

**Person Judgment in Management Decision Making:
Three Findings from Research on Impression Formation**

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Introduction

Many important decisions involve forming impressions about another person. Decisions about the ability of prospective job candidates, judgments about the suitability of expert financial advisors, and even choices between alternate dating partners all involve processing information about other people. In short, forming an overall picture of what other people are like is fundamental to many decisions in our daily life.

Traditionally, the study of impression formation has been associated with the **person impression formation task** introduced by Asch (1946). In this task, subjects are presented with personality trait information about another person and asked to evaluate their impression of that person. For instance, what would you think of someone described as *honest*, *calm*, and *unsophisticated*? The purpose of this chapter is to present some key findings from research conducted within this paradigm. In particular, the goal is to show how this paradigm has been extended recently to study a variety of important interpersonal decisions.

The research reviewed here was conducted within the framework of *Information Integration Theory* (Anderson, 1981, 1991). This approach (IIT) has provided fundamental contributions to person impression research for nearly 30 years. Moreover, IIT has been used to study a variety of psychological judgment tasks other than person impressions. Some examples include gambling and risky decision making (Shanteau, 1974; Lopes, 1976), judgments by children (Anderson, 1991), and expert agricultural judgments (Shanteau, 1987).

Information integration theory. Before getting to the main body of the paper, it is first necessary to provide a brief overview of some of the main principles and methods

used by IIT. The basic premise underlying IIT is that human judgment results from the evaluation and combination of information about judged objects. The functional goal of IIT is to derive a quantitative description of the way that information is processed to arrive at an overall judgment. This quantitative description is then a representation of the subjects' *judgment strategy*.

The basic elements of IIT involve a series of evaluation processes. The first is the **stimulus evaluation** that occurs when an external piece of stimulus information receives subjective psychological meaning. Specifically, each item of information can be represented by two internal parameters. One is the *scale value*, which refers to the placement of an item along the dimension of judgment. For instance, the trait *humorous* may have a high scale value when evaluating the dateability of a person. But the scale value for *humorous* may be low when evaluating someone as a plumber (Anderson & Lopes, 1974).

The second parameter is the *weight value* of the item of information. This can be thought of as the importance or relevance of that item. Weight also depends on the dimension of judgment. For instance, school performance may carry a greater weight when evaluating the abilities of a prospective employee than when judging the guilt of a defendant in court.

Once the various types of stimulus information have been evaluated, the weights and scale values are combined to form an overall evaluation. The combination rules, called **integration functions**, generally can be described using various algebraic operations. Many different combination rules have been explored using IIT. However, the results of several hundred studies reveal that an *averaging model* describes most types of person impression formation judgments.

Specifically, the final judgment is a *weighted average* of the individual pieces of information. In effect, averaging can be likened to a psychological “center of gravity.”

The remainder of this paper will be organized into three parts, followed by a conclusions section. Each part will provide a summary of major findings that have emerged from the research literature on person impression formation. In each case, one or two studies will be described to illustrate relevant evidence. Then the implications of the finding for managerial decision making will be discussed along with consideration of other implications.

Initial Impressions

Any historical discussion of person impression formation research must begin with Asch’s classic 1946 paper. Asch described a series of ten experiments in which subjects were presented with sequences of personality trait adjectives and then asked to form an impression of the person described. Asch’s contention was that the total assessment would reflect a dynamic process in which the separate traits would interact to form a unitary impression.

In support of his contention, Asch observed a **primacy effect** by which traits earlier in a sequence had greater impact. For example, when sequences of the same set of traits were presented in opposite order, the adjectives appearing first were most predictive of the final impression. Asch suggested that a primacy effect occurs because the initial traits in a sequence set the stage for the interpretation for later traits. In effect, the meaning of each new adjective was interpreted in light of the ones already received, i.e., there is a *change of meaning*.

Asch’s pioneering studies sparked a considerable amount of subsequent research into person impression formation. The primacy effect was central to much of this early work. Many of these studies were concerned with exploring more precise reasons for the dominance of initial impressions. One alter-

nate hypothesis deserves particular comment: **attention decrement**. According to this idea, later traits have less effect because peoples’ attention declines as additional adjectives are presented.

Although many studies have explored this alternate hypothesis, the study by Stewart (1965) is noteworthy. Stewart was one of the first to propose attention decrement as an explanation for primacy. He reasoned that changing the task so that subjects were forced to attend to later traits should diminish the effect. In contrast, Asch’s change-of-meaning hypothesis would predict no difference. Stewart’s study had two conditions. In the first, subjects saw the entire sequence of traits before responding. In the second, subjects responded after each trait was presented.

Consistent with prior studies, Stewart found a primacy effect when subjects responded only at the end of the sequence. However, for continuous responding the effect was reversed; traits appearing later in the sequence actually had a greater impact – a **recency effect**. Since continuous responding forced subjects to attend to later adjectives, this result supported an attention decrement view. The importance of Stewart’s research is that it emphasizes the role of the weighting process in impression formation.

