# How Do Self-Attributed and Implicit Motives Differ?

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Repeated attempts have been made in the past 35 years to obtain self-report measures of motives originally identified in associative thought. Measures of the same motive obtained in these two ways seldom correlate significantly with each other and relate to different classes of behavior. Recent evidence is summarized showing that implicit motives, derived from stories written to pictures, combine generally with activity incentives to affect behavior, whereas self-attributed motives, derived from self-reports, combine generally with social incentives to affect behavior. Hence, implicit motives generally sustain spontaneous behavioral trends over time because of the pleasure derived from the activity itself, whereas the self-attributed motives predict immediate responses to structured situations because of the social incentives present in structuring the situation. Implicit motives represent a more primitive motivational system derived from affective experiences, whereas self-attributed motives are based on more cognitively elaborated constructs.

From the beginning of the work on the achievement motive (McClelland, Atkinson, Clark, & Lowell, 1953), it has been apparent that motive dispositions as coded in imaginative thought from stories written to pictures differ from motive dispositions with the same name as measured in self-reported desires or interests. The authors of the studies on achievement motivation wanted to demonstrate that the variable they had identified in fantasy functioned like an animal drive in the sense that it energized, directed, and selected behavior. In this tradition (cf. Melton, 1952) it was particularly important to show that a motivational disposition that these authors labeled n Achievement (for the need to achieve) would select behavior or facilitate learning just as hunger would facilitate a rat's learning a maze. When McClelland et al. examined a self-reported desire for achievement, they observed that it did not facilitate learning in the same way that n Achievement did and so concluded that self-reported desires do not function like motives. An early study (deCharms, Morrison, Reitman, & McClelland, 1955) showed that the two measures of achievement motivation were uncorrelated and that their behavioral correlates were different. For these reasons deCharms et al. urged that the two measures be distinguished in future research by referring to the variable identified in fantasy as n Achievement (for the need to achieve) and the self-reported desire for achievement as v Achievement (for valuing achievement).

The recommendation that the two types of motive measures be carefully distinguished has not generally been followed in psychology for a variety of reasons. Ever since Murray's (1938) original study of motives, it has been commonly assumed that

questionnaires and projective tests are simply alternative ways of getting at the same variable (see, e.g., Campbell & Fiske, 1959). Furthermore, it has seemed unreasonable not to call a strong self-reported desire for achievement a need or a motive (Edwards, 1954; Jackson, 1974). Moreover, the fantasy-based measures of variables like n Achievement did not appear to satisfy the psychometric requirements of a good measure (Entwisle, 1972) whereas the questionnaire measures did. More recent evidence has suggested that when a picture-story exercise is administered properly, the motive variables obtained from it have satisfactory test–retest reliability (Koestner & Franz, 1989; Lundy, 1985; McClelland, 1980; Winter & Stewart, 1977), yet many psychologists remain convinced that the distinction between motives and values is unnecessary and confusing (Raven, 1988). A current reason for rejecting the distinction derives from the cognitive revolution in psychology, which turned attention away from the interest in unconscious and mechanistic models of motivation aroused by the earlier Freudian (e.g., Freud, 1940) and Hullian (e.g., Hull, 1943) conceptions, respectively. Modern investigators have focused more on information processing and on the way in which motivational thoughts are converted into action (e.g., Heckhausen & Kuhl, 1985; Weiner, 1972, 1986). And these processes could best be followed by asking subjects to report consciously on their desires, intentions, goals, and reasons for action (Kreitler & Kreitler, 1976; Kuhl, 1986). From this point of view, the problem was to explain the story-based motives in such cognitive terms, rather than to consider them to be separate and distinct.

A further consequence of the cognitive reorientation of motive theory has been to call into question the use of the term value to describe self-reported motives. For value is a term that has come to be used to describe normative beliefs about desirable goals and modes of conduct (Chaiken & Stangor, 1987; Rokeach, 1973, 1979). To avoid misunderstanding, we abandon the term value to describe attitudinal or self-reported motives and refer to them as self-attributed motives. For convenience, the motive measures derived from the picture-story exercise

will continue to be labeled in the traditional way as *n* Achievement, *n* Power, and so on. We will consider them *implicit* needs in the sense that the person is not explicitly describing him or herself as having the motive. In contrast, the self-reported, attitudinal motive measures are labeled *san* Achievement, *san* Power, and so on to indicate that they are *self-attributed* needs of various types.

Relabeling helps to avoid some types of misunderstanding, but it does not clarify the issue of whether it is important to distinguish between motives measured in these different ways, and if it is, then why. We have recently completed research (Koestner, Weinberger, McClelland, & Healy, 1988) that we believe does help to explain why these two types of motive measures have often yielded different results. To provide a background for the clarification that we believe these results bring to the field, it is first necessary to review briefly why it has been considered necessary to treat implicit and self-attributed motives as different variables (cf. McClelland, 1985a). The findings are then described in terms of how they shed light on these differences and how they provide more general insights into the way in which behavior is motivated.

## The Relation of Implicit and Self-Attributed Motives

Measures of self-attributed and implicit motives seldom correlate significantly with one another. This fact was reported first in 1953 by McClelland et al., was confirmed in 1956 by Child, Frank, and Storm, and has been reported many times since (Atkinson & Litwin, 1960; Heckhausen, 1980; Heckhausen & Halisch, 1986; Holmes & Tyler, 1968; Korman, 1974; Kreitler & Kreitler, 1976; McClelland, 1958). As a recent example, in the two studies referred to later in Figures 1 and 2 involving college students, the correlations between *n* Achievement and *san* Achievement were −.21 and .15, respectively; between *n* Power and *san* Power, the correlations were .08 and .05, respectively; and between *n* Affiliation and *san* Affiliation, the correlations were −.06 and −.08, respectively. In these studies, the self-attributed motive measures were obtained from the Jackson (1974) Personality Research Form (PRF) scales.

Few facts in psychology are as well established as this one, yet psychologists have had difficulty in dealing with it. They have generally reacted in one of two ways: (a) by concluding that the story-based motive measures are worthless (Entwisle, 1972; Campbell & Fiske, 1959) or (b) by concluding that the reason for the lack of correlation is that the self-report measures have not been designed properly (Raven, 1988). Over the years many attempts have been made to develop questionnaire measures of *n* Achievement and other motives (Edwards, 1954; Gjesme & Nygard, 1970; Gough & Heilbrun, 1975, 1983; Hermans, Petermann, & Zielinski, 1978; Jackson, 1974; Kreitler & Kreitler, 1976; Mehrabian, 1969, 1970; Raven, Molloy, & Corcoran, 1972), yet none of them has proved to be consistently related to story-based motive measures. The most common reaction to this failure has been to gloss over it and to treat the self-report measures as if they were assessing the same variables as the story-based measures, despite the lack of correlation between them (Weiner, 1980, 1986). And the hope still persists that asking a person just the right questions will yield a measure of implicit motives (Raven, 1988).

