

reconstruct the routine, in order to discover the secret, his memory may not provide him with sufficient information for reconstruction, and the secret can stay intact. If the deceiver is successful in casting the spectator's attention only on selected items, and the spectator's memory contains only what the deceiver intended, then the spectator will remember having seen a miracle, for he remembers perceiving no movement or procedure which could have made the magical effect possible.

As the spectator gives the magic trick more thought, he will affect the contents of his memory still further. Either he will recall a moment or movement which explains the events for him, or he becomes more convinced that he has witnessed magic, because his memory contains no information to the contrary. Due to the fallibility of memory, magicians often hear reports of tricks they have done, which could never have been done by them. The more reports of legendary magic tricks, the better the magician has become at manipulating attention and memory.

### PRAGMATIC IMPLICATIONS

A pragmatic implication is a message which leads the receiver to expect and construe a message that is neither expressly stated nor logically implied by the statement itself. Very often, a message does imply something which is not in the actual wording. "He dealt one of the cards onto the table" implies that there were more cards present. "He hammered the nail into the wall" implies logically that a hammer was present, even though the verb hammering could apply to other tools.

Take this statement for example—"The card was returned, and the magician was able to name the chosen card." The spectator might assume that the magician *did in fact name the card*, but no such statement was made. It only stated that he was capable of doing so. Receivers later remember hearing

what they inferred from the message. A pragmatic implication, therefore, is an instance where a source suggests through his message that something is the case. The receiver, due to lack of attention, assumes that the message *said* what it only *implied*. The implication does not need to be drawn from statements, it can be made from gestures and movements.

A magician takes a pack of cards and offers one to a spectator. The spectator takes one, notes it, and returns it to the pack. The magician then takes the card on top of the pack and shows it to the spectator, turns it face down again, and deals it onto the table. The spectator remarks that the card shown by the magician is incorrect. The magician then directs the spectator to name his card. He does, and then discovers it to be the card face down on the table. The spectator is shocked, and hasn't a clue as to how the incorrect card was changed for the correct one. The spectator was deceived because he made a pragmatic implication. Because he was shown the incorrect card, and a card was then dealt onto the table, the spectator assumed that the card he saw and the one placed on the table were one and the same. The magician's motions suggested that the cards were one and the same, but in fact, the incorrect card was shown, and the correct one dealt face down onto the table. The spectator remembers having *seen the incorrect card being dealt onto the table*. This memory is false. The receiver has made an illogical implication, based on the non-verbal suggestion of the performer.

Much of magic could not exist without the receivers being counted on to make pragmatic implications. Unlike the closure principle, which is an attempt to make sense of an incomplete set of facts, the pragmatic implication works by allowing the receiver to "jump to conclusions." Another example of this phenomenon can be seen when playing with a dog. A stick is thrown into the bushes and the dog chases after it. He brings the stick back, and the person throws it for him again. Over and over the dog is thrown the stick and he

chases it. Finally, the person pretends to throw the stick, but really hides it behind his back. The dog, seeing the throwing motion, assumes that the stick will be thrown. He has made a pragmatic implication, which is what motivates him to run for the stick. It is only after the dog has run across the lawn that he realizes he's been deceived.

The spectator watching a magic trick behaves in much the same way. Once a fact has been suggested, either verbally or nonverbally, the spectator makes a pragmatic implication. He is unaware of this process, believing that what has been suggested is fact. Later, when he discovers that he's been deceived, he has a problem discovering where his perceptions failed him. Due to this factor, in part, humans can be given poor evidence, and yet can come to a conclusion based upon it. If it is suggested by the deceiver that something will constitute good evidence, and then that evidence is suggested, the receiver may believe by implication that his demand has been satisfied.

Much controversy exists over the use of pragmatic implications by advertisers. Many complaints have been registered with the Federal Trade Commission over advertising that suggested certain facts. The advertisers argued that the facts were never stated, but it was obvious what the intent was.

Many times, these implications serve as the link which puts two ideas together. "The magician waved his hand and my card floated from the deck." The illogical implication is that the hand was responsible for the floating card. Often, magicians add furtive movements to their pockets, sleeves, or coat to give the spectators false implications concerning what they must have done to accomplish a given magical effect. In fact, these "clues" lead the spectators even further from the truth, by getting them to concentrate their attentions and imaginations on the wrong movements.

Memory, then, plays an important role in information processing. It provides the language references against which

new messages are compared. It provides the personal history which gives a frame of reference to new incoming messages, and furthermore, it provides the consciousness which considers each moment. The functions of memory are ongoing at all times during processing, and are influenced by attention which determines what will be entered. The storage of memory seems to work much like a library system, with various pieces of information becoming available through cues. These cues act as file cards, helping the individual to find needed information. Data is thrown into short-term memory for consideration by the long-term memory, and is collected from external sources as well. This blend of information is then fortified by mental processes which tend to add and subtract information, issuing a result which represents the facts with different degrees of accuracy.

Human memories, like human attention, are selective, and in time record the highlights of perceived stimuli. The deceiver attempts to engineer the highlights that will be processed, so that he may most effectively keep the intended receivers from the truth. The more fallable the receiver's memory, the less capable he will be of reconstructing what really took place. The deceiver attempts to use these principles to his advantage, and when they are applied correctly by the deceiver, and activated responsively by the receiver, deception has an increased chance of success.

## INFORMATION PROCESSING

The processing system is continually attempting to combine all levels of information into a combined, meaningful picture. Some processing proceeds from the bottom-up and others from the top-down (D. Norman, 1976).<sup>126</sup> Attention and pattern recognition operate along with memory (which serves to

create a frame of reference for the incoming information and its relevance).

Information processing is the end result of the functions of PERCEPTION, ATTENTION, and MEMORY. Therefore, information processing is both the end result of three other functions, and an ongoing process. Once the senses have provided perceptive input, the attention mechanism makes choices concerning what will be subjected to further processing. The memory is checked to provide an indication of value, and the information is entered into consciousness for consideration. Once in consciousness, the data is compared, associated, and integrated with other information contained in long-term memory. If the new data fits certain criteria, it is passed into long-term memory to help form the fabric of stored information.

#### DATA-DRIVEN OR BOTTOM-UP ANALYSIS

Bottom-up analysis refers to the cognitive process of interpreting externally generated signals. The principle flow of information (in this mode) being processed by the receiver is from a source existing outside of himself. It flows from an external source—who encodes the message, places it in a medium, and thereby transfers it to the receiver. The receiver decodes the message, and assigns meaning. The receiver is receptive to input from external sources including other people, the setting or environment, tactile experiences, etc. When data-driven analysis is taking place, the receiver is principally receiving messages from external sources.

#### CONCEPTUALLY DRIVEN OR TOP-DOWN ANALYSIS

Conceptually driven analysis refers to information being generated by the processor himself, as opposed to an external

<sup>25</sup> Donald Norman, *Memory and Attention: An Introduction to Human Information Processing*, (2nd. Ed.), New York: John Wiley and Sons, Inc., 1976, pp. 39-40.

source. An example of this activity would be a person "lost in his thoughts." Although the receiver may be perceiving external signals at the same time, the focus of his attention is on his own concepts. For this reason, we say, that processing is occurring from the top-down. The receiver stimulates this processing by formulating ideas and concepts, and generating new data by consulting long-term memory, which provides information for consideration.

In fact, most information processing is a combination of data driven and conceptually driven modes. The data which a receiver chooses to process changes considerably, depending upon the context he expects to be working in (J. A. Morton, 1970).<sup>[26]</sup>

Generally, a receiver comes to a situation with some expectations. The conceptually driven processing system is already in operation. The data is then perceived from external sources, and it is compared and evaluated to mesh with information in memory. As the receiver considers the new data, he is engaging conceptually driven processing again. The process is a back and forth, give and take procedure between signals generated from within and beyond the receiver.

The conceptually driven process accounts for the violation of logic during a magic performance. The magician knows that receivers assume that certain things are not possible. This assumption provides the needed premise on which magic demonstrations depend.

If a magician took two silver rings, and linked them together, it would be meaningless, as magic, unless he was violating an assumed premise that solid rings cannot be linked. The magician depends on the receivers to conceptually provide this missing premise. The magician finds it unnecessary to inform his audience that certain things are not possible.

A con man introducing a scheme to a victim might need

<sup>26</sup> J. A. Morton, "A Functional Model for Memory," In D. A. Norman (Ed.), *Models of Human Memory*, New York, Academic Press, 1970.

to inform him that he could benefit greatly from certain actions. He relies on the victims conceptually driven motivations to fuel the transaction.

### THE CLOSURE PRINCIPLE

When a receiver is attempting to construct a complete and meaningful picture from the stimulus he is processing, he sometimes misses necessary fragments of information, generally due to:

PERCEPTUAL INEFFICIENCY  
LAPSES IN ATTENTION STRENGTH  
WEAKNESSES IN THE FABRIC  
OF INFORMATION

In order to create a cognitively whole and satisfying picture, the receiver tends to subconsciously add bits of information to close the perceptual gaps. This process is known as the closure principle.

In the early days of television, it was deemed illegal by the Federal Communication Commission to show the killer, the instrument of death, and the victim, in the same camera shot. For this reason, the viewing audience would see the killer holding the gun, a picture of the victim, then possibly the sound of the gun, and finally they would see the victim fall. When questioned as to what they had seen, most viewers reported having seen the entire murder. Their minds had filled in the missing links to form a whole picture of the event. When receivers are given only part of what they are expecting to see, but they are given either a large enough portion, or enough information to infer the rest, then they tend to close the gap of information by filling in the missing details.

The magician's technique of simulation is based upon the closure principle. The performer can simulate an action, and can often rely on the audience to believe that they saw the real action. In addition, he can often claim that something was

enacted, during the process of a magical demonstration. Later, the audience will generally believe that they *saw* the action enacted. In fact, the magician merely suggested it.

During a mind reading demonstration, a magician has a spectator write a word on a piece of paper. The magician takes the paper back (once it's been folded by the spectator) and tears it into small pieces. He then burns the paper and later reveals what was written upon it. He suggests to the spectator before revealing the word that *they* folded, tore, and burned the paper. The spectators when reporting on the events of the trick, usually convey that they tore and burned the paper, even though it was the magician who did it. The desire, subconsciously, to make all of the actions consistent, promotes the closure principle. The more impressed the spectator is with a given trick, the more prone he will be to remove details which take away from the strength of the trick, and to add details which seem to make it all the more impossible (Study D-2).<sup>[27]</sup>

If the source is dynamic and persuasive, he can be more effective in suggesting to the victim that he include elements not actually perceived. The receiver will either fill in the missing information on his own, or can be prompted to do so by the source. Psychological experiments have been conducted showing that a number of witnesses testifying to having seen certain events, influence an uncertain witness, who then borrows their perceptions to fill in what he never perceived. Because he is more cognitively comfortable with a certain picture, he may come to believe that he witnessed the entire event.

Some experiments using confederates have convinced victims that they saw lights moving on a wall, when in fact the lights were perfectly still. The low self-esteem individual is particularly vulnerable to his memory being manipulated by the suggestions of others. Motivation for activating the

<sup>27</sup> Study D-3, Jason Randal, 1982. See Appendix.

closure principle is generally not consciously known. Sometimes, a person, knowing that he was not paying full attention, is receptive to reports of the event from others to fill in his own lack of information. Later, after the new information has been processed, he may deceive himself into believing that he actually perceived and attended to the entire event. Usually this deception occurs without conscious knowledge, but occasionally a receiver becomes aware that he is filling in the gaps.

