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CONCEPTUAL DETERMINANTS OF INFLUENCIBILITY¹

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University of Colorado

Boulder, Colorado

June, 1963

Technical Report No. 5

Contract Nonr 1147(07)

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1. This study was supported by the Group Psychology Branch, Office of Naval Research, under Contract Nonr 1147(07) with the University of Colorado. Reproduction of this study in whole or part is permitted for any purpose of the United States Government.
2. Thanks are extended to ONR for its support and to Foster Cline, Jerry Felknor and Thomas Schmitz for their help in carrying out the experiment.

ABSTRACT

Representatives of each of the four nodal systems of conceptual functioning or levels of abstractness posited by Harvey, Hunt and Schroder (1961) made judgments of two sets of stimuli under conditions aimed at producing differential dependence on external cues. One set of stimuli consisted of 12 pairs of dots between which Ss judged the distance; first, in the presence of a falsely calibrated but authentic appearing ruler; and then in the absence of the ruler but with knowledge of the judgments of the two other members of a temporary triad. Judgments in the latter condition were made under either a set of instructions that made no reference to conformity or a set that represented the study as one in conformity. The second set of stimuli consisted of 16 slides of varying content and clarity which Ss identified following exposure to a pre-recorded narration which described the content of each slide in a very general way. The content of nine of the more ambiguous slides was incorrectly described while that of the seven remaining slides was correctly depicted. The narration accompanying projection of the slides was attributed either to a high authority or to a low authority source.

System 3 Ss were found to be the most influenced, System 4 Ss the least influenced and System 1 Ss next to the least influenced in judgments of dots with the ruler present, in judgments of dots in the triad when no reference was made to conformity and in identification of the slides with the low authority source. Reference to conformity and involvement of formal authority resulted in System 2 Ss being the least influenced while introduction of authority cues resulted in System 1 Ss being the most influenced of the four conceptual systems.

Among the most important of the organismic factors with which a stimulus interacts in producing a particular outcome are the recipient's interpretive schemata or concepts through which the input is filtered, transmuted into personal relevance and, knowingly or unknowingly, assigned its psychological significance. Variation in these conceptual yardsticks or filters may result in the same event or impingement being interpreted and responded to differently, even oppositely, by different individuals. This means that the same experimental treatment might "pull" very different perceptions, emotions, and responses from conceptually different subjects; or to pull similar cognitions and responses from conceptually varied recipients different external treatments would be necessary.

In the present study individuals varying in conceptual makeup were subjected to a series of experimental manipulations calculated to elicit different responses from the varyingly constituted participants. More specifically, representatives of the four nodal conceptual systems posited by Harvey, Hunt and Schroder (1961) were exposed to experimental variations that were expected to "pull" differential yielding to or reliance upon external cues and social influence. According to the theory of Harvey, et al., representatives of these four conceptual systems vary not only in terms of concreteness-abstractness, as a function of the developmental stage they have attained, but they also vary in terms of the cues or guidelines on which they tend to rely in cognizing and reacting to given classes of stimulus events or situations.

System 1 individuals, the least differentiated and integrated, the most concrete, of the four conceptual systems treated by Harvey, et al., are viewed as relying heavily on the assertions and cues from authority and other institutional representatives in their interpretations of and response to the world. In the absence of guidelines from authority,

such persons seem, however, to be less influenced by external cues, including non-authority social ones, than many other persons, such as representatives of System 3 described below (Harvey, 1963a). It appears, however, that the lower dependency of System 1 Ss on non-authority cues is more the consequence of insensitivity due to conceptual closedness and simplicity than of the kind of independence that accompanies the self autonomy of a highly differentiated and integrated individual, such as a System 4 person depicted below (Harvey, 1963c).

System 2 representatives, at the next level of abstractness above System 1 persons, according to Harvey, et al., are negatively dependent on authority edicts and cues. Owing to a developmental history that has resulted in strong distrust of authority, System 2 individuals are presumed to be motivated to reject, rebel against, and to avoid dependency on the same cues and referent points that are actively sought and relied on by System 1 individuals.

Representatives of System 3, the next to highest level of abstractness treated by Harvey, et al., are viewed as being more person oriented and being more concerned with friendship, mutual dependency, acceptance and being liked. Being less suspicious than individuals from either System 1 or 2, and less differentiated and integrated (and hence less independent) than System 4, System 3 individuals tend to be more acceptant of a wider range of external cues, including opinions from other persons, than persons of the other conceptual systems. Preliminary evidence indicates that individuals behaving in accordance with System 3 functioning are particularly susceptible to majority opinion and tend, in the face of conflicting social inputs, to move toward a compromise position with greater readiness than Ss from the other systems (Harvey, et al., 1961).

