

THE EFFECT OF POPULAR MUSIC
ON TRUST AND COOPERATION

By

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CHAPTER I

INTRODUCTION AND REVIEW OF LITERATURE

Throughout history many people have believed music to be a powerful force in their lives. It has been assumed that music can change or intensify emotions, that it can affect people on a feeling level. For example, there is the Biblical story (Samuel 16:23) of David playing his harp to cure King Saul of his bad mood. Plato thought that not only the lyrics and melody of songs, but also the mode in which they were written, could inspire dignity and manliness or promote softness and self-indulgence, so that great care should be taken in the kind of music allowed in his ideal Republic (Rosenthal, 1956, p. 34; Farnsworth, 1969, p. 72).

Much more recently, many newspapers (e.g., Lawrence Journal World, Nov. 29, 1975) carried the story of a Florida minister who was preaching against the evils of rock music, saying its "sensual beat" had led many teenagers to immoral actions. A Psychology Today article (Robinson & Hirsch, 1969) was addressed to parents concerned that their children might be politically radicalized or tempted to use drugs by the lyrics of popular songs. The effects of popular music, especially rock music, have concerned a number of scientific investigators, most of whom approach the subject from a much more objective viewpoint than those mentioned so far.

Review of the Literature

The investigation of popular music by social scientists can be divided into three broad categories. There are those who analyze the content of song lyrics, those who study the effects of music in existing social groups, and a third, less well-defined group who seem to be interested in the more global study of popular music as a part of mass culture and who offer criticism of other research done to date.

The content-analysis studies generally have dissected popular song lyrics in order to draw conclusions about the society in which they arise. It generally is assumed that since these songs were popular, listeners must have felt some agreement with the lyrics, and therefore inferences can, within certain limits, be drawn about the listeners from the lyrics. Horton (1957) analyzed lyrics of songs from magazines devoted to rock and roll, country and western, and rhythm and blues music. He found that love songs, which were the great majority of songs in the magazines, could individually be placed into one of five stages in what he called "The Drama of Courtship," and that rock, country, and blues differed regarding which of these stages each emphasized. Carey (1969) replicated Horton's study with rock songs from 1966, and found that although love songs could still be fit into Horton's categories, there were fewer songs about love; the songs dealt with a wiser range of themes; and boy-girl relationships had been expanded beyond the limited love affair. He reported the music of 1966 revealed a preoccupation with choice and

personal autonomy.

In 1971, Richard Cole published an analysis of the lyrics of the top ten songs for each year of the 1960s in which he compared his findings to Carey's. He did not find as much emphasis on the physical dimensions of relationships or any clear-cut references to drugs. He reported that females dominated the outlined relationships while Carey had stated that the initiative rested with the male.

Content analysis studies have several advantages over other methods. First, they allow the investigator to study song lyrics in great detail, and by analyzing trends across a number of contemporary songs, inferences can be drawn as to the basis of their appeal. Also, they allow generalizations about very large groups of people, as in Cole's (1971) study of the most popular songs of ten years for the entire United States. Content analysis studies also allow the investigator to study trends years after the fact, since old trade magazines, radio station airplay lists, and fan magazines are available to provide historical data.

However, these studies are limited in the inferences they can draw. Perhaps the most significant of these is the fact that one cannot know positively whether listeners are responding to some or all or even any of the lyrics, as Robinson and Hirsch (1969) noted. Criticism of these studies (e.g., Denzin, 1969) often has centered on this point. Another problem is that the record-buying public is actually composed of many subgroups (Hirsch, 1971). Thus, it is difficult to ascertain

exactly which subgroup is responding to a song or style, or even if different subgroups are responding to different aspects of the same song or style.

It should be pointed out that the content analysis approach, while it can study lyrics of an individual song, cannot analyze the immediate impact of that song, nor can it deal with strictly musical aspects of any songs.

Another method in the investigation of popular music has been studying its functions in existing social groups. Johnstone and Katz (1957), using members of teenage girls' clubs, attempted to correlate musical taste (specifically, preference for happy or sad songs) with frequency of dating, number of friends, and socioeconomic class. They found no relationship between musical taste and dating or number of friends, but socioeconomic class as determined by neighborhood did make a significant difference in song preferences. Brown and O'Leary (1971) examined the role of music in an English secondary school and concluded that it and school work were alternate foci of peer group prestige. Those who might have been expected to do well academically, but did not (whom the investigators called "middle class low achievers"), were most likely to be very involved with music.

This kind of study has various advantages and disadvantages which can be contrasted with those of content analysis investigations. The most obvious advantage over content analysis is that the public is studied directly, without the crucial assumption that songwriters, record companies, and

deejays are all producing exactly what the public wishes to hear. Such studies by their very nature select a small, specific group of music listeners at a single point in time. Generalizations about larger publics are correspondingly more speculative in nature.

It would seem to be more difficult to study past rather than present group functions of music in this way than with the content analysis approach. Also, it should again be noted that these studies do not deal with the effect of a specific song on a group or individual, but rather concern themselves with popular music's function in general.

Many articles have been published in various journals about the more global role of music as a part of mass culture. One periodical in particular, the Journal of Popular Culture, regularly publishes the work of investigators using this approach. As an example of this type of research, Luthe (1968) discussed how the structure of the record industry alters the nature of the musical product and offered some pointed criticisms of the research that had been done to that time. Riesman (1954) discerned two major patterns of listening to popular music: a majority pattern of identification with star figures and uncritical listening habits, and a minority pattern of rejection of stars and "name" brands, and overcritical, absolutist standards of listening. He stressed the importance of the individual's peer group in perception of mass media. Clarke (1971) proposed further

research in the field of popular music study. One of his concerns was the patterns of children's socialization into media use. He also noted that parents and teachers may unwittingly be socialized by children to a much greater extent than they suspect.

This global, more critically-oriented type of research would seem to have stimulation of creative thinking as its major purpose, rather than providing data for assessing the validity of more rigorous theoretical structures. Perhaps an important function of these studies has been to point out how little is known empirically in the field of popular music and its relation to the individual, to various social groups, and to society as a whole.

In sum, the extant research dealing with popular music divides into three categories: content analysis studies, studies of music's function in existing social groups, and more generalized studies aimed at stimulating further research through criticism of past research or through postulating impressionistic concepts by which to approach more empirical studies.

Each type of study seems to have advantages and disadvantages. Content analysis allows the study of small groups of songs in great detail across large groups of people and over long periods of time (for example, Hannet, 1964, analyzed American popular song lyrics from 1800 to 1949). The drawbacks to this approach include a lack of precision in determining to what extent popular songs actually reflect

the society in which they are found, the fact that they tend to ignore musical variables in favor of lyrical ones, and the problem of differential impact of any given song or style of song upon the various subgroups which make up any music-listening public.

Studies which focus on the functions of popular music in existing social groups assess the music's impact directly (rather than indirectly via content analysis), and they deal with musical as well as lyrical variables. This approach does limit itself to fairly small groups at a single point in time, although some inferences can be drawn beyond the group actually studied.

The third type of research, the more global, speculative articles, have stimulation of further research as their principal goal. They are not necessarily based upon and do not provide empirical data, nor are they intended to do so.

It should be noted that none of the types of research reviewed has studied the immediate impact of a single song, but rather they have tended to study the Top Ten or Top 40, or the impact of pop music as a whole. The purpose of this study is to take this heretofore neglected approach to the study of popular music as a medium of communication.

Review of Speech Communication Literature

Popular music only recently has come to the attention of investigators in the field of speech communication as a focus of empirical study. There are those who would say it has been

neglected too long. Bloodworth (1975) is one contending that rock music was "a major part of the communication for youth in the sixties and early seventies" (p. 309). He, along with Kosokoff and Carmichael (1970) and Irvine and Kirkpatrick (1972), urged study of the rhetoric of popular music, with the object of discovering how it affects the young people who listen to it.

Irvine and Kirkpatrick were concerned with isolating the rhetorical variables in music, and indicated that music can be a singularly persuasive medium because

listeners do not ordinarily anticipate persuasion (from popular music) and as a result, they are ready recipients of the rhetorical statement without being aware of its complete implications. The normal listening situation gives the musical artist more freedom of expression than would normally be employed by the speaker (p. 273).

Bloodworth stated that in American society in the sixties and early seventies there existed a counterculture with values different from the greater part of society. This counterculture chose a lifestyle "based upon individualism, peace, and a concern for all mankind" (p. 304). Bloodworth contended that rock music was a primary form of communication for this group, and that "the rock songs of this period were declarations of the counterculture's dreams for a recast American and a changed world" (p. 304). He wrote that music changes a message from its usual speaker-audience form into one which embodies greater aesthetic and kinesthetic appeal.

E. B. Nyquist (1972) commented upon music's appeal, saying that it is one of the powerful forces in the emotional

life of human beings, one that bridges the gap between the two worlds an individual must live in: the outside world of physical survival and the inner one of feeling. He suggested that music transports man continuously from one to the other, and quoted Susanne Langer, saying

Because the forms of human feelings are more congruent with musical forms than with the forms of language, music can reveal the nature of feelings with a detail and truth that language cannot approach (p. 205).

In sum, there seems to be general agreement that music is a potent means of delivering rhetorical messages and of affecting people emotionally, and that, in addition, rock music has been a powerful force for many young people on these two levels.