Another way to react to this lack of correlation is to take it seriously, to insist that at a minimum, psychologists should not call by the same name two measures that do not correlate with one another (McClelland, 1980). Perhaps there are two qualitatively different kinds of human motivation, both of which are important; what needs explaining is how they differ, and how they relate to each other.

## Implicit and Self-Attributed Motives Influence Different Classes of Behavior

McClelland (1980) has summarized evidence that implicit motives predict spontaneous behavioral trends over time, whereas self-attributed motives predict immediate specific responses to specific situations or choice behavior. The story-based measures of motives have been demonstrated to have greater validity for predicting long-term trends in behavior than have self-reported desires as recorded in questionnaires. For example, *n* Achievement was shown to predict entrepreneurial activity over time in the United States (McClelland, 1965) and in India (McClelland, 1987b). The inhibited power-motive syndrome, likewise scored in stories, was shown to predict managerial success in a major U.S. company over 16 years (McClelland & Boyatzis, 1982) and elevated blood pressure in an adult sample of graduates of a prestigious college over 20 years (McClelland, 1979). The amount of intimacy motivation in imaginative stories written by individuals at age 30 predicted marital happiness and overall psychosocial adjustment 17 years later (McAdams & Vaillant, 1982). In several of these instances, a variety of self-report measures of similar motives had no predictive validity over time. See especially, Bray, Campbell and Grant (1974) for the failure of a variety of questionnaire measures of motivation to predict managerial success over time.

Although self-attributed motives have at times appeared to relate to long-term trends in behavior, the results may often be as easily explained in terms of the effects of such behavioral trends on self-attributions as the reverse. For example, Kreitler and Kreitler (1976) reported a significant relationship between cognitive orientation toward achievement and final grades received by the subjects in the academic year preceding the date of the study. Kreitler and Kreitler described such results in terms of the *predictive power* of the cognitive orientations, but it seems just as likely that the cognitive orientations and self-attributions were a result of the grades received (i.e., those who did well ascribed achievement motivation to themselves).

To take another example, Jackson (1974) has validated the self-attributed motive scores obtained on his PRF scales against peer ratings that are presumably based on behavioral trends over time. But here again, if people have achieved, they are likely to attribute achievement motivation to themselves. The observer also notices their many achievements and rates them high on achieving behavior, so the person's self-reported achievement motive correlates with the observer's judgments of their achievements. Moreover, people who see themselves as achievement oriented are likely to express this to others who then dutifully report it on rating measures. That is, people form opinions about themselves that they report in direct measures (as on the Jackson PRF) and in conversations with others. These others therefore come to know and report these opinions

when they are asked to make judgments in the form of peer ratings (McClelland, 1972). It is therefore possible to conclude that self- and other-judgments are influenced by the same achievement behavior and self-concept, not that self-reported achievement drive *predicts* achievement behavior over time as independently judged by others.

On the other hand, self-attributed motives, like other attitude measures, seem to predict behaviors best when the attitude and behavior measures show what Ajzen and Fishbein (1977) have termed a high degree of *correspondence;* that is, when both are closely matched on specificity and are assessed within a short time of one another. (For a review of the relation between attitudes and behavior, see Zanna, Higgins, & Herman, 1982). Thus, behavioral intents in a Prisoner's Dilemma game predict very well what choices the players will make in that well-defined situation (Ajzen & Fishbein, 1970). Also, Kreitler and Kreitler (1976) reported that childrens' statements about the degree of their curiosity correlates with a number of specific behaviors characteristic of curiosity in a well-defined classroom test situation. Similarly, Bandura (1982) reviewed a variety of studies indicating that self-efficacy judgments tailored to a specific domain of functioning are highly predictive of performance in that domain. But as Ajzen and Fishbein (1970) pointed out, "the longer the time interval between the statement of intention and the actual behavior, the lower the correlation between intent and behavior will tend to be" (p. 469). Thus, the relationship between setting a goal to get a higher grade and actually getting a higher grade over several months tends to be low, especially when previous grade-point level is partialed out (Locke & Bryan, 1968).

So, generally speaking, implicit motives appear to be better at predicting behavioral trends over time and self-attributed motives, like most attitude measures, appear to be better at predicting immediate choices. Adopting a distinction introduced by Skinner (1938), McClelland (1980) referred to the spontaneous behavioral trends as *operants* and the immediate choice behaviors as *respondents.* Skinner used these terms to distinguish between occasions in which the stimulus for a response could be identified (respondent behavior) or could not be identified (operant behavior). In the case of respondent behaviors, the strength of a response is measured in terms of its *intensity* (latency or amplitude) in reaction to a known stimulus. In contrast, operant behaviors are measured in terms of the *frequency* of a response over time.

In a direct test of the usefulness of this distinction, Constantian (as reported in McClelland, 1985a) used two measures of the affiliation motive—one, the traditional picture-story measure of implicit *n* Affiliation and the other a typical self-attributed measure of the need for affiliation (*san* Affiliation). The affiliative motive is defined as the desire to establish, maintain, or restore warm relationships with other people (Atkinson, Heyns, & Veroff, 1954; Boyatzis, 1973). Constantian found that *n* Affiliation correlated more strongly than *san* Affiliation with an operant measure of affiliative behavior (whether the person was found to be talking with someone when he or she was beeped randomly throughout several days). Note that the operant behavior was without identifiable stimuli, a type of spontaneous behavior varying in frequency over time that involved a readily available response (e.g., talking to someone). In con-

trast, the *san* Affiliation measure correlated more strongly than the *n* Affiliation measure with affiliative choices—with reporting that they would rather go to a movie with someone than go alone, live with others than live alone, and so on.

Heckhausen and Halisch (1986) found similar results in an extensive study. First, they reported the usual lack of correlation between an *n* Achievement TAT measure and *san* Achievement questionnaire measures. More important, they found different behavioral correlates for each variable. The *n* Achievement score correlated with the number of job-related activities that subjects reported they had successfully and spontaneously carried out—an operant measure. The *san* Achievement scores correlated with a number of respondent measures, such as setting higher levels of aspiration and reporting that they had higher levels of ability. Such findings serve to underline the importance of maintaining the distinction between self-attributed and implicit measures of motive dispositions, inasmuch as the two types of measures correlate differently with other behaviors in ways that are potentially of theoretical importance.