Individuals representing System 4 functioning, the highest level of abstractness dealt with by Harvey, et al., are more differentiated and integrated in their conceptual schemata and, as a consequence, are more information oriented, more open and sensitive to minimal cues in their environment but at the same time are more reliant upon their own opinions, perceptions as valid criteria for decision and courses of action than are persons of the other conceptual systems (Harvey, 1963c). Faced with new or deviant inputs, System 4 individuals are capable of letting them into their system, of examining and entertaining them and of accepting or rejecting them in terms of consonance with their own standards. Such individuals are neither indiscriminant yielders to or invariant rebels against definitions and prescriptions emanating from authority.

In this study two general sets of stimuli were manipulated in the different treatments aimed at eliciting differential dependence of the conceptually varied persons on external cues in making their judgments and reaching decisions.

One set of stimuli consisted of 12 pairs of dots, in different contexts, between which Ss judged the distance under two conditions: (1) In the presence of a falsely calibrated but authentic appearing ruler but without interpersonal communication and influence, and (2) then in the absence of the ruler but with knowledge of the judgments of the two other persons of a three-person group. The latter variation was carried out under either a set of instructions that made no reference to conformity or a set that specifically represented the experiment as one in conformity and independence of judgments.

The second set of stimuli consisted of 16 slides of varying content and clarity which Ss were to identify following exposure to a pre-recorded

narration which described the subject of each slide in a very general way. The content of nine of the more ambiguous slides was incorrectly depicted while that of the other seven slides was correctly described. The narration accompanying projection of the slides was identified to the Ss as having been made by either a presumed high authority source, a professor of psychology interested in the slides as experimental stimuli, or by a low authority source, an undergraduate student interested in photography.

It was hypothesized that:

1. In reliance on, or influence by, the falsely calibrated ruler
 - A. System 3 Ss will be the most influenced.
 - B. System 4 Ss will be the least influenced.
 - C. System 1 Ss will be next to the least influenced.
2. In response to the presence of the ruler
 - A. System 1 Ss, more than Ss of each of the other systems, will try to exclude the ruler from their vision while viewing the dots.
 - B. System 4 Ss, although being least influenced by the ruler, will not try to exclude it from their vision as much as System 1 Ss.
 - C. System 3 Ss will knowingly rely upon the ruler in making their estimates more than Ss from each of the other systems.
3. The degree of social influence on judgments of the distance between the dots under the instructions that made no reference to conformity
 - A. Will be greatest for System 3 Ss.
 - B. Will be least for System 4 Ss.
 - C. Will be next to least for System 1 Ss.

4. The degree of social influence on judgments of the distance between the dots under the instructions that referred to conformity

A. Will be less for all systems than under the instructions that did not mention conformity.

B. The decrease in consensus or influence under the instructions referring to conformity will be greatest for System 2 Ss, the individuals assumed to be highest in negative independence.

5. The number of incorrect descriptions accepted in identification of the slides under the low authority condition

A. Will be greatest for System 3 Ss.

B. Will be least for System 4 Ss.

C. Will be next to least for System 1 Ss.

6. The number of incorrect descriptions accepted in identification of the slides under the high authority condition

A. Will be greatest for System 1 Ss.

B. Will be least for System 2 Ss.

Confirmation of these hypotheses would further support the theory of conceptual functioning proposed by Harvey, et al. (1961) as well as contributing to further clarification of the interactive effects of dispositional and situational variables on judgment and decision making.

Method

Measure of Conceptual Systems

Individuals were classified as representing predominantly one of the four conceptual systems in terms of their responses on the This I Believe (TIB) Test devised by the present author as a specific measure of abstractness and conceptual systems. This test, found by the author

and his students in several studies to have high predictive and construct validity (Harvey, 1963c), requires S to indicate his beliefs about a number of socially and personally significant concept referents by completing in two or three sentences the phrase: "This I believe about _____," the blank being replaced by one of the following: friendship, the American way of life, guilt, marriage, myself, religion, sin, majority opinion, people and compromise. The concept referents, one to a page, are, along with questions of subject identification, presented in a small booklet under the title "Opinion Survey." The front page instructs S:

In the following pages you will be asked to write your opinions about several topics. You will be timed on each topic at a pace that will make it necessary for you to work rapidly.

You must write on the topics in the order of their appearance. Wait to turn each page until the experimenter gives you the signal (every two minutes). And once you have left a page, do not turn back to it.

Please do not open this booklet until you are instructed to begin.

