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ABSTRACT

A project is reported in which the in-home TV viewing of 254 kindergarteners was controlled for 3 weeks by a selected "diet" of "violent" or "pacific" programming. Eight teachers recorded all in-school instances of violent-aggressive-hostile behavior by each child over a 5 week period. Parental report of in-home changes and the in-school changes indicated that most children did not change as a function of TV "diet," while those that did tended to copy the behaviors to which they had been exposed. The lengthy discussion is divided into 3 parts: (1) an analysis of the concepts "hostile," "violent," and "aggressive;" (2) a comparison of the authors' methodology and results with typical laboratory efforts, many of which are viewed as irrelevant, incompetent, or immaterial; and (3) the relevance of the results to the social issue of TV violence. (Author/TL)

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THE EFFECTS OF VIEWING "VIOLENT" TV UPON CHILDREN'S
AT-HOME AND IN-SCHOOL BEHAVIOR

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What effect does the viewing of aggressive-hostile-violent TV programs have upon the behavior of children? Although much has been said, both popularly and professionally, about this issue, the President's commission on the causes and prevention of violence was unable to come to firm conclusions (Eisenhower, 1969). Some have criticized the commission for its indecision in the face of a considerable volume of laboratory experiments upon children's reactions to viewing "violent" films or models. The present project was undertaken in the belief that the commission acted judiciously in that the empirical evidence presented to it was largely irrelevant, incompetent, and immaterial.

Our objections to the laboratory evidence presented to the commission hinge on the laboratory's unrepresentativeness of life-in-general. The laboratory is only one situation of the thousands encountered in our society. It is common knowledge that a person's reactions to something in one situation may be entirely different from his reaction to the same thing in another situation, much less situations-in-general. Thus while research on person's reactions performed in the laboratory may bear on person's-reactions-in-general, whether it does or not is an empirical question that cannot be solved by any amount of laboratory research. Thus, while the research performed in the laboratory may have bearing on "TV viewing's effect upon children's

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behavior-in-general, that such laboratory results do pertain, has yet to be proven. In fact, most of the published studies ostensibly bearing on the issue, report laboratory-behaviors of children that constitute clear warnings that their results cannot be taken at face value. While the relevance of the laboratorization of the reactions of persons remains questionable, the application of the experimental method to persons in their ordinary lives constitutes an unquestionable source of relevant information. Hence this report of the first naturalistic experiment bearing on the issue of children's reaction to "violence on TV".

Method

We contacted the superintendent and the 8 kindergarten teachers of the school district of River Rouge, Michigan (a suburb of Detroit, which, according to the 1960 census, almost exactly matched the U.S. average in income and size of households, while about a quarter of its population was Negro). We outlined our plans and they agreed to cooperate*. It was determined that the district probably serviced 349 kindergarten children at that time, and a letter requesting the cooperation of all parents was mailed under the name of the superintendent of schools to the residence of each kindergartener. The letter was followed-up by a personal contact with the parent(s) explaining the nature of the project and their involvement in it. 292 parents were contacted, of which 288 agreed to participate. Over the course of the 7-week study, 54 of the children either withdrew from school, were absent for an entire week, or moved and could not be relocated in time to assure guide-delivery and our eventual number of kindergarteners was 254 in the experimental conditions and 43 controls.

After the initial parent-contact, the children within each room were divided by sex, and first the boys and then the girls were randomly placed

into one of the four experimental conditions. The children of the 4 parents who refused to cooperate and all those children whose parents we could not contact were placed in the control group. As this was an exploratory study we felt that it was more important to have as many children as possible in the experimental groups than to have a classical control group. The initial number of children in each of the four experimental groups was: "straight violent", 74; "violent-pacific", 72; "pacific-violent", 71; and "straight pacific", 71. After the above-mentioned attrition, the number of children in each of the four experimental groups was 66, 64, 61, and 63, respectively. The "straight violence" group received 3 weeks of violent TV programs; the "violent-pacific" group received 2 weeks of violent followed by a week of non-violent TV; the "pacific-violent" group received 2 weeks of non-violent TV followed by a week of violent TV; and the "straight pacific" group received 3 weeks of non-violent TV.

Classification of TV Programs. A panel of 5 students and the authors through consultation with the Detroit TV stations, their memories, and program descriptions, classified all TV programs scheduled for the next week into two categories--"violent" or "pacific". The criterion was "does this program show a person, or an animal or cartoon character representing a person, hit, strike, shove, throw or shoot objects at or in any physical, non-verbal way demonstrate violent, hostile, aggression toward any other person or animal representing a person?" If a program had one such incident it was classified as "violent"; if none, it was classified as "pacific". Hockey and basketball were classified as "violent", tennis as "pacific". Most situation comedies were classified as pacific and most dramatic shows as violent (all crime and western shows fell here). Most monster movies fell into the pacific category (monsters are not persons). As fate would have it, Alfred

Hitchcocks's *THE BIRDS* appeared on the TV screen during the period of the study--it was classified as pacific (though birds hurt and killed humans and visa versa, no humans injured humans). In only a couple of instances over the 3-week manipulation period did we have to guess, and, to our knowledge, only one guess was incorrect.

The panel met about a week before each TV week started and did the classification. Then two TV "guides" were constructed, one violent and the other pacific. The appropriate one was then mailed to the homes of the participating parents. During each of the 3 experimental weeks an attempt was made to contact each home twice to encourage them to abide by the guide and to answer any questions that might have arisen (overall, we averaged about one and a half contacts per week). The first week's mailing went smoothly, but the second-week's got partially lost in the post and we had to hand-deliver the appropriate guides. The next week's guides were all hand-delivered. All TV guides were personally picked-up when possible at the beginning of the next-week's programs (which, for our purposes, started Saturday morning). As might be expected, a certain percentage was not retrieved from each group (perhaps the family was not at home, in which case the new TV guide would be dropped off, but the old one could not be retrieved until Monday). There were many different reasons for loss of the marked, old TV guides among which were "we lost it . . . it was just here a moment ago . . ." and "the dog ate it".

Responsibilities of Cooperating Parents. Cooperating parents were told that they were to control their child's TV viewing as per the TV guide we provided them. If a child wanted to watch TV, he had to watch one of the listed programs on his TV guide for that time slot. If there was no listed program, he could watch what he pleased (without exception, there was always

at least one pacific program on TV at any time; however, there were many time-periods when no violent program was available). The parent was to further indicate which programs the child watched on each day (it takes effort to look up the correct programs, and even more effort to locate a pencil and mark; and our parents were more apt to do the monitoring than they were to do the indicating).