## VARIABLES AFFECTING RECEIVER BEHAVIOR

Although there are numerous situational factors which affect a receiver's tendency to be persuaded and/or deceived, there exist a number of personality types that are understood to influence receiver behavior. Any given deceptive attempt can be affected by factors such as mood of the receiver, fatigue, momentary lapse in attention, or distraction. Take for example a young urban executive from Wall Street who has become lost on the New York subway system and finds himself in a ghetto neighborhood. He is approached by a man who offers him a watch at an unheard of low price. In another situation, the executive might become interested in the particular watch at an attractive price. The setting and circumstances, however, have altered his tendency to be persuaded. His attention is being consumed by very different concerns for safety, the direction home, and a late appointment.

In another case, an individual who is fatigued and just had an argument with a co-worker, would be less receptive to a persuasive effort than if the circumstances were different.

Excluding these situational factors, and instances such

as brainwashing where fatigue and pain are techniques of coercion, there are principle personality types which have been shown to correlate differently with persuasion. They are:

SELF-ESTEEM FACTORS  
ANXIETY AND INSECURITY  
MACHIAVELLIANISM  
AUTHORITARIANISM  
DOGMATISM  
EGO-DEFENSIVENESS

### SELF-ESTEEM

Self esteem is the measure of the receiver's opinion about himself. The higher the self-esteem, the more in control they will tend to be when receiving the source's message. High self-esteem individuals tend to be less defensive while responding to a persuader's message. A magician attempting to deceive a low self-esteem receiver, might be confronting a person who was overly concerned about being made a fool of. The defensiveness could cause the attentions of the receiver to be more concerned with protecting his image than with the deceiver's message. Since low self-esteem individuals often feel that their attributes are not sufficient, they tend to avoid situations which can potentially damage their esteem further. Their inability to discover the magician's methods can result in turning the blame toward themselves. They can potentially suffer more loss of esteem by pitting themselves against the magician and losing. These same individuals when victimized by a con man can turn on themselves more strongly than would a high self-esteem individual. A person of high esteem would retain his opinion of himself, and argue that the deceiver's tactics would have fooled anybody. He does not suffer loss of esteem for having been victimized, where the low-esteem individual would have one more example of failure to

strengthen his opinion.

Persuasion can be successful on both high and low self-esteem individuals depending upon the circumstances and the formulation of the message. Low self-esteem can work in the deceiver's favor, making suggestions more easily implanted than on a person of high esteem, and influence more strong from external sources (A. Cohen, 1964).<sup>[28]</sup>

In another case, the higher the esteem, the greater the susceptibility to persuasion (Nisbett, R., 1967).<sup>[29]</sup> It was observed that a positive correlation between persuasion and high esteem exists when the message contained a more complex, argumentative line of thought. The receiver, proud of his ability to understand and comprehend the complexity of a given message, was more prone to be persuaded by it. The low-esteem individual, feeling that he possibly hadn't fully understood the message, was not as willing to commit himself, and therefore his susceptibility was higher.

According to a study (Gullob and Dittes, 1965),<sup>[30]</sup> the effects of self-esteem on persuasability depend on the threat or complexity of the situation. However, he discovered a negative relationship between self-esteem and persuasability when clear messages were used, and a negative relationship when ambiguous messages were presented. This would tend to support the findings of Nisbett demonstrating that higher self-esteem is needed to deal with complex messages.

Another study by (P. Holtzman, 1970)<sup>[31]</sup> suggests that some individuals of low-esteem will be more receptive to per-

<sup>28</sup> A. Cohen, *Attitude Change and Social Influence*, New York: Basic Books, 1964.

<sup>29</sup> R. Nisbett, and A. Gordon, "Self-Esteem and Susceptibility to Social Influence," *Journal of Personality and Social Psychology*, 1967, 5, pp. 268-76.

<sup>30</sup> Gullob and Dittes, "Differential Effects of Manipulated Self-Esteem on Persuasability Depending on the Threat and Complexity of the Situation," *Journal of Personality and Social Psychology*, 1965, 2, pp. 195-201.

<sup>31</sup> P. Holtzman, *The Psychology of the Speakers' Audiences*, Glenview, Illinois: Scott Foresman, 1970.

suasion, if the persuasive source is an individual from whom they want acceptance. Due to a low self-esteem receiver's opinion of himself, and his need to be validated by others, he will tend to weigh, more heavily, the suggestive and persuasive messages of those from whom he wants attention.

An astute deceiver can take the perceived esteem of an individual into consideration when formulating his message. To reach a person of low esteem, the deceiver needs to keep the message clear, and present it in such a way as to be non-threatening to the receiver. The more threatened the receiver is made to feel, the more he will move away from the message. The more complex and demanding the message, the more he will avoid it.

A high self-esteem individual can also be approached by a nonthreatening message, though its challenging nature will not affect him in the same manner or to the same degree. Within the limits of the receiver's knowledge, he will appreciate a message that is challenging and responsive to his ability to discriminate.

If a low self-esteem receiver can be made to feel that a message is understandable, and that giving it attention will result in higher esteem, he is more likely to listen to it. For a magician, a low self-esteem individual can be brought to the stage and made an assistant. The new status will give the receiver bolstered esteem and make him more responsive to future attempts at deception.

## ANXIETY AND INSECURITY

Neurotically anxious individuals are generally unresponsive to messages, even highly persuasive ones. Strong fear appeals seems to have little impact as well, on neurotically anxious individuals (J. Nunnally, 1959).<sup>[32]</sup>

In another study by (I. Janis, 1953),<sup>[33]</sup> it was discovered that situational anxiety may work as a facilitator of reaction if the suggestion is relevant and hopeful. Secondly, insecure

individuals tend to endorse extreme positions and cling to fanatical orientations. Thirdly, the effective persuader must first identify the cause of the insecurity, and then proceed to relate to the individual in a way that increases his self-acceptance and self-worth.

Anxious and insecure receivers, therefore, share some of the same characteristics as those with low esteem. Due to fear, their attention is directed away from the message and more toward preservation of self. Strong fear appeals have little effect on such individuals since they are already in a self-induced state of fear, which has become chronic. The fear tactic being introduced from external sources is often not as powerful as the internal fear being generated by the receiver himself.

When a deceiver is attempting to present a message to a receiver who is not chronically anxious or insecure, a fear appeal can have more impact. If the fear appeal has been established, and a solution can be introduced to solve the dilemma, then the situational anxiety can be an effective persuasive tool.

Since normal receivers are not in a state of anxiety, any situational anxiety to which they are subjected would be an abnormal state. They would tend to look for avenues of relief. The source who could provide that avenue with his message could hope to be more persuasive than if the receiver had no such motivation for attending to his message.

Insecure individuals gravitate toward extreme positions since they seem to offer the only solution to their predicament. Since their normal situation is viewed as extreme, only extreme solutions would rationally alleviate the situation. If the deceiver can identify the source or cause of his victim's in-

<sup>32</sup> J. Nunnally, and H. Bogren, "Variables Concerning Willingness to Receive Communications on Mental Health," *Journal of Personality*, 1959, 27, pp. 38-46.

<sup>33</sup> I. Janis, and S. Feshback, "Effects of Fear-Arousing Communications," *Journal of Abnormal and Social Psychology*, 1953, 48, pp. 78-92.

security, then he can conceivably construct a message which offers relief.

A con man, for example, can entangle his victim in an intricate confidence game where the victim knows that he is breaking the law, but accepts the fact since he has so much to gain. When the con man needs the victim to make errors in judgment and hasty decisions, he can lead the victim to believe that authorities are "closing in." The victim, if convinced, will become anxious over the situation, and may respond by attempting to free himself of all involvement *at any cost*. He may give up much so that the authorities will not find him guilty of any wrongdoing, leaving his monies or other gains to his former "partners." The fear appeal, in this instance, acted to motivate behavior that otherwise wouldn't have occurred.

The deceiver can otherwise manipulate an anxious receiver by giving him cause to be less anxious. Exhibiting to the receiver that he is on the same side, and that the message will result in positive benefits and fear alleviation for the receiver. If the fear is chronic and self-perpetuated, the receiver may not respond, but if the fear is situational, the source's appeal may motivate the receiver to action.

## MACHIAVELLIANISM

Machiavellianism refers to an amoral manipulative attitude toward other individuals, combined with a cynical view of other people's motives and character (S. Gutterman, 1970).<sup>[34]</sup> The personality is of interest in the study of deception as it bears relationship to deceptive vulnerability. A number of studies have uncovered implications concerning the relationship between the machiavellian personality and susceptibility to persuasive influence, and the findings were as follows:

1) Subjects with high machiavellianism scores and low machiavellianism scores are equally persuaded by factual in-

<sup>34</sup> S. Guttermann, *The Machiavellians*, Lincoln, University of Nebraska Press, 1970.

formation and rational arguments.

2) Subjects with low machiavellianism scores are also persuaded by sheer social pressure.

3) Although low machiavellianism individuals seem to be more susceptible in live face to face interaction, they are also moved by written communications which purport to represent the beliefs or wishes of others (R. Christy, 1970).<sup>[35]</sup>

These personality types, then, are not trusting of others. They tend to resist being manipulated due to their tendency to manipulate others. They can be persuaded, however, by appealing to their desire to control, and by presenting a message which is rational and capable of withstanding scrutiny.

Individuals with low machiavellianism scores are less critical and controlling. Their desire to please works in the deceiver's favor as he leads them to believe that they will gain appreciation by being persuaded. Indications of low machiavellianism can be perceived by a source who looks for subjects who are eager to please, quick to agree with most statements, and obliging when asked to perform certain acts. The high machiavellianism individual will display the opposite traits, being cautious, defensive, and guarded.

### AUTHORITARIANISM

According to (T. Adorno, 1950),<sup>[36]</sup> there are nine basic traits which describe an authoritarian personality:

1) Conventionalism—doing things the way they are usually done.

2) Submission to authority—the willingness of an individual to submit to the wishes of others who have been defined as authorities.

3) Hostility toward those who violate social norms—de-

<sup>35</sup> R. Christie, and F. Geis, *Studies in Machiavellianism*. New York: Academic Press, 1970.

<sup>36</sup> T. Adorno, E. Frenkel-Brunswik, D. Levinson, and R. Sanford, *The Authoritarian Personality*, New York: Harper, 1950.

picts the inability of the subject to tolerate differences in behavior and attitude or other forms of deviance from the social norm.

4) Dislike of subjectivity—this trait outlines the subject's need for detachment and either a denial of his own feelings and/or lack of regard for the feelings of others.

5) Stereotyping—the need for the subject to place others in prearranged categories and to see people as types rather than as individuals.

6) Preoccupation with strength and power—the tendency to consider force as the primary tool in peacekeeping and to adhere to the "might is right" philosophy.

7) Cynicism—a basic distrust of others, and a pessimistic attitude concerning other people's actions and motives.

8) Projectivity—the tendency of the subject to transfer his own fears and behavior onto others, and afraid to recognize the same in himself.

