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Projective Techniques in US Marketing and Management Research: The Influence of the Achievement Motive

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Abstract Purpose – This paper aims to examine the use of projective techniques for published marketing and management research in the USA. The paper emphasizes the influence that McClelland, Atkinson, Clark and Lowell's study, The Achievement Motive (1953), has had on subsequent research. That work applied quantitative analysis to responses obtained using projective techniques. **Design/methodology/approach** – The approaches used in this paper consist of descriptive historical methods and a literature review. The historical analysis was conducted using Kuhn's 1967 conception of paradigms, showing that the paradigm from which projective techniques emerged – psychoanalysis – failed to gather many adherents outside the discipline of psychology. The paradigm failed to gain adherents in US colleges of business, although there are some exceptions. One exception is managerial motivation research, which built on the traditions of The Achievement Motive. The literature review suggests that, despite lacking institutional bases that could be used to develop new adherents to the paradigm, projective techniques were used by a number of researchers, but this research was marginalized, criticized or misunderstood by adherents of the dominant paradigm, positivism. **Findings** – Some of the criticism directed at projective techniques research by positivists involves criticism of the paradigm's assumption that humans have an unconscious, and a belief that projective

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techniques are unreliable and invalid. This paper points out that a growing number of cognitive psychologists now accept the existence of an unconscious, and measure it using the "implicit association test." This paper argues that the IAT is an associational test is the tradition of word association. Moreover, the literature review shows that projective techniques are much more reliable than critics contend, and exhibit greater predictive validity than many positivist instruments**. Research limitations/implications** – As with all literature reviews, this one does not include every published research study using projective techniques. As a consequence, the conclusions may not be generalizable to the studies excluded from the analysis. **Originality/value** – The paper is one of the few to assemble the literature on projective techniques used in several disciplines, and draw conclusions from these about the applicability of the techniques to market research.

Introduction

Boddy (2005a) described the reliability and validity of projective techniques for market research. Although research with projective techniques can be qualitative or quantitative (Boddy, 2005a; Levy, 1994), the quantitative approach represents the dominant tradition of projective research in the United States, which was strongly influenced by *The Achievement Motive* (McClelland *et al*., 1953). In contrast, Boddy's (2005a) description was principally qualitative.

Haire (1950) conducted the first published marketing study in the United States using projective techniques (Boddy, 2005a). Haire (1950) found that women consumers formed impressions about other women based on their product purchases, which they could not, or would not, state during direct questioning. The study, which preceded the publication of McClelland *et al*.'s (1953) book, was principally descriptive. Haire's approach is known as the "shopping list experiment" (Reid and Buchanan, 1978).

In a diffusion of innovation study conducted among Iowa farmers published in *Journal of Marketing*, Rogers and Beal (1958) found that respondents were often vague and embarrassed when answering questions about other social groups, such as agricultural scientists. To overcome this, Rogers and Beal (1958) used projective pictorial tests showing individuals from different social groups interacting, combined with questions derived from the Thematic

Apperception Test (TAT; Murray, 1943; McClelland *et al*., 1953). Rogers and Beal (1958) found that the projective technique generated positive and negative responses, unlike direct questioning, and that positive statements about agricultural scientists were positively associated with the rapid adoption of new farm practices. This was the first in a series of marketing-related studies influenced by the research of McClelland *et al*. (1953).

As Haire (1950), Rogers and Beal (1958) and other academic researchers experimented with projective techniques, several professional researchers – the best known being Ernest Dichter (Stern, 2005) – proclaimed that projective techniques were far superior to other research methods because they assessed deep-rooted motivations. For this reason, the techniques were described as "motivational research." These claims led to a public debate among professional market researchers about the value of these methods (see Rothwell, 1955; Wells, 1956). However, the debate did not immediately affect the use of projective techniques by US academic researchers.

In a diffusion of innovation study of Wisconsin farmers, Morrison (1964) administered the TAT developed by McClelland *et al*. (1953) and a sentence completion test to determine the relationship between need for achievement (*nAch*) and other variables such as farm practice adoption and gross farm income. The *nAch* TAT consists of eight ambiguous pictures of individuals at work or school, about which respondents write or tell short stories, using the same questions asked by Rogers and Beal (1958), but adding: "What has led up to this situation?"

Sentence completion tests were originally developed for personality assessment (Rotter and Rafferty, 1950; Rohde, 1957; Rotter *et al*., 1992), but have been modified to assess attitudes (Golde and Kogan, 1959; MacBrayer, 1960), traits (Exner, 1973; Shimonaka and Nakazato, 1985) and motivations (Miner, 1964; Ebrahimi *et al*., 2005).

