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## Viewing Contextual Style in Context: Cognitive Style of Clinicians-in-Training

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### ABSTRACT

*Cognitive style is an important cognitive and interpersonal measure that may impact how clinicians interact with their clients. Much research has found that field dependent (FD) individuals make more frequent use of emotion words in “describing” the behavior of others while field independent (FI) participants were more accurate in “identifying” specific emotions. This research sought to examine the cognitive style (FDI) of clinicians-in-training within a scientist/practitioner program. We measured the cognitive style of sixty clinical psychology doctoral students with the Group Embedded Figures Test and the Rod and Frame test. Results indicated that a field independent cognitive style was far more prevalent in this sample than expected by chance. No significant gender differences in cognitive style were found. Implications for clinical training and program development are discussed.*

*Keywords: cognitive style, field independence, field dependence, clinician training, rod and frame, group embedded figures, contextual, analytic, relatedness, culture*

### INTRODUCTION

Cognitive style is an important cognitive and interpersonal measure that may impact how clinicians interact with their clients. Examining cognitive style has a long history in psychology.

The traditional measure of cognitive style, using a rod and frame, was created by Witkin and Asch in 1948 and is still considered one of the most empirically valid measures available in the field of psychology. Empirical studies have demonstrated the presence of individual differences in judging the upright or true vertical when either the body or the stimulus field is altered to make perception of true vertical more difficult (Witkin & Asch, 1948). Individuals were found to use either internal bodily cues or external field referents to judge the upright under various conditions. Witkin and Asch discovered that individuals utilizing internal bodily referents were more accurate at perceiving true vertical than those who utilized external stimuli as referents. The terms field independent and field dependent reflect a mode of information processing that is independent of the stimulus field or dependent on the stimulus field, respectively.

A significant body of research supports differences in styles of thinking when individuals are dichotomized as either field independent (FI) or field dependent (FD) (Davies, 1982; Davis, 1991; Demick, 1991; Mezoff, 1982). FI individuals tend to rely on internal cues such as gravity and vestibular cues to guide their behavior. Conversely, FD individuals tend to make greater use of external cues (i.e., physical referents, social context). It is no surprise that field independence (the ability to “decontextualize” or separate a stimulus from its embedding context) became valued as the hallmark behavior of the more differentiated and subsequently more developed human being.

We view it as unfortunate that the term field dependence fosters images of a global and less differentiated mode of mental functioning. It is important to note that this position has not been entirely accepted in the FDI research literature. Witkin’s colleague, Solomon Asch once described field dependence in terms of “relatedness” (as cited in Haaken, 1988), presumably noting the potential benefits of viewing stimulus within context as opposed to being separated from surrounding context. As will be discussed later in this paper, the field of clinical psychology and psychotherapy may be particularly sensitive to differences in “holistic” versus “analytic” approaches to helping client’s with their problems.

As noted by Masuda and Nisbett (2001), East Asians were far more attentive to contextual details and relationships between them than were their American counterparts. Masuda and Nisbett suggest that East Asians may have more difficulty separating from context. What then, are the implications for training in clinical psychology given an increasingly culturally blended world environment? This research attempted to provide support to a growing body of research in the empirical study of cognitive style that considers FDI in contexts that range beyond the original empirical interest in perceptual abilities.

Previous research has demonstrated that this phenomenon extends beyond performance in completing tasks that relate to physical/environmental cues. It appears that this dimension may mediate interpersonal interaction in much the same manner (Dreyer, 1991; Kogan & Block, 1991; Witkin & Goodenough, 1981). Interpersonally, field dependent individuals rely more heavily on the external feedback they receive from those around them to guide their behavior, are more interpersonally oriented in general and are more open with their feelings (Dreyer, 1991; Witkin & Goodenough, 1981). Specifically, Kogan and Block (1991) report findings that suggest FD individuals make more frequent use of emotion words in “describing” the behavior of others while FI participants were more accurate in “identifying” specific emotions.

In a study of non-verbal sending and receiving abilities, (Sabatelli, Dreyer, & Buck, 1979) intimate couples, identified as either FI or FD, were videotaped while viewing a series of “emotionally loaded” color slides. The respective intimate partners were then exposed to the videotaped color slide reactions of their partners and asked to identify, based on facial cues alone, which slide their partner was currently viewing. Results indicated no differences between FI and FD participants’ ability to “decode” their partner’s nonverbal reaction to the slides (Dreyer, 1991). However, in the “sending” condition, the participants viewing the slides were asked to describe their emotional reaction while unaware that they were being videotaped. Sabatelli et al. (1979) found FD participants were more accurate in transmitting their own emotional state via facial cues than FI participants.