9) Exaggerated concern with sexual behavior—this depicts the subject's tendency to perceive things in their most base terms, and to focus on immediate and instinctive reactions, rather than long-term rational consideration.

The key factor in the relationship between authoritarianism and persuasion is the subject's very high regard for authority figures, and his tendency to look condescendingly upon individuals he feels are less significant. Therefore, the authoritarian personality will be persuaded by those whom he feels are authorities and less persuaded than normal by a source with only standard credibility (H. Triandis, 1971).<sup>[37]</sup> In addition, persons who are not known as authoritarians, are persuaded largely by relevant arguments instead of perceived authority or acceptability of the source.

The thrust of these studies indicate that authoritarian personalities will respond more readily to persuaders who

<sup>37</sup> H. C. Triandis, *Attitude and Attitude Change*, New York: John Wiley and Sons, Inc., 1971.

have authority positions. They will most likely be more affected by status and prestige factors than other receivers. In addition, a source with a high measure of expertise will be strongly persuasive only if his area of expertise falls within the accepted value system of the receiver. If the source, even as an expert, advocates a position which is opposed to that of the receiver, the receiver may disregard the message, unless the source is also a known authority.

If a persuader or deceiver wants to effectively meet his objectives when dealing with an authoritarian personality, he needs to construct a message that will seem to coincide with the receiver's beliefs, and choose a presentation that will emphasize the prestige, status, and authority of the speaker. If the source can structure the message utilizing a (we-they) approach, he can side with the receiver, who may readily take up the spirit of the message. The receiver needs to have clear cut sides and know on which side the authority figure has thrown support, so that he may know on which side to align himself.

### DOGMATISM

Known as closed-mindedness, the findings relevant to persuasion were as follows:

1) The more dogmatic (M. Rokeach, 1960)<sup>[38]</sup> the individual, the greater the tendency to reject a motion of common ground or overlap between his belief system and disbelief system. This means that a dogmatic individual is less flexible and moves less easily from a known and accepted area to a new and unknown area.

2) The less dogmatic the individual, the greater the tendency to accept the motion of common ground.

3) The more dogmatic, the greater the tendency to view the advocacy of the disbelief system as a threat.

4) The more dogmatic, the greater the opinion change in

<sup>38</sup> M. Rokeach, *Open and Closed Mind*, New York: Basic Books, 1960.

response to the suggestion of a positive authority source.

The thrust of these findings is that the more close-minded a subject, the less the tendency to be persuaded, when the area is outside of the receiver's belief system. When the source is an authority figure, the tendency to advocate a new position is greater but is not certain.

Magicians attempting to deceive dogmatic individuals find that the subject will tend to explain and categorize magic effects according to preconceived notions. If the subject, for example, does not believe in ESP, they will be unable to suspend their disbelief concerning the subject to allow the mentalist to entertain them. Additionally, a subject who believes very strongly in ESP will not accept that some demonstrations are merely magic tricks, but will hold onto the belief that the psychic demonstration was purely legitimate.

Magicians who find a dogmatic orientation find it difficult to bring the receiver to either suspend disbelief or to accept the frame of reference upon which some magical effects rest. The best approach is to allow the spectator to believe that the trick is reinforcing their own belief system. Since attempting to pry the receiver from his ideas is a difficult undertaking, the persuader should construct a message to seem to coincide with the beliefs and attitudes of his audience.

### EGO-DEFENSIVENESS

In relation to the correlation between ego-defensiveness, the findings were as follows:

Moderately ego defensive individuals respond better to material that facilitates self understanding than to purely informational or material issues. Therefore, if a speaker wants to appeal to an individual who is ego-defensive, he must direct his message more toward the individual and his unique situation, and must stress outside concerns to a minimum. The thrust of the message should be directed toward the personal concerns of the receiver. His unique set of circumstances

should be discovered, and appealed to if a persuasive appeal is to be most effective.

The problem with all of the above strategies is the task of identifying the various personality types and catering to them individually. The astute persuader must address himself to the predominant personality type in a given audience, and can only afford to individualize his strategy when dealing with intimate groups or single persons.

## COGNITIVE DISSONANCE AND THE MAGICIAN

Magic presents to an audience an unusual situation. The spectators perceive the laws of nature, which they have come to accept, broken, altered, and under the control of a person before them. They are confronted, therefore, with a demonstration of the impossible, a series of events which go against all that they accepted as truth.

According to cognitive dissonance theory, people suffer dissonance (anxiety) when confronted with cognitions which are not consistent. When an imbalance exists between what the subject knows or has accepted to be true, and the new information confronting him, he will experience cognitive anxiety. According to the theory, people tend to avoid dissonance, in the same way that they tend to avoid any pain. Yet, if this is the case, why do people go to magic shows? Why are people drawn to a situation which would be predicted to produce dissonance?

During survey research, the following explanations surfaced:

Subjects are attracted to mild-anxiety situations such as horror movies, magic shows, and theme park rides because of

the excitement they create. As long as the choice was made by the receiver, and the situation is known to be temporary and nonthreatening, the mild anxiety produces excitement (both physiological and psychological), and the subject is attracted to the activity.

Subjects were attracted to magic because of the mental challenge and puzzle it represented. They felt that the demonstration of magic was only illusion and a challenge to their analytical abilities. They enjoyed attempts at discovering the methods in the same way that they enjoyed working mazes and puzzles.

Subjects were drawn to magic shows because it represents escape and fantasy. The subject is able to imagine, if even temporarily, that the bending of nature's laws are possible, and that human beings are capable of affecting their environment in radical ways. Magic seems to demonstrate that fast and effortless solutions are possible to complex problems.

Subjects enjoy the demonstration of skill that magic represents, just as they would enjoy watching an accomplished ice skater or gymnast. They appreciate the amount of work which they infer must have resulted in the performance. They understand that much of what they are witnessing could be accomplished by anybody with enough practice, and though they are not caught up in the fantasy, they are impressed by the skill and finesse.

### DISSONANCE REDUCTION PROCESS

Once a person is confronted with dissonant information, and has acknowledged it, it is predicted by dissonance theory that he will move away from the anxiety by one of the following methods:

- 1) Accept new information (B) and reject old information (A), therefore restoring balance.
- 2) Distort new information (B) to seem consistent with established belief (A).

3) Rationalize or qualify new information (B) to make it seem consistent with (A), possibly allowing it as an exception.

4) Reject the legitimacy of new information (B) and retain belief (A).

Subjects need to maintain a state of cognitive balance, and therefore must adjust their belief system to allow for new conflicting information. Festinger, in a 1964 study, discovered that the dissonance that exists after a decision has been made is a function of the inconsistent elements that were present during the decision process. This implies that the greater the internal conflict before the decision, the greater the dissonance afterward. Elements which are less inconsistent cause less dissonance and elements which are more conflicting cause more dissonance (L. Festinger, 1964).<sup>[39]</sup>

It can be inferred from this that the more impossible a magic demonstration, or the more it conflicts with established laws of human performance and natural law, the more dissonance it should cause.

Another aspect of Festinger's study was that after a decision has been made, subjects tended to seek out information that would reinforce their decision. In addition, they will tend to find their decision more attractive, and the alternatives less attractive, simply to solidify their choice.

Imagine a person who is considering purchasing an automobile. They must deal with issues such as style, performance, comfort, gas mileage, and cost. If the person hypothetically opts for an automobile which emphasizes performance and style, they will tend to move further from the considerations of economy and comfort. After purchasing the automobile, they will tend to notice the performance and style aspects, and tend to disregard lack of economy and comfort.

The dissonance reduction process actually begins to take place as soon as the subject anticipates cognitive anxiety. The

<sup>39</sup> L. Festinger, *Conflict, Decision, and Dissonance*, Stanford, Stanford University Press, 1964.

subject will either avoid the dissonant producing situation, or begin to modify his cognitions to perceive the dissonant information in a way which can be rectified. After a given behavior, subjects tend to modify their attitudes to justify or rationalize their actions (L. Festinger, 1957).<sup>[40]</sup>

In light of this dissonance, why, then, do people attend situations which bring about dissonant circumstances, and particularly, how do they relieve the dissonance associated with a magical performance?

### RELIEVING MAGIC RELATED ANXIETY

As would be expected, subjects tend to view magic demonstrations differently, and to deal with the discrepant information in various ways. The survey research revealed the following responses as typical: (Study D-3)<sup>[41]</sup>

Magic doesn't bother me because — The demonstration I saw was accomplished by trickery, and secret movements and props. I can imagine how the tricks could have been accomplished, given certain techniques and props.

I think it is real magic. Real magic is possible, and I believe that I am seeing the real thing.

I just like to enjoy the magic show. I don't concern myself with how the tricks are actually accomplished, and I don't care. I just want to be entertained.

There is a good explanation for everything. I just don't know what it is.

The orientations seem to fall into three categories:

1) People who are upset at their inability to decipher the workings of the particular tricks. They know that there is an explanation, and expect themselves to be able to logically arrive at it.

2) People who enjoy the magic, suspend their disbelief, and are not concerned with the workings of the illusions. They

<sup>40</sup> L. Festinger, *A Theory of Cognitive Dissonance*, Evanston, Row, Peterson, 1957.

<sup>41</sup> Study D-3, Jason Randal, 1982. See Appendix.

allow the magic to represent fantasy and do not take it seriously, or feel it as a challenge to their intellect or character.

3) People who believe that the magic demonstrations are real. They are not interested in how the trickery is accomplished, but are more interested in the performance of real magic, and are inquisitive as to procedures.

The most anxiety is experienced by persons who fall in the first category. Their dissonance stems from their knowledge that magic cannot be done, yet they perceived a magic demonstration. Since they know that what they witnessed is not real, and magic is not real, they theoretically should not have anxiety. The dissonance occurs when they contend that they should be able to perceive the method—and they cannot. In the same way, a person who believes they can solve a puzzle, and then finds it unsolvable, experiences anxiety. They relieve their anxiety by insisting that nobody could solve the puzzle, or that they could solve the puzzle given enough time, or they make an excuse for their inability by citing distractions or poor instructions. Since magic is much like a puzzle to some receivers, they cite the same kinds of reasons for being unable to discover the method.

They are attracted to magic because of the challenge, and due to its ability to excite their curiosity. The receivers who are most affected by dissonance are the ones who are ego-defensive. They feel that their inability to solve the mystery is a direct threat to their personal image. Even though nobody else can discover the method, they somehow feel that they are responsible for doing so. Their dissonance is relieved by expressing how good the magician is—"so of course I was fooled." If the magician was not believed to be particularly skillful (low expertness rating), then the receiver in category one feels even more anxiety (to have been fooled by a person with little expertise). These types of receivers would rather be deceived by a highly competent professional, than by a child, for example.

The dissonance experienced at a magic performance is

obviously not enough in most cases to keep spectators from seeing another one. Therefore, even though magic is a potentially dissonance producing situation, its level of anxiety is not enough to cause real problems.

High self-esteem individuals tend to appreciate magic more, and find it less of an affront to their character. They value their own attributes, and are comfortable with magicians exhibiting skills which they (the receivers) don't possess. Magicians are best received, according to interviews, at gatherings consisting of accomplished people. The more accomplished the audience, the less they have to lose by being deceived, and the less threatened they tend to feel. The more educated the audience, the more openminded they tend to be, and the more accepting of items of which they are not familiar.