Responsibilities of Cooperating Teachers. All 8 kindergarten teachers in the district graciously agreed to cooperate with us. Teachers knew that the study was going on, but were asked to deliberately avoid finding out into which experimental condition their children were placed. All cooperated. For the first 5 weeks of the study each teacher was provided a list of the children in her classroom and asked to note the number of physically-aggressive-hostile behaviors performed by each child against any other child, by child, by incident, per day. That is, any child whom she saw hit, push, strike, throw an object at, or in any other physical, non-verbal way, aggress against another child was to be located on the list, and a check placed by his or her name. If the same child performed another such behavior on the same day, he would receive another check, and so forth. No special training was given the teachers; it was assumed that a person knowledgeable enough to teach knew what we were talking about. As would be expected, the amount of recorded "violence" varied from classroom to classroom (one of the teachers was quite a disciplinarian; almost none of her children ever were recorded as having behaved "violently"--we subsequently informally checked on her "could she really have that calm a class, maybe she's just not recording?"--she really did have that calm a class). It will be noted that this was taken into account in the design of the study, since an equal number of children from each room fell into each of the four experimental conditions.

Further, as luck would have it, about the same proportion of controls came from each teacher's classroom(s) (some had two).

Parental-Report Data. At the end of each of the three manipulation weeks one of the parents was contacted and asked, "Have there been any changes in your child's behavior?" (if so) "What were they?" At the end of the seventh week the interview was repeated and one of the parents then asked: "Did you expect your child to change because of the TV programs he was watching?" (if so) "How did you expect him to change?" It will be noted that the parents were not forewarned that they would be making any of these appraisals, and, by asking for their expectations after they had made their reports we increased the possibility that what they claimed they had expected would jibe with what they had reported (it is a commonly known person-maximum that persons in our culture like to be correct, and, given the chance will tend to make their predictive proneness appear greater rather than smaller, Ossorio, 1966). In other words, knowing that the results might well be biased, we deliberately designed the reporting so that expectations would more likely jibe with the reports rather than vice versa.

Results

TV Viewing. The universe of TV programs accessible to children during the three-week manipulation period are summarized in Table 1. Clearly the majority of movies (72%) fell into our "violent" category while a majority of the regularly-scheduled programs (84%) were placed in our "passive" group. Overall, giving each program equal weight irrespective of length. 30% of the TV programming was violent and 70% passive.

Table 2 reports the TV programs checked by the parents or guardians of each experimental group. Groups subjected to "violence" watched less TV that was monitored and recorded by their parents.

Insert Tables 1 and 2 About Here

In-School Violent-Hostile-Aggressive Behavior. It must be noted at the onset that we found no completely legitimate way to analyze the single-blind data from the teachers. Children were absent at varying times throughout the experiment. Only a handful of children in each experimental group were not absent at all. It would be quite illegitimate to perform any conventional parametric analysis upon only their data. In fact, no statistician we consulted, and we talked with a dozen, could think of a reasonable parametric test. Hence the following analysis, which permits a "feel" for the results, even though it is, admittedly, only a "better-than-nothing" solution.

First we took the number of times in the week the child had performed a violent-aggressive-hostile behavior and divided it by the number of days in attendance for the first base week, each of the three manipulation weeks, and the second base week which gave us a weekly index of in-class "violence". In Table 3 each child's index for each of the succeeding weeks is compiled with his initial index in week 1. The number who changed in a more "violent" direction is marked with a plus (+), the number who changed in a more "passive" direction is marked with a minus (-). Table 4 presents the direction of changes expected for the two "theories" of the effect of watching a violent or passive TV diet. The "drain" model assumes that aggression-violence-hostility is a "natural" substance or force that must be regularly discharged by acting-out or through vicarious experience. The "copy-cat" model assumes that persons will tend to do what they see others doing. If more of the others in their experience do aggressively-hostile-violent things, then they will do more, while if the others in their experience do non-aggressively-

hostile-violent things, they will "copy" them. Both theories assume that TV provides psychologically-real-others.

Because the preponderance of pluses (+) or minuses (-) could be expected to vary randomly, non-randomicity can be tested with the sign test. Thus, for the "straight violence" group, the second-week should have found more children changing toward violence than toward non-violence under the "copy-cat" theory; this occurred and was scored a hit. The same should have occurred for week 3, but the changes did not fall in either direction which was scored neither a hit nor a miss. Week 4 should have seen more violent changes and did--a hit. Week 5 should have seen a tapering-off with more changes toward passivity; this occurred and was scored a hit. Further, when the violence level for each child for week 4 is compared with the violence level for week 5, there should be more non-violent changes; there were (6+/11-), a hit. For the "violent-passive" group, week 2 should have seen relatively more violent changes; there were more non-violent changes--a miss. Similarly for week 3--a miss. For week 4, where passivity dominated the TV screen, the prediction would be uncertain, however, comparing weeks 3 and 4; the preponderance of changes should have been toward passivity; they were equivalent (7+/7-) and was scored as neither a hit nor a miss. For the "passive-violent" group, week 2 should have seen a preponderance of non-violent changes; there were and this was scored a hit. The same was true of week 3; also scored a hit. When the changes in weeks 3 and 4 are compared, there should have been a preponderance of violence; there were (9+/7-) and was scored a hit. For the "straight-passive" group, week 2 should have seen a greater number of non-violent changes; there were, and this was scored a hit. The same was true of week 3, a hit. Week 4 was uncertain, neither a hit nor a miss. Week 5 should have seen more changes toward violence, and did--a hit. A comparison of the changes in weeks 4 and 5 should reveal a greater number of changes toward violence; the

numbers were equal (7+ / 7-) and was scored neither a hit nor a miss. Thus we had 10 hits and 2 misses which would give us a P of less than .02 one-tailed or .04 two-tailed, in favor of the "copy-cat" theory.