It has been suggested that the field dependent individual, in attempting to gain feedback from the environment (other people), is more active in sending verbal and non-verbal information regarding their own internal state (i.e., facial cues, verbal disclosure) and that this tendency is based in reciprocal expectations (Dreyer, 1991). However, Dreyer finds little support for the notion that either style is more accurate at decoding the emotional state of others based on non-verbal cues (1991). Instead, it is suggested that although field dependent individuals may attend more closely to social cues, their less differentiated style may reflect a tendency to “overlook fine distinctions in non-verbal displays” which makes it difficult to describe the emotional experience of another (Dreyer, 1991, p. 313). Conversely, the field independent individual may remain differentially less attentive to social cues as opposed to their field dependent counterparts while being more internally motivated toward identifying specific experience.

These findings may have considerable implications for psychotherapy. If the FD is more emotionally expressive, although possibly less accurate than the FI, one must consider how the more emotionally attentive style of the field dependent individual influences the context of psychotherapy (e. g., the tendency of the field dependent individual to disclose emotional state more readily). The more externally dependent style may value the social cues evident in emotional contact more than their field independent counterparts and therefore may have a disposition toward more emotional expression of empathy. This study viewed cognitive style as a dispositional characteristic of therapists. It was expected that a larger portion of the student sample (clinicians-in-training) would display features of field dependence (field relatedness) as compared to a “normal” distribution.

## **METHOD**

### *Participants*

Participants consisted of 60 graduate students (13 men and 47 women) currently enrolled in or recently graduated from (within the last two years) a clinical psychology doctoral program in the northeast of the United States. Of the 75 persons contacted, 15 either did not respond or were unwilling to complete the study.

## *Materials*

The Rod and Frame Test (Witkin & Asch, 1948) is a visual perception test that was administered as one part of a two-part cognitive style index. Each participant, in a completely darkened room, viewed a tilted luminous rod embedded in a tilted square frame. With the experimenter hidden from view, participants were asked to provide directional cues that adjust the rod position to the vertical axis of space. The experimenter, utilizing a device that rotates the rod independent from the frame, made the adjustments until the participants were satisfied that the rod position was at true vertical. At no time was the frame moved by the participant. Over the twelve trials, the special chair apparatus was tilted to the following specifications in four trials each: upright, tilted left 28 degrees and, tilted right 28 degrees. For each of the chair positions, the experimenter adjusted the rod and frame to the following settings: frame at 28 degrees right, rod at 28 degrees left; both rod and frame at 28 degrees right; frame at 28 degrees left, rod at 28 degrees right; both rod and frame at 28 degrees left. Measure was the number of degrees error from true vertical averaged over all twelve trials. Average error for this sample was 4.64 degrees (SD = 2.91) with a range of .75 to 16.25. Higher scores indicated greater field dependence and lower scores indicated greater field independence. There were no statistically significant differences between men and women.

The Group Embedded Figures Test (Witkin, Oltman, Raskin & Karp, 1971) is a visual perception test that was combined with the RFT to obtain the second part of a cognitive style index. Each participant attempted to identify a simple geometric figure contained within a more complex design by tracing it onto the testing booklet. A total of twenty-five trials including seven practice items and another eighteen items divided into two sets with a time limit of five minutes each were administered. Measure was the number of incorrectly identified figures out of eighteen attempts. Published reliability findings indicate a split-half correlation of .82 for this test (Witkin et al., 1971) and a test-retest reliability of .89 after three years. For this sample, the average error was 5.65 (SD = 4.60) with a range of .00 to 18.0, higher and lower scores indicating greater field dependence and independence, respectively. Differences between men and women were not statistically significant.

## *Procedure*

Recruitments were completed via email and telephone contacts from a graduate program class roster. All participants completed: Demographic background form, Rod and Frame Test and Embedded Figures Test. The Rod and Frame Test and Group Embedded Figures Test were completed in the research lab of the psychology department at Suffolk University during one session with the primary investigator with the remaining measures completed as mail-in surveys. All participants voluntarily provided an informed written consent.

## *Data Analysis*

Degree of field independence/dependence was determined utilizing a procedure described elsewhere in the literature (Kogan & Block, 1991; Tobacyk, 1981) that combines RFT and GEFT scores to obtain a single cognitive style index. GEFT scores were reversed so that each test was scored in the same direction. Next, RFT and GEFT scores were standardized and summed to obtain a total score that was then divided by two to obtain an average FDI score. A whole

number of 250 was added to the index score to eliminate negative scores leaving an index score ranging from 248.9 to 252.25 and an average of 250.0 ( $SD = .81$ ) with higher scores indicating greater field dependence (FD) and lower scores indicating greater field independence (FI). Again, there were no statistically significant differences between men and women.

