NY: Anchor Books, 1966. Print.
- "Manufacturing Giant Recalls Melamine Tainted Tea." *CNN.com*. CNN, 29 Sept. 2008. Web. 29 Sept. 2008. <<http://www.cnn.com/2008/WORLD/09/30/china.tainted.milk/index.html>>
- Marini, Zopito A., Andrew V. Dane, Sandra L. Bosacki, and YLC-CURA. "Direct and Indirect Bully-Victims: Differential Psychosocial Risk Factors Associated With Adolescents Involved in Bullying and Victimization." *Aggressive Behavior* 32 (2006): 551-569. Wiley InterScience. Web. 16 Dec. 2008.
- Marshall, Eliot. "The Shots Heard 'Round the World." *Science* 289.5479 (2000): 570-571+573-574. JSTOR. Web. 23 May 2008.
- Mattson, Mark P. "Energy Intake, Meal Frequency, and Health: A Neurobiological Perspective." *Annual Review of Nutrition* 25 (2005): 237-260. Print.
- Maynarich, Melissa. "Student Planned to Kill Classmates, Police Say." *News9.com*. News9.com, 9 Sept. 2008. Web. 9 Sept. 2008. <<http://www.news9.com/global/story.asp?s=8974417>>
- McKenzie, John. "Autism Breakthrough: Girl's Writings Explain Her Behavior and Feelings." *ABC News*. ABC News, 19 Feb. 2008. Web. 19 Feb. 2008. <<http://abcnews.go.com/Health/story?id=4311223&page=1>>
- McMahon, Christopher. "The Better Endowed and the Difference Principle." *Analysis* 49.4 (1989): 213-216. Print.

- McMahon, Christopher. "Collective Rationality." *Philosophical Studies* 98:3 (2000): 321-344. ProQuest. Web. 14 Dec. 2008.
- McMahon, Christopher. "Gewirth's Justification of Morality." *Philosophical Studies* 50 (1986): 261-281. Print.
- McMahon, Christopher. "Shared Agency and Rational Cooperation." *Nous* 39.2 (2005): 284-308. Blackwell-Synergy. Web. 14 Dec. 2008.
- Medlin, Brian. "Ultimate Principles and Ethical Egoism." *Ethical Theory: Classic and Contemporary Readings*, edited by Louis P. Pojman, pp. 90-95. Belmont, California: Wadsworth/Thomson Learning, 2002 [1957]. Print.
- "Melamine Found in 18 More Food Products." *CNN.com*. CNN, 3 Oct. 2008. Web. 3 Oct. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/10/03/milk.melamine.australia.ap/index.html>>
- "Melamine-Tainted Candy Found in CT." *Eyewitness News 3*. WFSB.com, 1 Oct. 2008. Web. 1 Oct. 2008. <<http://www.wfsb.com/health/17599817/detail.html>>
- Mele, Alfred R. *Free Will and Luck*. New York: Oxford University Press (2006). Print.
- Mesulam, M.-Marsel. "From sensation to cognition." *Brain* 121 (1998): 1013-1052. Print.
- "Middle School Girls Tape Schoolmate Beating." *CNN.com*. CNN, 19 April 2008. Web. 19 April 2008. <<http://www.cnn.com/2008/CRIME/04/19/girl.beating.ap/index.html>>
- Mill, J. S. *Utilitarianism*, edited by Roger Crisp. Oxford: Oxford University Press, 1998. Print.
- Mitchell, Jason P., Malia F. Mason, C. Neil Macrae, and Mahzarin R. Banaji. "Thinking about Others: The Neural Substrates of Social Cognition," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 63-82. Print.