In Table 4, the five groups' sexual composition, number of violent-aggressive-hostile actors, number of violent aggressive-hostile acts, and mean number of violent-aggressive-hostile acts per week are presented. In Table 5, the first 3 weeks for the first two experimental groups are combined each week as are the first 3 weeks for the second two experimental groups. In Table 4, of the 25 possible comparisons of mean violent-aggressive-hostile acts per week for boys and girls, the boys' mean is greater in 23 which is associated with a P of less than .001. Therefore, the comparisons for the sexes are made separately in Table 5.

In the base week (week 1), the average "level of violence" for the "violent" treatment boy groups is .108 versus .1105 for the "pacific" boy groups. If we consider the difference between these two groups' means as the base, then the difference between these two groups should increase during the next week relative to the base week if the "copy-cat" model is valid or decrease if the "drain" model is valid. The same relationship should obtain for the next week's means relative to the base week's. As is evident in Table 5, for both boys and girls, the "copy-cat" model applied and this is scored as 4 hits. During the fourth week, the change week for the two middle groups, the "copy-cat" model would predict an upward or level mean for the "straight violence" group compared to the previous week's mean. Boys were up, girls were up--2 hits. For the "violence-pacific" group, the "copy-cat" model would predict a downward level compared to the previous week's mean. Boys were up, girls were down--1 hit, 1 miss. For the "pacific-violence" group the "copy-cat" model would predict an upward swing compared to last week's mean. Boys were up, girls experienced no change--1 hit,

1 miss. For the "straight pacific" group the "copy-cat" model would predict a downward or level tendency compared to the previous week. Boys were down, girls were up--1 hit, 1 miss. For the fifth week, the "copy-cat" model would predict a downward swing for the "straight violence" group. Boys were down, girls were down--2 hits. The intermediate groups would be simply questionable, but for the "straight pacific" group the prediction would be upward relative to the previous week. Boys were up, girls were up--2 hits. Of the 16 possible predictions, 13 were hits for the "copy-cat" model which is associated with a two-tail probability of less than .03.

 Insert Tables 3, 4, and 5 About Here

In-Home Behavioral Change. Parental report of changes in children's behavior included changes other than those along the violent-aggressive-hostile continuum. In order to preserve the data all is reproduced below. The classificatory scheme or weightings of behavior are post hoc; we were not sure just what kinds of parental report we would get before we got it. However the ratings appear psychologically sensible and are evenly applied to all four experimental groups. It should be noted that only a small proportion of the changes reported by parents are pathological per se. Most of the changes refer to activity level (e.g., "more active", "louder"), some refer to activity and/or pathological behavior (e.g., "more aggressive", "argumentative"), and others refer to para-behavior (e.g., "nightmares", "wets bed"). All of these are summated upon the assumption that probably some degree of pathology or lack of it is indexed by these reports.

Parental report for the first 3 weeks is summarized by child in Table 6. Children who were mentioned more than once are indicated with an asterisk. If

amount of change were directly related to the amount of "violent" TV programming in harmony with the "copy-cat" model, we would have expected the means for the groups to run, highest for the straight violence group (group 1), next-highest for group 2, next-highest for group 3, and least high for group 4. We actually obtained an ordering of 1,2,4,3. The rank-order correlation associated with this relationship is .73 which is associated with a P of less than .25. If we compare groups 1 and 4 with student's t we get a value of 1.37 which is associated with a P of less than .20 with $df = 127$.

The results of the seventh-week interview of parents is summarized in Table 7. Clearly the changes that occurred were again in "copy-cat" 's expected direction with the rank-order correlation again equaling .73 and the t test between groups 1 and 4 equaling 1.835 which is associated with a P of less than .04.

The expectations and reported outcomes by the parents at the end of the seventh-week interview are summarized by child in Table 8. Clearly there was little or no relationship between professed expectations and reported outcomes. Of the 59 changes, 41 had no expectations, 4 were correct, 4 were wrong, 6 were not specific enough to know whether the person had been right or wrong, and 16 of the expectations were associated with no change.

Insert Tables 6, 7, and 8 About Here

Comparison of In-Home and In-School Behavioral Changes. There was little if any correspondence between in-home and in-school changes. For instance, during week 2, the total number of home changes was 29 and school changes was 65. Only 10 of the children were reported as having the same kind of change at home and school, and 3 had opposite changes. Of the 65 children who changed

at school, if there had been a random mix into did-change-at-home and didn't-change-at-home categories, we would have expected about 12% to change in both places in similar ways. We got about 15%. The same relationship obtained for the two other weeks of manipulation, so we uncovered no evidence that behavioral changes similar to those reported at home would be more likely than chance to be found or reported at school.

Discussion

Due to the relative novelty of both the conceptualization and the methodology of the study, we have divided the discussion into 3 parts: 1) a demonstration of an "ordinary discourse" analysis of the concepts "hostile", "violent", and "aggressive"; 2) a comparison of our results and methodology with the typical laboratory efforts; and 3) the relevance of our results to our social system.

The Meanings of the Concepts "Violent", "Aggressive", and "Hostile". A great deal of confusion regarding these terms abounds in the literature. Buss (1961), for instance, defines aggression as "a response that delivers noxious stimuli to another object." (Page 1). This is obviously not what most people mean by aggression because under it every doctor who administers a hypo is aggressing against his patient, or most teachers are aggressing against their students by teaching. Bandura and Walters (1965), suggest that aggressive acts are that class of behaviors that ". . . could injure or damage if aimed at a vulnerable object." (Page 114). This definition serves us no better, for then chopping down a cherry tree would be aggressive because it was vulnerable, and we definitely aimed to damage it. In their quest for brevity and objectivity, these and other psychologists have tried to define many words without attending to the complexities of the linguistic system. Brevity is certainly a worthy goal--who want to be bored by redundancy or excessive length? And the same is

true of objectivity--who wants to learn or have to deal with biased or idiosyncratic terminology? However, brevity that sacrifices completeness is a disservice and objectivity is not to be gotten by ignoring significant features of the phenomenon under question. If we examine our linguistic system we will find the definition of what kinds of behavior are aggressive and/or hostile and/or violent--but our definitions will not be ten words long. "Quick" definitions often serve the laboratory researcher well, for under them children's kicking against a doll is aggressive or hostile, and a slap in the face is always both. But if the linguistic system is attended to it is obvious that a person cannot aggress against or be hostile to a doll, and a slap in the face is not at all necessarily hostile. In the motion picture *THE BIRDS*, for instance, the hero slaps the hysterical heroine to bring her to her senses. In context, his behavior is aggressive and probably violent, but it is not hostile. It is our contention that we have to know a great deal about the linguistic system, the social customs in specific situations, and some of the personal characteristics of the actors before we can correctly characterize an act as aggressive, hostile, or violent.