People in group two do not tend to experience any significant level of dissonance. They come to the magic situation with the belief that they can be deceived and that their perceptions can be tricked. They do not believe that they should be able to uncover the workings of magical effects by logic or observation. The magic show that they see verifies that belief, and to insure the consistency, they relax their critical mind so that they are less apt to uncover the machinery of the effects. If this group is prepared to suspend their disbelief, and enjoy the magic without being critical, then they are disappointed when the magician's expertise is not sufficient to deceive them. Where people in group one are glad when the magician exposes a trick accidentally (giving them a clue to his method), the people in group two are disappointed. They want to imagine that the magic is real, during the performance. Any disruption in this fantasy makes the suspension of disbelief difficult, and they do not enjoy themselves to the fullest.

People in group three feel that at least some magic is real. They are most attracted to magic that purports to be real demonstrations of magic, than to magic which they feel is simply trickery. People in this group are disappointed when

magic which they believed to be real is exposed as fake. They often need to feel that magic is real, because they are attracted to quick solutions, and they wish to believe that there is more to life than our normal orientation would dictate. In addition, they would like to believe that they themselves are potentially capable of super-human feats, and that these aspirations are obtainable. People in this category tend to be strong in their beliefs, and are capable of denying trickery as an alternative method. If a performer is particularly credible, they tend to believe that he is capable of real magic if that is what he reports to be doing. People in category three tend to look for people who can support their beliefs, and are less critical and demanding in terms of proofs and evidence.

#### VARIATIONS IN DISSONANCE PRODUCING EFFECTS

Magic tricks have varying abilities to produce dissonance. As we already noted, the more impossible a given feat of magic, the more dissonance it can potentially create in an individual who is prone to dissonance. A trick becomes more impossible based on how far removed it is from accepted capability. For example, a red ball becoming a green ball would not have as serious implications as if a cat were to be transformed into a horse. The ball is small enough to fit into the hand, and the spectator can imagine that ways could be devised for changing its color. To change a cat into a horse, however, is quite another matter. Additionally, the less apparatus used to effect changes, the more impressive the trick. If an elephant is seen to be standing on a large platform, and it is covered briefly and then disappears, the audience generally imagines that the platform played a part in the animal's disappearance. If no such platform exists, however, the audience is more impressed (Survey series 4).<sup>[42]</sup>

<sup>42</sup> Survey Series 4, Jason Randal, 1982. See Appendix.

Magic which is accomplished with everyday items with which the audience is familiar is more impressive and dissonant producing than magic done with special appearing apparatus. People assume that they understand the limitations and capabilities of common objects, and are very impressed when those objects are manipulated magically.

When the magical effect being presented is associated with extraordinary abilities that are known to be possible, the magic has more of a chance of passing for a real demonstration than magic not associated with such abilities. For example, ESP tricks, when performed convincingly, are often taken for real demonstrations of psychic ability. Psychic phenomenon has come to be accepted in many circles as legitimate, and has been demonstrated to many people's satisfactions on a number of occasions. Scientific literature has delved into ESP, and legitimate institutions of higher learning have dedicated studies to psychic phenomena. Due to this background, it is possible for magicians to duplicate psychic feats using magic apparatus and techniques, and pass the tricks off as real demonstrations. People with a need disposition to accept psychic phenomenon will take the magician's demonstration as further evidence to support their belief. The same person, seeing a cat transformed into a horse, would have little background to support their belief of such an act. They would have less tendency to accept the animal transformation as real, than they would the ESP feat.

The ESP feat, therefore, will create no dissonance in a person who is prone to believe in ESP. The demonstration will simply serve to cement his beliefs concerning psychic phenomenon. The person who dogmatically denies the existence of ESP will become very anxious when he is confronted with an ESP demonstration which suggests no other explanation. To relieve his dissonance, he will hold fast to his conviction that magic must have been used, even if he can find no evidence of such a deception.

Each time a magical effect is presented, the audience members construct a number of alternative ways in which it might have been accomplished. Due to the puzzle-like structure of magic, the spectators will naturally seek to find logical answers. The more the message has allowed for these explanations, and negates them, the more impressive the trick, and the more impossible, since it leaves the spectators with few if any explanations.

*If a magician is able to anticipate the solutions that the audience will arrive at and demonstrate during the message that the solutions are not possible, then he will be more successful at his deceptions.*

In summary, then, the more impossible a spectator believes a feat to be, the more dissonance he will experience when he perceives it. Due to experience and frames of reference, people will tend to think of some feats as more impossible than others, and more difficult to simulate using magic technique than others. Furthermore, the more objections and explanations the magician has negated in his performance, the fewer solutions the audience will arrive at, and the more dissonant the information.

A magician wants his magic to be as effective as possible, and therefore as impossible as he can construct. If he can help the audience to feel comfortable with him and nonthreatened by the situation, the audience will be amazed by the level of impossibility, but will not feel defensive. In one sense, he wants the audience to experience as much dissonance as possible (by making his magic as impossible as he can), and at the same time, he wants them to experience no overall anxiety due to the performance. Because an audience, for the most part, suspends their disbelief, they are capable of witnessing the impossible, while remaining cognizant that they are only seeing an illusion of the impossible, not the impossible itself, which is why the amount of dissonance they experience is not significant. Again, the principal dissonance occurs due to the

spectator's belief that he can determine the working of the magical effect. When he cannot establish an acceptable explanation, he may experience dissonance. It is not, however, over the impossibility of what he has perceived, but over his inability to understand it rationally. Spectators who do not have these expectations, do not suffer dissonance from magic.

Deceivers such as con men can create a tremendous amount of dissonance in their victims. The receivers often do not realize that they have been deceived until after they have lost a great deal of money or position. The realization that they were victims of a plan, and that their intelligence was unable to protect them from victimization can be devastating.

The dissonance in con games is created because the receiver has expectations of significant gain. He also trusts the people with whom he is dealing, and usually takes pride in his ability to see a good transaction when it arises. There are so many issues on which he feels in control, and so many differing beliefs and expectations associated with his involvement, that he is set up for a compounding effect of anxiety. Imagine the compounding of these variables:

1) Victim knows that he is entering a "shady" transaction, and yet knows that he should steer clear of such situations—(dissonance producing).

2) Victim believed that the people with whom he was dealing were honest—yet they turned out to be deceiving him. Those he considered his partners were not—(dissonance producing).

3) Victim believed that he would gain substantially from his involvement, yet he lost considerable money and prestige—(dissonance producing).

4) Victim realizes that victims can engage the police when they have been deceived, yet since he was involved in a less than legitimate transaction, no such avenues are available to him—(dissonance producing).

It is easy to see how the issues involved with a simple

con game can produce so much anxiety in the victim. Unlike magic, the victim did not choose to be in a situation which was admittedly using deception as a method. Unlike magic, he hoped to gain from the involvement, and furthermore, the situation was unethical. The result of the con game or other deception often has implication in the real life of the victim. The deceptions brought about by magicians are not related to the personal life of the receiver, and it has no ramifications in the receiver's personal affairs. The receiver stands to gain entertainment from being deceived, and enters into the situation with the knowledge that others will be similarly deceived and entertained. The victim of a con game or criminal act has no intention of being deceived, and stands to lose from such a situation. Therefore, the two have no similarities in terms of receiver reaction, since the aims and expectations of magic and criminal deception are so opposite.

Though cognitive dissonance can occur from any type of deception, it is significantly strong when the receiver has lost as a result, and not significant when the receiver has gained (in entertainment value) with his permission.

## SUMMARY

This book has attempted to outline the contributing factors which make the process of deception possible. It has also endeavored to conduct some pilot studies which may indicate the direction for more involved and revealing research into the areas of deception application and response.

A magician needs to decide on his objectives, and develops a plan which will emphasize those goals. His audience, whether they be children, other magicians, or corporate executives will be appealed to and deceived in different ways. Once the audience is analyzed, the source can construct a message and a mode of presentation which will best achieve his intentions. The professional will develop contingency plans which can be put into action in the event of a disruption or mishap. Finally, the performer can attempt to increase his ability by demonstrating and increasing his expertness, dynamism, and trustworthiness, in addition to other qualities.

The magic routine should be arranged with a logical order and content, which places the most important elements at the beginning and end to take advantage of primacy-recency effects. The proofs should be carefully constructed, with false evidence made to look as legitimate as possible. The setting, including props, clothing, and container, should be integrated effectively into the presentation, so as to lend as much support as possible to the false evidence and assertions. The support materials should be capable of explaining any elements of legitimate evidence which might become available.

The mode of information transfer should be chosen to best communicate the message, and control the outcome. If, for example, magic is to be done over television, effects and movements need to be planned, taking the limitations and particularities of that medium into consideration.

The receiver is responsible for assigning credibility and

being deceived. The more the deceiver understands the information processing system, with its strengths and weaknesses, the better the source is of attacking those processes. Aside from limitations of perception, attention, and memory, receivers are of a number of personality types which can be effectively appealed to with various deceptive strategies. An understanding of possible receiver types will yield the deceiver an edge when constructing motivational approaches. The victim of a deception is prone to cognitive imbalance or dissonance. The deceiver can induce this anxiety, and then suggest remedies to the receiver. The remedies may, in fact, be the result the deceiver wants, the goal of his deception. If the deceiver is a magician, he may want to promote cognitive imbalance to achieve the highest level of status and prestige as a deceiver. An understanding of the elements which promote cognitive imbalance will help the deceiver tailor a communication to that end.

The more a deceiver understands the elements and processes which make deception possible, the more effective and successful he will be in meeting his goals.

## APPENDIX

## STUDY A-1

A study was contrived to test for the variation in scores reflecting expertness and overall source credibility on subjects who were exposed to magicians displaying differing levels of skill.

The hypothesis stated that the more expert the magician, the higher the perceived expertness, and therefore, higher credibility and consequent enjoyment by the audience. This statement implied that the less expertness perceived, the lower the credibility and the less audience enjoyment.

High expertness rating was operationalized to reflect the ability of the magician to hide the critical act (the method) from the audience. Low expertness would consequently result in the magician accidentally exposing the method. Mid-range expertness would be conveyed by the magician allowing the audience to receive clues as to the method without completely exposing the trick.

To keep other factors constant, the same magician was used to exhibit all three levels of credibility and expertness. The three tricks remained the same, including props, pattern, and presentation. The only variation introduced was the magician exposing the hidden method to the audience, in such a way as to seem accidental, and to insure that most spectators were able to "catch" the magician.

The assumption (arrived at from surveys and interviews) is that audiences attend a magic presentation to be deceived, and expect the magician to be competent in terms of his ability to hide his methods. If the magician is unable to hide his methods, then the demonstration is not magical (since the unusual result is expected or accounted for logically). Thus, the audience's expectations of being deceived are not met, and they do not enjoy the show as much. Though they are engaged in a contest with the performer, they actually hope for him to

win, or they give him little credit (in terms of expertness).

A service group was contacted, and offered an evening of entertainment without charge if their members would respond to a short questionnaire. The audience was broken up into two random groups who were told that they would see the magician one group at a time. While group 1 was in a meeting, group 2 would be entertained. Group 2 would not be able to have contact with group 1 after the magic show, but would go directly into a meeting of their own while group 2 was entertained. This process prevented reported expertness scores from being transferred from one group to another.