Many studies since Stewart have shown that primacy can be reversed to recency using a variety of attentional manipulations. When left to our own resources, however, we will emphasize whatever we know first about a person – an **initial impression** effect. Of course, this may lead to biased or incorrect assessments of people since later information is often more revealing. Nonetheless, it is possible by redirection of attention to alter the natural tendency towards primacy.

Another piece of the puzzle about initial impressions was filled by looking simultaneously at memory and impression formation. In a series of studies, Anderson (1991) asked subjects both to form an impression of

someone based on a series of traits and to recall the actual traits from the series. The final impressions displayed the primacy effect shown by Asch and others. However, the memory results revealed a classic bowed serial recall shape with a strong recency effect. That is, the information with the greatest effect on impressions was not the most readily recalled. Anderson argued that once trait information is evaluated, the impact is stored in an impression memory. The trait itself is no longer needed and may be forgotten.

Hastie and Park (1986) used this evidence to make a distinction between **on-line** and **memory-based judgments**. The former are made at the time stimuli are presented – these judgments show primacy. In contrast, the latter are made subsequently – these show recency. Apparently, the same information can lead to different impressions depending on when the evaluations are made. Thus, the timing of the impression formation can be crucial in determining the outcome of the process.

Irrelevant Information

In many settings, information that is logically irrelevant to the judgment at hand has been shown to influence person impression formation. As an example, consider the study by Kaplan and Kemmerick (1974) of juror decision making using IIT procedures. They were interested in investigating how relevant **evidentiary** information was influenced by the presence of irrelevant **non-evidentiary** information.

In a simulated jury task, defendants accused of a felony traffic offense were described by: (1) evidential information related to the circumstances of the crime, and (2) non-evidential information about the defendant's personal characteristics. Besides varying both types of information, instructions regarding the relevance of non-evidential information were systematically manipulated.

Kaplan and Kemmerick reported several findings of interest. First, subjects consistently used both evidential and non-evidential information in evaluating the guilt of the defendants. Specifically, more incriminating evidence and negative personal characteristics produced increased guilty responses. Second, this occurred despite instructions about the irrelevance of personal characteristics. Third, no matter whether the information was relevant or not, subjects combined the information using a *weighted averaging rule*.

Thus, apparently information logically irrelevant to a decision may nonetheless influence that decision. Kaplan and Kemmerick pointed out that many other factors may have a similar effect. Specifically, they proposed that phenomena such as perceiver bias, source credibility, redundancy, inconsistency and order effects may be viewed as examples of logically irrelevant factors influencing person impression formation.

Comparable studies of the effects of irrelevant information have found similar effects in other areas of research such as probabilistic decision making (Troutman & Shanteau, 1977), expert agricultural judgment (Gaeth & Shanteau, 1984), nursing diagnosis (Shanteau, Grier, Johnson, & Berner, 1991), and financial decision making (Shanteau & Harrison, 1991). Thus, it appears that it is frequently difficult for decision makers to differentiate between what is relevant and what is not when making judgments about other people.

In a recent analysis of what distinguishes expert from sub-expert decision makers, Shanteau (1992) identified the ability to separate relevant from irrelevant information as critical to superior performance. Because of their ability to make the distinction between relevance and irrelevance, experts often end up attending to less information. Therefore, focusing on only what is relevant may lead to a simpler, but better decision strategy by experts (Ettenson, Krogstad, & Shanteau, 1984).

However, it is possible for non-experts to learn how to discriminate between what is relevant and what is not. For instance, Gaeth and Shanteau (1984) were able to train student soil judges to make more accurate assessments by learning how to compensate for the impact of irrelevant materials in soil. Similarly, Shanteau, et al. (1991) reported that student nurses improved their decision making by concentrating only on information they evaluated as “essential” to a nursing problem.

These results are noteworthy since it might appear that the most direct way to deal with irrelevant information is by simply ignoring it – “if it is irrelevant, then don’t pay any attention to it.” In both Gaeth and Shanteau (1984) and Shanteau, et al. (1991), on the other hand, the decisions improved only when conscious efforts were made to compensate for the effects of irrelevant information. Therefore, it seems that direct action is needed to reduce the effect of logically irrelevant factors.

Physical Appearance

It has long been known that physical appearance influences person impression formation. For instance, Lampel and Anderson (1968) observed that an attractive photograph increased the importance of personal traits in impression formation. For unattractive photos, on the other hand, the trait information became less important. They suggested that subjects put more weight on personality traits in the presence of a more attractive photograph, and less weight when the photo is unattractive.

Two later studies (Nagy, 1981; Shanteau & Nagy, 1979) used the IIT approach to explore the role of physical attractiveness in dating choice. These studies were concerned with two questions: How is physical appearance information combined with personal trait characteristics? And, how does the appearance of the stimulus person influence the choices made by the decision maker?