We might first ask, "what conditions must be met before we can correctly characterize an act as aggressive?" The act:

- 1) must have the effect of crimping another's range of behavior. Charging the net in tennis eliminates that option for your opponent--he must now lob or get the ball by you, whereas before he could do all these things plus deliver the ball at you. At a party, if someone 'hogs' the attentions of the guest of honor for possible self-advancement, one is acting aggressively (perhaps the guest is a gallery-owner and a young artist seeks to build enthusiasm for her work.). Obviously the more she has the guest's attention the less attention others can garner--their range of choice is reduced by her ploy. Then too, the guest himself has a smaller range of choice.

2) must advance the interest or social position of the actor. In a tennis game if one can with good strategy go to the net his chances of winning the point are considerably enhanced. Our female artist's ploy enhances her work's chances of being attended to and consequently sold (to be unnoticed is to have no chance at recognition or sales). In the case of an aggressive salesman the situation is the same--he makes rejection a personal affront. The customer must either buy and remain "friends" or "gracious" or refuse and gain an "enemy" or be "rude". The customer's option of declining to buy in a "civilized" manner (while physically removed from the salesman and given "time to think") is denied him. And the salesman generally stands to gain. After all, if he's played his cards right the customer who would have bought will anyway--only sooner. The customer who wouldn't have purchased may under the threat of making an enemy or being unfair. Similarly, an aggressive lover narrows the choices of his object of affections while he enhances his chance of sexual satisfaction.

3) must have rather strong or powerful social or personal effects relative to other acts in that social situation. Here we must note that a very small expenditure of energy may result in very powerful social effects (perhaps as small as too rapidly extending one's hand in a king's court) while a very great expenditure of energy may locate far enough from the social norm to be considered aggressive. (Far from every series of punches and movements in a boxing match is considered aggressive--on the contrary, a whole fight may feature not a single aggressive series). The difference between an aggressive tackle and an ordinary tackle in the game of football revolves around the tackler's exceeding the norm in terms of assertiveness and actively seeking out the encounter and 'laying it to' the man he tackles. On the street while shopping any sort of tackle would be considered

an aggressive act. The same would be true of any blow or any series of punches while one was making amorous advances to his date.

4) the actor must be the initiator of the interaction. No matter how vigorous one's defense before another's aggression, one's act or series of acts is defensive even if it meets the above three criteria. Thus a boxer might attempt to withdraw from an aggressive onslaught of his opponent--no matter how vigorously he made his retreat his actions would not be labeled aggressive even though his action 1) reduced his opponent's range of behavior, 2) advanced his own cause, and 3) had a decided effect on his opponent. He simply was not aggressing by such behavior, he did not initiate the series.

Further,

5) all of the above strictures can be tempered by the status of the actor. The president of the United States' 'hogging' of a guest would not be considered aggressive even if he thereby sought to advance his own interests--the president has enough social status to not be subject to the same rules as others. The status may be transitory and still result in the same dampening effect--the honored guest of the party would have a difficult time being verbally aggressive since it is expected that he will be the center of attention (he would also have to go some to be rude, likewise for the president). But put high status people with their peers and the situation reverts to normal (for instance, at a big-four conference, the president could be aggressive, or rude, and when the party is over the honored guest loses his invulnerability). There are other statuses that confer partial exemption. The village idiot, or a young child, or an animal may do some act that if performed by an adult would be considered aggressive, yet, in their case it will be categorized differently (I don't suppose we could ever call a 6-month-old rude no matter how many conversations he interrupted with his crying). Thus, kings and children share relative exemption to the usual use of terminology.

Lastly,

6) correct use of the term aggressive, as with all other terms, is relative to the culture in which it is to be applied. Anthropologists have enumerated countless instances of customs or styles of life that would include acts that would be labeled aggressive in our culture but would be quite usual in another. Margaret Mead has told of a tribe which engages in such vigorous sexual foreplay that we would probably call it highly aggressive, yet, since it is normative in their culture, it most certainly would not be considered aggressive by them. Obviously, many psychologists have talked as though aggression implies hostility or even that the two terms are synonymous. Could it be possible that something has been deleted in the exposition of the use of the term aggression? Perhaps, but aggression does not invariably accompany hostility nor vice versa. Often, of course, both concepts are needed to adequately describe an act. Let's return to boxing for an example. Even though the participants are attempting to harm each other not a single punch is necessarily an instance of aggression, nor are all boxers considered aggressive--either as a general trait or in the ring. Further, since the ring is their place of business, often times no hostility toward their opponents is involved. Probably we would only suspect hostility if the rules were violated--such as hitting an opponent who was down or hitting after the bell. And even in these cases it would be possible for no hostility to be involved. On the other hand, one could do many hostile acts against somebody else without ever having been aggressive or having performed an aggressive act (though in an international diplomacy sense of the word one might have aggressed against the other person). You might casually scratch an enemy's car, or spit on his lawn, or tell one of his children a lie, or give him misinformation or any number of things directed against him, without being aggressive nor having performed a single aggressive behavior. On the other

hand, if you knew that Jones got especially 'up tight' about people spitting on his lawn then your spitting would not only be hostile but also aggressive. Likewise, if a person were very wealthy it is possible that he would consider the destruction of one of his many cars but a minor annoyance--hence hostile, but not aggressively so. Perhaps the analysis will become clearer if we look at the characteristics of a hostile act.

An instance of hostile behavior is one that meets all of the following three criteria:

1) the person involved must have reason to believe that the other person or persons will be displeased by it. Since one man's meat may be another's poison there is some variability here. The comely young British miss who whipped masturbating cabinet members while dressed in panties and boots did injure them physically, but since they liked it, what she did was not a series of hostile acts. On the other hand, most people would find it unpleasant (the whipping that is), and unless she knew the victim liked the whole bit the act would be hostile, damn aggressive, and violent to boot. Conveniently, most people agree that many acts are unpleasant (liked being knifed, or having the air let out of your tires) and when we see someone doing this sort of thing we suspect hostility is afoot. But before we can say for sure, we must know whether the perpetrator believed the victim would find the act unpleasant if he knew he was being victimized. The 'if he knew he was being victimized' is necessary because sometimes we find ourselves able to do hostile things against a person without his ever knowing. We may, for instance, damage his reputation, or lie to him about something important to him when there is no possibility of his discovering our duplicity. In these cases our behaviors are correctly called hostile even though the person against whom they are directed is unaware of them.