- Moll, Jorge, Ricardo de Oliveira-Souza, Paul J. Eslinger, Ivanei E. Bramati, Janaína Mourão-Miranda, Pedro Angelo Andreiuolo, and Luiz Pessoa. "The Neural Correlates of Moral Sensitivity: A Functional Magnetic Resonance Imaging Investigation of Basic and Moral Emotions." *Journal of Neuroscience* 22.7 (2002): 2730-2736. Print.
- Monks, Claire P., Peter K. Smith, and John Swettenham. "Psychological Correlates of Peer Victimization in Preschool: Social Cognitive Skills, Executive Function and Attachment Profiles." *Aggressive Behavior* 31 (2005): 571-588. Wiley-Liss. Web. 7 May 2008.
- Moretti, Marlene M., Ingrid Obsuth, Candice L. Odgers, and Pratibha Reebye. "Exposure to Maternal vs. Paternal Partner Violence, PTSD, and Aggression in Adolescent Girls and Boys." *Aggressive Behavior* 32 (2006): 385-395. Wiley-Liss. Web. 7 May 2008.
- Münch, Richard and Neil J. Smelser. *Theory of Culture*. Berkeley, California: University of California Press, 1992. Print.
- National Institutes of Health. "Iron Deficiency Anemia." *Medline Plus*. 28 Aug. 2007. Web. 2 Dec. 2007. <<http://www.nlm.nih.gov/medlineplus/ency/article/000584.htm>>
- Neisser, Ulric, Gwyneth Boodoo, Thomas J. Bouchard, Jr., A. Wade Boykin, Nathan Brody, Stephen J. Ceci, Diane F. Halpern, John C. Loehlin, Robert Perloff, Robert J. Sternberg, and Susana Urbina. "Intelligence: Knowns and Unknowns." *American Psychologist* 51.2 (1996): 77-101. Print.
- Newhouse, Barry. "Blast Kills at Least 8 Near Danish Embassy in Pakistan." *NewsVOA.com*. Voice of America, 02 June 2008. Web. 02 June 2008. <<http://www.voanews.com/english/archive/2008-06/2008-06-02-voa6.cfm?CFID=79107132&CFTOKEN=73728272>>
- "New Humane Society Footage Shows Downed Cattle at Auction Facility." *International Herald Tribune*. International Herald Tribune, 8 May 2008. Web. 8 May 2008. <<http://www.iht.com/articles/ap/2008/05/07/america/NA-GEN-US-Livestock-Abuse.php>>
- Noble, Kimberly G., Nim Tottenham, and B. J. Casey. "Neuroscience Perspectives on Disparities in School Readiness and Cognitive Achievement." *Future of Children* 15.1 (2005): 71-89. Muse. Web. 20 Nov. 2006.

- “Nonfatal Maltreatment of Infants --- United States, October 2005—September 2006.” *CDC. CDC* (57.13: 336-339), 4 April 2008. Web. 20 April 2008. <<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5713a2.htm>>
- Nord, Mark, Margaret Andrews, and Steven Carlson; Economic Research Service/USDA. 2007. Household Food Security in the United States, 2006. Economic Research Report ERR-49, <<http://www.ers.usda.gov/Publications/ERR49/>> 30 Nov. 2007.
- Nozick, Robert. *Anarchy, State, and Utopia*. New York: Basic Books. 1974. Print.
- Nusbaum, Howard C. and Steven L. Small. “Investigating Cortical Mechanisms of Language Processing in Social Context,” in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 131-152. Print.
- Nussbaum, Martha C. *The Feminist Critique of Liberalism*. Lindley Lecture; Department of Philosophy, University of Kansas, 1997. Print.
- Nussbaum, Martha C. *Sex and Social Justice*. Oxford, Oxford University Press. 1999. Print.
- Nussbaum, Martha C. *Women and Human Development: The Capabilities Approach*. Cambridge: Cambridge University Press, 2000. Print.
- Nussbaum, Martha C. and Amartya Sen (ed.). *The Quality of Life*. Oxford: Clarendon Press, 1993. Print.
- O’Conner, Thomas G., Michael Rutter, Celia Beckett, Lisa Keaveney, Jana M. Kreppner, and the English and Romanian Adoptees Study Team. “The Effects of Global Severe Privation on Cognition Competence: Extension and Longitudinal Follow-Up.” *Child Development* 71.2 (2000): 376-390. JSTOR. Web. 24 Jan. 2008.
- “Officials: Teens Trained for Suicide Bombings in Iraq.” *CNN.com*. CNN, 26 May 2008. Web. 26 May 2008. <<http://www.cnn.com/2008/WORLD/meast/05/26/iraq.main/index.html>>
- “Ohio School Shooter Gave Many Warnings.” *CNN.com*. CNN, 11 Oct. 2007. Web. 11 Oct. 2007. <<http://www.cnn.com/2007/US/10/11/cleveland.shooting/index.html#cnnSTCText>>

- Okin, Susan Moller. *Is Multiculturalism Bad for Women?* edited by Joshua Cohen, Matthew Howard, and Martha C. Nussbaum. New Jersey: Princeton University Press, 1999. Print.
- Olesen, Thomas. "Contentious Cartoons: Elite and Media-Driven Mobilization." *Mobilization: An International Quarterly* 12.1 (2007): 37-52. Mobilization. Web. 28 May 2008.
- Oliver, Diane E. "Human Capital Theory and Higher Education in Developing Countries." *Journal of Thought* 39.1 (2004): 119-130. Print.
- Palloni, Alberto. "Reproducing Inequalities: Luck, Wallets, and the Enduring Effects of Childhood Health." *Demography* 43.4 (2006): 587-615. Muse. Web. 20 Nov. 2006.
- Palloni, Alberto and Carolina Milesi. "Economic achievement, Inequalities and Health Disparities: The Intervening Role of Early Health Status." *Research in Social Stratification and Mobility* 24.1 (2006): 1-20. Print.
- Park, Alice. "When Shyness Turns Deadly." *Time*. Time, 17 Aug. 2007. Web. 17 Aug. 2007. <<http://www.time.com/time/health/article/0,8599,1654095,00.html?xid=feed-cnn-topics>>
- Peirce, Charles Sanders. "A Neglected Argument for the Reality of God." *Peirce on Signs* edited by James Hoopes. 1991 [1908]. 260-278. Print.
- Peirce, Charles Sanders. "One, Two, Three: Fundamental Categories of Thought and of Nature." *Peirce on Signs* edited by James Hoopes. 1991 [1885]. 180-185. Print.
- Peirce, Charles Sanders. "Prolegomena to an Apology for Pragmatism." *Peirce on Signs* edited by James Hoopes. 1991 [1906]. 249-252. Print.
- Peirce, Charles Sanders. "Sign." *Peirce on Signs* edited by James Hoopes. 1991 [1901]. 239-240. Print.
- Peirce, Charles Sanders. "Some Consequences of the Four Incapacities." *Peirce on Signs* edited by James Hoopes. 1991 [1868]. 54-84. Print.
- Peña, Manuel and Jorge Bacallao. "Malnutrition and Poverty." *Annual Review of Nutrition* 22 (2002): 241-253. Print.