Morrison (1964) found that the TAT scores sentence completion responses measuring *nAch* correlated significantly, but the measures

exhibited low inter-item correlations and low factor loadings. Nevertheless, the *nAch* scores correlated in the expected direction (i.e. positive) with outcome variables such as farm practice adoption and gross farm income.

In another study of diffusion of innovations, Rogers and Svenning (1969) administered a *nAch* sentence completion test similar to that developed by Morrison (1964) to assess the relationship between *nAch*, adoption of innovation, fatalism, and other attitudes. Rogers and Svenning (1969) found significant positive relationships between *nAch* and agricultural innovativeness, home innovativeness, and level of living, and a significant negative relationship between *nAch* and fatalism, as predicted.

These studies show that projective techniques were used for marketing research in past decades, but also highlight some of the problems associated with the use of projective techniques, such as low inter-item correlations, low factor loadings, and inconsistent findings. Although many of these problems have been addressed by researchers who use projective techniques (e.g., McClelland *et al*., 1989; Masling and Bornstein, 2005), these discussions have either not made their way into marketing or related disciplines such as communication or management, or have been misunderstood by critics of the techniques. Some of these issues are addressed in this essay.

Despite being used in the past, projective techniques appear to have disappeared from the methodological arsenals of current US academic researchers. A search of electronic resources indexing marketing communications research published during the past 20 years (1988-2008) shows that projective techniques are rarely used by US, UK and Australian-based academic researchers. EBSCO's *Communication and Mass Media Complete* database produced zero items for the search term, "projective tests"; a false hit for the search term "thematic apperception"; and eight citations using the search term, "projective techniques." Only one (Soley, 2007) of the eight appeared in a marketing journal; all but one of the remaining articles appeared in linguistic and psychology journals. *Communication Abstracts Online* produced zero items for the search term, "projective tests"; zero hits for the search term, "thematic apperception"; and

three citations using the search term, "projective techniques." The three citations were from articles appearing in *Health Promotion Practice, Psychology and Marketing*, *and Journal of Advertising Research*, the latter an essay about the contributions of Ernest Dichter (Stern, 2005). The *Psychology and Marketing* article (Aaker and Stayman, 1992) discussed the possible applicability of projective techniques to the study of transformational advertising, rather than applying the techniques.

A search of *ABI/Inform*, a business database produced by Proquest that includes international professional and academic publications, produced 41 citations using the search term, "projective techniques." Over half appeared in European-based marketing journals such as *International Journal of Market Research, Qualitative Market Research*, and the *International Journal of Consumer Studies*, and one-quarter appeared in trade publications such as *Marketing News, Marketing Intelligence, and American Demographics*. The latter were almost entirely written by professional marketing researchers. Of studies appearing in US marketing and consumer behaviour research journals, four were published by associates and former students of former Northwestern University marketing professor Sidney Levy (e.g., Sherry *et al*., 1992; Levy, 1994; McGrath, 1995), who pioneered these techniques in marketing (see Levy, 1963). This suggests that US academic researchers, except for a small group associated with Levy, have largely abandoned these research techniques.

Boddy (2005b) found a similar situation in Australia and the UK, but also that business academics think that projective techniques would be useful in their research once they know and understand them. In contrast, the techniques are still used by professional researchers in North America (Zaharkevich, 1999; Greenberg *et al*., 1977), as well as Asia (Boddy, 2007). Because the techniques are used professionally, they are still briefly mentioned in most marketing research textbooks (e.g., Churchill and Iacobucci, 2002; Zikmund, 2003). Morrison *et al*. (2002) also provides a brief chapter on these techniques in their book, *Using Qualitative Research in Advertising*. However, none of these texts provide a description of the epistemological and ontological basis of the techniques; they instead

suggest that these techniques are useful when respondents are reluctant to openly discuss their opinions.

By contrast, currently available communication research texts (e.g., Dominick and Wimmer, 2005; Hocking *et al*., 2002; Frey *et al*., 1999; Poindexter and McCombs, 1999), including those devoted to qualitative methods (e.g., Deacon, 2007; Lindlof and Taylor, 2002), do not discuss projective techniques.

Social science research methods texts that are occasionally used as texts for US marketing and communications methods courses (e.g., Babbie, 2007; Kerlinger and Lee, 1999) also fail to discuss the techniques. However, earlier editions of *Foundations of Behavioural Research* (Kerlinger, 1986, 1973) included a chapter titled, "Available materials, projective methods and content analysis." That chapter was dropped from the latest edition of the text. This leads to the question: Whatever happened to projective techniques in the United States?

This essay addresses that question, looking at some of the sociological, epistemological, and methodological explanations for the decline, or perhaps disappearance, of projective techniques from US consumer, management, and marketing research.