If a person does something that causes displeasure, yet did not know it would (as often happens to new members of social groups who don't know the 'ropes' and offend due to ignorance of appropriate behavior) then he is obviously exempt from recrimination. The next time, however, he is expected to know better.

2) The person involved must want to displease the person annoyed. If the person behind the deed, no matter how violent, meant to do something else but mistakenly caused displeasure, the act was not hostile. The automobile has ushered many such cases to our attention. The person driving the car meant to go to the store, didn't see the pedestrian, and struck him by accident. Although the driver may have incurred some degree of social responsibility by driving, he is not guilty of an act of hostility (which would get him 20 years to life in most states).

Social guilt or responsibility hinges in all cases on intent. Often intent is inferred from "motive" (a socially intelligible reason). If we find someone accused of a crime who had no reason to do it, we cannot reasonably convict him. Even though the injuries are the same, if one resulted from an intentional act and the other from a mistake, the social consequences are quite different.

3) The person involved must have possessed the skills necessary for the act. A person would not be convicted of landing a one-man helicopter on a victim if the person did not know how to fly it. Since so many acts require complex skills, animals and children are often not even considered as possible suspects in acts of hostile aggression or violence. It is not enough to know that landing a helicopter on top of another will probably injure him, nor even to want it to happen, one must also know how to do it to perpetrate the act. And, of course, one must have the capacity to do the deed--if you knew how to

fly a helicopter 2 months ago, but subsequently lost your arms in an accident-- besides not needing sleeves you wouldn't need an alibi.

Hostile-aggressive acts can only be committed against persons. You cannot aggress against a tree or a car (you may get 'mad' at them; that is, you may act against them in a way analogous to how you would act against a person you were mad at, but as you well know or others will inform you, it's 'silly' to be really mad at the thing--after all, it's not to blame. If a person lets the air out of your tires you have reason to be mad--and at him. If you drive over nails with the same result no one in his right mind would be mad at the nails (though perhaps at the damn fool who put them there).

Violent acts always involve a considerable expenditure of energy. The consequences of violent acts almost always involve physical hurt or destruction and/or a considerable expenditure of energy. Thus storms which are violent are usually powerful and usually involve physical destruction. Acts that are violent such as a violent murder not only have severe consequences but also inform of severe physical damage. When we say that Joe violently attacked Sue, we know that he did a hostile act, that was aggressive and, of course, violent. When we hear that Jane was the victim of a violent sexual attack we know not only that the act was hostile and aggressive but also that she probably bled a bit. She could have been 'just' raped, and, virginity aside, would probably not have bled or have gotten roughed up.

Our linguistic system, then, allows for three levels or degrees of hostile behavior. A person can commit a hostile act, an aggressively hostile act, or a violently hostile act. But not all violent acts are hostile (you can make violent love) nor are all aggressive acts hostile. Figure 1 illustrates the possible relationships between these conceptual entities. You will notice that although

Insert Figure 1. About Here

it is possible for a behavior to be aggressive and violent yet not hostile (as a virulent interruption into a conversation) or hostile and aggressive but not violent (as spuelching an underling at a party), there does not seem to be room for an act that is hostile and violent without its being aggressive also.

Only persons can commit hostile-aggressive acts, the reason being that only persons can act at all. No matter what a car did to a bridge it hit, it would be nonsensical to speak of the car's behavior, or to characterize the collision as a violent or aggressive act. Our linguistic system is by its very nature separated into two major divisions--concepts dealing with the physical world and concepts dealing with persons (we appear to be indebted to Peter G. Ossorio, 1966, for a complete explication of this notion). This linguistic dualism allows us to talk about the reactions or forces or processes of physical objects or about the wants or needs or acts of persons, but there is no way to sensibly substitute either conceptual system, or any part of either system, for the other. We can't sensibly contend that atoms want to move, or are interested in something, or behave. Similarly we cannot think of people as not responsible for their behavior (if a man drives a car from New York to Los Angeles he would have a hard time convincing us he didn't know how to drive--a cloud making the same trip, though, would not be suspected of any skill). Before we step on a rat-runner's tail let us hasten to add that animals (but not plants) are treated as persons within the linguistic system and also behave.

And so where have our labors carried us? Obviously, the point most germane to our study is that one cannot 'just by looking' confidently tell whether a given act or series of acts is aggressive or hostile or both. We must know a

considerable amount of information before we can adequately and correctly characterize a person's behavior. If we were to take a number of children and show them a film that incorporated a large amount of hostile aggression between people (perhaps a fight scene or two) and then left the room. And if through a secret window we found them kicking each other's playthings or getting into arguments and fights more frequently than a similarly-treated group that watched a film about how flowers grow, what would we be watching? We certainly would have difficulty convincing ourselves, or anyone else for that matter, that we were watching violence or aggression in the full sense of either word, much less that we had proved something thereby. If we similarly showed a group of children a film which featured actors who always went about with their hands in their pockets and then found that they, more frequently than the children who watched the flower-growing bit, put their hands in their pockets when we left them, what would we be watching? We would have a difficult time convincing anyone that we had induced a desire for the children to warm their hands or a "need" to put their hands in their pockets. And when we do things like these, and make grand claims about our findings--and as a profession we've done both--ought we to wonder why our efforts are considered trivial and our theories specious?