The two groups were both exposed to the same magician. At time 1 the magician would present a series of magic tricks, three of which he would expose to the audience (accidentally). He would pretend not to notice that he had exposed the method, and continue with the performance. Otherwise, the routine remained the same for both groups.

When the magician performed for group 2 he would make no mistakes, and move through the performance with as much technical expertness as possible. It was predicted that the audience in group 2 would rate the magician higher in expertness and would also like the performance more.

A semantic differential was applied which allowed the audience to rate the magician's expertness on a scale of one to five. The scale is as follows:

How would you rate the magician's technical skill?

- |                        |                      |
|------------------------|----------------------|
| 1. Very skillful       | 2. Fairly skillful   |
| 3. Moderately skillful | 4. Not very skillful |
| 5. Not at all          |                      |

Of the six magic tricks you saw, how many did you figure out?

- |         |         |            |          |
|---------|---------|------------|----------|
| 1. none | 2. one  | 3. two     | 4. three |
| 5. four | 6. five | 7. all six |          |

Of the tricks you figured out, how many were because the magician accidentally exposed something?

- |         |         |            |          |
|---------|---------|------------|----------|
| 1. none | 2. one  | 3. two     | 4. three |
| 5. four | 6. five | 7. all six |          |

On a scale of one to five (one being lowest and five being highest), how good overall would you say this magician is?

Answer\_\_\_\_\_.

Would you have enjoyed the show more if the magician had not made any mistakes?

YES\_\_\_\_ NO\_\_\_\_

## RESULTS

The results were as predicted. The audience in group 1 rated the magician who made mistakes (exposing three tricks) as moderately skillful (66%), fairly skillful (21%) and not very skillful (13%). The magician did not receive ratings of very skillful or not at all skillful from group 1. Additionally, group 1, for the most part, understood the working of all three tricks, or at least felt that they understood (which would affect expert rating in the same way). 92% of group 1 felt that they had discovered the workings of all three tricks. 8% felt that they understood two tricks. 60% of the respondents felt that the magician's accidental exposure had resulted in the discovery of the trick. The other 40% credited their discovery to their own cognitive and perceptive abilities, and did not admit to the magician's inability as a contributing factor. Overall, group 1 rated the magician as a three on a scale of one to five. He was granted a smattering of two scores and a lesser amount of four scores. In conclusion, 78% of group 1 stated that they would have enjoyed the show more if the magician hadn't made any mistakes.

Group 2 was affected as predicted. They were exposed to the magician who made no perceptible mistakes. Their results

were as follows after having been administered the same semantic differential:

82% of group 2 rated the magician as very skillful, while 8% rated him as fairly skillful. 35% of group 2 felt that they had figured out two tricks, 18% felt that they had figured out one trick, but none of those feeling that they had discovered the workings of the tricks cited the magician as responsible due to accidental exposure. 74% of group 2 rated the magician overall as a five. 20% rated the magician as a four, and 6% rated him a three. In response to overall enjoyment, only 2% responded that they would have enjoyed the show more if the magician hadn't made any mistakes.

The conclusion to this pilot study is that the more expert a magician appears, and the fewer mistakes he makes, the more a show will be enjoyed. People expect magicians to have a high level of technical skill, and if they do not exhibit the expected expertness, they are not perceived by their audiences as highly credible, and do not, subsequently, entertain their audiences as much as possible.

## STUDY A-2

A study was arranged to test for variation in ability to deceive adults and children, given the same magic tricks, presentation, and misdirection. The hypothesis was that children are more easily deceived than adults. It is often heard from both informed and uninformed sources that children are the most difficult audience to deceive. A number of magicians had indicated during interviews that children are, in fact, easier to deceive; they are simply less trusting and more vocal in their objections. Additionally, a child is more easily deceived and more trusting when alone than when he is part of an audience of peers watching a magic show.

As a pilot study, two children's birthday parties were attended. The audience consisted of a group of at least twenty children under the age of twelve, and an additional group was comprised of the children's parents who were having a separate party. The magician was hired to entertain the children after lunch, and then the adults were to be entertained while the children were being served dessert.

Due to the difficulty of utilizing a questionnaire under such circumstances, an assistant was present to ask questions and record responses. The birthday party was given a reduced rate to motivate the host to participate.

The magic tricks presented ranged in perceived difficulty from the very easy to the very difficult. Some tricks were utilized which could be reasoned to work solely on their own without any technical skill required of the magician. Other tricks could be understood (in terms of their method) by a process of reasoning alone, without any special knowledge of techniques or magic apparatus. Other tricks utilized secret techniques and apparatus which were necessary to their working, without the knowledge of which no spectator should be able to uncover, unless the magician made an accidental reve-

lation during a performance.

The children were observed and questioned after the magic performance and before they were served dessert. The adults were similarly questioned after their show.

## RESULTS

Due to the adult's experience, they were able to cite the workings of some of the easier, purchased tricks. A demonstration which worked by a known principle of science did not deceive them, and on the second group of tricks, they were able to reason out the method, based on what their experience dictated could have been done. Though not all of the adults were correct, most had theories which could have made the effect possible. On the third set of tricks, none of the adults were able to discover or give a possible solution to the effect. They admitted to having been deceived.

The children were equally puzzled by all three groups of tricks. Their inexperience had prevented them from seeing some of the store bought tricks used in their past, and their lack of experience and reasoning ability also prevented them from constructing theories as the workings of tricks in group two. The group three tricks which had alluded the adults, also alluded the children. The children were perceived to be more vocal, and to object to almost every object introduced by the magician.

Where the adults would accept that a piece of rope or a pack of cards or handful of coins was legitimate, the children were suspicious. Knowing that the magician planned to fool them, they became inquisitive concerning every prop presented to them. When not allowed to examine the prop, the children immediately dismissed it as responsible for the unusual result of the trick.

Children generally had an explanation which described the secret working of the trick to their satisfaction. Even though the explanation was incorrect, it still served to satisfy

the children that they had discovered the method. Therefore, as an audience they had not admitted to having been deceived. When one child would insist on examining a given prop, the other children would be influenced and were not satisfied until every child had examined it.

When adults elect representatives from the audience to examine a magician's props, they generally accept the testimony of their witnesses. Each child, however, believes the other's testimony or tests on a given prop to be inadequate, and insists on satisfying himself as to its authenticity. Children were more willing to admit that the prop had done all of the necessary work, and less prepared to accept that the magician's technical skill was responsible. Adults occasionally suspected "trick" cards or other props, but generally cited the magician's practice and technical skill as responsible for the tricks. The adults' experience dictated that a particular event could not have been caused by a prop. The children believing that anything can be done with technical means and special apparatus, are more prepared to be resorted to electronics or mechanical means of accomplishing his ends, and therefore, credits the magician himself with less skill.

When children were entertained privately, they were more influenced by the magician, and more willing to accept his testimony that the cards, coins, and ropes were real. It was postulated that the children, being less influenced by the groups' lack of trust and challenging fervor, were more accepting and more easily deceived. On simple tricks, therefore, children were more easily deceived than adults, and on more difficult feats, they were equally deceived. The adults were more willing to admit to having been deceived than were the children, and the children were more easily influenced while alone.

## STUDY B-1

This study was designed to discover whether or not audiences would be more prone to perceive the critical act or critical moment of a given trick, if they had seen similar effects previously. The contention was that once a spectator had been deceived by a given effect, he would be more trained in observing the critical moment and critical act if he were to see the same or similar trick again. Since he would know what to expect, and would be less susceptible to misdirection techniques, he might be better able to identify certain "secret" elements.

The study B-1 was combined with study C-3 which asserted that a spectator seated further from a close-up magic demonstration (one done with small props such as coins, cards, rings, etc.) would be less effectively misdirected from the critical act and the critical moment than if he were seated more closely. It was felt that the more closely a subject was sitting, the more easily he could be engaged in an activity or conversation with the performer, thus misdirecting him from critical points. Additionally, there would be more in the spectator's field of vision if he were seated further away, giving him a larger perspective of the activity, and possibly allowing him to perceive furtive movements on the part of the magician.

The critical act for these studies was defined as that secret moment, which the magician intended to go unnoticed, which was responsible or partly responsible for the result of the effect. The critical moment was defined as that moment when the critical act took place.

These two tests were both performed on a group of college juniors, who were informed that they were to be entertained, and to play a part in an experiment on perception and magic. The subjects were split into two groups of fifteen participants each. Group 1 would be presented a magic trick

at time 1. They would then be shown a similar magic trick at time 2. Group 2 would be shown the same first magic trick at time 1, but would then be shown a dissimilar magic trick at time 2. At the end of each group's demonstration, they would attempt to relate to an assistant the (1) working of the trick (method), and the critical moment when they thought the secret move was made.

The two groups were then subjected to a similar set of magic tricks and circumstances, except that one group would be seated close to the magician where he could draw them more closely into the situation. The other group would be seated further away. Aside from the differences in seating, both groups for study C-3 were shown the same two dissimilar magic tricks.

The first trick presented to both groups was one in which a ring is made to apparently penetrate through a solid table. The table was demonstrated to be a solid wooden utility table commonly found in classrooms. The ring was borrowed from a spectator. The magician took the ring in the right hand and apparently placed it in his left. The left hand was then brought to the center of the table in a closed fist. The right hand was placed beneath the table prepared to catch the ring. At the count of three the left hand was shown to be empty, and the right hand moved from beneath the table holding the ring. At this point the students were allowed one minute to contemplate how the trick may have been accomplished.

Time 2—After the minute of contemplation, the students were subjected to a similar demonstration. The similar demonstration was operationalized to mean that the same critical act and critical moment would be used, only with different props. This time two red foam balls were introduced. The magician took a red ball in his right hand and pretended to place it in his left. He then took up the remaining ball with his right hand. After the count of three, the left hand was opened to show that it held nothing, and the right hand revealed that

it had both balls. To insure that the audience realized that only two balls were being used, they were suitably marked with ink pens by the spectators, using markings which were selected by the audience.

At the end of the demonstration of two tricks, group 1 was asked to identify both the critical move, and the critical moment. In each case, the critical move had consisted of the magician pretending to place an object into his left hand, but actually retaining it in his right. Due to the hidden nature of the movement and the size of the objects being placed into the hand, it would not have been possible for the subjects to have actually seen the critical move. They could only have perceived the critical moment, and assumed that the critical move must have been made. The only way for the trick to work would have been for the original object to have been retained in the original hand. The transfer therefore was only simulated.

Group 2 was shown the same trick number one as group 1. Group 2, however, was exposed to a dissimilar trick at time 2. The second trick shown to group 2 was a ring (used in trick one) being placed on the performer's left thumb. His hand was then shown to be empty, and the ring was revealed to be connected to a hook on a keycase in his back pocket. After the two tricks, the subjects were questioned to discover whether they could ascertain the critical move or the critical moment. The results were as follows:

## RESULTS

Study B-1 results were as predicted. The subjects who had been subjected to a similar trick at time 2 were more accurate in pinpointing the critical moment and identifying what the critical act must have been. Subjects were introduced to two dissimilar tricks were less able to identify the critical moment or the critical act. The percentages were as follows:

Of the fifteen subjects in group 1, eleven were able to

identify the critical moment of both the first and second trick, after having been exposed to both. Six of the fifteen subjects were able to correctly identify the fact that the object during both instances had been retained in the original hand.