## Combining Self-Attributed and Implicit Motives for the Prediction of Behavior

Separate measures of self-attributed and implicit motives may be combined to yield a better understanding and prediction of certain types of behavior. If the measures were of the same variable, this would not be true. McClelland (1985a) and Parsons and Goff (1980) suggested that implicit motives as reflected in the TAT measures might provide a general orientation toward certain types of goals but that self-attributed desires often reflect social norms that help define more narrowly the areas in which those goals are to be accomplished. Thus, *n* Achievement is associated with a concern to do things well—a kind of general process goal that in time, assuming no special self-conscious types of achievement goals, may lead people into entrepreneurial activity (McClelland, 1985b). Although explicit desires for achievement are often also measured in general terms (cf. Edwards, 1954; Jackson, 1974), they much more readily combine with explicit goals of trying to do well in some particular socially accepted domain, such as in school or on the job. Hence, knowing the strength of both explicit and implicit motives can improve prediction of performance. For example, Raynor and Entin (1982) measured among college students both *n* Achievement and the extent to which they saw doing well in a particular course as related to their future career success. That is, for some students, but not others, doing well in the course was seen as a subgoal to later achievement. Results showed that students high in *n* Achievement did better in the course than those low in *n* Achievement only if they saw doing well in it as instrumental to reaching a long-term achievement goal. Thus, *n* Achievement provided an impulse toward doing something well. The conscious achievement goals (doing well in the course and career success) defined the particular area in which this impulse expressed itself. So measures of both types of motives improved prediction of performance over what either predicted alone.

Self-attributed motives, more often than implicit motives, are allied to explicit goals that are normative for a particular group and that channel the expression of implicit motives for

members of that group. Realization of this fact provides an answer to the frequent criticism that achievement motivation theory is ethnocentric because it appears to emphasize individualistic striving in a way that is not appropriate to the way older people (Maehr & Kleiber, 1981), people from other cultures (Gallimore, 1981), or women (Parsons & Goff, 1980) define achievement or success. This criticism is valid in the sense that the n Achievement variable by itself gives a poor indication of the area of life in which a person will strive to do better or be entrepreneurial. Self-attributed motives, plans, and goals are needed to show the direction in which the achievement motive will turn.

So individuals in different cultural groups can still be concerned with doing something well (their achievement motive), but that *something* is defined by the motives and goals that the individuals attribute to themselves, as determined in part by what is considered important in the group to which they belong. An early illustration of this point was provided in a study by French and Lesser (1964), in which they determined whether college women were oriented toward a career or toward a traditional role as a wife and mother. They found that n Achievement in career-oriented women was significantly associated with doing better at an academic task like anagrams, but not with doing better at a social task that involved listing the number of different ways in which they could make friends if they moved into a new community. In contrast, among the women oriented toward the traditional women's role, those with higher n Achievement performed better at the social task of how to make friends, but did not perform better at the anagrams task. Self-attributed motives or purposes here defined the type of task at which a woman high in n Achievement would do better. So it is useful in understanding and predicting behavior to measure both implicit motives and self-attributed motives, with their associated explicit goals, because they often give specific direction to the implicit motives.

## The Relation of Self-Attributed and Implicit Motives to Environmental Incentives

Recent research that we have undertaken (Koestner et al., 1988) pointed to another distinction between self-attributed and implicit motives that we believe will help explain the other differences just reviewed. The research was undertaken because of hints in the literature that implicit motives are chiefly activated by incentives experienced in doing something, whereas self-attributed motives are usually activated by explicit, often social, incentives such as rewards, prompts, expectations, or demands. For example, it is relatively well established (McClelland, 1985b) that those scoring high in n Achievement do better at challenging tasks (those with a moderate probability of success) than do those low in n Achievement, because such tasks provide the maximum incentive of feeling good from doing something better. Conversely, such individuals often do worse than those with low n Achievement when the challenge incentive is not present in the task—that is, when the task is very easy (Atkinson, 1958). And if performance is totally under the direction of external prompts or demands (as when an experimenter keeps telling subjects to "Hurry up!"), subjects high in

n Achievement do not do significantly better than those low in n Achievement (Wendt, 1955).

On the other hand, those who score high on a self-attributed motive measure have been shown to be more influenced by salient external social demands. In the very first study of san Achievement (then called v Achievement) by deCharms et al. (1955), it was demonstrated that people high in san Achievement were more likely to change their views of the quality of paintings to be more in line with expert opinion than people low in san Achievement or high in n Achievement. Furthermore, Patten and White (1977) showed that under normal testing conditions, high san Achievement did not lead to better performance on a laboratory task, but if an external demand for achievement was added, those high in san Achievement did perform better than those low in san Achievement (see McClelland, 1985a).

A number of studies have recently been carried out that were designed to compare directly the effect of social and task incentives on the performance of those who score high on a self-report versus a picture-story measure of the same motive. The general hypothesis that guided the research was that salient social incentives would combine with self-attributed motives to influence performance, whereas task incentives would influence performance in conjunction with implicit motives or needs.

In the first such study (Koestner et al., 1988), college students were presented with 32 picture–word pairs for 5 s each. In one condition, they were asked simply to try to associate the pairs, as they would be asked to recall them later. In another condition, an achievement incentive was introduced by making repeated references to ways of retaining or recalling the words better. After a period of about 5 min during which the subjects filled out a background questionnaire, the subjects were asked to try to recall the picture–word pairs and to list the words they had seen.

A story-based measure of n Achievement was obtained in the standard way (McClelland, 1985b) at the outset of the session. In addition, the Jackson (1974) Personality Research Form was administered after the picture-story exercise. It provides in self-report format a measure of the subject's interest in or self-attributed desire for achievement—here labeled san Achievement.