A Comparison of Naturalistic Versus Laboratory Findings. Bryan and Schwartz (1970) in the most recent review of the literature conclude that it ". . . seems quite clear that models are presented in films are capable of evoking a wide range of response, . . . , from aggression to courage and self-sacrifice." ". . . thus providing support for the assumption that laboratory findings pertaining to modeling phenomena will be generalizable to a variety of naturalistic settings." A most interesting appraisal, for the question immediately springs to mind, "which findings?" In the Hicks (1965) study, involving "aggression toward an inflated doll" (1), the children who were shown models "aggressing" against the doll,

"aggressed" against the doll far more than the controls who didn't "aggress" at all! Are we to take this experiment as demonstrating that children who are not exposed to models will never "aggress" against inflated dolls? A "finding" that just about no one would treat seriously for we know that children often buffet dolls. If we generalize as Bryan & Schwartz do, then conceivably this study demonstrates that children who are never provided models for aggression will never aggress! The Bandura, Ross, and Ross (1963) effort does not indicate whether every single experimental child "aggressed against the Bobo doll", but it would be rather strange if children provided with the pacity of materials to play with didn't "aggress". Clearly these and similar experiments depend for the generalizability upon the misuse of the concept "aggression" (see the first section of the discussion above). Without this misuse, their experiments are but rather trivial demonstrations that children will often do, or try to do, what they see others doing. The characteristic of "playing fast and loose" with our linguistic system is not confined to the misuse of the concept "aggression". In the Midlarsky & Bryan (1967) study, when children, who were encouraged by an experimenter that expressed joy and/or hugged them, did not pull a lever that would get them some M & Ms, their behavior was characterized as "a self-sacrificing response". Since others have most capably assailed the intellectual sophistry and inherent triviality of such social psychological experiments (Chapanis, 1967; Ossorio & Davis, 1969) we will refer the reader to their labors.

The most distressing aspect of such experiments is that many psychologists ask society to treat them most seriously, and as generalizable to situations in-general ("[t]he results of the present study provide strong evidence that exposure to filmed aggression heightens aggressive reactions in children" [Bandura, Ross, & Ross, 1963]). The results of a study featuring a questionable use of the concept of aggression, performed upon 96 children's play with a Bobo doll, hardly

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constitutes "strong evidence". An experimental situation is one situation. It is already known that what a person will do, or how he reacts in one situation, bears no necessary relationship to his behavior in other situations. Many behaviors are situation-specific. To find out how children will react to a given input "in-general", we must sample their reactions in a variety of situations. The lab-situation simply does not constitute an adequate sample of situations-in-general. When we talk about aggressive-responses-in-general, we must sample not only situations but aggressive responses. Such comments are, or should be, truisms to professionals trained in the heritage of Brunswik's insistence on representative design.

In the present experiment, we were not primarily interested in contributing evidence toward the argument of whether "violent-aggressive-hostile models generally tend to elicit similar behaviors from the viewers". Rather we have provided information that bears on only one, albeit practical, situation, namely "does the viewing of violent-aggressive-hostile models on home TV tend to elicit similar and/or pathological behaviors at home and/or at school?" It will be noted that we tested in the very situation we hoped to generalize to. Our investigation constitutes only one limited test of the first, and more general proposition. But our study provides information that is relevant, competent, and materially related to the question that faces our society. That it does not enable a final answer is evident. Yet because the evidence it provides bears directly and necessarily upon this particular social problem, at some point, after a number similar studies performed in a number of different locations upon different grades of children and different parents and teachers, a decision that would smack of judiciousness could be made. The same can almost never be said for laboratory findings. Laboratory findings may or may not apply, because the laboratory is, after all, one real human situation. Probably laboratory

findings will be eventually found to apply more frequently than they do not. But it is improbable in the extreme that many real social psychological questions will be solved in the lab. Further, we regard it as improbably that psychologists will ever discover what, if any, relationship laboratory-results-in-general bear to social-questions-in-general. Our opinion aside, let us at least be honest as a profession and admit that we do not today know how to translate social-psychological laboratory results into truths for application to society, even if some among us believe that "someday we might". Since we know that we cannot answer the question of the effects of TV violence in the lab, let us, by all means, not contend that we can. Those who do so contend, risk not only personal embarrassment, but constitute a real threat to the credibility of psychologists-in-general.

Relevance of Our Study to the Social Issue of TV Violence. The relevance of our study to the current social issue of the amount of hostile-aggressive-violence on the TV screen is not certain. We must emphasize that this was one test of the possible effects. This test took place in one community, with one modest sample of kindergarteners, 8 teachers, and all in one slice of time. Parents appear to have reasonably diligent in monitoring what their children watched on TV at home, but there was no control over the commercials, at least one of which featured a bloody brawl between two boxers, and ending with a knockout. We also had no control over the TV programs children might have seen at their neighbor's or elsewhere. A judicious estimate of amount of control would suggest that about 75% of the TV viewing of each child was "controlled". Thus each experimental group received about 75% "correct" TV and 25% ? Unlike the results gotten in the laboratory, in all experimental conditions, most children appear not to have changed. In all experimental conditions, almost as large a minority of children changed against the "copy-cat" model as changed toward it. However, in harmony

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with the way most investigators have construed the results of their laboratory experiments, more children changed toward the "copy-cat" than toward the "fluid" model. We sampled only kindergarteners, who are only quasi-persons. Whether the same effect would appear in a 3-week study with older children is an empirical issue.

TV constitutes only one source of the many aggressive and/or hostile and/or violent models present in our culture. It is conceivable that our manipulations generally had no effect because the members of our society are already at the upper limit of violent-aggressive-hostile behaviors.

Examining our data as they pertain to the validity of the "copy-cat" and "fluid" models, if we regard all changes in individual children's behavior as due to the "influence" of one of these two models, at most, the experimental groups experienced 120 changes per the $254 \times 3 + 129 = 891$ child-weeks in harmony with the "copy-cat" and 107 in harmony with the "fluid" model. Thus, 13.5% of the child-changes were toward the copy-cat versus 12.0% toward the fluid model. During the same period, 39 changes were recorded for the control group's $29 \times 4 = 116$ child-weeks, or a "normal" rate of change of about 33.6%. The experimental children as-a-whole had a rate of 25.5%. It would not appear injudicious to consider the total contribution of the fluid model as error, and to subtract this error from the amount of change attributable to the copy-cat model. This would leave us with $13.5 - 12.0 = 1.5\%$, or less than 2% of the changes associated with the copy-cat model. A miniscule and uncertain effect for the three-week period. By controlling 3 weeks of in-home viewing, we affected about 1% of each child's life. Since these children were about 5-years-old, they had "watched" TV for about 250 weeks in their life-times. We can probably consider the first 2 years' viewing as "unseen" from the standpoint of providing

models of aggression or hostility. If the "effect" we apparently uncovered is psychologically additive, and the "control" of about 1% of TV viewing results in about a 1% or 2% swing toward behavior that is more frequently violent-hostile-aggressive, then it is conceivable that a difference of between 100% to 200% would be found between 5 year old children subjected to a TV diet of pacific programming versus a diet of violent programming. Persons in our society are usually not subjected to "pure" violent or "pure" pacific programming, but if we can extrapolate directly from our results, it is conceivable that the typical young adult engages in about twice as much violent-hostile-aggressive behavior as would be expected if violent TV programming were not available. This is, of course, quite speculative, but the question is of such importance, and so eminently amenable to empirical verification or falsification, that more research along these lines would be most useful.