Of the fifteen subjects in group 2 who were exposed to two dissimilar tricks, only two were able to identify the critical moment of trick one, and three were able to identify the critical moment of trick two. One subject was able to identify the critical act of trick one, and none of the subjects were able to identify the critical act in trick two.

This pilot study would indicate that the more exposure which a subject has to a given event, the more familiar that event will become, and the more he will gain understanding of it, even if elements of the event are being kept hidden. The subject has the ability to test out competing hypotheses, and his attention is more under his own control, since he has more of a clue as to what will be important. Since the subject knows basically what is about to take place, he knows, for example, that watching a particular hand or movement already proved unrevealing. At time 2 therefore, the subject watches a different hand or different movement. The ability to select more decisively what to give attention to results in more revealing information.

### RESULTS OF STUDY C-3

During this study both group 1 and group 2 were exposed to the same set of magic tricks. The magic tricks consisted of two dissimilar effects. The purpose of the study was to discover the relevance of proximity in perception. Each group was exposed to the same tricks, the only difference being that group 1 was seated immediately surrounding the performer, and group 2 was seated fifteen feet away. It was expected that the wider field of vision, and diminished capability of the performer to engage the participants in eye contact would result in increased perception of critical moves and moments on the

part of the spectators. The tricks selected were ones in which the performer would be required to make furtive movements which could be perceived by the spectators if they were watching the right place at the right time. The results were as follows:

Group 1, consisting of fifteen subjects, was seated around the performer. Of that group, three of the fifteen subjects was able to report the correct time of the critical moment, and only one was able to identify the critical act of trick number one. During trick number two, two subjects were able to identify the critical moment, and no subject was capable of identifying the critical act.

Group 2, which was seated fifteen feet away, had different test results. Seven of the fifteen subjects were able to identify the critical moment during trick number one, and four were able to identify the critical act. During trick two, five subjects were able to identify the critical moment, and two were able to identify the critical act. Subjects reported ability to see "the magician reaching into his coat."

To prevent the performers from skewing the results, they were not made aware of the nature of the test. They were told that they would perform given tricks, and that the subjects would try to discover the method. The performer would attempt to hide the method the best he could. The subjects entered the demonstration with the intention to discover the method, so they were more highly motivated and critical than might be found in a typical audience. Furthermore, the test was performed using college juniors, who in themselves, may be a more analytical group than the general population.

The results indicate, however, that given the population utilized, and competent magicians using advanced methods of misdirection, that variation in a performance and the utilization of differing methods of accomplishment aid the magician in keeping his methods hidden from the audience. Furthermore, the more closely the magician can work with a group, some tricks are more easily accomplished. Given the general

distance of audiences from performers, stronger misdirection methods must be employed to keep the critical act from the spectators' view. The stronger the performer seems to need to legitimately make a furtive movement, the less it will be perceived by receivers. Any movement which seems suspicious, and does not appear to have any logical reason for its existence, will become a crucial point of focus to an audience.

## STUDY D-2

Study D-2 was designed to test for the effects of memory as it is affected by the quality of a magic demonstration. The hypothesis was that the more impressed a spectator was with a given magic demonstration, the more they are likely to load the report of that demonstration in favor of the magician.

Subjects were contacted by arranging to entertain a social club without a fee, if they would agree to take part in a "game" afterwards. A group of 42 subjects was obtained, and divided into two groups of 21. Group number 1 would be given a magic demonstration. Group 2 would be given an identical demonstration. The audience was then given a semantic differential to respond as to how impressive they believed the magician to be. The respondents were then divided into two groups—one group was labeled as Very Impressed, the second group was labeled Impressed. The subjects in each group were asked to reveal what the magician did during the performance. It was expected that those who were very impressed would exaggerate the magical feats to make them seem more impressive than they were. It was further expected that the people who were impressed would more accurately describe the events. The accuracy of the testimony was weighed against what the interviewer knew the magician to have done.

One of the complicating factors of this particular test was that errors in perception could have accounted for some subjects to report what they saw inaccurately. If they were, in fact, deceived, they may have loaded their responses in favor of the magician.

### RESULTS

Of the forty-two subjects subjected to the magic show, thirty were very impressed, and had marked the magician as either a 4 or 5 on a scale of 1 through 5. The other eleven re-

spondents gave the magician a score of 1, 2, or 3. Predominantly 3. The groups were then separated into Very Impressed and Impressed, and asked individually to report what the magician had done that impressed them. Though most of the reports were fairly accurate in terms of what the magician had intended for the subjects to see, there were twelve instances among the very impressed group where a particular trick was described in a manner more favorable than what had occurred. For example, a paper was given to a spectator who wrote a word upon it and then folded it before giving it back to the magician. He then appeared to tear and burn the paper and reveal the word written upon it. Seven of the very impressed group reported that they had themselves torn and burned the paper. Another spectator revealed that his hand had been closed and empty, when he opened it to find a coin inside. Still another spectator reported that the magician had secretly removed the ring from their finger, when in fact, the magician had been given the ring, and had stolen the watch.

There were two instances among the impressed group, who reported a trick to have been done in an embellished manner. There were more instances among the very impressed group, however, than among the impressed group.

The results may indicate that the more impressed spectators are with a given performer, the more willing they are to embellish what he accomplished. Another explanation is that the performer who strikes a spectator as being more impressive is able to suggest that he accomplishes feats which in fact he does not. It may be the suggestive power, therefore, of the highly credible performer which contributes to the spectator's mistaken memory.

The answer probably lies somewhere in the middle. The magician is continually attempting to manipulate the spectator's attention, and will therefore determine, in part, what will enter the receiver's memory. The receiver, in turn, if he is impressed with the performer, wishes to describe him as favor-

ably as possible, and also wants to describe him as an expert to explain the receiver's own inability to discover his secret methods. We can only assume the motive, therefore, for the receiver to embellish a particular magical performance. Further studies to indicate whether the receiver believed he was reporting the act to a newspaper for the magician's publicity, a researcher interested in perception, or another spectator interested in seeing the magician's show, might give a further indication of the receiver's motive. It might also indicate whether a receiver was willing to embellish a story if he believed it would benefit somebody with whom he was impressed.

Another study might be performed where the magician himself attempted to purposely suggest an embellished version to the spectator after the fact. A test could be conceived to discover whether the spectator could be persuaded to believe that he saw something he did not. It could be argued that since the magician originally persuaded a spectator to believe something which was not true (the illusion itself), then he might possibly compound the effect by persuading the spectator that the magical trick was indeed more impressive or impossible than it originally was presented to be.

## STUDY D-3

This study was constructed to discover the reasons why receivers were not experiencing significant levels of cognitive dissonance after magic performances. Groups of respondents were acquired at social gatherings where magic was included in the entertainment program, at schools after a magic show had been presented, at service clubs, after a magic performance, and at an exclusive magic club, after people had been exposed to as many as five different magic acts.

People were given a questionnaire to fill in which asked them to complete only two questions:

I AM BOTHERED BY MAGIC BECAUSE \_\_\_\_\_

ARE YOU BOTHERED ENOUGH BY MAGIC TO PREVENT YOU FROM CONSIDERING MAGIC AS A FORM OF ENTERTAINMENT FOR YOURSELF FOR YOUR GUESTS? Yes \_\_\_\_\_ No \_\_\_\_\_

I AM BOTHERED BY MAGIC BECAUSE \_\_\_\_\_

DO YOU BELIEVE THAT REAL MAGIC IS POSSIBLE, AS OPPOSED TO MAGIC TRICKS ACCOMPLISHED BY CLEVER TECHNIQUE AND PROPS? Yes \_\_\_\_\_ No \_\_\_\_\_ I don't know \_\_\_\_\_

### RESULTS

All of the various responses were placed into three main groups. Most of the respondents (88%) reported that they were not bothered by magic. Of those 88%, 31% stated that they believed in real magic, 24% did not believe in the possibility of real magic, and 45% were not sure. The 12% who were bothered by magic predominantly stated that magic bothered

them because they couldn't figure it out. The puzzle was frustrating, and presented a problem which they were unable to solve. Generally, they felt a pressing need to figure out the methods. Of those 12%, however, only 2% said that they would not consider magic as entertainment. Though they were perplexed by the methods employed, they were still drawn to magic demonstrations, though they found them frustrating. Most who were not bothered by magic felt that they enjoyed the fantasy it represented, and the opportunity to suspend their disbelief and imagine that the impossible was possible. They were able to enjoy a magic demonstration, and were not interested in the methods secretly used.

Other respondents were not bothered by magic, but did try to figure out the method. They felt that they were better able to figure out methods when the magician went slowly and gave them time for recall and cognitive reflection. They enjoyed the puzzle of magic, but were not significantly upset when they couldn't arrive at the result.

The thrust of the responses were that the spectators did not take magic seriously, and therefore, did not become upset over it. Other issues in their lives could cause more dissonance because of the effects on their everyday activities. Magic was perceived as entertainment and fantasy, and therefore, not responsible beyond the showroom. Most realized that magic was illusion, and that there was an explanation for the unusual results. Most responded, therefore, that I am not bothered by magic because I know it's just a trick. The minority group responded that they did not like magic because they couldn't figure out the method, and were troubled by it.

Further studies should be constructed to look in-depth at the kinds of personality types who are most attracted to and most troubled by magic. Furthermore, conditions should be set up to test what kinds of magic cause the most cognitive imbalance and dissonance. Also interesting is to determine whether people who do not believe in real magic can be per-

suaded to change their mind if confronted with a demonstration which can be made to look legitimate.

A study was performed at California State University, Northridge, where a class of senior sociology students were tested as to their attitudes on mental telepathy ESP. At the beginning of the session over 60% of the class believed that there either was no real evidence for ESP, or that it was possible, but not probable. The remaining 40% of the class had been previously convinced that ESP was a fact.

A person was brought in and introduced by a credible source as being from a national psychic testing institute. The person, who had been given specific information concerning the students in the class, then proceeded to do a forty-five minute psychic demonstration that was accomplished purely by magician's methods. After the demonstration, the class was tested again to discover if attitude change had taken place. All but 4% of the class had changed their opinion regarding the existence of ESP. The change in attitude had occurred because of the firsthand demonstration. Later when the students were told that they had been deceived by a magician, the level of cognitive dissonance was significant. The students were particularly upset because they viewed themselves as competent and discriminating observers, and they had committed themselves to a changed opinion, based on their observation of a credible and expert source. They felt that they had lost faith in their own intellectual ability, and therefore, experienced dissonance. The anxiety was handled by usual dissonance reduction methods.

## SURVEY SERIES 4

A number of questions were asked spectators who had just witnessed a magic show, and others had reported having seen magic within the past year. Of the questions asked, some of them considered the use of props.

When a magician accomplishes a given trick with the use of a prop, are you less impressed than if he had accomplished the same trick with no prop at all?

All respondents answered that the fewer the props the more impressed, since the likelihood that the prop was being used to accomplish the result was less. The less credit that could be given to the prop, the more credit must be given to the magician.