- Petrini, J. R., H. C. Hamner, A. L. Flores, J. Mulinare, and C. Prue. "Use of Supplements Containing Folic Acid Among Women of Childbearing Age – United States, 2007." *Morbidity and Mortality Weekly Report* 57.1 (2008): 5-8. Research Library. Web. 23 Jan. 2008.
- Pew Commission on Industrial Farm Animal Production. *Putting Meat on the Table: Industrial Farm Animal Production in America*. Web. 14 Dec. 2008. <<http://www.ncifap.org/>>
- Pogge, Thomas W. "Eradicating Systemic Poverty: Brief for a Global Resources Dividend." *Ethics in Practice: An Anthology*, edited by Hugh LaFollette. Malden, Massachusetts: Blackwell Publishers Ltd, 2002. 604-617. Print.
- Pogge, Thomas W. "World Poverty and Human Rights." *Ethics and International Affairs* 19.1 (2005): 1-7. Blackwell-Synergy. Web. 14 Dec. 2008.
- Pojman, Louis (ed.). *Ethical Theory: Classic and Contemporary Readings*. Fourth Edition. Belmont, California: Wadsworth, 2002. Print.
- Pojman, Louis P. "Are Human Rights Based on Equal Human Worth?" *Philosophy and Phenomenological Research* 52.3 (1992): 605-622. JSTOR. Web. 18 July 2008.
- "Police: Teen Planned to Bomb High School." *MSNBC*. MSNBC, 20 April 2008. Web. 20 April 2008. <<http://www.msnbc.msn.com/id/24230688/>>
- Pollitt, E., C. Saco-Pollitt, A. Jahari, M. A. Husaini, and J. Huang. "Effects of an Energy and Micronutrient Supplement on Mental Development and Behavior under Natural Conditions in Undernourished Children in Indonesia." *European Journal of Clinical Nutrition* 54 (2000): S80-S90. Print.
- Polman, Hanneke, Bram Orobio de Castro, and Marcel A. G. van Aken. "Experimental Study of the Differential Effects of Playing Versus Watching Violent Video Games on Children's Aggressive Behavior." *Aggressive Behavior* 34 (2008): 256-264. Wiley-Liss. Web. 7 May 2008
- "Profile: Finnish School Suspect." *BBC News*. BBC, 23 Sept. 2008. Web. 23 Sept. 2008. <<http://news.bbc.co.uk/2/hi/europe/631786.stm>>
- "Prosecutor: Accused Georgia School Shooter Admired Columbine Gunmen." *CNN.com*. CNN, 9 Aug. 1999. Web. 9 Sept. 2008. <<http://www.cnn.com/US/9908/09/conyers.school.shooting/>>