If we sound uncertain, it is because we are. More work will have to be performed to enable a reasonably judicious decision. Since social policy is usually made in the absence of most relevant information, yet must be made, it should be noted that our results tend to weigh in the following directions: a) most children's at-home and at-school behavior is not affected by exposure to violent-aggressive-hostile interpersonal relationships on TV; and, b) it appears that the minority of children whose behavior is affected tend to copy the models to which they have been exposed rather than evidencing "release from inward tensions".

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Table 1
TV Program "Diet" for the 3 Week Manipulation Period

Regularly Scheduled Programs	Movies	Total Number per Week
"Pacific"		
Week 1 864	42	906
Week 2 864	25	889
Week 3 864	30	894
"Violent"		
Week 1 159	76	235
Week 2 159	92	251
Week 3 159	81	240

Table 2
Reported TV Programs Watched by Each Experimental Group

group		week 1	week 2	week 3
"violent"	N	50	46	47
	Md	25.5	15	20.1
	Range	0-118	0-109	0-116
"violent-passive"	N	51	39	34
	Md	21	30	30.6
	Range	0-106	0-139	0-104
"passive-violent"	N	44	41	44
	Md	42	18	18
	Range	0-112	0-46	0-52
"passive"	N	55	37	31
	Md	43	39	45
	Range	0-119	0-120	0-104

Table 3
In-Class Behavior: Children Who Changed

group	week 2	week 3	week 4	week 5	week 4 vs. week 5
solid violent	12+/5-	9+/9-	9+/8-	5+/10-	6+/11-
violent-passive	8+/12-	6+/12-	7+/10-	10+/11-	
passive-violent	6+/10-	5+/8-	5+/9-	6+/10-	
solid passive	5+/7-	8+/9-	8+/8-	9+/8-	7+/7-
control	5+/3-	8+/2-	6+/2-	10+/13-	

+ the child was more violent

- the child was less violent



Week 3 (second manipulation week)

Control 25	7	10	103	.097	18	1	3	86	.035
Violent 30	6	10	138	.0725	36	5	5	168	.0298
V-P 34	11	17	166	.102	30	1	3	133	.0226
P-V 31	7	9	150	.0600	30	1	1	139	.0072
Paci-29 fic	7	16	137	.117	34	3	3	161	.0186

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Week 4 (third manipulation week)

Control 25	4	6	107	.056	18	2	5	77	.065
Violent 30	8	10	125	.074	37	4	6	158	.038
V-P 34	10	18	156	.115	30	0	0	142	
P-V 31	8	11	146	.0753	30	1	1	139	.0072
Paci-29 fic	6	13	133	.0477	34	3	4	153	.0261

Week 5 (Control or base week)

Code	25	5	7	30	.078	18	4	6	68	.0685
Vic- lent	30	4	4	102	.0382	36	2	5	136	.0368
N-P	34	10	15	124	.121	30	3	3	114	.0263
P-V	31	5	8	120	.0667	30	2	3	117	.0256
Paci- fic	29	6	12	118	.102	34	2	2	131	.0513

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Table 5
 First Three Weeks' Data for the "Straight Violent" and "Violent-Pacific" Groups Combined
 and "Straight Pacific" and "Pacific-Violent" Groups Combined

		Boys				Girls				
group	n	actors	acts	#S days in sch	acts/S/ day	n	actors	acts	#S days in sch	acts/S/ day
Week 1										
Violent	64	19	33	306	.108	66	8	9	290	.0311
Pacific	60	17	32	289	.1105	64	6	6	307	.0195
V - P = -.0025										
Week 2										
Violent	64	14	29	239	.1210	66	10	13	248	.0525
Pacific	60	13	21	230	.10913	64	5	6	241	.0276
V - P = +.0297										
Week 3										
Violent	64	17	27	304	.0890	66	6	8	301	.0267
Pacific	60	14	25	287	.0872	64	4	4	300	.0133
V - P = +.0018										



Table 6

Parental Report of Behavioral Change

"straight violent" N = 66

	Name	Sex	Scored
Week 2 nightmares	BM	M	+1
was once sympathetic to TV villains, now wants them killed	TT	M *	
more aggressive	MT	F *	+2
behaving better	OE	F	-1
acts bolder	RC	M *	+1
more active	CJ	M *	+1
less active	HJ	M	-1
<hr/>			
Week 2 more aggressive	KL	F	+2
more aggressive	SL	M	+2
nightmares	BL	F	+1
aggressed against doll	PK	F	
more aggressive	LD	M	+2
cries more, nightmares, whinny	JB	F	+2
bolder	RC	M *	+1
restless, sleeps poorly	DK	F	+2
more violent with other kids	JJ	F	+2
more aggressive, nightmares, argumentative	SK	F *	+4
more aggressive	JM	F	+2
more active	CJ	M *	+1
less violent	CC	M	-2
<hr/>			
Week 4 more violent	HA	M	+2
more violent	WA	F	+2
louder	MA	M	+1
hostile, aggressive, playfully hits	TT	M *	+3
more aggressive	MT	F *	+2
fight with brother, never did before	ET	F	+2
bolder	RC	M *	+1
nightmares	SK	F *	+1
much more violent	CJ	M *	+3

All $\sum s \bar{X} = 39/66 = 592$ $SD = 1.41, \bar{X}_{SD} = .175$

Group 2 -- violent then passive N = 64

Week 2 quieter verbally	JL - F -1
more aggressive	GR - M +2
more aggressive	BA - M +2
more active	CJ - M * +1
more aggressive	MA - M +2
fight more, much meaner	LE - F +3
calmer	JB - M -1

Week 3 afraid of dark	KS - F +1
more aggressive	ZM - M +2
wilder	VG - M +1
more aggressive	SE - F * +2
calmer	JB - M -1