Sociological issues

According to Kuhn (1970), paradigms represent sets of assumptions about how the world operates that provide researchers with guidance in formulating questions and methods to address pressing issues in that discipline. A paradigm is adopted within a discipline because it appears to better answer questions that researchers think important than do competing paradigms. Kuhn (1970) contends that paradigms are taught to students, who are socialized to adopt them as their own. Based on Kuhn's observations, two things are prerequisites for a paradigm to influence a discipline: advocates who see the paradigm as addressing pressing issues in their field, and students who are socialized by paradigm advocates to accept and adopt the paradigm.

Historically, paradigm advocates have migrated to universities where like-minded researchers are found, as symbolic interaction shows. Advocates of symbolic interaction were centred at the University of Chicago during the early and middle part of the past century (Machin, 2002). Several other US universities, most notably the University of California at Berkeley, the University of Iowa, and the University of Illinois, attracted faculty members who were advocates of that paradigm. These institutions produced graduates who also became advocates. As an example, Norman Denzin received his PhD from the University of Iowa, where he studied with symbolic interactionists Carl Couch and Manford Kuhn. Denzin went to the University of Illinois, which produced graduates who conducted research within this paradigm (e.g., Reid, 1979; Frazer, 1981; Scott, 2000; Pierce, 2001).

Everette Rogers, although having used projective techniques (e.g., Rogers and Beal, 1958; Rogers and Svenning, 1969), was neither an advocate for the techniques nor affiliated with departments where psychoanalysis – the paradigm underlying projective techniques – was theoretically dominant. Although Rogers was introduced to projective techniques earlier, he was a Communication Department faculty member at Michigan State University (MSU) from 1964 to 1973 (Rogers, 2001), where the Psychology Department housed some of the era's leading proponents of projective techniques, including Aronoff (1967) and Rabin (1968, 1981). These researchers influenced others at MSU, as well as others in their discipline.

MSU's Departments of Psychology was not the only academic department where projective techniques were adopted and used for research; psychoanalysis and projective techniques became well entrenched in psychology and were taught as clinical assessment techniques and as research tools at many US universities. As of the 1980s and 1990s, projective techniques remained some of the most widely used assessment instruments in clinical psychology (Lubin *et al*., 1984), and were widely-taught in doctoral-level clinical psychology programs in the United States (Piotrowski and Zalewski, 1993). They are also widely taught and used in other countries (Piotrowski *et al*.,1993). In addition to psychology, projective techniques have been used in anthropology, education and sociology.

In the USA, business research employing projective techniques was confined to just a few universities, including Northwestern University and the State University of New York at Buffalo.

Graduate students and marketing faculty at Northwestern University were strongly influenced by marketing professor Sidney Levy (Rook, 2006), and developed a stream of research employing these techniques for consumer and marketing research (Levy, 1963, 1994; McGrath, 1995).

At Georgia State University, management professor John E. Miner similarly influenced graduate students and colleagues, who developed a stream of research using these techniques (e.g., Ebrahimi *et al*., 2005; Ebrahimi, 1997; Miner *et al*., 1989; Miner et al., 1994). Miner developed a sentence completion test for assessing managerial motivation (Miner, 1964; 1978) that was based on McClelland *et al*.'s (1953) theories of achievement motivation (*nAch*). Miner also co-authored a book on a projective pictorial test, the Tomkins-Horn Picture Arrangement Test (Tomkins and Miner, 1957), which has also used for management research (Miner, 1962a, b; Stoess, 1973). Miner's (1964; 1978) approach, like that of McClelland *et al*. (1953), was quantitative rather than qualitative.

Unlike advocates of symbolic interactionism, advocates of psychoanalysis and projective techniques never established institutional bases in US marketing or communication departments – with the possible exception of Northwestern University – from where they could defend their paradigm or recruit new scholars. The failure to establish an institutional base has meant that that there are few new advocates of the techniques, and no spokespersons to challenge misstatements and misconceptions about the paradigm.

An example of a misstatement by a market researcher is provided by Yoell (1974), who wrote, "The value of projective techniques has yet to be substantiated, their accuracy has yet to be proved. Specific scientific supports of projective techniques are not available" (p. 34). In reality, social scientists in many disciplines, including psychology (e.g., McClelland *et al*., 1953), management (Miner, 1962a; Durand, 1975) anthropology (Gates, 1976) and

administrative science (Misumi and Seki, 1971) have successfully and repeatedly used projective techniques. Yoell (1974) also observed, "Rorschach, himself, wrote in 1949 that his tests cannot be considered as means of delving into the unconscious" (p. 35). In this regard, Yoell (1974) even misstated elementary facts: Hermann Rorschach died in 1922, and therefore never criticized projective tests in 1949. In addition, the term "projective techniques" was not developed until 1939, a decade and a half after Rorschach died (see Frank, 1939). Not surprisingly, Yoell's (1974) misstatements were never challenged or corrected[1].