To omit a detailed discussion of the rationale underlying the categorizing of a S as a primary representative of a given conceptual system, suffice it to indicate that a S is classified as representing predominantly System 1 if his responses to the concept referents in the TIB booklet manifest such characteristics as: high absolutism of assertions with a minimum of qualifications and contingencies; high positive dependence on, or cathexis with, institutional or formal authority; high frequency of platitudes or normative statements; and high ethnocentrism or strong assertions of American superiority. Individuals scored as representing System 1 functioning also score high on the F Scale.

System 2 representatives display a high degree of negativism, distrust of institutions and authority and a strong tendency toward autonomy and avoidance of dependency on most of the cues which serve as positive

guidelines for the System 1 individual. These individuals tend also to score fairly low on the F Scale.

Individuals are categorized as expressing System 3 functioning if, in addition to viewing the world in a fairly positive glow, they write less absolutistically about systems of social control, either positively or negatively, and tend instead to extol the merits of people and to stress the importance of friendship and mutual dependency. These individuals score higher on the F Scale than do System 2 Ss but lower than System 1 individuals.

Subjects are categorized as representing System 4 functioning if their responses to the TIB referents indicate: a high degree of novelty and appropriateness; independence without negativism; high relativism and contingency of thought; and the general usage of multidimensional rather than unidimensional interpretive schemata. These individuals score lowest on the F Scale, but not markedly lower than System 2 representatives.

Some of the clearer and more representative differences among representatives of the four systems in their responses to the TIB referents are presented in Table 1.

Table 1 about here

In categorizing a S into a particular conceptual system responses to all of the TIB referents are considered in totality and one overall score assigned instead of each response to each referent being scored separately and an additive numerical value taken to represent the conceptual system. While this more global approach violates certain precepts in test and measurement theory, as well as lacking mathematical precision, we have found it to produce a higher reliability and validity than single item analyses because a context or yardstick is provided against

Table 1

Typical Sentence Completions of Representatives of the Four Conceptual Stages

Referent	Stage 1	Stage 2	Stage 3	Stage 4
TIB The American way of life	...should be followed by all cultures everywhere	...is conducive to bigotry	...fosters closeness with our fellow man	...contributes to individuality and creativity
	...is the only sensible way of living	...fosters greediness and ultra-materialism	...is built on interpersonal respect and loyalty	...is characterized by diversity and challenge
Friendship	Friends should be chosen only from among one's equals	It is not even safe to trust your best friend	Without friends life would be meaningless	My most rewarding friendships are with persons different from myself
	Really close friendships are between persons of similar interests	Friends are often out to get you also	Friends are more important to me than anything else	Friends are wonderful but one must not sell one's self to gain them
Guilt	...is a feeling that results from evil acts	Institutions try to engender guilt to force conformity	...is a violation of personal trust	The feeling of guilt generally results from violation to one's own standards
	...results from violation of God's laws	...is a social fiction	...is hurting another person	Hopefully society will be able to substitute understanding for guilt as a deterrent to antisocial acts
Marriage	...is a divine institution for the glorification of God	...means loss of freedom	...is sharing of intimacies	...allows two people to commonly explore their world and grow in it

Table 1 (continued)

	...is a sacred bond which ties two people inseparably	...is the biggest joke of our times	...creates mutual dependency	to be successful, marriage must allow for independence together with interdependence
Myself	I was put on earth for a purpose	Most people, including myself, are parasites	I like to help persons solve their problems	I find disorder enjoyably exciting
	I feel incapable of deciding what should be done with my life	I feel smothered by the shackles of society	I need to be liked	I love to explore strange foods and places
People	...are essentially helpless	...are basically animals	...are great	...as a whole like new things
	The masses need to be told what to do	...will resort to anything to get what they want	...everywhere aspire to decency	...of differing beliefs are a thing of immense interest and education
Religion	Dependence on God is the answer to the world's ills	...abolishes people's progress	Friendship gives more meaning to my life than does religion	...has often inspired aesthetic creations
	Man is nothing without divine help	...only helps people who need a crutch	The practical part of religion is its emphasis on love of fellow man	...as a philosophy of life fosters self insight
Sin	...is breaking the commandments of God	...is a manufactured tool of religions	...is the deceiving of another person	...is primarily a culture definition
	Man is imately sinful	There is no such thing as sin	...is readily forgiven and forgotten by a friend	...if it exists at all, is a transgression against oneself

Table 1 (continued)

Majority opinion	...is the basis of our democracy	...is sterile and reactionary	...is more likely to be right than is the minority	...is the conservative and not always the most efficient machinery for decision
	...protects against extreme minorities	...generally abuses the minority groups	...provides a framework for judging right and wrong	...even though often unwielding still allows for novelty to emerge from diverse opinions
Compromise	...is a poor substitute for power	...is usually a one-way affair, with the weaker giving in to the stronger	...prevents conflicts between persons and between parties	...often is a process through which extremes can be merged into a product superior to either
	...it is sinful to compromise your personal values	...a person compromises only when he doesn't have enough power to get his own way	...allows us to keep out friends and maintain our values	...doesn't insure the best solution; a middle-of-the-road approach may be an excuse for inactivity and fear of commitment

which a single response can better be interpreted. Many of the responses, if treated singly and in isolation, might be scored as representing almost any one of the conceptual systems. When such an item is interpreted against the comparative backdrop of all the other responses, however, its meaning is made clearer and it can be coded more accurately.