Week 4 much more violent -- karate chops to all	SS - M +3
quieter	SD - M -1
more aggressive	GR - M +2
less violent	SR - M -2
clinging	CJ - M * +1
nicer, sweeter	SE - M * -1
more aggressive	NP - F +2

All $\bar{S}_s \bar{X} = 20/64 = .313$



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Group 3 -- passive then violent N = 61

Week 2 less aggressive, quieter
calmer, less rowdier
sleeps better now

KK - F -3
PT - M * -1
FK - F -1

Week 3 more aggressive
more friendly with other children
more aggressive
quieter
transitory imitiveness -- violent after violent,
passive after passive
younger kids seem more affected by TV -- fighting
more

WA - F +2
CT - M
TL - M +2
HK - M -1
PT - M *
CR - F +2

Week 4 more violent -- kicking

DJ - M +2

$$\text{All } \underline{Ss} \bar{X} = 2/61 = .0328$$

Group 4 - solid passive TV programming N = 63

Week 2 more active	TJ - F * +1
more aggressive	AF - M * +2
more aggressive	LA - F +2
less aggressive	TD - F * -2
more aggressive	MG - F +2
less aggressive	BT - M * -2
more active	GJ - M * +1
more violent, with fights	BC - M * +3

Week 3 more aggressive	TD - F * +2
more violent	MG - F * +2
more violent - aggressive	BC - M * +2
less violent	BT - M * -2
less rowdy	GJ - M * -1
less aggression, quieter	OJ - F * -3
more aggressive	EL - M * +2

Week 4 more violent	AJ - F +2
wilder	LG - M +1
less of a tomboy, more subdued	TJ - F * -1
more aggressive	AF - M +2
less aggressive, quieter	SD - F -3
less aggressive, quieter	OJ - F * -3
less aggressive	MG - M -2
more aggressive	EL - M * +2

All $\bar{S}_s \bar{X} = 9/63 = .143$ SD = 1.58; $\bar{X}_{SD} = .201$

Table 7
Seventh Week Parental Report of Overall Change in Children's Behavior

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group	n	mean	S.D.	number who changed
straight violent	66	.348	1.01	13
violent-pacific	64	.250	1.085	18
pacific-violent	61	.279	.85	16
straight pacific	63	.0317	.89	12

Parental Report of Changes & Expectations of Change During the Experiment

Subject	Straight Violent (N=66)		Expectations
	Changes		
KL-F	+2	more aggressive	none
PC-M	+3	more aggressive-asserts	none
HS-F	+3	self more more aggressive-noisier	none
AD-M	+3	louder-more aggressive	expected unspecified change
MA-M	-1	became quieter	expected him to be louder
BJ-M		none	expected him to be quieter
LD-M	+3	More aggressive and de- manding	none
TT-M		none	expected to be more aggressive
SL-M		none	expected to be quieter
ET-F	+3	more aggressive towards brother-hits back now	none
LE-M	+3	more aggressive and violent	expected unspecified change
BS-M	-1	not as wild and jumpy	none
SS-F	+3	more aggressive-fought more with brothers and sis-	none
SK-F		none	expected unspecified change
VR-M		none	hoped would become more aggressive
JM-F	-1	quieter	none
CS-M	+3	mean-wants to kick every- one-more aggressive towards everyone	none
DA-F	+1	edgy-nervous	none

Violent Pacific		(N=64)
S	Changes	Expectations
KS-F	+1 won't go to the bathroom at night	none
SD-F	none	expected a bit more aggressive
ZM-M	+2 more violent-been biting	expected to become less violent
SA-M	+2 fought with sister	expected unspecified change
.SS-M	+3 more aggressive-hit people with judo chops	none
BT-F	+2 more violent	none
JL-F	+2 more aggressive-full of pep	Expected him to become quieter
LE-F	+3 more aggressive towards brother	none
MD-M	none	expected to become more aggressive
VJ-M	/? fights more with sister	expected no change, Tv must have changed him
LV-F	-1 quieter	expected unspecified change
RJ-F	none	expected unspecified change
GR-M	-1 a little quieter	expected him quieter
NB-F	-1 quieter	expected to make her quieter
TD-M	-1 a little quieter	expected to make him quieter
HM-M	none	expected him more aggressive
BA-M	/? definitely more aggressive and dramatic	none
PG-M	-1 minds better	none
Ic-M	none	expected him more aggressive
KE-F	/? more violent, fights with brother	none
MK-F	-2 less aggressive	none
MA-M	/? more aggressive	none
SR-M	-2 less aggressive	expected unspecified change

Pacific Violent (N=61)

	Changes	Expectations
S		
MN-M	+1 talks back more	none
TS-F	+3 talks back more, more aggressive	none
PB-F	+1 frightened of many newly noticed objects	expected unspecified change
BS-M	+2 more aggressive	none
DJ-M	+1 isolated cases of more aggressive behavior	none
CT-M	+1 noisier	none
SS-M	+1 less violent-doesn't fight as much as used to	expected to become quieter
SS-F	+1 a little crankier	none
HE-F	none	expected to become more aggressive
DL-F	none	expected unspecified change
HK-M	+1 A little more uncontrol-able while watching violent television	none
MT-F	none	
CR-F	+3 more violent-shoving-pushing-screaming	
NDM-M	+1 more violent when watching violent television	
FK-F	-1 slept better during non-violent	
	+1 sleep fitful when she watches violent T.V.	
BD-M	+1 more hateful	
MR-F	+2 now hits back	
RC-F	none	
BC-F	+2 a little more aggressive-speaks out	

Straight Pacific (N=63)

	Changes	Expectations
S		
SL-M	-3 less aggressive-easier to get along with	none
MF-F	+1 more talkative	expected to be a lot noisier
EC-F	-1 quieter	none
JV-M	none	expected unspecified change
TJ-F	-2 less aggressive	expected less aggressive
AF-M	+3 more violent-screaming-uncontrollable	none
JA-M	+1 more talkative	none
LA-F	none	expected transitory violence
EB-F	none	expected unspecified change
SD-F	-1 quieter	none
BC-M	+3 more unruly-fought with brother	none
LS-F	-1 more cooperative	none
BT-M	-2 less aggressive	none
DK-F	none	expected unspecified change
GJ-M	+1 rowdier	none
OJ-M	none	expected a violent change
LE-M	+3 talks back-hits little brother	none

Figure 1

Interrelationships of the Concepts Aggressive, Hostile, and Violent