Where props were used, most respondents believed that the magician either invented or built the prop, and therefore, was still responsible for the success of the trick, although they credited him with more inventive skill than technical skill.

Subjects also reported that props which looked shabby and poorly maintained made them suspicious concerning the magician's expertness. The more professional his props, the more professional and therefore expert they perceived the magician to be.

Subjects reported becoming suspicious of props which they could either not account for, or seemed included for a weak reason. Props which seemed necessary to the performance of a trick or the telling of a story were not viewed as suspicious.

Gimmicks which were utilized by magicians but unseen by the audience were rarely perceived, and not considered when attempting to discover the method of a given trick. Since hidden techniques and gimmicks are unknown and not perceived by spectators, they cannot include those factors

when attempting to "figure out" a trick. A prop which is revealed and integrated can be attributed as responsible, even when that prop may have made no contribution to the working of the effect.

## BIBLIOGRAPHY

- Adams, J.S., "Reduction of Cognitive Dissonance by Seeking Consonant Information," *Behavioral Science*, 1971, 3, pp. 1-13.
- Addington, D.W., "The Effects of Vocal Variations on Ratings of Source Credibility," *Speech Monographs*, 1971, 38, pp. 242-7.
- Addis, B., "Media Credibility: An Experimental Comparison of the Effects of Film, Audio Tape and Written Communication on Beliefs in the Existence of Unusual Phenomena." Doctoral dissertation, University of Oklahoma, 1970.
- Adorno, T., Frenkel-Brunswik, E., Levinson, D., and Sanford, R., *The Authoritarian Personality*, New York: Harper, 1950.
- Allen, V., "Cognitive Familiarity and Dissonance Reduction," in C. Festinger (Ed.), *Conflict, Decision, and Dissonance*, Stanford University Press, 1964.
- Allyn, J., and Festinger, L., "The Effectiveness of Unanticipated Persuasive Communications," *Journal of Abnormal and Social Psychology*, 1961, 62, pp. 35-40.
- Anderson, K., *Persuasion: Theory and Practice*, Boston: Allyn and Bacon, 1971.
- Anderson, Kenneth, and Clevenger, Theodore Jr., "A Summary of Experimental Research in Ethos," *Speech Monographs*, June 1963, 30, pp. 59-78.
- Applebaum, R. L., and Anatol, K.W. E., "The Factor Structure of Source Credibility as a Function of Speaking Situation," *Speech Monograph*, 1972, 39, pp. 216-22.

- Aronson, E., "Dissonance Theory: Progress and Problems," in R. Abelson, et al., eds. *Source Book on Cognitive Consistency*, New York: Rand McNally, 1968, p. 5-27.
- Aronson, E., and Golden, B.W., "The Effect of Relevant and Irrelevant Aspects of Communicator Credibility on Opinion Change," *Journal of Personality*, 1952, 30, pp. 135-46.
- Aronson, E. et al., "Communicator Credibility and Communication Discrepancy as Determinants of Opinion Change," *Journal of Abnormal and Social Psychology* 1963, 67, pp. 31-6.
- Asimov, Isaac, *The Human Brain, Its Capabilities and Functions*, Signet Science Library, New York, 1955.
- Baker, E. B., "The Immediate Effects of Perceived Speaker Disorganization of Speaker Credibility and Audience Attitude Change in Persuasive Speaking," *Western Speech*, 1965, 29, pp. 148-61.
- Baker, E. E., and Redding, W. C., "The Effect of Perceived Tallness in Persuasive Speaking: An Experiment," *Journal of Communication*, 1961, 12, pp. 513.
- Bandler, Richard, and Grinder, John, *The Structure of Magic I*, Science and Behavior Books, 1975.
- Bauer, R., "Personality, Perception of Source and Persuasibility," in W. H. Joseph, ed. *On Knowing the Consumer*, New York: John Wiley and Sons, 1966, pp. 8-9.
- Beighly, K. C., "An Experimental Study of the Effect of Four Speech Variables on Listener Comprehension," *Speech Monographs*, 1952, 19, pp. 249-58.
- Bennet, David J., and Bennett, Judith D., "Making the Scene," in Gregory P. Stone and H. Farberman (Eds.), *Social Psychology Through Symbolic Interaction*, Waltham, Mass.: Ginn and Co., 1970, p. 190.

- Berbo, David, Comert, James, and Mertz, Robert J., "Dimension for Evaluating the Acceptability of Message Sources," *Research Monograph*, Department of Communication, Michigan State University, 1966.
- Berkowitz, L. and Lundy, R., "Personality Characteristics Related to Susceptibility to Influence by Peers or Authority Figures," *Journal of Personality*, 1957, 25, pp. 306-16.
- Berlo, D. K., Lemert, J. B., and Mertz, R. J., "Dimensions for Evaluating the Acceptability of Message Sources," *Public Opinion Quarterly*, 1969-70, 33, pp. 563-76.
- Berlo, David K., Lambert, James B., Mertz, Robert J., "Dimension for Evaluating the Acceptability of Message Sources," Unpublished paper, Michigan State University, 1966.
- Bettinghaus, E. P., *Persuasive Communication*, New York: Holt, Rinehart and Winston, 1968, p. 173.
- Bettinghaus, E. P., and Baseheart, J. R., "Some Specific Factors Affecting Attitude Change," *The Journal of Communication*, 1969, 19, pp. 227-38.
- Binet, Alfred, *Psychology of Prestidigitation*, Smithsonian Report, 1898, pp. 555-71.
- Bochner, B., Bochner, A., and Hilyard, D., "An Experimental Investigation of the Effect of Social Status and Social Dialect Upon Listener Responses." Paper presented at SCA convention, San Francisco, 1971.
- Bogart, L., *Strategy in Advertising*, New York: Harcourt, Brace & World, 1967.
- Bostrum, R. N., and Tucker, R. K., "Evidence, Personality, and Attitude Change," *Speech Monographs*, 1969, 36, pp. 22-7.

- Brembeck, Winston C., and Howell, W., *Persuasion: A Means of Social Influence*, Prentice-Hall, 1976.
- Broadbent, D. E., *Perception and Communication*, London: Pergamon Press, 1958, Chapter 2.
- Broadbent, D. E., "Speaking and Listening Simultaneously," *Journal of Experimental Psychology*, 1952, 43, pp. 267-73.
- Brock, T. C., "Communicator-Recipient Similarity and Decision Change," *Journal of Personality and Social Psychology*, 1965, pp. 650-4.
- Brock, T. C., and Grant, L. D., "Dissonance, Awareness, and Motivation," *Journal of Abnormal and Social Psychology*, 67, pp. 53-60.
- Brooks, Robert K., and Scheidel, Thomas M., "Speech as Process: A Case Study," *Speech Monographs*, March 1968, 35, pp. 1-7.
- Bruner, J., "Social Psychology and Perception," in E. Macoby, T. Newcomb, and E. Hartley, eds. *Readings in Social Psychology*, New York: Holt, 1958, pp. 85-94.
- Buck, J., "The Effects of Negro and White Dialectal Variations Upon Attitudes of College Students," *Speech Monographs*, 1968, 35, pp. 181-6.
- Burke, K. A., *A Rhetoric of Motives*, New York: Prentice-Hall, 1950.
- Byrne, D., "Interpersonal Attraction and Attitude Similarity," *Journal of Abnormal and Social Psychology*, 1961, 62, pp. 713-5.
- Byrne, D., Gaiffitt, W., and Golightly, C., "Prestige as a Factor in Determining the Effect of Attitudes Similarity-Dissimilarity on Attraction," *Journal of Personality*, 1966, 34, pp. 434-4.

- Carlsmith J. M., and Aronson, E., "Some Hedonic Consequences of the Conformation and Disconformation of Expectancies," *Journal of Abnormal and Social Psychology*, 1963, 36.
- Carment, J., Miles, C., and Cervin, V., "Persuasiveness and Persuibility as Related to Intelligence and Extraversion," *British Journal of Social and Clinical Psychology*, 1965, 1, pp. 1-7.
- Cartwright, D., "Some Principles of Mass Persuasion," in W. Viacke, W. Wilson, and G. Meredy, eds. *Dimensions of Social Psychology*, Chicago: Scott Foresman and Company, 1964.
- Chapanis, J., and Chapanis, A., "Cognitive Dissonance: Five Years Later," *Psychological Bulletin*, 1964, 61, pp. 1-22.
- Cherry, E. J., "Some experiments on the recognition of speech with one and two ears," *Journal of the Acoustical Society of America*, 1953, 25, pp. 975-79.
- Christie, R. "Some Consequences of Taking Machiavelli Seriously," in E. F. Borgatta and W.W. Lambert, eds. *Handbook of Personality Theory and Research*, Chicago: Rand McNally, 1968.
- Christie, R. and Geis, F., *Studies in Machiavellianism*, New York: Academic Press, 1970.
- Cohen, A., "Communication Discrepancy and Attitude Change: A Dissonance Theory Approach," *Journal of Personality*, 1959, 2, pp. 386-96.
- Cohen, A., *Attitude Change and Social Influence*, New York: Basic Books, 1964.
- Croft, R. et al. "Comparison of Attitude Changes Elicited by Live and Videotape Classroom Presentation," *AV Communication Review*, 1969, 17, pp. 315-21.

- Dessoir, Max, *The Psychology of Legerdemain*, Chicago: Laird and Lee, 1897.
- Deutch, M., Krauss, R., and Rosenau, Norah, "Dissonance or Defensiveness," *Journal of Personality*, 1962, 30, pp. 16-28.
- Dresser, William R., "Effects of 'Satisfactory' and 'Unsatisfactory' Evidence in a Speech of Advocacy," *Speech Monographs*, 1963, XXX, pp. 302-6.
- Elliot, Gregory C., "Some Effects of Deception and Level of Self-Monitoring on Planning and Reacting to a Self-Presentation," *Journal of Personality and Sociology*, August 1979, 37 (8), pp. 1282-92.
- Elman, Dave, *Hypnotherapy*, Westwood Publishing Co., 1964.
- Festinger, L., *A Theory of Cognitive Dissonance*, Evanston, Row, Peterson, 1957.
- Festinger, L., *Conflict, Decision, and Dissonance*, Stanford, Stanford University Press, 1964.
- Festinger, L., and Carlsmith, J., "Cognitive Consequences of Forced Compliance," *Journal of Abnormal and Social Psychology*, 1959, 58, pp. 203-10.
- Festinger, L., and Maccoby, N., "On Resistance to Persuasive Communications," *Journal of Abnormal and Social Psychology*, 1964, 68, pp. 359-66.
- Fitzkee, D., *Showmanship for Magicians*, Saint Raphael House, Cal., 1945.
- Fitzkee, D., *Magic by Misdirection*, Lakeside Press, San Francisco, 1945.
- Freedman, J. G., "Preference for Dissonant Information," *Journal of Personality and Social Psychology*, 1965, 2,

- pp. 287-9.
- Gantt, V.W., "Attitude Change as a Function of Source Credibility and Level of Involvement," Doctoral Thesis, Ohio University, 1970.
- Gilchrist, J. C., and Nesberg, L. S., "Need and Perceptual Change in Need-Related Objects," *Journal of Experimental Psychology*, 1952, 44, pp. 369-76.
- Glucksberg, S., and Cowen, G., Memory for nonattended auditory material, *Cognitive Psychology*, 1970, 1, pp. 149-56.
- Greenberg, B. S., and Miller, G. R., "The Effects of Low-Credible Sources on Message Acceptance," *Speech Monographs*, 1966, 33, pp. 127-36.
- Greenberg, B. S., and Tannenbaum, P. H., "Communicator Performance Under Cognitive Stress," *Journal Quarterly*, 1962, 39, pp. 169-78.
- Gullob and Dittes, "Differential Effects of Manipulated Self-Esteem on Persuasibility Depending on the Threat and Complexity of the Situation," *Journal of Personality and Social Psychology*, 1965, 2, pp. 195-201.
- Guttermann, S., *The Machiavellians*, Lincoln, University of Nebraska Press, 1970.
- Haaland, G. A., and Verbeatesan, "Resistance to Persuasive Communication: An Examination of the Distraction Hypothesis," *Journal of Personality and Social Psychology*, 1968, 9, pp. 167-70.
- Haiman, Franklyn, "The Effects of Ethos in Public Spouking," *Speech Monographs*, 1949, 16, p. 192.
- Haiman, Franklyn S., "Democratic Ethics and the Hidden Persuaders," *Quarterly Journal of Speech*, Dec. 1968, 44, p. 385.