Using a more empirical approach, Kosokoff and Carmichael (1970) studied protest songs, political campaign songs, and others with obvious rhetorical functions. They hypothesized that combining speeches and songs for rhetorical purposes would be a better way of producing attitude change than using either songs or speeches alone. To test their hypothesis, they composed and performed (vocal with banjo) three songs, one opposing the war in Viet Nam, one opposing professional boxing, and one supporting the eighteen year-old vote. The song lyrics were converted into brief speeches, constituting the other independent variable. Three weeks after a pretest on their attitudes toward these issues, subjects heard a song on one topic, a speech on another, and both a song and a

speech on a third. A Latin Square design was used.

None of the song-only conditions produced a significant attitude change on the posttest, and only one speech-only condition did, but all three song-speech combinations produced significant attitude change scores in the desired directions.

There were several deficiencies in Kosokoff and Carmichael's experimental design. First, in the song-speech combination condition, subjects received a quantitatively greater amount of persuasive communication, and there is no way of knowing whether it was the amount of communication or the conjunction of song and speech which produced the observed attitude change. Secondly, they did not take into account a possible compliance effect: subjects were given the posttest immediately after the speeches and songs. It probably was obvious to the subjects that there was a connection between what they had just heard and the questionnaire they were filling out. Finally, the study is limited in that only a paper-and-pencil test was used as a dependent variable. If some sort of behavioral measure had been used as well, more information would have been available as to the actual nature of the change produced in the subjects.

A University of Kansas student, Schmucl Spitzer (1975), experimented with music's effect on cooperation and trust. He studied the impact of a guided affective imagery introduction versus a standard music appreciation introduction to a musical selection (an instrumental piece by Bach) in eliciting trust and cooperation in the subjects.

Spitzer used the Giffin Trust Differential and the Prisoner's Dilemma Game as dependent measures, and found significantly higher scores on the Trust Differential for those in the guided imagery condition than for those in other conditions. No significant differences were found on the cooperation measure, the Prisoner's Dilemma Game.

One criticism of Spitzer's study is that subjects played the Prisoner's Dilemma Game with each other and thus each subject received a unique rather than standardized stimulus on that measure; however, this study did have an advantage over Kosokoff and Carmichael's study in that a behavioral measure, the Prisoner's Dilemma Game, was used. The possibility of a compliance effect was lessened by the fact that subjects were unaware that the dependent measures were part of the same experiment as the introduction and the music.

In summary, many people, including parents, ministers, and of course music industry figures, as well as social scientists, are concerned with popular music's effect on young people. Scholarship in human relations is concerned with the feeling level of human communication, and Langer, as well as other theorists, suggests that music might be a more appropriate form for expressing feelings than normal language. The concerns of the counterculture as outlined by Bloodworth (1975) seem to be quite closely related to those of writers in the field of human relations; lyrics of many contemporary songs deal with issues such as honesty, conflict, caring, trust, and cooperation.

For these reasons, an appropriate next step seemed to be a study concerned with the effect of contemporary rock music on young people's interpersonal attitudes and behavior.

Purpose of the Study

The popular song would seem to have rhetorical as well as expressive elements, and a song dealing with a human relations-oriented subject therefore might have an effect on the human relations orientation of those who hear it. It is not expected that such a song would have a large or especially long-lasting effect, at least on first hearing, but it possibly could have a measurable immediate impact.

The Kosokoff and Carmichael and Spitzer studies raise questions as to the relative importance of vocals and instrumentals in creating the effect of a song, as well as how music compares to spoken prose communication in influencing attitudes and behavior. If significant differences could be found between these, our understanding of how music affects people would be much increased. For these reasons, the present study was undertaken: to determine whether persons who hear a rock song dealing generally with trust and caring will exhibit a more trusting attitude and greater cooperation than those who do not.

CHAPTER II

DESIGN OF THE STUDY

This study attempted to determine whether subjects hearing a song dealing generally with trust and caring have higher scores on a measure of trust and a measure of cooperation than those who do not. It was intended to measure the relative effects of vocals and instrumentals as well as contrasting the merits of music with spoken prose communication in influencing attitudes and behavior.

As Crano and Brewer (1973, p. 4) stated, the first step in translating conceptual variables into those which can be scientifically studied involves redefinition of the abstractions so they can potentially be observed or manipulated. In the present study, these conceptual variables include a rock song dealing generally with trust and caring, to be split into vocal and instrumental parts, a spoken prose communication dealing with the same themes as the song, the concepts of trust and cooperation, and the subjects of the experiment.

Statement of Hypotheses

The variables under investigation may be stated as null hypotheses as follows:

1. There will be no significant differences in trust between subjects hearing the various conditions of the independent variable tape.

2. There will be no significant differences in cooperation between subjects hearing the various conditions of the independent variable tape.

Results were defined as significant when alpha levels were at .05 or less.

Independent Variables

Song. The song chosen should have lyrics dealing with trust and cooperation, and the lyrics should be easily comprehensible. It is necessary that the song has been heard an equal number of times by all subjects, to standardize the effects of repeated listening. This is most easily done by choosing a song which probably has not been heard by most subjects, although it should have enough of what most musicians would call "commercial appeal" to be essentially similar to what most young people listen to.

"The Late Show" from Jackson Browne's album, Late For The Sky, seemed to fulfill these criteria (for lyrics, see Appendix A). It would be characterized by this writer as a pleasant, slow ballad. It was taken from an album which produced one Top 40 single, and several of its songs received moderate to heavy FM airplay, so it would seem to have had a fairly wide commercial appeal.

"The Late Show" itself, however, was not widely played, so it was thought that most subjects would not have heard it before. To check this assumption, subjects were asked if they had heard the song before, and the data of the one person who

had were excluded from the analysis.

Kosokoff and Carmichael (1970) questioned the relative rhetorical merits of songs and speeches, and Spitzer (1975) contrasted conventional music appreciation introductions with guided affective imagery introductions in the effect of instrumental music. This study attempted to combine these concerns by comparing a tape of "The Late Show" with those of

- (a) The instrumental parts only of the same song;
- (b) The vocal parts only of the same song; and also
- (c) A conventional lecture over the same themes dealt with by "The Late Show."

For purposes of standardization it was desirable that (a) and (b) above be identical with their counterparts in the original version of "The Late Show;" in other words, that the tape be split into vocal and instrumental parts. This could most directly be done by obtaining Asylum Records' 24- or 32- track master tape of the recording session and running one tape of the instrumental parts and one of the vocals. However, considering how closely guarded master tapes are kept by the record companies (to prevent bootleg copies of equal quality to the legitimate ones), it seemed extremely unlikely they would release the master tapes in any useable form, so a different approach was taken.

The writer had, at the time of this study, been a professional musician for six years, and so had access to the recording equipment and musicians to make a new tape of the song. For a discussion of recording techniques and equipment

used, see Appendix A. By having our own multitrack master, it was a simple matter to take vocals only or instrumentals only straight off the tape, so that they would be identical to those heard on the complete version of the song.

The song used for the study can be formally defined as "The Late Show" by Jackson Browne, as recorded by a local band, and to be presented as a complete song, as the instrumental parts only, and as the vocal parts only.

Lecture. In order to compare "The Late Show" with a conventional academic lecture on human relations, as in (c) above, it was necessary to have a lecture with which a fair comparison could be made. Kosokoff and Carmichael did this by writing speeches directly from the lyrics of the songs they used; however, the lyrics to "The Late Show" proved to be too informal to allow this approach. Instead, Patton and Giffin's (1974) text on interpersonal communication was scanned for sections dealing closely with the themes expressed in the song: difficulties in communicating with other people, testing personal realities, finding a trust-worthy friend, and feelings of frustration and alienation when these things cannot be accomplished (pp. 88-89, 440, 452). This lecture took approximately as long to read as the song did to play (for text, see Appendix A).

The lecture can therefore be defined as a spoken prose communication taken from Patton and Giffin (1974), and dealing with the same themes as the song lyrics.

Comparison song. It seemed possible that the dependent measure results might be attributed to the fact that subjects were listening to a slow, pleasant ballad, rather than to the specific topics embedded in the song's lyrics. To control for this effect, it was decided to introduce a condition in which comparable music less relevant to human relations was heard. Playing the same song but using nonsense lyrics or simply vowel sounds (i.e., "ooh" or "ah") for the melody was considered. However, it was felt that a young audience would perceive this as a comic effect, and it would change completely the intended mood of the song. Instead, it was decided to play a different song, similar in mood, performed by the same band, and recorded on the same equipment.

The song chosen for this condition was "Desperado" from the album of the same name, by the Eagles. This song has a similar tempo, instrumentation, and overall mood to "The Late Show" although the lyrics deal with a different theme (see Appendix A).

The comparison song is thus formally defined as "Desperado" by the Eagles, and performed by the same band as the other song.

Dependent Measures

Trust. Trust is widely thought to be a building block of primary importance in interpersonal relationship. Since the almost desperate search for someone who could be trusted was an essential part of "The Late Show," it seemed appropriate to measure trust to assess the effect of a popular song on its

listeners.