Despite the apparent subjectivism involved in this scoring procedure, the interjudge reliability for three and four trained judges for the four systems depicted above has been .90 or above for seven different samples of subjects (Harvey, 1963b). In all of our studies so far, including the present one, only those Ss have been used who were unanimously agreed on by three or more independent judges as representing a particular system. The use of the "pure" or "extreme" design has meant necessarily the elimination of Ss who did not fit the theoretical categories with which we have so far been concerned.

Procedure

Judgment of Distance Between Dots.

Twelve pairs of dots, each pair on a separate 35 mm. slide, were used as stimuli. The twelve pairs of dots, each pair arranged to be projected on a horizontal plane, were enclosed in four different borders or contexts, with three variations of between-dot distance in each context. The surrounding contexts were rectangles, regular ellipses and irregular ellipses. The three distances between the pairs of dots when projected on the screen from a fixed distance were 6, 14 and 19 inches. Variation of context allowed repeated presentation of a few dots of common distance thus permitting enough trials on each distance to establish some judgmental stability with a minimum of boredom. Context differences were noted in the instructions, which represented the study to Ss as an experiment in

perception under varied physical and social contexts; but the effects of context differences, if any, were not analyzed.

The distance between the projected dots were judged as Ss sat in temporary three-persons groups, each group at a separate table. Judgments were first made with the ruler present but without intragroup communication and influence. Distances between dots were then estimated with the ruler absent but with intragroup communication and knowledge of the estimates of the other two members of the group.

Ruler Present. The ruler was especially prepared for this study. While actually 15 inches long, it was calibrated and marked as a typical 12-inch ruler. To prevent detection of its unusual length, the ruler was made somewhat wider than the usual 12-inch measure. Pretesting had earlier indicated that unless suspicion was deliberately aroused, the falsity of the ruler went unnoticed.

A clear picture of the ruler, on a 35 mm. slide, was, by means of a second projector, projected on the screen immediately below each pair of dots, in sufficient proximity that both dots and ruler would be included easily in the same visual span unless S deliberately separated them. The projector was set at such a distance from the screen that the projected image of the ruler was identical in size to the distorted original. To add to the apparent validity of the procedure, E adjusted the projector while a volunteer S held the ruler up against its projected image on the screen to insure perfect match between them. Each pair of dots was projected for 10 secs., while the picture of the fictitious ruler, clear in its numbered calibrations, was continuously projected throughout the presentation of all 12 slides. Each S recorded each of his own judgments without communication with the other members of his group and without knowledge of their estimates.

Subjects then were passed out the following question which they completed:

"In making your estimate of the distance between the dots how did you react to the ruler? (a) Tried not to look at it or to use it; (b) looked at it and consciously used it; (c) looked at it but did not consciously use it."

Intra-group Communication. Following completion of the single item questionnaire, Ss were instructed:

You will now be asked to judge the distance between pairs of dots without the benefit of the ruler. When each slide is projected, first write down your own estimate of the distance between the pair of dots without consulting or comparing judgments with the other two persons of your group. However, as soon as all three members of your group have recorded their estimates let the other two members see your estimate and you see theirs. After seeing the others' estimates, you may wish for some reason to change your's or you may elect to keep your's as it is. Should you wish to change your estimate, do so by not erasing your first estimate but recording your revised estimate on the second score sheet (numbered for 12 estimates as was the first one) in the appropriate space.

This terminated the instructions for judging dots for approximately half of the Ss while the other half were given instructions aimed at sensitizing them in respect to conformity: "This is an experiment in conformity and independence, to see how much you are influenced by others' judgments of distance or rely on your own estimates. Hence you are entirely free to change your estimates or to leave them unchanged after seeing those of the other two members of your group.

In this variation each pair of dots was projected for 15 secs.