Epistemological issues

Projective techniques are derived from psychoanalysis, which contends that humans engage in conscious, but also unconscious, mental processing. The concept of projection, on which projective techniques are based, was introduced into medicine by Sigmund Freud (Abt and Bellak, 1959). The concept of projection has also been used in several ways since Freud first introduced the process.

Projection is sometimes used in a narrow sense, suggesting it is a defence mechanism where impulses, wishes, or aspects of the self are imagined to be in some object external to the self. At other times, projection is used more broadly, referring to how individuals' personalities influence their perceptions of the outer world (Murstein and Pryer, 1959).

The term, "projective techniques," originated with Frank's (1939) article, "Projective Methods for the Study of Personality," where Frank argued psychological assessment techniques are needed that allow an "individual to reveal his way of organizing experience, by giving him a field (objects, materials, experiences) with relatively little structure and cultural patterning so that the personality can project upon that plastic field his ways of seeing life, his meanings, significances, patterns, and especially his feelings. Thus, we elicit a projection of the individual personality's private world..."(p. 403).

Frank (1939) criticized "objective" paper-and-pencil scales' abilities to uncover subjects' private worlds, suggesting that these

approaches organized responses in ways that are inconsistent with the ways used by subjects. Following publication of Frank's (1939) article, some clinical psychologists began using several already-existing assessment tools, such as the Rorschach inkblot technique, to measure individuals' "private worlds."

The paradigm underlying projective techniques is psychoanalysis. Because "psychoanalysis" conjures up the image of Freud and the popularizations of his theories, some theorists (e.g., Blum (1966)) prefer the term "dynamic psychology." Dynamic psychology is also preferred because it clearly distinguishes therapy – that is, psychoanalysis – and the paradigm, which views the unconscious as dynamic, with counter-forces operating upon it.

Although some Freudian analysts and perhaps a majority of dynamic psychologists reject Freud's theories of instinct and sexuality, all accept a set of assumptions, some of which were developed by Freud. These include the influence of early childhood experiences on adult behaviour, the existence of an unconscious, and the self-regulation and control of motivations and impulses (Horney, 1939; Blum, 1966).

Psychodynamic researchers believe that the early years of life, during which children are taught to control impulses, shape the behaviours and thought processes that operate throughout life. The interaction of children with their environment during these years produces children's attitudes and motivations, which are imbedded in memory, but are not consciously retrievable.

Because much childhood learning is directed at controlling impulses, and failure to control these can produce embarrassment and punishment, the impulses and memories about learning to control them are repressed. Although repression keeps these anxiety-producing phenomena from being consciously retrieved, they nevertheless affect behaviour. Other repressive mechanisms or ego defences that keep memories, impulses, and motivations from consciousness are denial, introjection, reaction formation, displacement, regression, and sublimation (Blum, 1966; Hilgard *et al*., 1952). Meissner (2000) lists many more, including intellectualization,

where people avoid affect by mentally distancing themselves from their immediate world, and distortion, where individuals grossly reshape the external world to fit their own inner world.

In addition to defence mechanisms keeping memories and drives from consciousness, McClelland *et al*. (1989) theorize that early experiences are not consciously retrievable because they are primarily experiential and image-based, rather than linguistic. A visual storage mode is used by young children, who lack the symbolic skills necessary to verbally encode and store experiences.

In contrast, experiences that occur after children learn to symbolically process are more easily recalled and verbally described. McClelland *et al*.'s (1989) theory also explains why verbal (including written) measurement scales cannot tap the unconscious: They tap consciously-formulated thoughts based on verbally-stored and retrieved information.

Although most quantitative researchers (i.e. logical empiricists) have probably never thought about, and rationally rejected, the assumptions underlying dynamic psychology, they nevertheless methodologically – and even theoretically assume – that the unconscious does not exist and that people operate exclusively on the conscious level. Thus, quantitative researchers assume that people can clearly explain the true reasons for their behaviour. These assumptions of conscious rationality are embedded in such conceptions as the "theory of reasoned action," which assumes that people truly know and can report their own beliefs, attitudes, and subjective norms, and then act upon these (Ajzen and Fishbein, 1980).

Although most logical empiricists have probably never thought about the assumptions underlying dynamic psychology, some have, and have expressed their disagreement with them. An example of this rejection is provided by Tichenor and McLeod (1989), who contrast logical empiricist (or positivist) research with psychoanalytic research, suggesting that the two can be distinguished by looking at the relationship between violent television program content and aggressive behaviour.