- Harvey, O. J., and Clapp, W. F., "Hope, Expectancy, and Reaction to the Unexpected," *Journal of Personality and Social Psychology*, 1965, 2, pp. 45-52.
- Heider, F., "Attitudes and Cognitive Organization," *Journal of Psychology*, 1946, 21, pp. 107-12.
- Heinberg, P., "Relationships of Content and Delivery to General Effectiveness," *Speech Monographs*, 1963, 30, pp. 105-7.
- Hilgard, Ernest R., *Introduction to Psychology*, New York: Harcourt, Brace and World, 1953, p. 60.
- Hochberg, J., "Attention, Organization, and Consciousness," in D. I. Mostofsky (Ed.), *Attention: Contemporary Theory and Analysis*, N.Y. Appleton-Century-Crofts, 1970, pp. 99-124.
- Hochberg, J., "In the Minds' Eyes," in R. N. Haver (Ed.), *Contemporary Theory and Research in Visual Perception*, New York: Holt, Rinehart and Winston, 1968, pp. 309-31.
- Hochberg, J., *Perception* (2nd Ed.), Englewood Cliffs, N.J., Prentice-Hall, 1978.
- Hollingworth, H. L., *The Psychology of the Audience*, New York: American Book Co., 1935.
- Holtzman, P., *The Psychology of Speakers' Audiences*, Glenview, Ill.: Scott, Foresman, 1970.
- Hovland, Carl, Janis, Irving L., and Kelly, Harold, *Communication and Persuasion*, New Haven: Yale University Press, 1953, p. 35.
- Hovland, C. I., and Weiss, W., "The Influence of Source Credibility on Communication Effectiveness," *Public Opinion Quarterly*, 1951, 15, pp. 635-50.

- Hull, Clark L., *Hypnosis and Suggestibility*, New York: D. Appleton-Century Co., 1933.
- Huxley, Aldus, *The Doors of Perception*, New York: Harper and Row, 1954, pp. 22-3.
- Janis, I., and Hovland, C., *Personality and Persuasibility*, New Haven: Yale University Press, 1959.
- Janis, I., "Personality Correlates of Susceptibility to Persuasion," *Journal of Personality*, 1954, 22, pp. 504-18.
- Janis, I., and Field, P., "Sex Differences and Personality Factors Related to Persuasibility," in Janis et al., eds., *Personality and Persuasibility*, New Haven: Yale University Press, 1958.
- Janis, I., and Feshbach, S., "Effects of Fear-Arousing Communications," *Journal of Abnormal and Social Psychology*, 1953, 48, pp. 78-92.
- Jastrow, Joseph, *The Psychology of Conviction*, Boston: Houghton-Mifflin Co., 1918.
- Johnson, A., "A Preliminary Investigation of the Relationship Between Message Organization and Listener Comprehension," *Central States Speech Journal*, 1970, 21, pp. 164-7.
- Jones, S. C., and Shrauger, J. S., "Reputation and Self-Evaluation as Determinants of Attractiveness," *Sociometry*, 1970, 33, pp. 276-86.
- Kahneman, P., *Attention and Effort*, Englewood Cliffs, N.J., Prentice-Hall, 1973.
- Karlins, M., and Abelson, H., *Persuasion: How Attitudes and Opinions are Changed*, N.Y.: Springer Publishing Co., 1970.

- Katz, D., Sarnoff, I., and McClintock, C., "Ego Defense and Attitude Change," *Human Relations*, 1956, pp. 27-45.
- Kilpatrick, F.P. (ed.), *Explorations in Transactional Psychology*, New York: N.Y. University Press, 1961.
- La Barge, D., "Acquisition of Automatic Processing in Perceptual and Associative Learning," in P. M. A. Rabbit and S. Dirnic, (Eds.), *Attention Performance*, London: Academic Press, 1975, V.
- Lana, R. E., "Familiarity and Order of Presentation of Persuasive Communication," *Journal of Abnormal and Social Psychology*, 1961, 62, pp. 573-77.
- Lawson, R. G., "The Law of Primacy in the Criminal Courtroom," *Journal of Social Psychology*, 1969, 77, pp. 121-31.
- Lerbinger, Otto, *Designs for Persuasive Communication*, Prentice-Hall Inc., Englewood Cliffs, N.J., 1972.
- Leventhal, H., and Perloe, S., "A Relationship between Self-Esteem and Persuasibility," *Journal of Abnormal and Social Psychology*, 1962, 64, pp. 385-8,
- Lippman, Walter, "The World Outside and the Pictures in Our Heads," *Mass Communications*, pp. 468-86.
- Loftus, Elizabeth, *Memory, Surprising New Insights Into How We Remember and Why We Forget*, Mass.: Addison-Wesley Inc., 1980.
- Lorge, I., "Prestige Suggestion and Attitudes," *Journal of Social Psychology*, 1936, 7, pp. 386-402.
- Luckiesh, M., *Visual Illusions*, New York: D. Van Nostrand Co., 1922.
- Mandler, G., "Response Factors in Human Learning," *Psychological Review*, 1954, 61, pp. 235-44.

- Maskelyne, Nevil, and Devant, David, *Our Magic*, New York: E. P. Dutton and Co., 1911.
- Maskelyne, N. and Devant, D., *Our Magic*, New Jersey: Fleming Book Co., 1946.
- McCroskey, James C., "A Summary of Experimental Research on the Effects of Evidence in Persuasive Communication," *Speech Monographs*, 1969, XXXVI, pp. 169-76.
- McCroskey, J. C., "The Effects of Evidence as an Inhibitor of Counter-Persuasion," *Speech Monographs*, 1970, 37, pp. 188-94.
- McCroskey, J. C., and Mehrley, R. S., "The Effects of Disorganization and Nonfluency on Attitude Change and Source Credibility," *Speech Monographs*, 1969, 36, pp. 13-21.
- McGill, Ormond, *Professional Stage Hypnotism*, Westwood Publishing Co., 1977.
- McGuire, W. J., "The Current Status of Cognitive Consistency Theories, in S. Feldman (Ed.), *Cognitive Consistency: Motivational Antecedents and Behavioral Consequents*, New York: Academic Press.
- McLeod, J. M., "Yielding as a Response to Cognitive Imbalance," *Dissonant Abnormalities*, 1963, 24, pp. 872-3.
- Meyer, V. H., and Gute, J., "The Effects of Channel Variation on Attitude Change and Source Credibility." Paper presented at the WSA convention, Honolulu, Hawaii, November, 1972.
- Miller, G. A., *Decision Units in the Perception of Speech*. IRE *Transactions on Information Theory*, 1962, IT-8, pp. 81-3.

- Miller, G. A., "The Magical Number 7, Plus or Minus Two: Some Limits on Our Capacity for Processing Information," *Psychological Review*, 1956, 63, pp. 81-97.
- Mills, J., "Avoidance of Dissonant Information," *Journal of Personality and Social Psychology*, 1965, 2, pp. 589-93.
- Mills, J., "Opinion Change as a Function of the Communicator's Desire to Influence and Liking for the Audience," *Journal of Experimental and Social Psychology*, 1966, 2, pp. 152-9.
- Mills, J., and Aronson, E., "Opinion Change as a Function of the Communicator's Attractiveness and Desire to Influence," *Journal of Personality and Social Psychology*, 1965, 1, pp. 173-7.
- Mills, J., Aronson, E., and Robinson, H., "Selectivity in Exposure to Information," *Journal of Abnormal and Social Psychology*, 1959, 59, pp. 250-3.
- Minnick, Wayne C., *The Art of Persuasion*, 2nd Ed., Boston: Houghton Mifflin Co., 1968, p. 285.
- Moray, N., *Attention: Selective Processes in Vision and Hearing*, New York: Academic Press, 1970.
- Moore, J., "Status and Influence in Small Group Interactions," *Sociometry*, 1968, 31, pp. 47-63.
- Morton, J. A., "A Functional Model for Memory," in D. A. Norman (Ed.), *Models of Human Memory*, New York: Academic Press, 1970.
- Mowrer, O. H., "Cognitive Dissonance and Counter Conditioning, a Reappraisal of Certain Behavioral Paradoxes," *Psychology Record*, 1963, 13, pp. 197-211.
- Nash, Jay Robert, *Hustlers and Con Men, An Anecdotal History of the Confidence Man and His Games*, M. Evans

- and Company, Inc., New York, N.Y. 10017, 1976.
- Neisser, V., *Cognition and Reality*, San Francisco: Freeman, 1976.
- Nisbett, R., and Gordon, A., "Self-Esteem and Susceptibility to Social Influence," *Journal of Personality and Social Psychology*, 1967, 5, pp. 268-76.
- Norman, Donald, *Memory and Attention: An Introduction to Human Information Processing*, (2nd. Ed.), New York: John Wiley and Sons, Inc., 1976, pp. 39-40.
- Norman, D. A., "Toward a Theory of Memory and Attention," *Psychological Review*, 1968, 75, pp. 522-36.
- Norman, D. A., and Bogrow, D. G., "On Data-Limited and Resource-Limited Processes," *Cognitive Psychology*, 1975, 7, pp. 44-64.
- Nunnally, J., and Bogren, H., "Variables Concerning Willingness to Receive Communications on Mental Health," *Journal of Personality*, 1959, 27, pp. 38-46.
- Ostermier, T. H., "The Effects of Type and Frequency of Reference Upon Perceived Source Credibility and Attitude Change," *Speech Monographs*, 34, 1971, pp. 137-44.
- Palmer, S. E., "Visual Perception and World Knowledge," in D. A. Norman, D. E. Rumelhart, and the LNR Research Group, *Explorations in Cognition*, San Francisco: Freeman, 1975, Chapter 3.
- Pearce, W. B., and Brommel, B. J., "Vocalic Communication in Persuasion," *Quarterly Journal of Speech*, 1972, 58, pp. 298-306.
- Pearce, W. B., and Conklin, F., "Nonverbal Vocalic Communication and Perceptions of a Speaker," *Speech Monographs*, 1971, 38, pp. 235-7.