Figure 1 presents the results in terms of the mean number of words recalled by subjects classified by san Achievement, n Achievement, and incentive condition. As Figure 1 illustrates graphically and as an analysis of variance (ANOVA) confirmed statistically, introducing an achievement incentive improved overall recall (main effect of incentive, $p < .05$). This indicates that introducing the achievement incentive was effective in improving performance. The most striking result confirms the hypothesis that the performance of those high in the self-attributed desire for achievement will be most influenced by an external social incentive. The interaction term in the ANOVA is significant ($p = .02$), showing that those high in san Achievement do significantly better under the influence of an achievement incentive than do those low in san Achievement. In fact, those high in san Achievement actually do worse than those low in san Achievement ($p < .05$) when there is no special achievement incentive. Such a result helps explain why under normal testing conditions people high in self-attributed need for
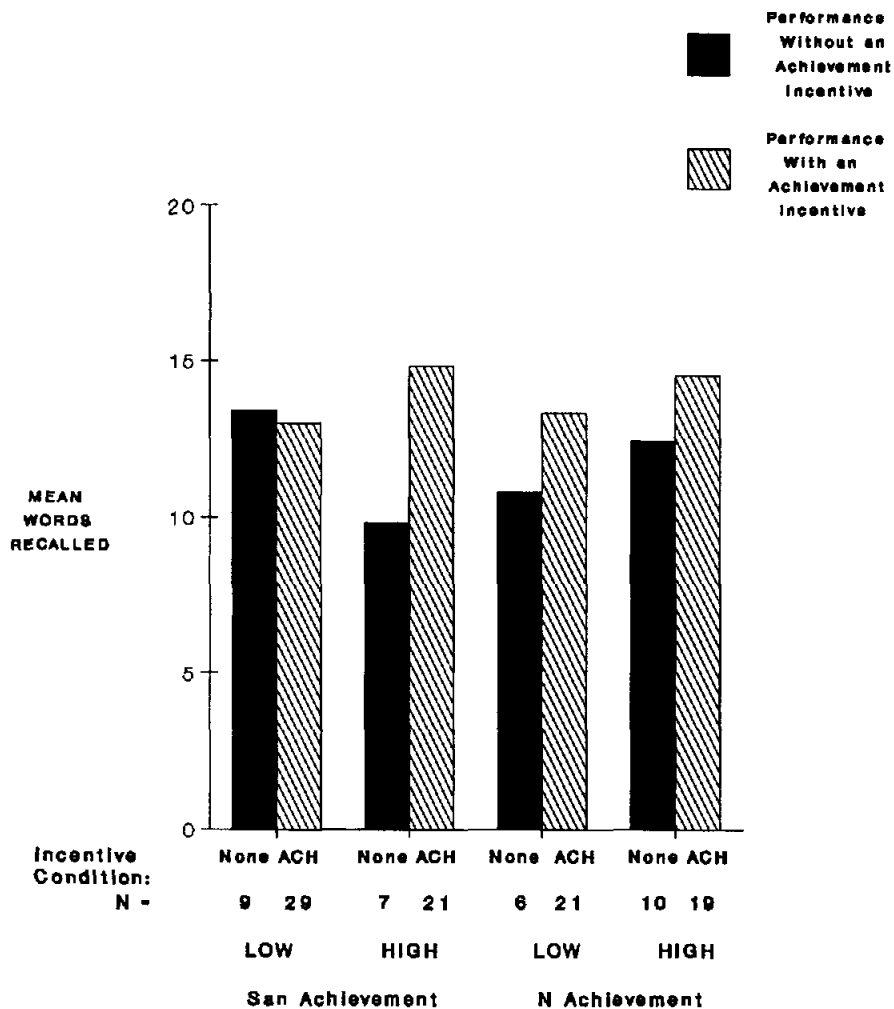
Figure 1. Relation of words recalled to achievement values, achievement motive and an achievement incentive.

achievement often do not perform better, a fact that has been reported a number of times previously (McClelland, 1985b). They need to be told that the performance relates to their self-attributed goal of doing better before they, in fact, do better.

On the other hand, when the classification is made in terms of the implicit motive measure—n Achievement—the same interaction term in the ANOVA is not at all significant. Those high in n Achievement are no more stimulated to perform well by the achievement incentive than are those low in n Achievement.

In a second part of the experiment, these subjects worked at word-finding puzzles that varied in level of difficulty or challenge. This task had no special incentive condition. The results showed a significant n Achievement × Difficulty Level interaction ($p = .035$, in the predicted direction), indicating that those subjects who were classified as high in n Achievement performed relatively better on the difficult than on the easy puzzles, whereas low-n Achievement subjects showed the reverse pattern. The subjects' level of san Achievement did not interact with difficulty to affect performance. Together, these studies provide support for the hypothesis that the implicit motive for

achievement is affected by task incentives (such as the challenge of a more difficult puzzle) to influence performance, whereas self-attributed achievement motivation will affect performance under the influence of social incentives (such as are made explicit by the way an activity is described).

Another experiment (Koestner et al., 1988) sought to determine if the results obtained for the two types of achievement motives would also occur for the two types of power motives. The need for power is defined as the desire to have impact on others by influencing, persuading, helping, arguing with, or attacking them (Winter, 1973; McClelland, 1975). The question was whether an introduced social incentive to show power would affect those high in san Power more than it would those high in n Power. This study also used college student subjects for whom the n Power scores from stories and a san Power measure from the Dominance or Leadership scale of the Jackson (1974) PRF were obtained. The subjects were presented with a social perception task (Sternberg, 1986) consisting of pictures of two people. The subjects were instructed to figure out the relationship between the people in the picture. For some pic-
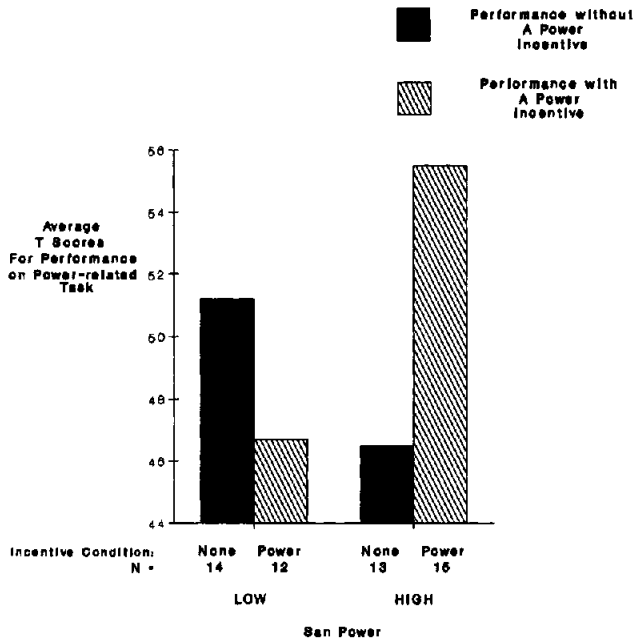
*Figure 2.* T-scored performance on the power-related task by incentive condition and level of self-attributed power motivation. (The means have been adjusted for the covariate [*n* Power]).

tures, the task was to determine the affiliative relationship between a man and a woman, and for other pictures, the task was to determine the power relationship between two adults in an office or in a factory setting. The subject was to decide which one was the boss. For each picture, the subject could find out if he or she had been correct by looking at the answer on the back of the sheet. Here, we will be primarily concerned with performance on the power-related task, as it has been shown that people high in *n* Power are more sensitive to power stimuli and perform better at power-related tasks (McClelland, 1985b).

One half of the subjects were simply told how to perform the task—the no special incentive condition. The other half was told that a high score on the social perception task would indicate that they were in a better position to influence or manage others. This explanation was expected to trigger the power motive in those high in *san* Power but not in those high in *n* Power. As expected, the subjects high in *n* Power performed significantly better than did subjects low in *n* Power on the power-related task (picking who was boss in the pictures), both in the no incentive and power incentive conditions, but differences in *n* Power bore no relation to performance on the affiliation task. In other words, the nature of the task incentive combined with *n* Power to influence performance as expected.

On the other hand, the social power incentive influenced performance of those high in *san* Power, as shown in Figure 2. Because *n* Power was significantly related to performance on the power task, its influence has been covaried out in the performance means shown in Figure 2. The interaction between social incentive condition and *san* Power is significant (*p* = .02), indicating that those high in *san* Power do better than those low in *san* Power when there is a social power incentive but not when it is not present. Again, no such relation appears for perfor-

mance on the affiliative portion of the social perception task. Introduction of the power incentive does not improve the performance of those high in *n* Power more than the performance of those low in *n* Power.