The purpose of the Nagy (1981) study

was to clarify the role of physical appearance in dating. Many dating studies have concluded that physical attractiveness dominates subjects’ choices (e.g., Walster, Aronson, Abrahams, & Rottmann, 1966). However, these earlier studies neither varied the personal information about the prospective dates nor evaluated the combination rule used. To examine these issues, Nagy had female subjects judge the dating desirability of males described by both a photograph and a personal description.

As expected, the results showed an effect of both physical appearance and personal characteristics. Interestingly, physical appearance did not totally dominate the subjects’ judgments. Estimates of the relative impact of physical appearance and personal characteristics showed them to be about equal in importance.

Analysis of the pattern of results revealed that physical appearance information was combined with trait information by an **averaging** combination rule. This is noteworthy since it is consistent with how other types of personal trait information are combined. The difference is that physical appearance is given about as much weight as the other sources of information combined.

A recurring question in literature has been whether the judge’s own appearance has an impact on how they evaluate stimulus information. In dating, the question is whether a subject’s inference about the chances of being accepted as a dating partner influences their choices of prospective dates. Prior researchers felt that subjects would consider their chances of acceptance and consequently prefer dates of equal attractiveness to themselves (Walster, et al., 1966). Although this **matching hypothesis** seems reasonable, the results in the literature were inconclusive. Thus, the role that probability played in dating choice has not been made clear.

Shanteau and Nagy (1976) attempted to resolve this ambiguity by using the IIT approach to investigate how (and whether) ap-

pearance is combined with feedback information about prospective dates. In a series of studies, they found that a date's attractiveness has a greater impact on choices as the probability of being accepted increased. Psychologically, this means that probability modified or modulated the effect of physical attractiveness. The pattern of results revealed that the behavior was consistent with a **multiplying** combination rule. Information about the risk of success was, in effect, multiplied by the attractiveness of the prospective date – this is consistent with economic theories of risky decision making.

Research on dating choices may seem to have little relevance for managerial decision making. However, Nagy (1981; summarized in Shanteau & Nagy, 1984) found that many of the same findings applied to personnel selection. She looked specifically at three factors: (1) physical appearance, (2) job-relevant information such as length or previous employment, and (3) job-irrelevant information such as the applicant's age and gender. Applicants for a job were described on actual forms used by a large nearby company.

The results for business students revealed that they relied on all types of factors, although job-relevant information was dominant. Providing a detailed job description and a policy statement about only using relevant information reduced the irrelevant effects for most subjects. When the same task was given to professional personnel managers, somewhat different results were obtained. None of the managers made direct use of job-irrelevant information. However, when two applicants were tied on relevant factors, then irrelevant information was sometimes used to break the tie.

The Nagy study revealed several findings of practical importance. Particularly noteworthy was evidence for the effectiveness of a job description in reducing the effects of irrelevant information. Also, judgments of experienced personnel managers differed substantially from those of business

students. This is important in that it implies that such students cannot be used as surrogates (or stand-in's) for experienced decision makers.

Concluding Comments

Each of the three issues addressed in this paper – initial impressions, irrelevant information, and physical appearance – is a natural consequence of the way impressions are formed about other people. And each of these issues has the potential to bias the impression in an inaccurate or inappropriate direction. However, as discussed above, it is possible for subjects to compensate for each of these effects. The key seems to take active steps to reduce the effects rather than taking a passive approach of trying to ignore them.

The studies reviewed in this paper also demonstrate the flexibility of the IIT approach specifically and the impression paradigm generally to study issues of practical concern. Indeed, the range of real-world issues that can be addressed using this approach is limited only by the imagination of the investigators. For instance, Shanteau and Troutman (1992; also see Troutman & Shanteau, 1976) applied the paradigm to investigate factors involved in consumer decision making. And Shanteau and Harrison (1992) extended the approach to look at financial and legal factors in investment decision making.

Nonetheless, there are three areas in which further research and analysis is needed. The first concerns the need for more penetrating analyses of **individual differences**. Many investigators of impression formation have commented informally about the substantial differences between subjects. With few exceptions, however, the underlying reasons for these preferences have not been explored. An example of what might be done appears in Kaplan and Kemmerick (1974). Subjects with high and low predispositions towards guilt or innocence were studied separately and found to have differ-

ent strategies of juror judgment; this result has major implications for both jury selection and other decisions influenced by person impressions.

A second area of concern is the need for more **intervention** studies. Up to now, most investigators of impression formation have adopted the “disinterested observer” a pproach to research – *look but don’t touch*. However, intervention is useful in two respects: (1) it provides a means to probe directly into the judgment process, and (2) it provides an opportunity to actually improve the judgment outcome. For example, Shanteau and Harrison (1992) explored several procedures for improving the financial decisions made by accounting students.

A third area in which future research is needed is to look beneath the surface descriptions of impression formation for **deeper levels of understanding**. Although it is certainly useful to know that subjects average personal trait information, it would be valuable to know why averaging is so pervasive. Among other possibilities, such research may enrich our understanding of the processes involved in personal impression formation.

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