Giffin and Barnes (1976) defined trust as "person P (the perceiver) relying on person O (the observed) in a risk-taking situation in order to achieve an uncertain objective." They commented that "trust is realized from an individual's unique perception of behavioral effects and may or may not reflect other individual's perceptions of the same effects... trust [is] an individual's unique perception of reality as distinguished from some external conception of 'truth' (p. 10)."

The Giffin Trust Differential was used to measure listeners' level of trust. It is a semantic differential test which measures trust on three independent dimensions, considered to be the perceived personal characteristics influencing the trusting person. These dimensions, identified in a factor-analysis study by Giffin, are termed expertness, reliability or character, and dynamism. They were detailed by Giffin and Barnes as follows:

1. Expertness--this may be [perceived] in terms of quantity of relevant information, degree of ability or skill, or validity of judgment.

2. Reliability [or Character]--a characteristic perceived as dependability, predictability, or favorable intent of the trusted person.

3. Dynamism--behavior perceived as more open or frank than closed or deceptive.

These three factors appear to be the primary characteristics that others perceive and consider as they decide the degree to which a person can be trusted as a member of a group (p. 46).

Trust is therefore defined as the scores, on the three dimensions of expertness, character, and dynamism, on the Giffin Trust Differential Form E.

Cooperation. It would seem that popular music might have effects on many aspects of individuals' behavior, especially in romantic love relationships (cf. Horton, 1957, p. 577). However, in the present study it was necessary to utilize behavior which would be immediately testable.

Cooperation is deemed to be of vital importance in interpersonal relationships, and is an issue implicit in the lyrics of "The Late Show." A measure of cooperation was included to provide an indication of the song's effect on subjects' behavior as opposed to strictly attitudinal effects.

The Prisoner's Dilemma Game (abbreviated PDG) has been used extensively in research on cooperation (e.g., Rapoport & Chamah, 1965). The game's name is attributed to A. W. Tucker and is derived from the following anecdote:

Two prisoners, held incommunicado, are charged with the same crime. They can be convicted only if either confesses...If only one confesses, he is set free for having turned state's evidence and is given a reward to boot...The prisoner who has held out is convicted on the strength of the other's testimony and is given a more severe sentence than if he had confessed...It is in the interest of each to confess whatever the other does, but it is in their collective interest to hold out (Rapoport & Chamah, 1965, pp. 24-25).

The Prisoner's Dilemma Game has been criticized by McCleary (1977) as having a competitive, as opposed to cooperative, bias. However, in the present experiment it was thought that for purposes of comparison between treatments that such

a bias would not be a problem.

It was noted earlier that a flaw in Spitzer's use of the PDG was that there was no standardized stimulus in the game since subjects played each other, and thus the level of cooperation found might be confounded with factors such as interpersonal attraction between subjects. In the present study this was changed so that subjects were told that their responses would be compared to an average pattern of responses previously established, and so in a sense they were playing against the average KU student. It was thought that this mental concept of "the average student" would allow subjects to all play more nearly the same opponent, and also might be a concept more easily influenced by listening to the song. All subjects played against a previously arranged list of random cooperative/competitive choices. They were given feedback after every round as to their "opponent's" choice. Scores on this measure were the number of "blue," or cooperative choices made.

Previously it was stated that a flaw in Kosokoff and Carmichael's (1970) design was that they did nothing to avoid a possible compliance effect, in that subjects were given the posttest immediately after they heard the persuasive communication.

A desirable way to handle the problem seemed to be to tell the subjects at the beginning of the session that they were to take part in two brief experiments. After hearing the independent variable tape, subjects filled out a dummy dependent

measure as a cover task for the "first," or music experiment.

The Hevner Adjective Checklist

The measure used for this cover task was the Hevner Adjective Checklist. The Hevner Checklist (Farnsworth, 1969, Ch. 5) is a set of adjectives arranged in clusters corresponding to certain moods, and has been used in music research for almost forty years. The original checklist was factor-analyzed by Farnsworth and revised for maximal consistency of moods within clusters (see Appendix B for revised checklist). Besides serving as a cover task, the Hevner Checklist provided informal information as to subjects' perception of mood in the independent variable. However, no hypotheses were made concerning this measure.

Subjects

Subjects in this study were students in the basic speech course at the University of Kansas. They were required to participate in departmental research as a part of the course. The signup sheet for this study described it as a study of listening behavior which would take an hour or less; they were told to scan the list of those already signed and not to sign up for any session in which they knew another person. This was done in an attempt to standardize how well they knew the other persons in the group.

Each condition of the independent variable was run at a single experimental session, and thus the N of each group was determined by how many subjects attended a single night.

Table 1 gives the relative sizes of the experimental groups.

TABLE 1
Size of Experimental Groups by Treatments

Group	N
1 (complete Late Show)	20*
2 (instrumental Late Show)	22
3 (vocal only Late Show)	14
4 (Desperado)	17
5 (lecture)	23

*The actual N of this group was 19, as one S indicated he had heard the song before, and his data were not included in the analysis.

Experimental Procedure

All five experimental sessions took place in the Speech Department labs in Wescoe Hall at the University of Kansas. The room used was approximately twelve by twenty-four feet, roughly rectangular, with a carpeted floor and acoustical tile on the ceiling. Subjects sat in four rows of seven seats in front of a table on which were the tape machine, speakers, and materials for the experiment. Seating was done by the subjects themselves, as they came in.

The experimenter started by explaining that the experiment had to do with listening behavior and would involve listening to a brief tape and completing a questionnaire; in addition, he had been asked by the department to administer two other instruments afterwards, but the whole process should not take

more than an hour (the script is given in Appendix B). The independent variable tape was then played.

The tape was played on a Wollensak reel-to-reel player through a Kenwood 1400 stereo receiver and KLH two-way stereo speakers. The length of the tape on all conditions of the independent variable was similar: "The Late Show" ran for 5 minutes 52 seconds, "Desperado" was 4 minutes 1 second, and the lecture ran 4 minutes and 45 seconds.

The subjects were then instructed to complete the Hevner Adjective Checklist. The checklists of those who heard "Desperado" or the complete "The Late Show" included a question at the bottom of the page, "Have you heard this song before?" with a place to check yes or no (see Appendix B).

After collecting copies of the checklist, subjects were handed the Giffin Trust Differential Form E (Appendix B) and instructed to read along as the experimenter read the instructions aloud. Next, they were asked to rate the group of people present as per the instructions.

When all had finished filling out the Trust Differential, the score sheets for the Prisoner's Dilemma Game (PDG) were handed out and the instructions read.

The subjects were told that previous research had come up with an average pattern of responses for ten trials of the game for KU students, so in a sense each would be playing against the average KU student. On each round, they could choose RED or BLUE and the payoff matrix was given according to Table 2.

TABLE 2
Payoff Matrix for Prisoner's Dilemma Game

Average student chose	You choose	
	RED	BLUE
	RED	1*, 1*
BLUE	-5, +5	3, 3

*The first number is the number of points awarded the "average student," and the second is the number awarded the subject.

Two scores were taken on this measure: the number of BLUE (cooperative) choices made after 3 rounds, and the number made on all 10 rounds of the game. This was done because previous research with the PDG (Rapoport & Chammah, 1965) had found a tendency for subjects to change the pattern of responses with time. It was thought that 10 rounds would be sufficient for a measure of cooperation while keeping the total time for the experimental session to a manageable length.

After playing the game, points were converted to pennies, and the subjects were paid after debriefing.

All five groups went through the procedure just described. The only difference between the groups was which part of the independent variable tape they heard. The order in which the groups were run was determined by a random number table. The treatments given the various groups are outlined in Table 1.

Analysis of Data

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) Version C computer program. General statistics for all the data and a one-way analysis of variance for the differences between groups were obtained using this program. The data were analyzed for each of the Trust Differential dimensions (expertness, character, and dynamism), and for the number of cooperative choices made on the Prisoner's Dilemma Game after three and ten rounds. In addition, another variable was analyzed, called "PB" for "played before." Some of the subjects had played a somewhat different version of the PDG in class, and each was asked to note on his score sheet whether he had done so. "PB" was run as a check to determine whether subjects who had played the class version differed systematically from those who had not.

The following chapter gives the results obtained from this study.

CHAPTER III

RESULTS

This was a study to determine the effects of listening to a rock song on trust and cooperation. There were five different conditions of the independent variable, corresponding to:

- (1) "The Late Show" by Jackson Browne, as performed by a local band,
- (2) "The Late Show," instrumentals only, with the vocal track removed,
- (3) "The Late Show," vocals only, with the instrumentals track removed,
- (4) "Desperado" by the Eagles, as performed by the same local band, and
- (5) a taped lecture taken from Patton and Giffin (1974) dealing with the same themes as "The Late Show."

After hearing the independent variable tape, subjects filled out a dummy independent measure, the Hevner Adjective Checklist, and were told that the first, or music experiment, was over. For the "other" experiment, they filled out the Giffin Trust Differential Form E, rating the group present at the experimental session, and played ten rounds of the Prisoner's Dilemma Game. In this game they were told they were playing against an average pattern of responses for KU students, as determined by previous research, though this was

actually a list of random cooperative and competitive choices.