Identification of Slides

Subjects identified in writing the contents of 16 35 mm. slides projected on a screen one at a time. The slides were selected from a larger number of pictures that had been copied from magazines and framed in such a way that the clarity of the contents varied from high to low. Each slide was accompanied by a travelogue-like description presented by tape recording. The contents of nine of the more ambiguous slides (Pictures 4, 6, 7, 8, 10, 11, 13, 15 and 16, Appendix 1) were

erroneously depicted in the recording while the other seven (pictures 1, 2, 3, 5, 9, 12 and 14, Appendix 1) were correctly represented. The descriptions of the pictures included in the tape were not specific, being designed instead only to imply a particular content. For example, the first slide, which pictured well known scenes from Venice, was correctly represented in the tape in the following way: "Often a foreign city with its different architecture and mode of travel provides interesting subject matter for photographers." Slide number 10, which pictured a drop of water hanging from a faucet, was described incorrectly in this way: "Glass and its varied forms often provide photographers with interesting still-lives. Study this slide carefully. Women perhaps more than men should recognize this, for many forms of glass often set on their dressers." The general hints rather than specific descriptions were employed to prevent the influence communication from clashing too sharply with Ss' perceptions and destroying the credibility of the source completely.

At the beginning of this part of the experiment, carried out in the same lab sections of Introductory Psychology as the preceding parts, Ss were advised by E, who was also their lab instructor.

This is an experiment in audio-visual perception. You will be shown a series of slides which will be described in narrative form over the tape recorder while they are being shown. You will see the slide for 25 secs; then you will have 25 secs. to write specifically what you have just seen. Another group will be shown the same slides without the narration. It is expected that your group, with the aid of the narration, will be more accurate in ascertaining the subject of each picture. In order that each one of you makes his own judgments independently, please do not communicate with other students during this experiment.

At this point Ss were erroneously instructed that the narrator of the tape describing the slides was either an undergraduate student interested in photography (low authority condition) or a professor of psychology interested in the slides as experimental stimuli (high authority condition). The tape recorder was then turned on. Pre-recorded

clicks sounded every 25 secs. signaling E when it was time to take the slide off the screen to allow for writing and when it was time to change to the next slide. The narration about a particular picture occurred during the 25 secs. it was exposed, before Ss recorded their identification of it. After a sample picture, described on the tape as such, the 16 stimulus slides were projected, nine accompanied by incorrect suggestions of content and seven accompanied by accurate suggestions of subject matter. (The 16 pictures and accompanying narration are presented in Appendices 1 and 2.)

Subjects

While more than 200 Introductory Psychology students participated in the study, the data were analyzed for only 128 Ss, those that had been classified previously as representing fairly clearly one of the four conceptual systems. Of these 128 Ss, 44 were from System 1, 30 from System 2, 32 from System 3 and 20 from System 4. Males and females were equally represented in Systems 1 and 4; in System 2 there were more males (18) than females (12) while in System 3 there were more females (20) than males (12).

All of the 120 experimental Ss first judged the distance between the dots with the distorted ruler present and social influence absent. They then estimated the distance between the same pairs of dots under the condition of intragroup communication, half from each system with the instructions that made no reference to conformity and the other half with the instructions that depicted the study as one in conformity and independence. To offset possible carry-over effects from the different instructions relating to judging the dots to identification of the slides, half of the Ss from each system under each set of dot judging instructions identified the slides under the low status condition and the other half under the

high status condition.

Results

Sex Differences

Unlike most experiments on conformity, the present study failed to find any sex differences on any of the dependent variables. This may mean that classification of Ss according to conceptual systems eliminated sex differences in independence of judgments. In any case, the lack of difference allows for the results of both sexes to be combined for a given condition.

Judgments of Distance Between Dots

Ruler Present

Reliance upon the falsely calibrated ruler would have resulted in an underestimation of the distance between the dots owing to the ruler's being longer (by three inches) than its indicated 12 inches.

The mean number of inches by which the distance between each pair of dots was underestimated was: System 1, 2.43; System 2, 2.65; System 3, 3.30; and System 4, 1.88. In accordance with the hypotheses, t-tests showed System 3 Ss to have been significantly more influenced than Ss from the other three systems and System 4 individuals to have been significantly less influenced than Ss of the other systems (P 's $< .05$ or $< .01$). There was no significant differences between Systems 1 and 2, indicating that while in a sense the ruler might be conceived of as an authoritative cue, it was not perceived by Ss as relating to personal or institutional authority. Hence no differential rejection of it or acquiescence to it was manifested by the System 1 and System 2 representatives.