- Puligandla, R. "Two Dogmas of Ethical Philosophy." *Southwest Journal of Philosophy* 3 (1972): 121-129. Print.
- Qouta, Samir, Raija-Leena Punamäki, Thomas Miller, and Eyad El-Sarraj. "Does War Beget Child Aggression? Military Violence, Gender, Age and Aggressive Behavior in Two Palestinian Samples." *Aggressive Behavior* 34 (2008): 231-244. Wiley-Liss. Web. 7 May 2008.
- Ramey, Craig T. and Sharon L. Ramey. "Early Learning and School Readiness: Can Early Intervention Make a Difference?" *Merrill-Palmer Quarterly* 50.4 (2004): 471-491. Muse. Web. 28 Nov. 2006.
- Ratner, Carl. *Cultural Psychology: A Perspective on Psychological Functioning and Social Reform*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers. 2006.
- Rauch, Leo. "Reflections on the Is-Ought Question." *Journal of Critical Analysis* 5 (1974): 67-72. Print.
- Rawls, John. *A Theory of Justice*. Cambridge Massachusetts: The Belknap Press of Harvard University Press, 1971. Print.
- Reichman, Nancy E. "Low Birth Weight and School Readiness." *Future of Children* 15.1 (2005): 91-116. Muse. Web. 21 Nov. 2006.
- Ricciuto, Laurie E. and Valerie S. Tarasuk. "An Examination of Income-Related Disparities in the Nutritional Quality of Food Selections among Canadian Households from 1986-2001." *Social Science & Medicine* 64 (2007): 186-198. Elsevier. Web. 21 Nov. 2006.
- Richerson, Peter J. and Robert Boyd. *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago: The University of Chicago Press, 2005. Print.
- "Riots, Instability Spread as Food Prices Skyrocket." *CNN.com*. CNN, 14 April 2008. Web. 14 April 2008. <<http://edition.cnn.com/2008/WORLD/americas/04/14/world.food.crisis/?imw=Y&ieref=mpstoryemail>>
- Rogoff, Barbara. *The Cultural Nature of Human Development*. Oxford: Oxford University Press, 2003. Print.
- Rogoff, Barbara and Pablo Chavajay. "What's Become of Research on the Cultural Basis of Cognitive Development?" *American Psychologist* 50.10 (1995): 859-877. Print.

- Roky, Rachida, Leila Iraki, Rachida HajKhlifa, Nouria Lakhdar Ghazal, and Farid Hakkou. "Daytime Alertness, Mood, Psychomotor Performances, and Oral Temperature during Ramadan Intermittent Fasting." *Annals of Nutrition & Metabolism* 44 (2000): 101-107. Print.
- Rosenthal, Elisabeth. "China's Milk Scandal Now Seen as Risk in Europe." *New York Times*. New York Times, 25 Sept. 2008. Web. 25 Sept. 2008.  
[http://www.nytimes.com/2008/09/26/world/asia/26melamine.html?\\_r=1&ref=world](http://www.nytimes.com/2008/09/26/world/asia/26melamine.html?_r=1&ref=world)
- Sagi, Abraham, Marinus van IJzendoorn, Tirtsa Joels, and Miri Scharf. "Disorganized Reasoning in Holocaust Survivors." *American Journal of Orthopsychiatry* 72.2 (2002): 194-203. Print.
- Samuels, Warren. "You Cannot Derive 'Ought' from 'Is'." *Ethics* 83.2 (1973): 159-162. Print.
- Sanfey, Alan G., James K. Rilling, Jessica A. Aronson, Leigh E. Nystrom, Jonathan D. Cohen. "The Neural Basis of Economic Decision-Making in the Ultimatum Game." *Science* 300 (2003): 1755-1758. Sciencemag. Web. 24 Nov. 2006.
- Sartre, Jean-Paul. *Being and Nothingness: A Phenomenological Essay on Ontology*, translated with an introduction by Hazel E. Barnes. New York: Citadel Press, 2001 [1956]. Print.
- Saulny, Susan and Cate Doty. "Stylish Surroundings Are Shattered by Killings." *New York Times*. New York Times, 7 Dec. 2007. Web. 7 Dec. 2007.  
[http://www.nytimes.com/2007/12/07/us/07store.html?\\_r=1&ref=us](http://www.nytimes.com/2007/12/07/us/07store.html?_r=1&ref=us)
- Schall, Jeffrey D. "Decision Making: From Sensory Evidence to a Motor Command." *Current Biology* 10.11 (2000): R404-R406. Elsevier. Web. 10 Sept. 2007.
- Schmidtz, David and Robert E. Goodin. *Social Welfare and Individual Responsibility*. Cambridge: Cambridge University Press. 1998. Print.
- Schneewind, J. B. "Modern Moral Philosophy." *A Companion to Ethics*, edited by Peter Singer, pp. 147-157. Oxford: Blackwell Publishers Inc, 2000. Print.
- Schott, Robin May. "Beauvoir on the Ambiguity of Evil." *The Cambridge Companion to Simone de Beauvoir* edited by Claudia Card, pp. 228-247. Cambridge: Cambridge University Press, 2003. Print.