Data From the Hevner Adjective Checklist

Although no hypotheses were made concerning results from the Hevner Checklist, the data collected reveal several consistent patterns. Due to the unequal sizes of the different cells of the experiment, the number of adjectives checked as appropriate to the mood of the tape heard was divided by the number of subjects in that group, to obtain the figures shown in Table 3 (page 28).

Table 4 (page 29) graphically presents the same information as Table 3, in histogram form. It can be seen from these tables that Group 5, the group that heard a lecture rather than music, consistently made fewer responses than the other groups, perhaps because they found the Hevner Checklist less appropriate as a way of responding to what they heard. Group 2 (instrumentals only), on the other hand, tended to check more adjectives than the other groups, possibly because the lack of lyrical content resulted in a wider range of perceptions within individuals about the mood of the song.

Overall, the groups tended to respond most heavily in clusters D (dreamy, etc.), E (longing, etc.), and F (dark, etc.), with two exceptions. Group 2 responded very heavily to cluster D, but not so much as the other groups to clusters E and F. This would tend to indicate that the lyrical content was responsible for the longing and depressing moods felt by subjects in Groups 1 and 2 (complete Late Show and vocals only). The other exception was Group 5 (lecture), which

TABLE 3

Heyner Adjective Checklist Data;
Mean Number of Checks per Subject By Experimental Group and Mood Cluster

Mood Cluster	A	B	C	D	E	F	G	H	I	J
1 (complete Late Show)	0.32	0.42	0.95	2.63	1.78	2.42	0.16	0.42	0.26	0.26
2 (instrumental Late Show)	0.77	0.95	1.09	4.41	1.00	0.86	0.09	0.45	0.27	0.09
3 (vocals only Late Show)	0.43	0.79	1.36	2.21	2.07	3.07	0.93	0.71	0.64	0.57
4 (Desperado)	0.47	0.35	0.88	3.65	2.06	3.06	0.12	0.71	0.41	0.18
5 (lecture)	0.13	0.17	0.31	1.74	0.26	2.17	0.04	0.52	0.04	0.04

Key:

A--cheerful, gay, happy, joyous, bright, merry, playful

B--fanciful, light, quaint, whimsical

C--delicate, graceful, lyrical

D--dreamy, leisurely, sentimental, serene, soothing, tender, tranquil, quiet

E--longing, pathetic, plaintive, pleading, yearning

F--dark, depressing, doleful, gloomy, melancholic, mournful, pathetic, sad, serious, sober, solemn, tragic

G--sacred, spiritual

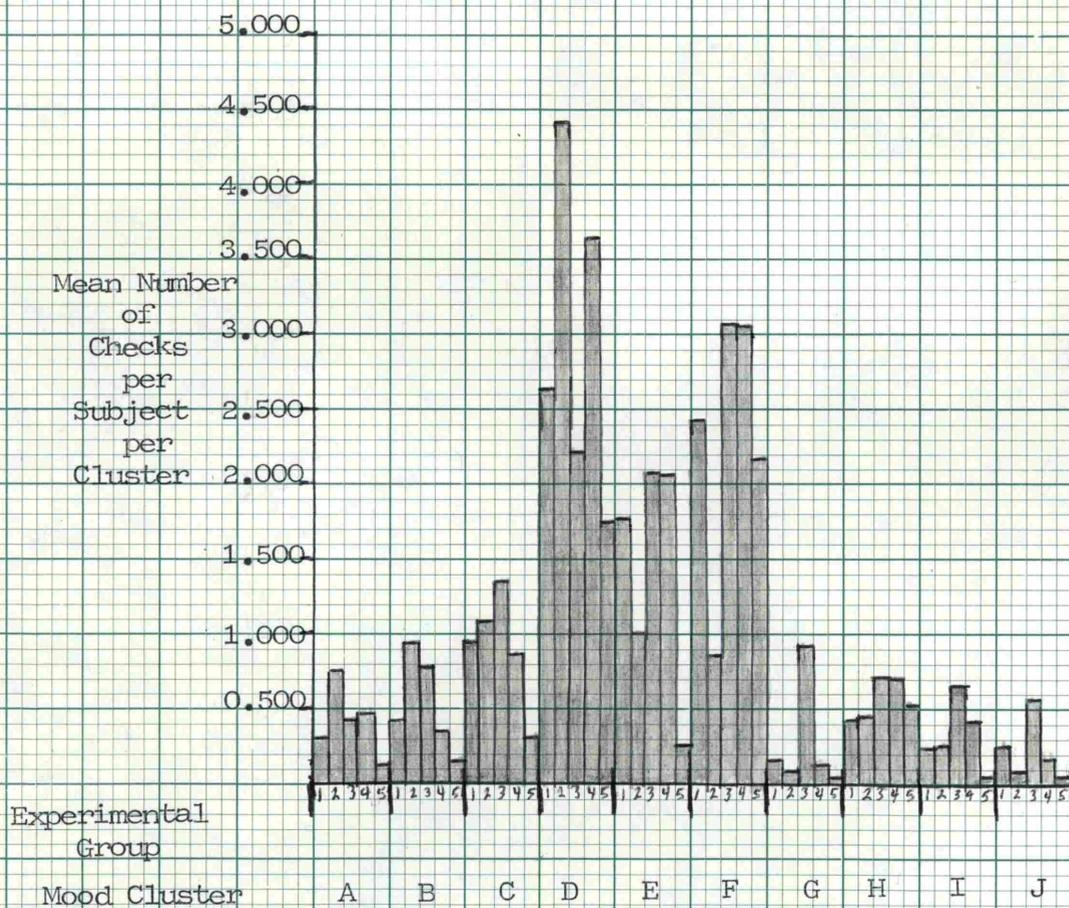
H--dramatic, emphatic, majestic, triumphant

I--agitated, exalting, exciting, exhilarated, impetuous, vigorous

J--frustrated

Note: The raw numbers of checks made per group by mood cluster is given in Appendix C.

TABLE 4
Histogram of Hevner Checklist Results



responded very little to cluster E, though there was a large response to clusters D and F. It would seem that the lecture was not perceived as plaintive or yearning, though there was a tendency to perceive it as leisurely and serious.

It should be noted that there is a close similarity in response patterns between Groups 1 (complete Late Show) and 4 (Desperado). Thus, the comparison song chosen was similar in mood to "The Late Show."

All subjects were encouraged to make comments about the tape they heard, but only four (out of 96 total) did so. One of these was the one subject who had heard "The Late Show" before; he said he liked Jackson Browne's version better. His data, incidentally, were not included in the analysis because he had heard it before. The other three comments were all from subjects in Group 2 (instrumentals only). One said, "This was an interesting experiment. Being a bass player myself, I thought the bass was over-recorded." Another wrote, "My first impressions would imply that the piece of music played came from the soundtrack of a short, non-speaking movie made by a government Bureaucracy or similar." The other comment received was, "It puts me in a mellow mood, like when you are around very personal and good friends. It also makes me wish I could play guitar better!"

Data from the Giffin Trust Differential

It was stated as null hypotheses that there would be no significant differences in scores on the Giffin Trust

Differential (GTD) between conditions of the independent variable. This study attempted to

- (1) assess the immediate impact on trust of a song dealing with human relations problems (Group 1).
- (2) distinguish the relative importance of vocals and instrumentals in creating the effect of the song (Groups 2 and 3).
- (3) determine whether the effects observed were due to simply listening to a rock ballad, by comparison to another song without the same human relations orientation (Group 4).
- (4) compare the effectiveness in inducing trust of a conventional human relations lecture with that of rock music (Group 5).

The results obtained by this study on the Giffin Trust Differential Form E are given in Table 5 (page 32).

Because the computer analysis showed significant differences between group means on the dynamism factor, t-tests were done by hand to determine which group means were significantly different from each other.

The formula used for these tests was the computational form of the t-test for a difference between two independent means, found in Bruning and Kintz (1968, p. 10). The results of the t-tests are given in Table 6 (page 33).

As can be seen from the table, Group 1 (the highest group mean), was significantly different from Groups 3 and 4 (the lowest group means), but not from Groups 2 and 5. Groups

TABLE 5
Means, by Factors, on the Giffin Trust Differential

	Expertness	Character	Dynamism
Group 1 (complete Late Show)	43.53	43.63	37.47
Group 2 (instrumentals only)	42.32	43.86	34.95
Group 3 (vocals only)	41.43	44.93	32.00
Group 4 (Desperado)	43.24	43.76	31.12
Group 5 (lecture)	44.30	44.83	35.13
Grand Means	43.07	44.19	34.38
F Ratios	0.527	0.177	2.864
Probability	0.719	0.947	0.027*

TABLE 6

Results of t-tests Between Group Means on GTD Dynamism Factor

Group	1	2	3	4	5
1 (complete Late Show)		t = 1.049 df = 40 p < .25	t = 1.917 df = 32 p < .05*	t = 2.291 df = 35 p < .025*	
2 (instrumental Late Show)			t = 1.345 df = 34 p < .25	t = 1.738 df = 37 p < .05*	t = 0.0870 df = 43 (no value for p given)
3 (vocals only Late Show)				t = 0.356 df = 29 (no value for p given)	t = 1.323 df = 35 p < .25
4 (Desperado)					t = 1.716 df = 38 p < .05*
5 (lecture)					

2 and 5 were not significantly different from each other, nor were Groups 3 and 4. Group 4 (the lowest mean) was significantly different from the middle means, Groups 2 and 5. However, Group 3 was not significantly different from those two group means.