Reactions to the Presence of the Ruler

Important differences in the bases of the differential dependence on the ruler by Ss of the four systems may be inferred from responses to the question that asked Ss to indicate their reaction to the ruler. The percentage of Ss who reported trying to exclude the ruler from vision while forming estimates of the distance between the dots were: System 1, 61; System 2, 43; System 3, 32; and System 4, 16. At the same time, 28% of System 1 Ss, 36% of System 2 Ss, 58% of System 3 Ss, and 11% of System 4 Ss indicated that they deliberately relied on the ruler in estimating the distance between the dots. Eleven per cent of System 1, 21% of System 2, 10% of System 3 and 73% of System 4 Ss reported that they looked at the ruler while making their estimates but had not knowingly based their judgments on it. In confirmation of the hypotheses, Chi-square tests based on the frequencies underlying the reported percentages showed that significantly more System 1 Ss than representatives of each of the other systems tried to exclude the ruler from their vision while estimating distance; significantly more System 3 Ss than Ss from each of the other systems knowingly depended on the ruler in making estimates; and significantly more System 4 Ss than Ss from each of the other systems neither tried to eliminate the ruler from their sight nor knowingly based their judgments upon it (P 's $<.05$ or $<.01$). Thus while System 1 individuals apparently minimized the influence of the ruler on their judgments by trying to keep their conceptual systems closed and consideration of the ruler out, System 4 persons allowed the concept of the ruler to enter their interpretive matrix but still were less influenced by it than were Ss from the other systems. System 1 functioning seemingly disposes toward warding off inputs as a defense against unwanted influence while

System 4 functioning permits inputs into the conceptual system without being strongly influenced by them.

Intragroup Communication, Without Reference to Conformity

The experimental concern in this condition is with the degree of consensus among the estimates of members of the temporary triads. This was determined by subtracting each S's post-communication estimate of each pair of dots from the mean of the pre-communication judgments of the same pair of dots by the other two members of the trio. The smaller this difference, the greater the degree of social, or intragroup influence. The average of this distance for each of the 12 pair of dots was: System 1, .81; System 2, .58; System 3, .35; and System 4, 1.75. In support of the hypotheses, t-tests showed that the degree of judgmental consensus or social influence was significantly greater for System 3 Ss than for the Ss of each of the other systems; was significantly less for System 4 Ss than for the Ss of each of the other systems; and was significantly greater for System 2 Ss than for System 1 individuals (P 's $< .05$).

Intragroup Communication, Reference to Conformity Instructions

The measure of social influence was the same as that for the condition in which no mention was made of conformity. The average judgmental deviation or agreement for each of the 12 pairs of dots under the instructions alluding to conformity was: System 1, 1.03; System 2, 2.07; System 3, .46 and System 4, 1.84. Hence the degree of agreement in this condition, as predicted, was less for all systems than it was in the condition in which conformity independence were not mentioned. Reference to conformity apparently aroused the attitudes toward independence, resulting in Ss of all systems agreeing less with the judgments of the other members of the triad. System 2 Ss were especially affected by mention of conformity, disagreeing significantly more with the estimates of their co-judges when

the instructions described the experiment as one in conformity than when the instructions make no reference to conformity.

Identification of the Slides

For both the low and high authority conditions the measure of influence was the number of slides each S identified in terms of the false depictions presented in the recorded narration.

Before comparing the systems on the number of erroneous descriptions accepted in identification of the pictures, it should be noted that the accuracy in identification of the seven correctly depicted slides was almost identical for the different conceptual systems and for the high and low authority conditions. In the low authority treatment System 1 Ss accepted the narrated description, or in some other way identified correctly, an average of 5.81 of the seven slides; System 2, an average of 5.82 slides; System 3, an average of 5.86 slides; and System 4 an average of 5.78 of the seven accurately depicted slides. In the high authority condition the average number of accurately narrated slides that were correctly identified was approximately 5.80 for all four conceptual systems. This lack of difference between systems and between the authority conditions in identification of the correctly depicted slides means that direct comparisons between the systems can be made of the number of false descriptions accepted by their representatives in identification of the slides.

Low Authority

The mean number of slides identified in terms of the erroneous descriptions attributed to the undergraduate student was: System 1, 6.66; System 2, 7.21; System 3, 7.38; and System 4, 5.50. Thus, in confirmation of the hypotheses, System 3 Ss accepted the highest number of incorrect descriptions, System 4 Ss accepted the lowest number and System 1 Ss accepted the next to lowest number. T-tests for all between-groups

comparisons were significant at the .05 level with the exception of the difference between Systems 2 and 3, System 3 Ss failing to be more significantly influenced than Ss from System 2.

High Authority

The relative order of acceptance of false depictions by representatives of the different conceptual systems was considerably different in the high authority condition than it was in the low authority treatment. The mean number of slides identified in terms of the incorrect depictions in the narration under the high authority condition was: System 1, 7.80; System 2, 5.46; System 3, 7.55; and System 4, 5.96.