The overall conclusion is the same as it is for the results in Figure 1. Explicitly introduced incentives generally affect performance more for those varying in the strength of self-attributed desires than they do for those varying in the strength of implicit motives as measured in the picture-story exercise. In common-sense terms, those who believe that they are interested in leadership and in influencing others are more apt to respond to an instruction that says the task is related to those goals than those who do not attribute those goals to themselves.

A further study (Koestner & Zuckerman, 1989) shows how varying the nature of the salient social incentive influences whether those high in *san* Achievement or *san* Power are more motivated to work on a task. College student subjects worked for a time on a word maze and then were given success or failure feedback in terms of how much of a task they had mastered (mastery or achievement feedback) or how well they had done compared with others (competitive or power feedback). The experimenter then told them the experiment was over, left them free to do what they liked, and recorded the percentage of them who continued working on the task on their own. Such persistence has often been considered a measure of intrinsic motivation (Deci, 1971; Lepper, Greene, & Nisbett, 1973; Ryan, 1982). One might regard intrinsic motivation as a better measure of motivation than performance that is influenced by skill independently of motivation. As Figure 3 shows, a greater percentage of those high in *san* Achievement continued to be interested in the task after mastery than after competitive feedback, whereas the reverse was true for those high in *san* Power; more of them continued to work on the task after power feedback than after achievement feedback. The interaction chi-square is significant (*p* < .03). People high in the implicit motive measures *n* Achievement and *n* Power were not differentially affected by the explicit mastery or power feedback.

The results of these studies suggest that implicit motives are more apt to be aroused by task incentives than by explicit social incentives, whereas self-attributed motives are more apt to be aroused by explicit social incentives or demands than by incentives implicit in a task experience. Four experiments are not enough to establish such generalizations firmly, nor are we prepared to believe that the reverse of these propositions would never be true—that, for example, an implicit motive could never be aroused by explicit social pressures (see French, 1955). Nevertheless, even as preliminary generalizations, the results appear to be theoretically important because they help explain other differences that have been found between the two types of motives and lead to a more comprehensive understanding of the nature of human motivation.

## Explanation of the Relationship of Implicit and Self-Attributed Motives to Different Classes of Behavior

To begin with, these results provide a ready explanation of why implicit motives have generally been found to predict operant behaviors and self-attributed motives have been found to predict respondent behaviors. For, if the primary incentive for
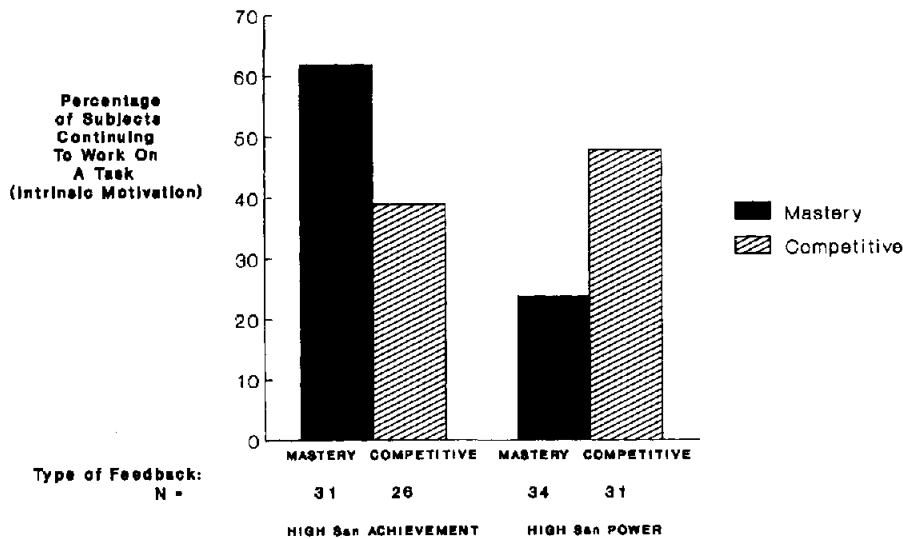
*Figure 3.* Percentages of subjects high in *san* Achievement or *san* Power continuing to work on a task after mastery or power feedback on performance.

carrying out an activity is in the activity itself, then the person implicitly interested in that incentive should continue to carry out that activity. Thus, a person high in *n* Achievement should continue to perform a task that provides a moderate challenge (Atkinson & Litwin, 1960), the primary incentive for that motive; and a person high in *n* Affiliation should continue to interact with people spontaneously (Constantian, reported in McClelland, 1985a), inasmuch as being with people is the primary incentive for *n* Affiliation.

By way of contrast, if the incentive lies in an external social demand, then the person with a strong self-attributed motive will perform the task well to the extent that the external demand or incentive for doing it is salient and is perceived as relevant to the self-attributed motive. As noted earlier, behavioral intents or attitudes are best at predicting behavior in immediate social situations in which the social norms and expectancies of success for various acts are all known and explicit (Ajzen & Fishbein, 1980). The problem with predicting from them to long-term behavioral trends lies in the fact that the external social incentives may not always be salient enough to elicit the behavior. For this reason, recent research on achieving distant goals has stressed the importance of setting proximal subgoals that sustain commitment to performing in the service of a long-term goal (Bandura, 1982, 1986).

The way in which these two types of motives influence behavior in everyday life can be illustrated by research on the relation of *n* Power and *san* Power to success in a managerial position. Managing others successfully involves influencing others or having an impact on them, which has been defined as the natural incentive for *n* Power. People high in *n* Power should enjoy the many opportunities for making decisions and having an impact that the managerial job offers. And, in fact, they have been shown to be more successful managers (McClelland & Boyatzis, 1982).

What about people high in *san* Power? They have a strong desire to be a leader and rise to a managerial position. They may

have joined the company because they saw that there was ample opportunity for advancement. If they rise to a managerial position, they will doubtless try to behave as they think a manager should and demand the respect a manager should have. But for their *san* Power to influence their decision making, they will have to see at every point just how that decision relates to their advancement. However, in managerial jobs there is a lot of discretion as to what people actually spend their time doing. That is, the job entails operant activities in which there are no moment-to-moment social explanations as to how this or that activity relates to one's explicit goals. So people high in *san* Power are no more likely than others to succeed in a managerial job (Bray et al., 1974). People high in *n* Power, on the other hand, seize every opportunity to spend their time doing what they enjoy doing—making decisions and influencing others—which is what the managerial job requires.