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Freudian psychoanalytic theory may state that gratification from viewing an aggressive television drama would be based on non-observable characteristics of the personality:

> [...] By contrast, a positivist approach, such as might be taken from a learning theory perspective, would produce a hypothesis that is more clearly limited to observables and research operations (p. 14).

Tichenor and McLeod (1989) suggest the unconscious to be unobservable and unmeasurable. Although Tichenor and McLeod (1989) are correct that the unconscious is unobservable, so too are most of the phenomena studied by logical empiricists, such as beliefs, attitudes, and traits. The existence of these psychological phenomena is inferred from written responses given by respondents. Like logical empiricists, dynamic theorists accept the existence of consciousness that can be measured with verbal self-reports, but also believe that there is an unconscious that is not assessable through simple introspection. To dynamic theorists, these self-reports are considered to be "self-attributed" or consciously-constructed attitudes and motivations, which should be contrasted with unconscious or implicit attitudes and motivations.

Projective techniques are designed to overcome defence mechanisms by not directly asking respondents ego-threatening questions, by obtaining answers to questions before defence mechanisms can be activated, or by using visual primes, such as TATs or pictorial tests, that direct attention to the stimuli instead of ego defences.

An example of a projective test that meets these goals is the TAT, which asks respondents to create stories about ambiguous pictures.

Another example is provided by word association tests, which request respondents to provide the first words that come to mind after a stimulus word is provided. Although originally developed to assess psychological adjustment and complexes (Jung, 1910, 1918), word association tests have been used to study meanings, world views,

stereotypes, and brand images (Szalay and Kelly, 1982; Moodie *et al*., 1995; Gordon, 1962; McDowell, 2004). Vicary (1948) and Vandenbergh *et al*. (1981) used word association to understand the meanings of "advertising" and "advertisers." McDowell (2004) used word association to assess brand images of cable news programs.

Gordon (1962) used word association to study ethnic stereotypes, asking subjects to provide associates to words such as "Chinese," "German," and "Jew." The results showed that the words often produced stereotypic images, over which respondents have little control. Follow-up interviews suggested that the images were formed early, rather than later, in life.

In cognitive and social psychology, there has been recent interest in, and recognition of, the unconscious, which has resulted in a large number of studies being conducted using the "implicit association test" (Greenwald *et al*., 1998). Research using the test has been reviewed by Kihlstrom (2004) and Fazio and Olson (2003), but has also been described in popular US trade books such as *Blink* (Gladwell, 2005) and *Strangers to Ourselves* (Wilson, 2002). Most of this research has focused on racial and ethnic prejudice, as did Gordon's (1962) word association study.

The implicit association test makes similar assumptions about the unconscious that the word association task does. Namely, quickly-given responses to stimuli represent unconscious responses over which respondents exercise little conscious control. A major difference is that the responses provided on the implicit association test are behavioural, requiring the respondents to strike keys after viewing stimuli provided on a computer screen by programs such as *Inquisit* (www.millisecond.com/products/inquisit3/desktop.aspx), whereas the word association task requires oral responses, which gives respondents a greater opportunity to "cognitively override" their unconscious responses.

There are also some major differences between the psychodynamic and cognitive psychology conceptions of the unconscious. Wilson *et al*. (2000), who present a detailed theory of the cognitive unconscious, define implicit (or unconscious) attitudes "as

evaluations that (a) have an unknown origin (i.e. people are unaware of the basis of their evaluation); (b) are activated automatically; and (c) influence implicit responses, namely, uncontrollable responses and ones that people do that people do not view as an expression of their attitude and thus do not attempt to control" (p. 105). Wilson *et al*.'s (2000) theory, like McClelland *et al*.'s (1989), suggest that people are unaware of implicit motivations and attitudes because they develop before language skills and are therefore difficult to verbalize, not just because repression keeps them from surfacing.

Methodological issues

The most frequently expressed methodological criticism of projective techniques is that they lack reliability and validity. As an example, Brunel *et al*. (2004) report that projective techniques "often lack convergent validity, and are poor psychometric instruments" (p. 387). Their source for the conclusion was Lilienfeld *et al*. (2000), whose work is extremely critical of the Rorschach technique. Despite their criticism of the Rorschach and a few other projective techniques used for clinical assessment, Lilienfeld *et al*. (2000) actually report that they "do not intend to imply that other projective techniques are without promise or potential merit" (p. 30).