- Schrader-Frechette, Kristin. "Locke and Limits on Land Ownership." *Journal of the History of Ideas* 54.2 (1993): 201-219. JSTOR. Web. 14 Dec. 2008.
- Schutter, Dennis J. L. G., Edward H. F. de Haan, and Jack van Honk. "Anterior Asymmetrical Alpha Activity Predicts Iowa Gambling Performance: Distinctly but Reversed." *Neuropsychologia* 42 (2004): 939-943. Elsevier. Web. 15 Sept. 2007.
- Searle, John R. "How to Derive 'Ought' from 'Is'." *Philosophical Review* 73.1 (1964): 43-58. JSTOR. Web. 14 Dec. 2008.
- Semple, Kirk and Cristela Guerra. "Shooting at South Florida Restaurant Kills 2." *New York Times*. New York Times, 4 March 2008. Web. 4 March 2008. <http://www.nytimes.com/2008/03/04us/04wendys.html?scp=95&sq=&st=nyt>>
- Shadid, Anthony and Kevin Sullivan. "Anatomy of the Cartoon Protest Movement." *Washingtonpost.com*. Washington Post, 16 Feb. 2006. Web. 10 Sept. 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2006/02/15/AR2006021502865.html>>
- Sheehan, Michael J. and Malcolm W. Watson. "Reciprocal Influences Between Ateral Discipline Techniques and Aggression in Children and Adolescents." *aggressive Behavior* 34 (2008): 245-255. Wiley-Liss. Web. 7 May 2008.
- "Shooter: 'You Have Blood on Your Hands.'" *CNN.com*. CNN, 18 April 2007. Web. 9 Sept. 2008. <<http://www.cnn.com/2007/US/04/18/vtech.nbc/index.html>>
- "Shooting Reopens Debate Over Drug, Violence Link." *CNN.com*. CNN, 25 Feb. 2008. Web. 9 Sept. 2008. <<http://edition.cnn.com/2008/HEALTH/02/25/antidepressants.violence/index.html#cnnSTCText>>
- "Shooting Spree Suspect Says He 'Kills for God' in Courtroom Outburst." *KIROTV.com*. KIROTV.com, 8 Sept. 2008. Web. 8 Sept. 2008. <<http://www.kirotv.com/news/17402744/detail.html>>
- Shweder, Richard A. and Robert A. Levine (ed.). *Culture Theory: Essay on Mind, Self, Emotion*. Cambridge: Cambridge University Press, 1984. Print.
- Sikora, R. I. "Facts, Promising and Obligation." *Philosophy: The Journal of the British Institute of Philosophical Studies* 50 (1975): 352-3. Print.

- Singer, Milton. "Signs of the Self: An Exploration in Semiotic Anthropology." *American Anthropologist* 82 (1980): 485-507. JSTOR. Web. 14 Dec. 2008.
- Singer, Peter (ed.). *A Companion to Ethics*. Oxford: Blackwell Publishers Inc, 2000 [1991]. Print.
- Singer, Peter. "Famine, Affluence, and Morality." *Ethical Theory: Classic and Contemporary Readings*, edited by Louis P. Pojman. Belmont, California: Wadsworth/Thomson Learning, 2002 [1973]. 241-248. Print.
- Singer, Peter. "Postscript to Famine, Affluence, and Morality." *Ethics in Practice: An Anthology*, edited by Hugh LaFollette. Malden, Massachusetts: Blackwell Publishers Ltd, 2002. 579-581. Print.
- Singh, Meharban. "Nutrition, Brain and Environment: How to have Smarter Babies?" *Indian Pediatrics* 40 (2003): 213-220. Print.
- "Site of Fatal NIU Shootings To Be Demolished." *CNN.com*. CNN, 27 Feb. 2008. Web. 27 Feb. 2008. <[http://www.cnn.com/2008/CRIME/02/27/niu.building/index.html#cnnSTCT\\_ext](http://www.cnn.com/2008/CRIME/02/27/niu.building/index.html#cnnSTCT_ext)>
- Slack, Kristen S. and Joan Yoo. "Food Hardship and Child Behavior Problems among Low-Income Children." *Social Service Review* 79.3 (2005): 511-536. Print.
- Smyth, Jamie. "Finnish School Gunman May Have Had Links to Previous Killer." *IRISHTIMES.com*. Irish Times, 25 Sept. 2008. Web. 25 Sept. 2008. <<http://www.irishtimes.com/newspaper/frontpage/2008/0925/1222207750267.html>>
- Snead, Christine M. and William C. Cockerham. "Health Lifestyles and Social Class in the Deep South." *Research in the Sociology of Health Care* 20 (2002): 107-122. Print.
- Staub, Ervin. "Notes on Cultures of Violence, Cultures of Caring and Peace, and the Fulfillment of Basic Human Needs." *Political Psychology* 24:1 (2003):1-21. Blackwell-Synergy. Web. 14 Dec. 2008.
- Staub, Ervin. *The Psychology of Good and Evil: Why Children, Adults, and Groups Help and Harm Others*. Cambridge: Cambridge University Press, 2003. Print.
- Staub, Ervin. *The Roots of Evil: The origins of genocide and other group violence*. Cambridge: Cambridge University Press, 1989. Print.