The distinction between task and social incentives also explains why McClelland (1980) came to the erroneous conclusion that self-attributed needs were not motives because they did not drive, direct, or select behavior. The conclusion correctly summarized early research on the implicit motives because the experiments were done primarily under neutral conditions when no explicit social incentives to do well had been introduced (Atkinson & Litwin, 1960). In fact, the relation between *n* Achievement and performance tended to disappear when subjects were explicitly urged to do well (McClelland et al., 1953). According to the present understanding, under these conditions subjects high in *san* Achievement would tend to do well, but that relation was not checked in these early studies. In any case, Figures 1 and 2 clearly show that self-attributed motives result in better performance if they are explicitly aroused by appropriate incentives. So they do act like implicit motives under certain conditions. That is, if explicitly aroused, they drive behavior (i.e., energize it), direct behavior (i.e., focus attention on the relevant activity), and select behavior (i.e., produce better learning or performance). However, implicit mo-

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tives may energize behavior more in the sense that they lead to more frequent activity of a certain type because it is pleasurable, even in the absence of specific social demands.

## Explaining the Way Implicit and Self-attributed Motives Combine

If implicit motives are aroused by incentives present in tasks or activities and self-attributed motives are triggered by explicit social incentives, the presence of both types of incentives should summate to facilitate performing the act. Including both *n* Affiliation and *san* Affiliation maximizes prediction of operant affiliative activities (talking to people) in the Constantian study cited by McClelland (1985a), presumably because sometimes the initiative for the interactions is personal, coming from those high in *n* Affiliation who take pleasure in interaction), and sometimes the initiative is social, coming from the other person (evoking a response from those high in *san* Affiliation in line with their commitment to be nice).

Knowing that there are different types of incentives also contributes to an understanding of how self-attributed motives influence the area of activity in which an implicit motive expresses itself. For explicit social incentives are often more differentiated and specific as to what is demanded or expected. In the French and Lesser (1964) study referred to earlier, *n* Achievement promotes better performance in making friends in a new community in those women who want primarily to be good wives and mothers. In this instance, the interest in being a good wife and mother directs the implicit achievement motive into the activity of making friends, which is instrumental to being a good wife and mother. In the same study, if the achievement goal is to have a successful career, that directs the implicit achievement motive into the activity of doing better at an anagrams task, which is presumably instrumental to showing that one is more qualified for a successful career.

Motives and incentives can conflict and undercut as well as combine and facilitate performance. Suppose that a person high in a particular self-attributed need is confronted by a conflicting or inappropriate incentive. That analysis was actually performed in the first study reported here. Subjects were classified not only as to *san* Achievement and *n* Achievement, as in Figure 1, but also as to *san* Power. When the achievement incentive was introduced in this study, those high in a self-attributed power need actually performed significantly less well in recalling words than they did when there was no stated external incentive. It was as if they were reacting by feeling that because the stated incentive of doing better did not interest them (because they were high in *san* Power), they would not put much effort into recalling the words. For these people, an explicit achievement incentive actually undercut performance. Deci and Ryan (1987) reported a large number of studies that have shown how explicit incentives can undercut intrinsic interest in performing a moderately challenging task.

Furthermore a conflict between an implicit and a different self-attributed motive can lead to compromise behaviors. In the Constantian study of spontaneous affiliative behavior, as reported in McClelland (1985a), some subjects were high in *n* Affiliation and also in an explicit desire to spend time alone. Their *n* Affiliation did not express itself in chatting with people

but found an outlet in writing letters to people, which also satisfied the desire to be alone. So having measures of both implicit and self-attributed motives helps explain a variety of behaviors that could not be accounted for by either measure alone.

## Implications

To return to the observation that started the discussion, one might infer that the two motive measures do not correlate because they are built on different types of incentives and were probably acquired in different ways, often at different stages in a person's developmental history. Suppose we assume, in line with the argument so far, that implicit motives are based on incentives involved in doing or experiencing certain things and that self-attributed motives are built around explicit social incentives or demands. If that is the case, then one might also infer that the implicit motives are built on associations with innately triggered affective experiences, called *natural incentives* by McClelland (1985b) and *primes*—for primary emotional experiences—by Buck (1985). In contrast, self-attributed motives would require a relatively well-developed concept of the self and of others, and some ideas acquired during socialization as to what is valuable or important. It would also follow that it should be possible for implicit motives to develop without symbolic conceptualization in language, whereas self-attributed motives would require linguistic conceptualization of ideas about the self and what the culture explicitly defines as important and valuable.

This distinction suggests a number of important implications:

1. The implicit motives seem more likely to be built on affective experiences with natural incentives early in life, before the development of language, than are self-attributed motives that would develop later, after concepts of the self, others, and what is valuable have been acquired. The evidence that natural or innately pleasurable incentives exist has been summarized by Buck (1985) and McClelland (1985b). Recent research has even suggested that there may be specific hormones or hormone profiles that reflect the specific affective arousal associated with different natural incentives (McClelland, 1987a). For example, the power motive is hypothesized to be based on the natural incentive of "having impact," as in aggression, which has been associated with more norepinephrine release. One might think of the implicit motive as a kind of conditioned emotion in which the emotion releases a hormone (norepinephrine) that is associated at least centrally with reinforcement and "pleasure" (Olds, 1977). If this were the case, then people high in *n* Power when involved in an "impactful" experience should show a greater release of norepinephrine than people low in *n* Power. This has been shown to be true: Students high in *n* Power respond to experiencing the impact of an important examination with a greater release of norepinephrine than do those low in *n* Power (McClelland, Ross, & Patel, 1985).

Another study showed that affiliative arousal through presentation of a romantic film is associated with increased dopamine release for those high in *n* Affiliation, but not for those high in *san* Affiliation (McClelland, 1989). Central dopamine release has also been linked to reinforcement (Wise, 1980) and could

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reflect a positive emotion that gets conditioned to affiliative cues forming the basis for *n* Affiliation.

2. It should be possible for implicit motives like *n* Achievement or *n* Power to develop in animals without language so long as the species responds to the natural incentives on which these motives are based. For example, Festinger (1943) has shown that the white rat prefers a moderately challenging to an easy path to food, suggesting that it is responding to the natural incentive on which *n* Achievement is based. Thus, it should be possible to measure individual differences in the strength of the responsiveness to this incentive by exposing rats to a variety of such challenging situations. Furthermore, a strong achievement motive might well be developed in the rat by pairing a number of cues with experiencing this incentive.

3. Because the implicit motives are apparently built on direct experiences of affect also characteristic of animals, it seems likely that these motives are mediated by more primitive midbrain structures than are the self-attributed motives that would be subserved by the highly developed cerebral cortex, in which language is processed. As a consequence, implicit motives should show closer connections with physiological systems controlled by midbrain structures, such as neurohormone release, than do the self-attributed motives. McClelland (1987a) has summarized some evidence suggesting that this is the case. The fact that the implicit motives appear to be more directly associated than the self-attributed motives to neurohormone release tends to support the hypothesis that the implicit motives are mediated through midbrain structures governing the autonomic nervous system.