Some projective techniques, including McClelland *et al*.'s (1953) *nAch* TAT, have been criticized for lacking internal consistency and exhibiting low test – retest reliability. Although these projective techniques have been criticized for low test – retest reliability and internal consistency, there is general agreement that the inter-coder reliabilities associated with the coding of completed projective protocols is generally high (> 0.70). A reason why high inter-coder reliability is associated with the coding of projective test responses, such as the Washington University Sentence Completion Test (Loevinger *et al*., 1983) and the *nAch* TAT (McClelland *et al*., 1953), is that the tests include detailed coding manuals that can be used to train coders, as well as serve as a references for the judges, allowing them to independently resolve coding problems that they confront (Smith, 1992).

Test – Retest Reliability

Of projective techniques, the TAT has been most frequently described as lacking in test – retest reliability (Lilienfeld *et al*., 2000; Birney, 1959; Entwisle, 1972). Other projective tests, including pictorial tests such as the Rosenzweig Picture Frustration Study (Rosenzweig, 1945) and sentence completion tests, such as the Rotter Incomplete Sentences Blank (Rotter and Rafferty, 1950), have been shown to exhibit very high test – retest reliability (Rotter *et al*., 1992; Rosenzweig and Rosenzweig, 1976; Lilienfeld *et al*., 2000).

Birney (1959) and Entwisle (1972) concluded that thematic apperception measures generally exhibit low test – retest reliability, with reliability coefficients averaging around 0.25. Although their criticisms were directed at TAT measures of *nAch*, their criticisms have been generalized to other TAT measures.

Winter and Stewart (1977) re-examined these conclusions, and showed that test – retest reliability is a function of the instructions given to experimental subjects rather than function of the test itself. Because thematic apperception measures are often presented to subjects as measures of imagination rather than as a personality assessment instrument, subjects attempt to write different, imaginative stories to the same pictures the second time than the first, unless instructed not to. As an example of these instructions, Murray's (1943) instructions began with the advisory, "This is a test of imagination [...]."

Winter and Stewart (1977) demonstrated this by conducting an experiment, where different subjects were given different sets of instructions during the retest. One set instructed the subjects to "put yourself in the state of mind you were in when you wrote stories to these pictures before.

Try and write stories as much like the ones you wrote before." The second set instructed subjects to "try and write stories as different as possible as the ones you wrote before." The third set instructed respondents to "not worry about whether your stories are similar to or different from the stories you wrote before." The test – retest correlations for the first and third instructional set produced acceptable

test – retest reliability coefficients (i.e. 0.61 and 0.58), whereas the second produced a low reliability coefficient (i.e. 0.27). These coefficients can range from 0 to 1.0, where coefficients close to 0 are weak or non-existent, whereas coefficients approaching 1.0 are very strong. A 0.61 coefficient would be considered "moderate to strong."

Lundy (1985) obtained similar results to those of Winter and Stewart (1977). At the second administration, Lundy (1985) instructed respondents to "feel free to react to [the pictures] as you did before or differently depending on how you feel now." The test – retest reliabilities obtained by Lundy (1985) ranged from 0.43 to 0.61. Lundy (1985) concluded that the test – retest reliability of thematic apperception measures is similar to that of many "objective" tests.

High test – retest reliabilities on TATs have been reported by some researchers. Haber and Alpert (1958) obtained reliability coefficients of 0.45 and 0.54 for two sets of pictures administered three weeks apart. Morgan (1953) obtained stability coefficients of 0.56, 0.56, and 0.64 over multiple weeks. Both of these studies involved alternate forms reliability, as well as test – retest.

Internal Consistency

Some projective tests, such as the Washington University Sentence Completion Test and the Rotter Incomplete Sentences Blank, exhibit high internal consistency (Churchill and Crandall, 1955; Loevinger, 1998; Lilienfeld *et al*., 2000). Other projective tests, such as TATs and some pictorial tests, have been found to exhibit far lower internal consistency.

The importance of internal consistency has been challenged by users of projective techniques (e.g., Atkinson, 1958; Rabin, 1981). Internal consistency is based on the assumption that each item contains some amount of "true" measurement and some amount of measurement "error," all items on a test measure the same construct, and items are linearly related. Logical empiricists assume that low internal consistency means that a scale is unreliable. This view was expressed by Entwisle (1972), who reported that the internal consistency of *nAch* TAT measures is low.

The effort to produce high internal consistency across multiple measures has led positivist researchers to use redundant items that reduce complex concepts to narrow, simplistic measurements. As an example, the complex conception of an attitude, which is a consistent evaluative and reactive response to a stimulus, is often reduced to a few bipolar adjectives (Bruner, 1998; Soley, 2006), some of which Osgood *et al*. (1957) have shown to be synonyms (e.g., good/bad and beneficial/harmful). A recent study (Bergkvist and Rossiter, 2007) has shown that the results produced by a single, simple item produces the same results as multi-item, semantic differential scales with high internal consistency. This is because the multiple items are redundant, and provide no additional explanatory power than a single statement of liking.