Thus while System 1 Ss were next to the least influenced and System 2 Ss were the next to the most influenced when the descriptions of the slides were attributed to a person of low status, System 1 representatives became the most acceptant and System 2 Ss became the least acceptant of the erroneous descriptions when they were represented as having emanated from a source of high authority. In line with predictions, System 1 Ss accepted significantly fewer of the incorrect descriptions (P for resulting $t < .01$) when they were associated with a low authority source than when they were attributed to a person of high authority; the reverse was true for System 2 individuals. From these reversals it can be inferred that the involvement of formal authority produced opposite effects on System 1 and System 2 representatives, with the first group tending to rely upon and accept authority cues as guidelines for their perceptions and actions and the latter group tending to reject and rebel against the same cues. While Ss from Systems 1 and 2 were strongly affected by variation in the authority of the source of the narration, representatives of Systems 3 and 4 were affected but slightly, accepting only a negligibly higher number of false suggestions when they were made by high authority than when they were made by a source of low status.

Summary and Conclusions

Representatives of each of the four nodal systems of conceptual functioning or levels of abstractness posited by Harvey, et al (1961) made judgments of two sets of stimuli under conditions aimed at eliciting differential dependence on physical and social cues.

One set of stimuli consisted of 12 pairs of dots between which Ss judged the distance; first, in the presence of a falsely calibrated but authentic appearing ruler; and then in the absence of the ruler but with knowledge of the judgments of the two other Ss of a temporary triad. Judgments in the social context were made under either a set of instructions that made no reference to conformity or a set that specifically depicted the experiment as one in conformity and independence of judgments.

The second set of stimuli consisted of 16 slides of varying content and clarity which Ss identified following exposure to a pre-recorded narration which described the content of each slide in a very general way. The content of nine of the more ambiguous slides was incorrectly depicted while that of the other seven slides was correctly represented. The narration accompanying projection of the slides was attributed either to a high authority or to a low authority source.

In support of the hypotheses, it was found that:

1. In reliance on the distorted ruler, System 3 Ss were the most influenced, System 4 Ss were the least influenced and System 1 Ss were the next to least influenced of the four groups.
2. In reactions to their presence of the ruler, significantly more System 1 Ss than Ss of each of the other systems tried to exclude the ruler from their vision while estimating distance; significantly more System 3 Ss than Ss from each of the other systems knowingly depended on the ruler in making their estimates; and significantly more System 4 Ss than Ss from

each of the other systems neither tried to exclude the ruler from sight nor knowingly based their estimates upon it.

3. The degree of social influence on judgments of the distance between the dots under the instructions that made no reference to conformity was greatest for System 3, least for System 4 Ss and next to least for System 1 individuals.

4. The degree of social influence on judgments of distance between the dots under the instructions that alluded to conformity was less for all Ss than under the instructions that did not mention conformity, but the increase in judgmental deviation under the conformity instructions was greatest for System 2, the more negatively independent individuals.

5. The number of incorrect descriptions accepted in identification of the slides under the low authority condition was greatest for System 3 Ss, least for System 4 Ss and next to least for System 1 persons.

6. The number of incorrect descriptions accepted in identification of the slides under the high authority condition was greatest for System 1 Ss and least for System 2 individuals.

From these results some tentative conclusions may be drawn. Cues that did not pertain to formal authority were relied upon most by System 3 Ss and least by System 4 persons. However, the association of authority with the cues resulted in System 1 Ss becoming the most reliant on them and System 2 Ss becoming the most rejecting of them.

Reference to conformity also sensitized the System 2 individuals more than representatives of the other systems, toward independence and deviation from judgments of peers. At the same time, System 3 and System 4 Ss were only slightly affected both by the reference to conformity and by variation in the status of the source of the descriptions of the slides. In all conditions System 4 Ss exercised a high degree of independence in

judgments while System 3 Ss depended heavily on external cues in their judgments. Whether System 1 and System 2 individuals were independent or dependent in their judgments depended on the involvement of authority and deliberate sensitization to conformity. Further, in those conditions under which System 1 Ss are not as much influenced by external cues these individuals appear to achieve the independence of judgment by not allowing deviant inputs to enter their conceptual system, unlike System 4 persons who exercise independence of judgment without excluding inputs from their interpretive schemata.

References

- Harvey, O. J. Authoritarianism and conceptual functioning in varied conditions. Submitted to Journal of Personality 1963
- Harvey, O. J. Cognitive determinants of role playing. Technical Report No. 3, Contract Nonr 1147 (07), 1963 b.
- Harvey, O. J. System structure and adaptability (in preparation), 1963, c.