Data From the Prisoner's Dilemma Game

The rationale for interpretation of the results of the Prisoner's Dilemma Game is similar to that for the Giffin Trust Differential (see p. 31), except that the impact of the independent variable on cooperation rather than trust is what is being assessed.

Each subject was given two scores on the PDG: the number of BLUE, or cooperative, choices made after three and after all ten rounds of play. These results are summarized in Table 7 (page 35).

There were significant differences between the groups in the number of cooperative choices made by the third round. By the tenth round these differences were no longer significant. Group 3, which heard the vocals only tape, had the highest average number of cooperative choices, while Group 5, which heard the lecture, had the lowest, followed closely by Group 1, the group that heard the complete version of "The Late Show."

As with the Trust Differential results, t-tests were done by hand to give greater detail to the results of the computer analysis.

TABLE 7
Means, by Number of Cooperative
Choices, on the PDG

Group	After 3rd Round	After 10th Round
1 (complete Late Show)	0.9474	2.2632
2 (instrumental Late Show)	1.3182	3.2273
3 (vocal only Late Show)	1.8571	3.8571
4 (Desperado)	1.2941	3.5294
5 (lecture)	0.8261	2.2609

Grand Means	1.2000	2.9474

F Ratios	2.609	1.441

Probability	0.040*	0.226

TABLE 8

Results of t-tests Between Group Means on PDG 3rd Round Data

Group	1	2	3	4	5
1 (complete Late Show)			t = 2.6861 df = 31 p < .01**		t = 0.3617 df = 35 (no value for p given)
2 (instrumental Late Show)				t = .0677 df = 37 (no value for p given)	t = 1.657 ⁺ df = 43 p < .25
3 (vocal only Late Show)				t = 1.4151 df = 29 p < .25	t = 3.1314 df = 35 p < .005**
4 (Desperado)					
5 (lecture)					

⁺The critical value for t with df = 43 is 1.683, so this test just missed significance at the .05 level.

The results of the t-tests between means on the third round of the PDG can be summarized as follows: Group 3, the highest mean, was significantly different from the means of Groups 1 and 5, the lowest means, but not significantly different from those of Groups 2 and 4, the middle means. Groups 1 and 5 were not significantly different from each other, nor were groups 2 and 4. The mean of Group 2, the second highest, was not significantly different from that of Group 5, the lowest mean score.

Data from the "PB" Variable

A problem that arose in the course of this study was that some (15 out of 95) of the subjects had played a version of the Prisoner's Dilemma Game in class. It was necessary to determine whether these subjects differed systematically from the others in the way they played the game, so a variable called "PB" (for "played before") was added to the analysis of variance done by the computer. Those who had played the game before were scored "1" on this variable, and those who had not were scored "0." The results of the analysis are given in Table 9 (page 38).

As can be seen from the probability of the F ratio obtained, those who had played the class version of the PDG did not differ significantly from those who did not.

The results obtained by the present study can now be summarized.

Summary of Results

The Hevner Adjective Checklist revealed a tendency for subjects in all groups to check clusters D, E, and F, indicating at least a broad similarity in mood for all conditions of the independent variable. Subjects in Group 2, the instrumentals only group, tended to make more responses than the other groups, while those in Group 5, who heard the lecture, tended to make fewer checks. It is thought that these results may be due to subjects' perceptions of the appropriateness of the Hevner Checklist to the version of the tape they heard. No hypotheses were made concerning the Hevner data.

The Giffin Trust Differential data revealed no significant differences between groups on the factors of expertness and character, and so the null hypotheses were retained on these dimensions. On the third factor of dynamism, significant differences ($p < .05$) were found, and so the null hypothesis was rejected for this dimension. T-tests between the various group means revealed that the mean of Group 1, which heard the complete song tape, was significantly higher than the lowest means, those of Groups 3 (vocals only) and 4 (Desperado). Group 4, which had the lowest mean score, was significantly different from Groups 2 (instrumental) and 5 (lecture).

The Prisoner's Dilemma Game data revealed significant differences ($p < .05$) between groups after three rounds of play, and so the null hypothesis was rejected on this measure. T-tests between the group means indicated that Group 3 (vocals

only) scored significantly higher in the number of cooperative choices made than Groups 1 (complete Late Show) and 5 (lecture).

After ten rounds of play, there were no significant differences between groups, so the null hypothesis was retained on this measure.

Variable "PB" was included in the analysis because some subjects had played a version of the PDG in class. This measure indicated there was little probability that subjects who had played the game before differed systematically from those who had not.

The following chapter will offer discussion and conclusions from the present study, as well as recommendations for further research.

CHAPTER IV

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

This was a study to assess the immediate impact of a song dealing with trust and caring ("The Late Show" by Jackson Browne as performed by a local band) upon a measure of trust and a measure of cooperation. The relative effects of vocals and instrumentals were measured and compared to those of the complete song. In addition, the effects of a song similar in mood but not dealing with the same lyrical themes were measured. Finally, the effects on trust and cooperation of a lecture, also dealing with the same themes as the song, were studied.

Discussion of Results

Significant differences were found between the experimental groups on the dynamism factor of the Giffin Trust Differential Form E. T-tests between group means showed that Group 1, which heard the complete version of "The Late Show," scored significantly higher than the two lowest group means. Also, Group 4, which heard "Desperado," scored significantly lower than the three highest group means. The writer confesses he is at somewhat of a loss to explain the large spread between group means, particularly since the other two factors of the Trust Differential showed virtually no difference between the groups.

Since the dynamism factor has to do with an open and frank versus a closed and deceptive orientation, it is possible that the lyrics of "The Late Show" resulted in a more open orientation in Group 1, which had the highest mean. However, this would seem to be contradicted in that Group 3, the vocals only group, had the second lowest mean score. Conceivably, Group 4, in listening to "Desperado" had the result of a less open orientation among subjects, but this is again contradicted by Group 3, whose dynamism scores were the only ones not significantly different from Group 4, the lowest mean score. The differences between groups do not seem likely to be explained by the differences between independent variable conditions intended by the experimenter.

The quality of the independent variable tape, as it was recorded under rather primitive conditions, might possibly help explain the results. The somewhat eccentric equalization was most noticeable on the vocals only condition, and about half the subjects in Group 4 had heard commercial versions of "Desperado" before. Poor tape quality would probably have been least noticeable for those in Group 1, as most had not heard the song before. However, it must be noted that it is not clear why tape quality would affect the dynamism scores so profoundly.

Experimenter error cannot be discounted as a possible source of variance between groups, especially as each group was run only one time. Possibly something in the way the experimenter was presented could have resulted in a more open

and frank or closed and deceptive orientation in the experimental groups.

The measure of cooperation used, the Prisoner's Dilemma Game or PDG, found that Group 3, the vocals only group, made significantly more cooperative choices in the first three rounds of the game than Groups 1 (complete Late Show) and 5 (lecture). This, again, is difficult to explain, because Group 3 had the second lowest mean on the dynamism factor, and Group 1 the highest. It might be construed from this that there is little relationship between trust and cooperation. A more palatable explanation might be that the version of the PDG used in this experiment was not really measuring cooperation.

Implications for Further Research

Independent variables. It has been about two and a half years since the writer ran this experiment, and a number of alternate approaches to the problem studied have suggested themselves in the meantime.

Possibly the most obvious problem with the present study was that it is not clear that the intended differences between independent variable conditions were salient to the subjects. In other words, it is entirely possible that "The Late Show" was not perceived as having a trusting and caring orientation, and that "Desperado" was. For this reason, a pretest would have been desirable, to establish that the songs used actually were perceived by the subjects as having a trusting orientation. It is entirely possible that had this approach been used during

pilot testing, a different choice of songs might have resulted.

A more desirable approach to the comparison song cell of the present study might have been to rewrite the lyrics of "The Late Show" to be irrelevant to a trusting orientation. Thus subjects would be exposed to identical instrumentals and the same melody as in the complete song.

It should be noted that a limitation to the present study was that it presented the song one time only in conditions of high intensity in the perceptual fields of the subjects. This is in contrast to the normal listening situation in which music is more in the perceptual background, and one may hear a song several times before it is even noticed. Perhaps a better approach to the study of the effects of popular music might be to have subjects involved in some kind of cover task for a long period of time while songs are played in the background. Songs with a positive orientation towards trust could be contrasted with those of a negative (i.e., deceptive) orientation, or some variable other than trust could be studied.

One of the purposes behind the experimental design was to contrast the effectiveness of popular music with that of a conventional lecture on human relations. It is worth noting that the lecture condition did not produce significantly different results from any of the other conditions. Thus, although this study did not demonstrate clearly that popular songs affect trust and cooperation, a lecture subject to the same constraints as the song also failed to demonstrate an effect.

Dependent variables. Hevner Adjective Checklist-- It was noted previously that there was a tendency for all groups to make the most responses in clusters D, E, and F on the checklist. It seems there are at least three possible reasons for this result:

- (a) Good matching in mood between the three versions of "The Late Show," "Desperado," and the lecture.
- (b) The fact that the writer played in the band, read the lecture, and ran the experiment may have resulted in similar moods in the presentation of the variables rather than in the variables themselves.
- (c) The laboratory situation itself may have caused similar moods in the subjects, rather than the independent variables.