Other research has shown that clustering of scale items, such as that done with semantic differential scales, produces inflated estimates of internal consistency, even for redundant items (Soley, 2006); and that internal consistency has become a substitute for assessing validity and other forms of reliability, such as test – retest reliability (Bruner, 1998; Soley, 2006). Oddly enough, the originator of the internal consistency measure, Cronbach (1961, p. 128), argued for the importance of validity over internal consistency, writing, "If predictive validity is satisfactory, low reliability does not discourage us from using the test."

In contrast with the logical empiricist assumption that measures should exhibit high internal consistency and unidimensionality, projective instruments are usually designed to measure complex, even multiple, concepts. As examples, the Rosenzweig Picture Frustration Study measures type of response and direction of aggression (Rosenzweig, 1945), and Lichter *et al*.'s (1986) TAT assessed attitudes toward authority, fear of power, and narcissism.

The multiple responses do not represent different dimensions of the same concept, but entirely different concepts. This is because the content analyses of projective protocols examine a multiplicity of concepts, just as content analyses of advertisements usually do. As an example, a content analysis of advertisements can examine the type or size of the headline, the size of the illustration or logo, the type of

layout, the characteristics of the models or endorsers in the ads (including their gender and race), the proximity of models to each other, the length of the copy, and so forth. All of these represent different concepts or variables rather than different dimensions of the same concept.

Internal consistency assessment is also based on the assumption that the items on tests are a "random sample of items from a hypothetical domain of items" (Nunnally, 1978, p. 193). Projective tests are not assumed to be randomly selected items, but purposively selected on an empirical basis. Another tacit assumption underlying internal consistency is that respondents think linearly, allowing error and shared variance to be partitioned using linear statistical models. Projective techniques do not assume that respondents think linearly or that responses will necessarily be linearly related (Gates, 1976).

However, even if respondents do think linearly and linear statistical models can be applied to analyses, projective techniques do not assume that the best measures will necessarily exhibit high inter-item correlations. Lundy (1985, p. 141) suggests that a better model is the "multiple regression model," which assumes that the best items "will maximize the set of predictors' correlations with a criterion," rather than among themselves. That is, inter-item correlations should be low, so that each item provides additional explanatory power that helps in clarifying a complex concept.

There are other reasons for rejecting the assumption that internal consistency is a prerequisite for validity; however, those stated above are sufficient to make the point that internal consistency relies on many disputable assumptions, and that it is not useful for assessing the reliability of projective techniques.

Validity

Convergent validation exists when a scale is shown to be associated with other, accepted measures of the same concept. In terms of convergent validity, Weinstein (1969) examined the

relationship between TAT measures of *nAch* and other measures of achievement, and found the TAT to be weakly associated with them.

Another study conducted by Lindgren *et al*. (1986) found that *nAch* TAT measures were not associated with "objective" measures, such as the Ray-Lynn achievement orientation scale. This led some methodologists, such as Kerlinger (1986, p. 477) to observe, "The scientific canons of reliability, validity and objectivity have not been adequately satisfied" by projective techniques.

However, several studies (e.g., Soley, 2006; Carson and Gilliard, 1993) have shown that paper-and-pencil "objective" scales and projective measures to be correlated, albeit weakly or moderately so, but that the two types of measures appear to tap different constructs.

Consistent with these findings, McClelland *et al*. (1989) contend that thematic apperception measures and paper-and-pencil psychometric scales assess different concepts: TATs assess implicit or unconscious motives, whereas psychometric scales measure self-attributed motives. According to McClelland *et al*. (1989), this is why responses to paper-and-pencil psychometric scales and TATs measuring achievement motivations are not strongly related.

Weinberger and McClelland (1990) hypothesized that the reason why implicit and explicit motivations are often found to be unrelated is that they are essentially different motivations. Implicit motives are based "on genetics and early affective learning, whereas self-attributed motives are more dependent upon later-developing symbolic representational capacities, most notably language-mediated cognitive structures" (Weinberger and McClelland, 1990, 585). Koestner *et al*. (1991) conducted research that found support for this hypothesis. They showed that implicit motives, as measured by projective instruments, are associated with the solving of inherently challenging tasks, such as word-finding puzzles, whereas self-attributed or explicit motives are associated with socially-cued activities. These conclusions are similar to those reached by cognitive and social psychologists, who study implicit and explicit attitudes using the implicit association test

(see Wilson *et al*., 2000; Johnson, 1990). Implicit and explicit attitudes are usually found to be weakly related.