4. Even though stories written to pictures obviously involve the use of language (and hence the cerebral cortex), it seems likely that they are more successful than self-reports in reflecting implicit motives because they provide a more direct readout of motivational and emotional experiences than do self-reports that are filtered through analytic thought and various concepts of the self and others. Here we follow Buck (1985) in his distinction between analytic cognition and syncretic cognition. Syncretic cognition is knowledge by acquaintance, as in reacting appropriately to a familiar face or feeling angry. Analytic cognition is knowledge by description, in which people interpret what they see or feel using linguistic concepts. Buck argued that the "direct subjective experience of emotion" in syncretic cognition allows subsequent cognitive analysis of the experience. This paves the way for self-regulation, "for verbally mediated control of emotionality." It "allows behavior to be under the control of principles of logic and reasoning that are mediated by language" (Buck, 1985, p. 398). The distinction he made between the two types of cognition describes very well the difference between the two types of motives. Self-attributed motives involve analytic thought in the sense of people making complex judgments as to the degree to which certain statements apply to them. And the imaginative stories from which implicit motives are coded reflect motivational and emotional themes in the person's life, unevaluated as to their appropriateness in terms of concepts of the self, others, and what is important.

5. The cognitive, information-processing model of human motivation in terms of needs, plans, and goals describes the way self-attributed motives function much better than the way implicit motives function. Self-attributed motives are character-

ized by organized thought; they start with an explicit goal that a person wishes for, then wants, then becomes committed to pursuing in various ways (Heckhausen & Kuhl, 1985; Klinger, 1975, 1987). Klinger, Barta, and Maxeiner (1981) have studied empirically the varieties of current concerns that people report in interviews or on questionnaires. Most of the concerns have to do with unattained goals or unfinished business. The more committed people are to a goal or the more salient it becomes, the greater the likelihood that they will feel frustrated and unhappy at some point for their slowness or failure in reaching it.

The situation is different with implicit motives because they are aroused by affective experiences intrinsic to an activity and not by explicit references to unmet goals. Thus, in the example given earlier (McClelland, 1989), a romantic film arouses those high in *n* Affiliation, which leads to greater release of dopamine, presumably because dopamine release is associated with affiliative arousal (McClelland, Patel, Stier, & Brown, 1987). The same experience does not lead to a release of dopamine for those high in *san* Affiliation because it was not acquired in connection with affective affiliative arousal but in connection with explicit understandings of the importance of affiliation to the self. So *san* Affiliation should be aroused by reminding the person that he or she has important unmet needs for affiliation. And that type of arousal should be predominantly negative, leading to physiological signs of increased anxiety, such as increased skin conductance or the release of cortisol (Lundberg & Frankenhaeuser, 1978). Thus, the physiological correlates of arousing the two types of motives may differ because of the different ways in which they are aroused.

It is especially important to realize that failure to meet a goal is not so obvious to those with a strong implicit motive. Observers may infer that a person who scores high in *n* Achievement has a goal of doing better, but that person is not necessarily aware that he or she has such a goal: There is no correlation between *n* Achievement and the explicit desire to achieve. Hence, it is not obvious to such a person when a goal is not being met. In describing how an implicit motive functions, it is not appropriate to speak of wishing, wanting, and committing oneself to the goal that we recognize as the natural incentive for that motive. Instead, we conceive of the motive as leading to an activity that is the incentive for that motive. Thus, people high in *n* Achievement may have learned through experience to seek out certain activities that provide the pleasure of moderate challenge. But they do not necessarily know that they have a goal of doing better. It follows that they know less about what is guiding their behavior than do people with an explicit achievement need. And they are therefore less able to plan appropriate corrective action when things go awry.

6. The distinction between the two types of motives is very similar to a distinction made by memory theorists (e.g., Kinsbourne, 1987) between explicit and implicit, or episodic and semantic memory. The difference between the two types of memory is illustrated by the fact that although amnesiacs cannot voluntarily recall an experience, thus showing a failure in episodic memory, it can readily be demonstrated that the experience influences their subsequent performance. Their semantic or implicit memory is intact. Conscious goal setting is analogous to episodic recall: It involves a voluntary act. And implicit motives are more like semantic memory: They automatically

influence behavior without conscious effort. They are like rules that guide behaviors that have been acquired on the basis of repeated affective experiences. Voluntary goal setting, like conscious recall, provides a means of escape from automatic processing—an escape that may involve overriding, stronger responses (Kinsbourne, 1987) contained in the general rule or implicit motive. Thus, conscious motives, intentions, and current concerns can override more primitive automatic functioning, at least temporarily (Bargh, 1984; Logan, 1980; Posner & Snyder, 1975). Although the override may be only temporary—witness the failure of many New Year's resolutions—it provides greater flexibility in adaptation, particularly when difficulties arise. In evolutionary terms, a conscious motivational system has been built on top, so to speak, of a more primitive motivational system. The evolutionary advantage of such an arrangement is obvious because the more primitive, automatic motivational system is not well equipped to make plans or to set specific goals that can take into account contextual circumstances. As noted earlier, self-attributed goals often serve to guide implicit motives into specific channels.

## Development of Self-Attributed and Implicit Motives

We finish our discussion of the two kinds of motives by considering recent empirical findings concerning their developmental origin. If implicit and self-attributed motives differ in the ways postulated, then they should have different antecedents in child rearing. The implicit motives should be more often built on early, prelinguistic affective experiences, whereas the self-attributed motives should be more often built on explicit teaching by parents and others as to what values or goals it is important for the child to pursue. Such instruction can occur only after the child can comprehend linguistic communication and organize its meanings into such constructs as self, others, and social norms. Allport (1937) also argued that there were two types of motivation, one characteristic of early infancy and the other of adult self-directed behavior. However, he did not believe that motives developed in infancy could continue to influence adult behavior in the way that we contend that early developed, implicit motives continue to guide thought and action in later life.

Some empirical findings on the child-rearing antecedents of the two types of motives are summarized in Table 1. They come from a follow-up study of children whose mothers were extensively interviewed on their child-rearing practices in 1951 when their children were 5 years old (Sears, Maccoby, & Levin, 1957). In 1977–1978, when the children had become 31-year-old adults, they were given both a version of the picture-story exercise from which implicit motives were scored (see McClelland & Pilon, 1983) and a self-descriptive adjective checklist that can be scored for san Achievement, san Power, and san Affiliation (Gough & Heilbrun, 1983). (The scoring keys for san Achievement and san Power contain a number of the same adjectives that were eliminated to prevent overlap in the measures of the two motives.)