Giffin Trust Differential-- Subjects were instructed to rate the experimental group for this measure, and it seems unlikely that they would have very strong feelings about this group. If they were to have rated a much smaller group, perhaps even one partner, they might have felt a stronger personal bond, and so clearer results might have been obtained.

Prisoner's Dilemma Game-- Playing against a depersonalized list of RED/BLUE choices does not seem a very direct way of measuring cooperation, and pennies did not prove to be much of an incentive, even to college students. Playing each other would have resulted in a unique stimulus to each subject, but this should have averaged out over all the subjects in the experiment.

Another method of measuring cooperation would have been to ask subjects to do a small favor for the experimenter, although this would probably have involved dealing with subjects individually instead of in large groups.

Subjects. It was the experimenter's impression that subjects did not find this to be a very personal experience, which would have been an appropriate context in which to measure trust and cooperation. Another problem with this study was that, although subjects were instructed not to sign up for any session in which they knew another person, it seemed that some of them did know each other at least slightly. These problems might have been avoided by using some of the alternative approaches to the study already discussed, such as running subjects in smaller groups.

Conclusions

Although significant results were found on the dynamism factor of the Giffin Trust Differential and the third round of the Prisoner's Dilemma Game, the pattern of results obtained did not seem explicable as being due to manipulations of the independent variable. Alternate possibilities, such as quality of the independent tape or experimenter error, were discussed; further experimentation into the effects of popular music upon the people who listen to it is necessary in order to clarify these results.

Spitzer (1975) found that a guided affective imagery introduction before playing a classical music piece resulted in significantly higher scores on the character factor of the GTD

than a standard music appreciation introduction or no introduction. In the present study, hearing the complete version of "The Late Show" resulted in significantly higher scores on the dynamism factor, and hearing "Desperado" resulted in significantly lower scores. This would seem to indicate that a trusting orientation in the lyrics produced higher dynamism scores, except that the vocals only version of "The Late Show" had the second lowest mean dynamism score, rather than one of the highest as might be expected. Possibly some other factor might be responsible for the low scores in this group; for example, hearing the vocals only, obviously missing the instrumentals, may have made the subjects uncomfortable in a way which resulted in lower dynamism ratings of the group present.

Spitzer's study also used the Prisoner's Dilemma Game as a behavioral measure, and found no significant difference between treatments. The present study used a different form of the PDG, and found the vocals only condition made significantly more cooperative choices in the first three rounds of the game. The lowest mean cooperative choices were made in the complete "Late Show" and lecture conditions. This is contradictory to what one would expect from the GTD results. Perhaps the form of the PDG used in the study should be tested to determine that it actually presents the mixed-motive conflict situation intended.

Kosokoff and Carmichael (1970) found that the conjunction of a song and a speech for rhetorical purposes resulted in

significant attitude change, while songs alone and speeches alone tended not to have as great an effect. The higher amount of trust shown on the dynamism factor by those who heard the complete "Late Show" would tend to indicate the rhetorical value of song lyrics, but again this is contradicted by the low scores in the vocals only condition. The fact that in the lecture condition, corresponding to their "speech" condition, scores were midway between these two groups also fails to support Kosokoff and Carmichael's findings.

Recommendations

The findings of the present study are best described as equivocal, and further research needs to be done to clarify the results obtained. A number of different approaches to the study of popular music suggest themselves.

In terms of replication of the present study, several changes should be made. First, the song or songs chosen should be pretested to insure that subjects find it relevant on the dimensions to be studied. The lyrics of the song used could be changed to be irrelevant to human relations concerns, rather than using another song for comparison. A more direct behavioral measure of trust would be desirable, such as the experimenter asking to borrow some change from a subject. This would involve running the experiment many times, and much more individual contact with subjects; but, as noted earlier, this might be a better context for eliciting trust, to obtain clearer differences between independent variable conditions.

A different approach to the study, and one possibly more relevant to real-life conditions, would be to have subjects involved with a cover task while music plays in the background. A song or even several songs could be played more than once, for possibly a deeper attitude change than that possible from a single playing of the song.

In addition, further research along other lines needs to be done. For example, content analysis of single songwriters over a period of several years could be done, for information as to what they have in common (possibly what makes them popular) as well as how they change with the times. The study of power groups within the industry (the record companies, musicians, deejays, program directors, and others) and their relation to the process of legitimation of individual artists or styles of music could be most instructive, as well as of a practical use to artists attempting to break into the national market.

The writer has been a professional musician for nine years, playing a variety of styles, and is more convinced than ever that popular music of all forms can change people in important ways. I see it every time I play. The scientific study of popular music and its effect on the attitudes and behavior of human beings is a subtle and complex area, and operationalization of variables can be exceedingly difficult, at least for the beginning researcher.

However, the fuller understanding of popular music, which has such important consequences in the emotional lives of so

many people, would seem to make the difficulties well worthwhile. It is in this spirit that it is recommended that further research be done in the study of popular music.

BIBLIOGRAPHY

- Bloodworth, J. D. Communication in the youth counterculture: Music as expression. Central States Speech Journal, 1975, 26(4), 304-309.
- Brown, R. L. & O'Leary, M. Pop music in an English secondary school. American Behavioral Scientist, 1971, 14, 404-413.
- Bruning, L. & Kintz, B. L. Computational handbook of statistics. Glenview, Ill.: Scott, Foresman, and Co., 1968.
- Carey, T. Changing courtship patterns in the popular song. American Journal of Sociology, 1969, 74, 720-731.
- Clarke, P. W. Proposals for continuing research. American Behavioral Scientist, 1971, 14, 309-317.
- Cole, R. R. Top songs in the sixties: A content analysis of popular lyrics. American Behavioral Scientist, 1971, 14, 389-400.
- Crano, W. D. & Brewer, M. B. Principals of research in social psychology. New York: McGraw-Hill Book Co., 1973.
- Denzin, N. K. Problems in analyzing elements of mass culture: Notes on the popular song and other artistic creations. American Journal of Sociology, 1969, 75, 1035-1039.
- Farnsworth, P. R. The social psychology of music. Ames, Iowa: Iowa State University Press, 1969.
- Giffin, K. & Barnes, R. E. Trusting me, trusting you. Columbus, Ohio: Charles E. Merrill Publishing Co., 1976.
- Hannet, F. The haunting lyric: The personal and social significance of American popular songs. Psychoanalytic Quarterly, 1964, 33, 226-269.
- Hirsch, P. Sociological approaches to the pop phenomenon. American Behavioral Scientist, 1971, 14, 371-388.
- Horton, D. The dialogue of courtship in popular songs. American Journal of Sociology, 1957, 62, 569-578.
- Irvine, J. R. & Kirkpatrick, W. G. Musical form in rhetorical exchange: Theoretical considerations. Quarterly Journal of Speech, 1972, 58, 272-280.

- Johnstone, J. & Katz, E. Youth and popular music: A study in the sociology of taste. American Journal of Sociology, 1957, 62, 563-568.
- Kosokoff, S. & Carmichael, C. W. Rhetoric of protest: Song, speech and attitude change. Southern Speech Journal, 1970, 35, 295-302.
- Luthe, H. O. Recorded music and the record industry. International Social Science Journal, 1968, 20, 656-666.
- McCleary, K. "Leader" versus "Prisoner's Dilemma." Unpublished master's thesis, University of Kansas, 1977.
- Minister sends "rock" records into the flames. Lawrence Daily Journal World, November 29, 1975, p. 13.
- Nyquist, E. E. Music as communication. Vital Speeches, Jan. 15, 1972, 38, 202-205.
- Patton, B. R. & Giffin, K. Interpersonal communication: Basic text and readings. New York: Harper & Row, 1974.
- Rapoport, A. & Chammah, A. M. Prisoner's dilemma: A study in conflict and cooperation. Ann Arbor: University of Michigan Press, 1965.
- Riesman, D. Listening to popular music. In D. Riesman's Individualism reconsidered. Glencoe, Ill.: The Free Press, 1954.
- Robinson, J. P. & Hirsch, P. It's the sound that does it. Psychology Today, 1969, 3(5), 42-45.
- Rosenthal, R. I. J. (ed.) Averroes commentary on Plato's Republic. Cambridge: Cambridge University Press, 1956.
- Spitzer, S. The influence of musically-guided affective imagery on cooperation and trust. Unpublished master's thesis, University of Kansas, 1975.