Klinger (1966) also contended that published studies of *nAch* measured by TATs were as likely to report non-significant as significant associations with performance measures such as scholastic performance. However, meta-analyses actually show that projective measures are actually better predictors of long-term behaviour than are explicit (i.e. "objective") attitude measures. Spangler (1992) found that projective *nAch* scores correlated more highly with behavioural outcomes such as occupational success and income than did self-report measures. The validity coefficients of positivist measurements have been compared the validity coefficients of positivist measurements with projective tests assessing the psychological trait of dependency, and found that the validity coefficients for the projective tests were generally greater than for the objective tests. This suggests that projective measures are superior to other measures on the criterion that Cronbach (1961) considered most important – predictive validity. Finally, a meta-analysis conducted by Collins *et al*. (2004) found that the relationship between entrepreneurial and managerial performance and TAT, Miner Sentence Completion Scores, and "objective" tests of achievement motivation were similar, although none were very high. Overall, the sentence completion scores produced higher correlations with the criterion measures than did the other two measures.

Conclusions

Although projective techniques are used by researchers in a variety of disciplines, US marketing, communication, and management researchers have, for the most part, neglected these techniques in recent years. Part of the neglect undoubtedly arises from the view that psychoanalysis, the paradigm underlying the techniques, has not "been particularly useful in [marketing communication] studies," as DeFleur and Ball-Rokeach (1985, p. 40) concluded. One could argue that psychoanalytic theory is actually useful for understanding marketing communications, explaining such diverse phenomena as the "third person effect" and responses to sexual stimuli in media messages, but that does not effect the reality that psychoanalytic

theory and methods have been largely ignored by US academic researchers. Ignoring the paradigm has led to the ignoring of methods derived from the paradigm.

That the techniques are ignored by most US marketing and communication researchers in the academy is demonstrated by surveys of the content of introductory and graduate research methods courses (Frey *et al*., 1998; Robb and Gale, 2005; Craig and Soley, 2009). A survey of instructors of qualitative communication research courses found that projective techniques were taught less, and considered less important, than any other method – far below deconstruction, ethnic orientations (e.g. Afro-centric research), and dialectical analysis (Frey *et al*., 1998). A survey of introductory research courses in advertising taught at universities found that most qualitative research techniques, including projective techniques, are neglected (Robb and Gale, 2005). A survey of research methods instruction in US graduate programs in advertising, communication, and marketing (Craig and Soley, 2009) found that projective techniques were the least frequently taught qualitative research method.

One problem with ignoring projective methods in the classroom is that it deprives graduates of knowledge about a potentially useful class of research methods, as well as skills that might be useful in landing research-related jobs. The neglect has led to ignorance about, and a failure to use, the methods among US academic researchers who study marketing.

As Zaharkevich (1999), Greenberg *et al*. (1977) and Boddy (2007) found, projective techniques are used by professional marketing researchers, and some knowledge of these techniques might be useful for graduates seeking to land jobs in industry. However, Zaharkevich (1999) found that most professional researchers learned these techniques on the job, rather than in college classrooms.

A second problem with neglecting projective techniques is that they are one of the few research methods that rely on visual stimuli. There is evidence that verbal (i.e. symbolic) and visual stimuli are

processed and stored differently (Paivio, 1971; Nickerson, 1965, 1968; Standing *et al*., 1970). Furthermore, McClelland *et al*. (1989) contend that early childhood learning and memories are visually stored, and cannot be tapped using verbal measures. Although advertising, communication and marketing scholars recognize the differences between verbal and visual communication, their research methods remain deeply rooted in the verbal tradition, relying on verbal instruments. This makes that approach very dated, almost a relic of a bygone era, given the increasingly visual nature of modern society. Finally, there is growing evidence in social and cognitive psychology that individuals do have implicit or unconscious attitudes (Wilson *et al*., 2000; Fazio and Olson, 2003; Kihlstrom, 2004), and that self-reports cannot tap these. Advocates of projective techniques have been arguing this for decades. A failure to discuss and test these theoretical developments, and to use methods that can test them, makes research insular rather than integrated, which is what integrated marketing communication is all about.

Finally, US marketing researchers have not only neglected this research, but have ignored research (e.g., Bruner, 1998; Soley, 2006) showing that self-report, verbal instruments, such as semantic differential scales, lack the validity that their users assert. Given the shortcomings of the traditional, positivist approaches to market research, academic and professional market researchers would be well-served if they thought about, and experimented with, projective techniques.

Note

1. Yoell's criticisms were accompanied with a critique agreeing with his statements, but saying that there not new.

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