- Stein, Rob. "Social Networks' Sway May Be Underestimated." *Washingtonpost.com*. Washington Post, 26 May 2008. Web. 26 May 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/05/25/AR2008052501779.html>>
- Stone, Valerie E. "Theory of Mind and the Evolution of Social Intelligence," in *Social Neuroscience: People Thinking about Thinking People*, ed. John T. Cacioppo, Penny S. Visser, and Cynthia L. Pickett. Cambridge, Massachusetts: MIT Press. 2006. 104-129.
- Strauss, Claudia and Naomi Quinn. *A Cognitive Theory of Cultural Meaning*. Cambridge: Cambridge University Press, 1997. Print.
- Strober, Myra. "Rethinking Economics Through a Feminist Lens." *The American Economic Review* 84.2 (1994): 143-147. Print.
- "Student Fights At Toki Middle School Posted Online." *Channel3000.com*. WISCTV, 23 April 2008. Web. 23 April 2008. <<http://www.channel3000.com/news/15962681/detail.html>>
- "Sudan Charges British Teacher with Inciting Hatred for Naming a Teddy Bear Muhammad." *International Herald Tribune*. International Herald Tribune, 27 Nov. 2007. Web. 27 Nov. 2007. <<http://www.iht.com/articles/ap/2007/11/28/africa/AF-GEN-Sudan-British-Teacher.php>>
- Suk, William A., Kerry Murray, and Maureen D. Avakian. "Environmental Hazards to Children's Health in the Modern World." *Mutation Research* 544.2-3 (2003): 235-242. Print.
- Sullivan, Regina, Donald A. Wilson, Joram Feldon, Benjamin K. Yee, Urs Meyer, Gal Richter-Levin, Avital Avi, Tsoory Michael, Michael Gruss, Jörg Bock, Carina Helmeke, and Katharina Braun. "Impact of Early Life Experiences on Brain and Behavioral Development." *Developmental Psychobiology* 48 (2006): 583-602. Wiley. Web. 21 Nov. 2006.
- "Suspects in Video Beating Could Get Life in Prison." *CNN.com*. CNN, 11 April 2008. Web. 11 April 2008. <<http://www.cnn.com/2008/CRIME/04/10/girl.fights/>>
- "Taliban: Aid Worker Killed for Preaching." *CNN.com*. CNN, 20 Oct. 2008. Web. 20 Oct. 2008. <<http://www.cnn.com/2008/WORLD/asiapcf/10/20/afghanistan.violence/index.html>>

- Tanner, Emily M. and Matia Finn-Stevenson. "Nutrition and Brain Development: Social Policy Implications." *American Journal of Orthopsychiatry* 72.2 (2002): 182-193. Print.
- Tataranni, P. Antonio, Jean-François Gautier, Kewei Chen, Anne Uecker, Daniel Bandy, Arline D. Salbe, Richard E. Pratley, Michael Lawson, Eric M. Reiman, and Eric Ravussin. "Neuroanatomical Correlates of Hunger and Satiation in Humans using Positron Emission Tomography." *Proceedings of the National Academy of Sciences USA* 96 (1999): 4569-4574. Print.
- "Teacher Says She Was Assaulted in Classroom." *Wbaltv.com*. CNN, 9 April 2008. Web. 9 April 2008. <<http://www.wbaltv.com/news/15832101/detail.html>>
- "Teen Charged With Threatening School Arrested Again." *WMUR*. WMUR, 9 May 2008. Web. 9 May 2008. <<http://www.wmur.com/news/16213523/detail.html>>
- Thomas, Gary. "Revenge for Danish Cartoons Blamed for Pak Blast." *NewsVOA.com*. Voice of America, 02 June 2008. Web. 02 June 2008. <<http://www.voanews.com/english/archive/2008-06/2008-06-02-voa50.cfm?CFID=79316634&CFTOKEN=75194078>>
- Thomas, Pierre, Jack Date, Jason Ryan, and Theresa Cook. "Campus Shooting Highlights Legal Loophole." *ABC News*. ABC News, 19 Feb. 2008. Web. 19 Feb. 2008. <<http://www.abcnews.go.com/WN/LegalCenter/story?id=4306362&page=1>>
- Thomson, James and Judith Thomson. "How not to Derive 'Ought' from 'Is'." *The Philosophical Review* 73.4 (1964): 512-516. JSTOR. Web. 14 Dec. 2008.
- "Timeline of School Shootings." *BBC News*. BBC News, 23 Sept. 2008. Web. 23 Sept. 2008. <[http://news.bbc.co.uk/2/hi/in\\_depth/7631162.stm](http://news.bbc.co.uk/2/hi/in_depth/7631162.stm)>
- "Timeline: Steps Down a Road of No Return." *Seattle Times*. Seattle Times, 10 Nov. 2002. Web. 9 Sept. 2008. <<http://community.seattletimes.nwsourc.com/archive/?date=20021110&slug=muhammadline10m>>
- Tolhurst, William E. "On Hare's 'Promising Game'." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 30 (1976): 277-279. Print.