APPENDIX A
INDEPENDENT VARIABLE MATERIALS

THE LATE SHOW

Everyone I've ever known has wished me well
 Anyway that's how it seems it's hard to tell
 Maybe people only ask you how you're doin'
 Cause that's easier than lettin' on how little they could care
 But when you know you got a real friend somewhere
 Suddenly all the others are so much easier to bear
 Now to see things clear it's hard enough I know
 While you're waiting for reality to show
 Without dreamin' of the perfect love
 And holdin' it so far above if you stumbled onto someone real
 You'd never know
 (You'd never know)*
 You could be with somebody who is lonely too
 (Sometimes it doesn't show)
 He might be tryin' to get across to you
 (Words can be so slow)
 When your own emptiness is all that's gettin' through
 There comes a point when you're not sure why you're still talkin'
 I passed that point long ago (long ago)
 I'm so tired of all this circlin'
 And all these glimpses of the end
 (You know it's useless to pretend)
 That's all the voices say
 (You'll go right on circling until you've found some kind of
 friend)
 Well I saw you through the laughter and the noise
 You were talkin' with the soldiers and the boys
 While they scuffled for your weary smile
 The thought of all the empty miles
 And the years that I'd spent lookin' for your eyes
 (Looking for your eyes)
 Now I'm sittin' here wonderin' what to say
 (That you might recognize)
 Afraid that all these words might scare you away
 (Break through the disguise)
 No one ever talks about their feelings anyway
 Without dressing them in dreams and laughter
 I guess it's just too painful otherwise

 Look
 It's like you're standin' in the window
 Of a house nobody lives in
 And I'm sittin' in a car across the way
 (Let's just say) it's an early model Chevrolet
 (Let's just say) it's a warm and windy day
 You go and pack your sorrow trashman comes tomorrow
 Leave it at the curb and we'll just pull away

--words and music by Jackson Browne

*words in parentheses are sung by background singers

RECORDING THE INDEPENDENT VARIABLE TAPE

The instrumental tracks were recorded on a TEAC 3340S four-track machine at the Musician's Local 512 rehearsal hall at 1146 Oregon in Lawrence, on August 23, 1976. The musicians were set up in the large rehearsal room and the engineer was in the smaller rehearsal room on the other side of the building. Mattresses and furniture pads were used as baffling. The bass and keyboards were run direct, though since there were no headphone monitors they also ran their normal speaker setups for their own monitors. Microphones used were mostly Shure SM-57s and -58s with a couple of AKG D-1000s.

The personnel on the instrumental tracks were:

Tim Bradley-- electric guitar

Arch Monson-- Rhodes 88 electric piano

Lori Baker-- Ovation electric acoustic guitar

Joe Meador-- bass guitar

Pat Tomek-- drums

All recording and mixdown was done by Brian Norwood.

The vocals were recorded October 26, 1976, in Brian's basement, using the same TEAC deck. The personnel on the vocal tracks were:

Joe Meador-- lead vocals

Lori Baker, David Coyle, Pat Tomek-- backing vocals

- Pat Tomek-- lecture from Patton and Giffin text.

LECTURE

Interaction with other people is imperative if we are to achieve a sense of personal well-being. The quality of our interpersonal communication heavily influences our personal growth, psychological health, and our success in influencing our environment. As we grow we strive to make sense of the world around us, to determine what is real and what is not real, and we depend on other people to check our views. All of us want to have an identity, to be somebody, a person with a distinct feeling of who he or she is. As our self-image develops, we constantly evaluate it; if to us it seems to be good, we gain self-esteem-- a very comfortable feeling. To the extent that our personal interaction with others is successful and confirming, we are able to grow, find our identity, gain self-esteem, and feel that we are firmly in touch with reality.

Ordinarily we are most happy and comfortable when we feel that our relationships with others are dependable and friendly-- that is, we can count on being understood and warmly accepted. As small children we find ourselves greatly dependent upon persons immediate to us, usually our parents or those who take care of us. The satisfaction of our needs almost entirely depends on our ability to establish a workable relationship with them. At this stage, our thoughts about ourselves are greatly colored by the quality of this relationship. As we grow older this factor continues to influence

our view of ourselves.

Most of us have been able to establish relationships with others that meet our needs and give us a fairly satisfactory self-image. The importance of this process may be demonstrated by looking at some persons who, for one reason or another, are unable to establish such an acceptable relationship. Such persons frequently develop great anxiety over their inability to relate adequately to others; they tend to feel helpless in the face of this problem without really knowing why. They cling to unproductive ways of reaching out to others and seem unable to change to more productive methods. They tend to be afraid, feeling inadequate, helpless, and alone.

As we see it, personal growth involves self-disclosure in words and actions, feedback from a trusted person, self-evaluation, a vision of what one might become, attempts to achieve those changes, followed by further feedback, self-evaluation, etc. This use of interpersonal communication can provide a self-revelation, of not just what you are, but a vision of what you can become. It can stimulate self-improvement by stirring your imagination, opening new horizons, new ideas, new appreciation of the needs of others, along with a desire to meet those needs. This process of "getting involved" with others can give you a new vision of yourself relating to them in new ways.

We should strive to increase our trust in other people. Increased trust in ourselves is vital; we must be willing to expose our thoughts and ideas to others and listen to their

responses to these ideas. Our trust of others will increase as we profit from their responses. An open and frank expression of what we think and how we feel about it will be an excellent start toward increasing interpersonal trust.

Our confidant must be selected with care. By easy stages we can achieve candor and disclosure of our feelings-- our fears, anxieties, hopes, and pleasures. We should not worry about "saying things just right;" the other person's responses should guide us in determining how well we have expressed ourselves. As trust increases, we learn that the correction of misinterpretation is not only possible but relatively easy; it does require, however, that we listen carefully to the other person's responses and reflections upon our thoughts.

The most valuable thing for us to learn as our trust of others is increased is that we do not ordinarily lose self-esteem by self-disclosure and relevant feedback; rather, the opposite is true: the surest way to increase self-esteem is to listen and evaluate feedback about ourselves from someone we trust, making changes in our behavior when desirable and possible. In this way increased interpersonal trust serves our own personal needs and purposes.

(from Patton and Giffin, 1974, pp. 88-89,
440, 452)

DESPERADO

Desperado why don't you come to your senses
You been out ridin' fences for so long now
Oh you're a hard one but I know that you got your reasons
There things that are pleasin' you can hurt you somehow
Don't you drive the queen of diamonds boy
She'll beat you if she's able
You know the queen of hearts is always your best bet
Now it seems to me some fine things
Have been laid upon your table
But you only want the ones that you can't get

Desperado oh you ain't gettin' no younger
Your pain and your hunger they're drivin' you home
And freedom oh freedom
Well that's just some people talkin'
Your prison is walkin' through this world all alone
Don't your feet get cold in the wintertime
The sky won't snow and the sun won't shine
It's hard to tell the nighttime from the day
You're losin' all your highs and lows
Ain't it funny how the feelin' goes away

Desperado why don't you come to your senses
Come down from your fences open the gate
It may be rainin' but there's a rainbow above you
You better let somebody love you
Ooh you better let somebody love you
Before it's too late

--words and music by Don Henley
and Glenn Frey

APPENDIX B
DEPENDENT MEASURE MATERIALS

HEVNER ADJECTIVE CHECKLIST

A
 cheerful
 gay
 happy
 joyous
 bright
 merry
 playful

B
 fanciful
 light
 quaint
 whimsical

C
 delicate
 graceful
 lyrical

D
 dreamy
 leisurely
 sentimental
 serene
 soothing
 tender
 tranquil
 quiet

E
 longing
 pathetic
 plaintive
 pleading
 yearning

F
 dark
 depressing
 doleful
 gloomy
 melancholic
 mournful
 pathetic
 sad
 serious
 sober
 solemn
 tragic

G
 sacred
 spiritual

H
 dramatic
 emphatic
 majestic
 triumphant

I
 agitated
 exalting
 exciting
 exhilarated
 impetuous
 vigorous

J
 frustrated

Have you heard this song before? yes no

EXPERIMENTER'S SCRIPT OF
INSTRUCTIONS TO SUBJECTS

Good evening. My name is Pat Tomek. The experiment you are about to take part in has to do with listening behavior. In a moment I will play a tape for you which will last about five minutes. At the end of that time I will pass out a brief questionnaire which will take just a few minutes more. In addition, I have been asked by the department to administer two other instruments at the conclusion of this experiment, for some research a couple of professors in the department are doing. But I think this won't take more than forty-five minutes or an hour, even with these extra things we have to do.

So, for the first experiment, we're going to listen to a five-minute tape. The different groups of subjects in this experiment all listen to different versions of this tape; one group listens to a song, another listens to the instrumentals only of the song, another to the vocals only, and another to a speech. You in this group tonight will listen to the _____ version of the tape. Please listen carefully, so that you form a definite impression of what you hear. When the tape is over, I will have a questionnaire for you to fill out. Any questions? (play tape)

Okay, now here is the questionnaire. This is what is called an adjective checklist. There are, as you can see, adjectives arranged in clusters on the sheet. Simply place a check mark to the left of any adjective you see which you feel

corresponds to the mood of the tape you just heard.

Check as few or as many adjectives as you wish, in as few or as many clusters as you wish. [Groups 1 and 4 only:] Then, at the bottom of the sheet, answer the question there, have you heard this song before? Put the title in if you know it. Also at the bottom of the sheet feel free to write any comments you might have about the experiment. (wait) Is everybody finished? (pick up sheets)

This was an experiment in music and communication. There were several different groups of subjects in this experiment, as I explained earlier. We are interested in how these groups will differ in their responses on the checklist-- how hearing the instruments only, or a speech, will change the mood of the communication. Any questions? (questions were deferred until the end of the experiment)

Now for the two instruments I mentioned earlier. First there is a semantic differential for you to fill out (hand out Giffin Trust Differential. Read instructions that go with it, instructing them to rate the group they are in, the subjects of this experiment.)