Appendix 1
Stimulus Pictures



SAMPLE



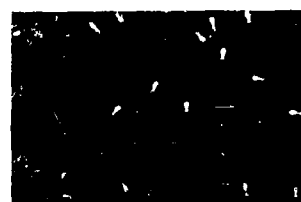
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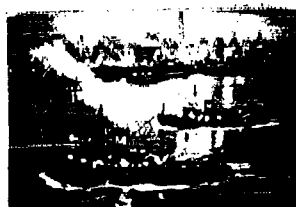
2



3



4



5



6



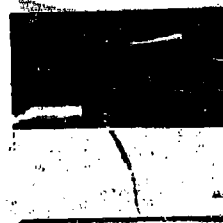
7



8



9



10



11



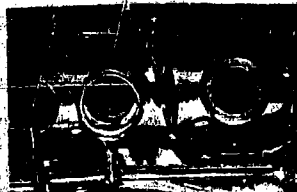
12



13



14



15



16

Appendix 2

Script of the Tape Recording

During the past fifty years photography has progressed at a very rapid rate. It is used as an art form and as an aid to science. It provides a creative outlet and is a tool of research.

You are about to see a series of sixteen photographs that have been especially chosen because they illustrate the versatility of this medium. Your task will be to write down on the sheet provided, specifically and exactly what you believe the subject of each photograph to be.

Now let's look at an example:

You will have a slide projected in front of you for twenty-five seconds, a slide such as this example. Now, I may say that babies and their world provide photographers with interesting subjects. I would tell you nothing more of the slide. It will be your job in the remaining twenty-five seconds, after the slide goes off the screen to state that this is a picture of a baby's milk bottle. In other words, I will speak generally of the picture and you must write specifically and exactly of it. Due to the nature of this study, it is important that there is no talking. Please take and give no hints to those about you concerning what you believe the slide subject to be.

Now the experiment will begin:

Here is slide number one. Often a foreign city with its different architecture and mode of travel provides interesting subject matter for photographers. (Hint: true. Actual subject: Venice, Italy.)

Here is slide two. Along with foreign people, we may see different ways of life and different activities. We spend our leisure time at a baseball game, while the people of other lands enjoy their own native games and national sports. (Hint: true. Actual subject: bullfight.)

Here is slide three. Recently astro-photography has been of immeasurable value to science. This picture was taken through the Mount Wilson reflector telescope in 1953. (Hint: true. Actual subject: Moon's surface.)

Now we jump from astro- or macro-photography to micro-photography. This picture was taken through a microscope over in the Hale biology building. As a further hint, I will tell you that it is a slide of some type of animal matter. (Hint: false. Actual subject: Milkweed seeds.)

Slide five. Interesting photographs may be taken at night as well as during the day. Night scenes such as this often provide themes for very striking photographs. (Hint: true. Actual subject: tugboats.)

This sixth slide demonstrates that the wide open spaces as well as congested cities provide beautiful landscapes. Pictures such as this may be taken in several parts of the world as dusk throws its varying shadows. (Hint: false. Actual subject: navel of nude.)

Slide seven. America's weapons have been widely photographed by the news media. This is the forward end or nose of a weapon that is used beneath the sea (Hint: false. Actual subject: tip of ballpoint pen.)

This eighth slide demonstrates that America's weapon systems actually consist of more than missiles. These silent sentries guard our western shore, tracking all planes within a thousand mile radius. (Hint: false. Actual subject: oil wells)

This picture was taken in a convent. Some recognize the subject immediately and others do not. (Hint: true. Actual subject: viewing nun's cap from above.)

Slide ten. Glass and its varied forms often provide photographers with interesting still-lives. Study this slide carefully. Girls perhaps more than boys should recognize this, for many varied forms of glass often sit on their dressers. (Hint: false. Actual subject: A drop of water hanging from a faucet.)

This picture was taken during an operation. Perhaps here, as with a previous slide, anatomy students have an advantage. (Hint: false. Actual subject: green pepper.)

This twelfth slide was taken during a concert in Philadelphia two years ago. (Hint: true. Actual subject: tuba player.)

Thirteen. Here is something else every musician should recognize, even though the lines have been broken and the score deleted. (Hint: false. Actual subject: Park benches on cobblestone.)

Well, this should provide no great challenge, and I'm going to give no further hints. (Hint: true. Actual subject: atomic blast.)

Fifteen. This, too, has to do with war, and indeed this picture might have been taken amid the rockets' red glare. (Hint: false. Actual subject: clarinet.)

This sixteenth and last picture is of a famous building that stands in Washington D.C. Many of you have probably actually been inside of it and have read the famous inscriptions engraved on the walls and ceiling. (Hint: false. Actual subject: The Parthenon on the Acropolis, Athens, Greece.)