Table 1 shows the early child-rearing practices that were significantly correlated with adult implicit motives (McClelland & Pilon, 1983), along with those child-rearing practices that correlate significantly with adult self-attributed motives. The

Table 1

*Correlations of Child-Rearing Variables With Implicit and Self-Attributed Motives in Adulthood*

| Child-rearing variable | Correlation with | |
| --- | --- | --- |
| | *n* Achievement | *san* Achievement |
| Scheduling of feeding | .33* | .06 |
| Severity of toilet training | .41*** | −.10 |
| Early tasks set for child | −.10 | .31** |
| | *n* Power | *san* Power |
| Permissiveness for sex and aggression | .31** | .08 |
| Punishes aggression to parents | −.17 | .32** |
| Frequency mother spanks | −.07 | .39** |
| | *n* Affiliation | *san* Affiliation |
| Mother unresponsive to infant crying | .27* | .02 |
| Child told not to fight back | .11 | .27* |

*Note. N = 76–78.*
*\* p < .05. \*\* p < .01. \*\*\* p < .001.*

different origins of the two types of motives fit the theory quite well. Setting high standards early in life for moderately difficult mastery of internal states is associated with adult *n* Achievement but not with adult *san* Achievement. Learning when to be hungry and when and where to defecate and urinate should provide some intrinsic pleasure from self-mastery in all children. And parents who emphasize the importance of these learnings apparently succeed in developing an affectively based interest in mastering challenging tasks that lasts into adulthood. On the other hand, setting explicit tasks for the child to learn and perform is significantly associated with adult *san* Achievement but not with adult *n* Achievement. Explaining what tasks a child is to carry out certainly involves more linguistically coded information than does teaching a child when to be hungry by scheduling feeding, and probably more than is involved in consistently putting the child on the toilet and demanding performance. Furthermore, in this sample at this period in history, toilet training was reported to be complete for the majority of children by 19 months (Sears et al., 1957) so that the learning occurred before language comprehension was developed as highly as would be necessary to understand what was involved in carrying out instructions to perform various tasks. The later emphasis on carrying out tasks, however, did develop a self-attributed need to achieve that persisted into adulthood.

The picture for the power motives is similar. Permissiveness about sex and aggression is associated with adult *n* Power but not with adult *san* Power. And permissiveness means that the parent allows or ignores the behavior without saying much about it. Thus, the children who experience the innate pleasure of having impact through sex and aggressive play grow up with a strong implicit *n* Power but have not coded this into a strong explicit desire for power, for the parents have not been saying things like "It's good to hit me." On the other hand, spanking and punishment for aggression are usually accompanied by explicit statements forbidding the child to do something and ex-

plaining why he or she is being spanked for violating a prohibition. This should lead to an explicit linguistically coded understanding of the following sort: "If I do such and such, I will be spanked," which should readily translate into a proposition like "Punishment—the exercise of power—is the way to control behavior." So adults, whose mothers reported that they had spanked them a lot at age 5, are more likely to grow up attributing a desire to exercise power to themselves but not necessarily with a strong implicit need for power because they may have been interrupted in their experiencing pleasure from "having impact."

The findings are less reliable in the area of affiliation motivation, but they point in the same direction. The only significant correlation with adult *n* Affiliation is again based on a very early experience. Overall, children whose mothers said they were unresponsive to them as infants when they cried grew up to have higher *n* Affiliation, although this relationship did not appear in all subgroups (McClelland & Pilon, 1983). Because *n* Affiliation contains a strong element of fear of rejection (Koestner & McClelland, in press), this correlation makes sense. Children who experienced insecurity in the primary affiliative relationship very early in life are apt to grow up with an implicit fear of rejection, although they have not explicitly coded this need as represented in the *san* Affiliation score. On the other hand, if the mothers said they explicitly told their children not to fight back—in other words, to be nice—the children were more apt as adults to attribute to themselves a desire to be compliant and nice to others, as represented by a higher *san* Affiliation score.

So the data can be reasonably interpreted to support the generalization that implicit motives are acquired earlier in life on the basis of important nonverbal affective experiences, whereas the self-attributed motives are acquired later, after the development of language, on the basis of more explicit instructions as to what is important from the parents. The key theoretical point is that the implicit motives appear to have been acquired on the basis of affective experiences and so remain aroused by them later in life, rather than by salient social incentives. Similarly, the self-attributed motives were acquired from social, linguistically conceptualized instructions and remain responsive to them in adulthood.

Although it may seem surprising that early childhood experiences would have an observable effect in adulthood, more than 25 years later, it should be remembered that the values that parents express, which develop self-attributed motives, are doubtless stressed over and over again as the child grows up. And McClelland (1942) has suggested a number of reasons why early, prelinguistic, affectively based associations might persist, because later, more cognitively elaborated experiences do not directly contact or replace them.

The influence of early childhood experiences on the development of motives, of course, does not preclude the possibility of motives being acquired later in life in response to similar experiences. In fact, numerous attempts to develop the implicit motive to achieve in adulthood support the conclusion that courses that emphasize experiencing positive affect in the course of mastering challenging tasks are more successful than those that emphasize a more cognitive approach to altering the self-image (McClelland, 1985b). Thus, it seems likely that the educational experiences that contribute to developing the two

types of motives in early childhood would also contribute to developing them later in life.

## Conclusion

There is evidence that implicit and self-attributed motives are acquired in different ways at different times of life, respond generally to different types of incentives, function differently in guiding behavior, and are associated with different physiological correlates. Small wonder that measures of them generally do not correlate. However, there is still the question of why, over time, they do not tend to become more congruent. We are all familiar with individuals who express a desire to act in a certain way but seem unable to do so consistently. That is, their self-attributed and implicit motives are discordant. For such people, as Buck (1985) argued, analytic thought should provide the opportunity to regulate emotion and motivation. Because the correlation between the two types of motives is essentially zero, this does occur for roughly one half of the population whose self-attributed and implicit motives are similar. As for the other half of the population, systematic experience-based self observation, as in psychotherapy or motivation training courses (Miron & McClelland, 1979), may bring the two types of motives into alignment. For example, managers may discover that although they believe they have a strong desire to manage others (*san* Power), they are not doing well at managing because they do not enjoy having impact on others (low *n* Power). And this discovery enables them to take corrective action either by learning to enjoy doing what the job requires or by changing their conscious aspirations.

But whatever the reasons for discordance between implicit and explicit motives, it can certainly lead to trouble. It was precisely symptomatology that had no basis in self-attributed motives that led Freud to get interested in implicit motives. He, like other psychotherapists since, has stressed the importance of discovering the implicit motives by getting down to basic feelings through an analysis of dreams and associative networks. Our picture of implicit motives is consistent with his view in the sense that we assess such motives in fantasy and believe that they are based on innate types of affective arousal and are more primitive than the elaborate system of explicit goals, desires, and commitments that are characteristic of self-attributed motives. We also believe, as he did, that through self-observation and analysis, greater congruence between the two types of motives can be achieved. So an understanding of how implicit and self-attributed motives function is not only theoretically important, it has important practical implications for psychological adjustment.

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