This other instrument has to do with joint decision processes. You will be playing a game which has certain payoffs. You cannot control by yourself the specific payoff of a given game. Rather, the outcome will depend on what your partner does, as well as what you do.

The game is played as follows:

On each of the ten trials you must make a choice of either

BLUE or RED and so must your partner. I'll explain in a second who your partner is. First make your choice on the left column by circling BLUE or RED. Now, in this version of the game, all of you will be playing the same person. In some earlier research with this game, some professors came up with an average pattern of choices made by KU students, and it is this average pattern who will be your partner in the game. So, in a sense, each of you will be playing against the average KU student. Does all this make sense so far? (pause) Okay, for each of the ten rounds or trials, you will make your choice, and then I will read off the choice made by the hypothetical average student. The payoff for each round is figured in this way (show payoff matrix). As you can see, how many points you get will depend not only on what you choose, but on what the average student chose. If you both choose blue, you both get 3 points. If you choose blue and he chose red, you lose 5 points and he gains 5 points. If you choose red and he chose blue, you get 5 points and he loses 5 points. However, if you both choose red, you both get only 1 point.

At the end of ten rounds, sum up your points. They will be converted to pennies and you will be paid at the end of the experiment. We are not studying speed of decision making, so make your choices at whatever rate you prefer. It is important that you do not communicate with each other. This includes sighing, laughing, or any other form of communication which might indicate how you feel about a given outcome.

I will help with the scoring by saying, "If you chose blue you get so many points, if you chose red you get so many points," at the end of each round. We will compute the score of the average student from your score sheets after you hand them in. Any questions before we begin? (play game)

Please write on the bottom of your score sheet whether you have played this game before, and whether you feel this had an effect on how you played the game. (pay off winners after debriefing)

GTD--FORM E (FOR INDIVIDUALS OR GROUPS)

The purpose of this questionnaire is to determine your attitude toward a specific other person or the members of a specified group. Fill out all of the following items with this one person or group in mind (as instructed by the person in charge).

On the following pages you will find a series of bipolar scales. You are to describe the person (or group) in terms of intervals on these scales. Please make your responses in terms of what these scales mean to you.

Here is how you are to use these scales:

If you feel that the person (or group) you are describing is very closely related to one end of the scale, you should place your check mark as follows:

fair: X: __: __: __: __: __: __: unfair

If you feel that this person (or group) is quite closely related to one or the other end of the scale (but not extremely), you should place your check mark as follows:

strong: __: X: __: __: __: __: __: weak

If this person (or group) seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active: __: __: X: __: __: __: __: passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the person (or group) you're judging. If you consider the person (or group) to be neutral on the scale, both sides of the scale equally associated with the concept, then you should place your check mark in the middle interval.

safe: __: __: __: X: __: __: __: dangerous

IMPORTANT: (1) Place your check marks in the middle of spaces, not on the boundaries.

 : X: : : : : X: :
(this) (not this)

(2) Be sure you check every scale--do not omit any.

(3) Never put more than one check mark on a single scale.

Work at a fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

APPENDIX C
DATA FROM THE EXPERIMENT

GROUP 1
 RAW SCORES ON
 GIFFIN TRUST DIFFERENTIAL
 AND PRISONER'S DILEMMA GAME

<u>Subject</u>	<u>Giffin Trust Differential</u>			<u>Prisoner's Dilemma Game</u>	
	<u>Expertness</u>	<u>Character</u>	<u>Dynamism</u>	<u>3rd Round</u>	<u>10th Round</u>
1	50	48	38	2	5
2	47	52	36	1	3
3	48	50	40	2	5
4	43	42	38	1	5
5	45	44	45	0	0
6	33	40	32	0	1
7	39	44	39	0	0
8	46	42	43	1	4
9	45	42	30	2	2
10	50	48	38	3	5
11	35	43	32	0	0
12	(not included in the analysis because he had heard the song before)				
13	47	52	40	1	4
14	45	40	41	1	1
15	40	42	39	2	3
16	45	43	37	1	4
17	47	47	41	1	1
18	40	41	31	0	0
19	37	29	36	0	0
20	45	40	36	0	0

GROUP 2
 RAW SCORES ON
 GIFFIN TRUST DIFFERENTIAL
 AND PRISONER'S DILEMMA GAME

<u>Subject</u>	<u>Giffin Trust Differential</u>			<u>Prisoner's Dilemma Game</u>	
	<u>Expertness</u>	<u>Character</u>	<u>Dynamism</u>	<u>3rd Round</u>	<u>10th Round</u>
1	33	41	24	3	5
2	42	46	41	2	3
3	54	51	43	1	3
4	24	37	32	3	4
5	41	47	40	3	10
6	43	48	40	0	0
7	39	48	42	0	5
8	39	39	30	0	1
9	55	49	21	1	1
10	38	46	33	2	5
11	40	36	34	1	1
12	54	49	29	1	3
13	47	45	29	2	3
14	49	50	37	0	0
15	39	31	30	1	2
16	39	37	38	0	0
17	50	48	41	3	5
18	41	45	33	0	1
19	42	50	35	1	1
20	34	32	42	2	7
21	46	41	34	1	5
22	42	49	41	2	6

GROUP 3
 RAW SCORES ON
 GIFFIN TRUST DIFFERENTIAL
 AND ON PRISONER'S DILEMMA GAME

<u>Subject</u>	<u>Giffin Trust Differential</u>			<u>Prisoner's Dilemma Game</u>	
	<u>Expertness</u>	<u>Character</u>	<u>Dynamism</u>	<u>3rd Round</u>	<u>10th Round</u>
1	39	52	29	2	2
2	42	42	36	3	6
3	40	38	28	1	2
4	35	43	29	2	4
5	46	43	41	1	1
6	43	47	18	2	4
7	38	38	29	0	1
8	43	47	32	2	5
9	41	42	34	3	5
10	43	50	42	2	6
11	44	45	29	3	7
12	46	45	40	2	5
13	46	57	31	3	7
14	34	40	30	0	0

GROUP 4
 RAW SCORES ON
 GIFFIN TRUST DIFFERENTIAL
 AND PRISONER'S DILEMMA GAME

<u>Subject</u>	<u>Giffin Trust Differential</u>			<u>Prisoner's Dilemma Game</u>	
	<u>Expertness</u>	<u>Character</u>	<u>Dynamism</u>	<u>3rd Round</u>	<u>10th Round</u>
1	53	54	22	0	1
2	50	44	31	0	0
3	38	30	29	1	4
4	55	51	38	0	0
5	42	36	31	3	10
6	58	58	46	2	5
7	45	42	35	1	1
8	37	40	23	1	2
9	45	53	23	0	0
10	49	44	43	1	4
11	40	46	29	0	1
12	35	49	31	3	5
13	43	46	22	3	5
14	35	36	28	3	3
15	36	38	38	1	8
16	38	41	35	2	7
17	36	36	25	1	4

GROUP 5
 RAW SCORES ON
 GIFFIN TRUST DIFFERENTIAL
 AND PRISONER'S DILEMMA GAME

<u>Subject</u>	<u>Giffin Trust Differential</u>			<u>Prisoner's Dilemma Game</u>	
	<u>Expertness</u>	<u>Character</u>	<u>Dynamism</u>	<u>3rd Round</u>	<u>10th Round</u>
1	46	37	40	0	0
2	30	37	18	1	4
3	39	39	32	2	8
4	51	53	43	0	0
5	48	62	45	1	3
6	31	45	35	1	2
7	52	55	30	2	5
8	48	48	35	0	2
9	41	41	30	2	4
10	52	44	44	0	0
11	35	37	30	0	0
12	47	46	38	0	0
13	37	38	33	3	10
14	48	43	38	1	4
15	35	41	29	0	0
16	39	39	32	0	0
17	59	50	50	2	5
18	48	51	36	1	1
19	43	38	32	1	2
20	47	40	40	0	0
21	44	47	44	0	0
22	51	53	29	0	0
23	48	47	25	2	2

HEVNER ADJECTIVE CHECKLIST DATA

BY GROUPS AND MOOD CLUSTERS

<u>Group</u>	Total checks made per group by mood cluster									
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>
1 (complete Late Show, N = 19)	6	8	18	50	34	46	3	8	5	5
2 (instrumental Late Show, N = 22)	17	21	24	97	22	19	2	10	6	2
3 (vocals only Late Show, N = 14)	6	11	19	31	29	43	13	10	9	8
4 (Desperado, N = 17)	8	6	15	62	35	52	2	12	7	3
5 (lecture, N = 23)	3	4	7	40	6	50	1	12	1	1

KEY

- A-- cheerful, gay, happy, joyous, bright, merry, playful.
 B-- fanciful, light, quaint, whimsical.
 C-- delicate, graceful, lyrical.
 D-- dreamy, leisurely, sentimental, serene, soothing, tender, tranquil, quiet.
 E-- longing, pathetic, plaintive, pleading, yearning.
 F-- dark, depressing, doleful, gloomy, melancholic, mournful, pathetic, sad, serious, sober, solemn, tragic.
 G-- sacred, spiritual.
 H-- dramatic, emphatic, majestic, triumphant.
 I-- agitated, exalting, exhilarated, impetuous, vigorous.
 J-- frustrated.