- Tomasello, Michael and Hannes Rakoczy. "What Makes Human Cognition Unique? From Individual to Shared to Collective Intentionality." *Mind & Language* 18.2 (2003): 121-147. Blackwell. Web. 9 Nov. 2007.
- Torregrossa, Mary M., Jennifer J. Quinn, and Jane R. Taylor. "Impulsivity, Compulsivity, and Habit: The Role of Orbitofrontal Cortex Revisited." *Biological Psychiatry* 63 (2008): 253-255. ScienceDirect. Web. 14 Dec. 2008.
- "Two Southern California Freeway Shootings, One Fatal, Investigated." *International Herald Tribune*. International Herald Tribune, 30 March 2008. Web. 30 March 2008. <<http://www.iht.com/articles/ap/2008/03/30/america/NA-GEN-US-Freeway-Shootings.php>>
- Uauy, Ricardo and Isidora De Andraca. "Human Milk and Breast Feeding for Optimal Mental Development." *The Journal of Nutrition* 125 (1995): 2278S-2280S. American Society for Nutrition. Web. 14 Dec. 2008.
- UNESCO. No date. United Nations Educational, Scientific and Cultural Organization. Web. 14 Dec. 2008. <[http://portal.unesco.org/education/en/ev.php-L\\_ID=53553&URL\\_DO=DO\\_TOPIC&URL\\_SECTION\\_=201.html](http://portal.unesco.org/education/en/ev.php-L_ID=53553&URL_DO=DO_TOPIC&URL_SECTION_=201.html)>
- Unicef. *Immunization: Annual Report. Summary 2006*. <[http://www.unicef.org/publications/index\\_pubs\\_immunization.html](http://www.unicef.org/publications/index_pubs_immunization.html)> Web. 14 Dec. 2008.
- Unicef. *Progress for Children: A Report Card on Nutrition*. Number 4, May 2006. <<http://www.unicef.org/progressforchildren/2006n4/>> Web. 14 Dec. 2008.
- Unicef. *Progress for Children: A Report Card on Water and Sanitation*. Number 5, Sept. 2006. <<http://www.unicef.org/progressforchildren/2006n5/>> Web. 14 Dec. 2008
- "U.S.: 'Demonic' Militants Sent Women to Bomb Markets in Iraq." *CNN.com*. CNN, 2 Feb 2008. Web. 2 Feb. 2008. <<http://www.cnn.com/2008/WORLD/meast/02/01/iraq.main/index.html>>
- U.S. Department of Health & Human Services. *Child Maltreatment 2006*. Web. 14 Dec. 2008. <<http://www.acf.hhc.gov/programs/cb/pubs/cm6/index.htm>>
- "US Man Arrested Over 'Gun Threat.'" *BBC News*. BBC News, 4 April 2008. Web. 4 April 2008. <<http://news.bbc.co.uk/2/hi/americas/7331087.stm>>

- “U.S. Student Arrested in Tehran While Working on Thesis Project.” *CNN.com*. CNN, 22 Oct. 2008. Web. 22 Oct. 2008. <<http://www.cnn.com/2008/WORLD/meast/10/22/iran.us.student.arrest/index.html>>
- “USDA: Most Recalled Beef Has Probably Been Eaten.” *CNN.com*. CNN, 18 Feb. 2008. Web. 18 Feb. 2008. <<http://www.cnn.com/2008/Health/02/18/beef.recall/index.html>>
- Vann, David. “Portrait of the School Shooter as a Young Man.” *Esquire*. Esquire, 16 July 2008. Web. 9 Sept. 2008. <<http://www.esquire.com/features/steven-kazmierczak-0808>>
- Van 't Wout, Mascha, René S. Kahn, Alan G. Sanfey, André Aleman. “Affective State and Decision-Making in the Ultimate Game.” *Experimental Brain Research* 169 (2006): 564-568. Springer. Web. 15 Nov. 2007.
- “Virginia Tech Families Win \$11 Million Settlement From State.” *CNN.com*. CNN, 17 June 2008. Web. 17 June 2008. <<http://www.cnn.com/2008/US/06/17/virginia.tech.settlement/index.html>>
- Wachs, Theodore D. “Relation of Mild-to-Moderate Malnutrition to Human Development: Correlational Studies.” *The Journal of Nutrition* 125 (1995): 2245S-2254S. American Society for Nutrition. Web. 14 Dec. 2008.
- Wainwright, Patricia. “Nutrition and Behaviour: The Role of n-3 Fatty Acids in Cognitive Function.” *British Journal of Nutrition* 83 (2000): 337-339. Print.
- Walker, Matthew P. and Robert Stickgold. “Sleep-Dependent Learning and Memory Consolidation.” *Neuron* 44 (2004): 121-133. Print.
- Waller, Bruce N. *The Natural Selection of Autonomy*. Albany: SUNY, 1998. Print.
- Waller, Bruce N. “Uneven Starts and Just Deserts.” *Analysis* 49.4 (1989): 209-213. JSTOR. Web. 11 Sept. 2006.

- Walsh, Tom, Jon M. McClellan, Shane E. McCarthy, Anjené M. Addington, Sarah B. Pierce, Greg M. Cooper, Alex S. Nord, Mary Kusenda, Dheeraj Malhotra, Abishek Bhandari, Sunday M. Stray, Caitlin F. Rippey, Patricia Roccanova, Vlad Makarov, B. Lakshmi, Robert L. Findling, Linmarie Sikich, Thomas Stomberg, Barry Merriman, Nitin Gogtay, Philip Butler, Kristin Eckstrand, Laila Noory, Peter Gochman, Robert Long, Zugen Chen, Sean Davis, Carl Baker, Evan E. Eichler, Paul S. Meltzer, Stanley F. Nelson, Andrew B. Singleton, Ming K. Lee, Judith L. Rapoport, Mary-Claire King, and Jonathan Sebat. "Rare Structural Variants Disrupt Multiple Genes in Neurodevelopmental Pathways in Schizophrenia." *Science* 320.5875 (2008): 539-543. Scienceexpress. Web. 23 April 2008.
- Watkins, Thomas. "Woman Fatally Shot at LA Freeway Ramp." *Seattlepi.nwsourc.com*. CNN, 10 April 2008. Web. 10 April 2008. <[http://seattlepi.nwsourc.com/national/1110ap\\_freeway\\_shooting.html](http://seattlepi.nwsourc.com/national/1110ap_freeway_shooting.html)>
- "Western Beaver School Bus Beating Caught On Video." *WTAETV*. ThePittsburghChannel.com, 23 April 2008. Web. 23 April 2008. <<http://www.thepittsburghchannel.com/news15970658/detail.html>>
- Wexler, Bruce. *Brain and Culture: Neurobiology, Ideology, and Social Change*. MIT Press: Cambridge Massachusettes, 2006. Print.
- Wilson, Samantha L. "Post-Institutionalization: The Effects of Early Deprivation on Development of Romanian Adoptees." *Child and Adolescent Social Work Journal* 20.6 (2003): 473-483. Print.
- Wolfendale, Jessica. "Training Torturers: A Critique of the 'Ticking Bomb' Argument." *Morality and Moral Controversies: Readings in Moral, Social, and Political Philosophy*, edited by John Arthur and Steven Scalet. Upper Saddle River, New Jersey: Pearson/Prentice Hall, 2009. Print.
- Wong, Gillian. "Experts Say Melamine Already in Global Food Chain, Could Affect Many Foods." *World News Network*. World News Network, 16 Dec. 2008. Web. 16 Dec. 2008. <<http://article.wn.com/view/2008/10/>>
- Wright, John Paul, Kim N. Dietrich, M. Douglas Ris, Richard W. Hornung, Stephanie D. Wessel, Bruce P. Lanphear, Mona Ho, and Mary N. Rae. "Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood." *PLoS Medicine* 5.5 (2008): 0732-0740. Open Access. Web. 28 May 2008.

- Yarkoni, Tal, Todd S. Braver, Jeremy R. Gray, and Leonard Green. "Prefrontal Brain Activity Predicts Temporally Extended Decision-Making Behaviour." *Journal of the Experimental Analysis of Behaviour* 84.3 (2005): 537-554. Research Library. Web. 10 Sept. 2006.
- Yoo, Seung-Schik, Peter T. Hu, Ninad Gujar, Ferenc A. Jolesz, and Matthew P. Walker. "A Deficit in the Ability to Form New Human Memories without Sleep." *Nature Neuroscience* 10.3 (2007): 385-392. Nature Publishing. Web. 26 Nov. 2007.
- Yoo, Seung-Schik, Ninad Gujar, Peter Hu, Ferenc A. Jolesz, and Matthew P. Walker. "The Human Emotional Brain Without Sleep – A Prefrontal Amygdala Disconnect." *Current Biology* 17.20 (2007): R877-R878. Elsevier. Web. 26 Nov. 2007.
- Zamost, Scott and Abbie Boudreau. "Mom Saw Warning Signs in Son Who Planned Shooting Spree." *CNN.com*. CNN, 11 April 2008. Web. 11 April 2008. <<http://www.cnn.com/2008/US/04/11/boudreau.campus.rage/index.html>>
- Zeisel, Steven H. "Choline: Critical Role During Fetal Development and Dietary Requirements in Adults." *Annual Review of Nutrition* 26 (2006): 229-250. Print.
- Zeisel, Steven H. "The Fetal Origins of Memory: The Role of Dietary Choline in Optimal Brain Development." *The Journal of Pediatrics* 149 (2006): S131-S136. Print.
- Zysset, Stefan, Cornelia S. Wendt, Kirsten G. Volz, Jane Neumann, Oswald Huber, and D. Yves von Cramon. "The Neural Implementation of Multi-Attribute Decision Making: A Parametric fMRI Study with Human Subjects." *NeuroImage* 31 (2006): 1380-1388. Elsevier. Web. 24 Nov. 2006.