## RESULTS

Analysis of cognitive style revealed an abnormal distribution toward field independence that exceeded chance  $X^2 = 20.3$ ,  $p < .001$ . Based on the distribution, more than half of the participants were clustered around the field independent pole ( $n = 36$ ) with a smaller percentage being field dependent ( $n = 12$ ) and the remainder falling within the middle range ( $n = 11$ ) (see Figure 1). The sample was negatively skewed toward field independence.

## DISCUSSION

Distributional analysis of cognitive style revealed an abnormal dispersion toward field independence in this sample. The finding that most of this sample was field independent bears significant implications for clinical training programs in general and scientist/practitioner models in particular. The high prevalence of field independence as a cognitive style would seem to indicate that this sample is predominantly analytical and more differentiated in terms of separating the self from the surrounding context (environment). This finding is of importance in clinical psychology as continued research endeavors explore the values of holistic versus analytic thought as ways of “knowing” (Nisbett, Choi, Peng & Norenzayan, 2001). These distinctions may be influential in directing the approach a clinician or researcher takes in understanding a human problem. In particular, cognitive styles that are holistic in nature would appear to lend themselves quite readily to defining problems in terms of relationships between variables (i.e., clinical work with families and organizations) whereas analytic styles are inclined to use logic to isolate structures and causes as in the study of psychopathology and forensic psychology. It would seem that a well-informed approach to clinical training would seek to raise awareness of these dispositional biases in students.

From a dialectical perspective (Basseches, 1997), the ability to view problem and process from the client’s frame of reference is critical in supporting the development of new cognitive structures in clients that seek more general change. In this way, a therapist with a holistic style (field dependent) may be predisposed to view the client’s problem within the context of how they make-meaning (Basseches, 1997) and thus be able to support developmental transition. An analytical style, (field independent) may find a dialectical approach challenging in the sense that the logical deduction of cause and effect and isolation of variables is less helpful to clients interested in personal growth. As always, the utility of any therapeutic endeavor should be viewed from the perspective of the client seeking treatment. Therefore, a client interested in the application of solutions to specific problems (i.e., smoking cessation) may find the context driven and relational style of the field dependent therapist a frustrating experience while they may indeed welcome a concise analysis of problem variables and potential remedies that the field independent therapist will likely offer.

A relatively new direction in clinical psychology is community-based or “action” research in which the experimenter plays a significant role in the process of change that is being

studied. Much like contemporary industrial/organization psychology, the action research model presumes that interventions under study are interdependently related not only to researcher theoretical interests but also to the practical interests of the host environment. The contextual aspect of field dependence may be an asset in research settings where responsiveness to environment is important as a means to engage collaboration. As such, context should allow the researcher to engage in a reciprocal relationship that values client interests and empirical interests equally. As the era of managed care continues to de-emphasize the role of the traditional psychologist, these findings should be of interest to programs that wish to explore possible roles for the psychologist in the community.

The field independent therapist may be more comfortable in a treatment model that is prescriptive in nature. The end goals of this type of therapy are more directed toward the application of relevant exercises or solutions that are based on an objectively viewed assessment of need rather than a subjective exploration of need. Training programs may wish to adjust goals in training with the natural styles of their students in light of these findings. Specifically, a scientist/practitioner modeled program may wish to expose students to training models that diverge from their natural stylistic tendencies with the intention of developing a well-rounded psychologist that can be more flexible depending upon client needs.

Similarly, the present findings would appear to warrant further research in the area of therapist to patient matching along the FDI continuum. Previous research has indicated that in matching studies, students rated teachers with the same cognitive style more favorably than those with a different cognitive style (Dreyer, 1991). This finding has led researchers (Dreyer, 1991) to speculate that, in terms of cognitive style, dyads that are matched may be more comfortable functioning together interpersonally because of similarities in mental functioning.

## Implications

Implications are directed toward clinical training models and developmental theory in general. This research will follow recent suggestions (Ahn & Wampold, 2001) that the training of future psychologists should focus on the therapist themselves in addition to a particular therapy model. For example, one may consider training programs that enhance standard clinical models by exposing students to technique and theories with what Basseches refers to as “epistemological intent” (1997). It is far more important that a clinical psychologist understand his or her work from a critical perspective than it is to achieve an expected level of facility with various theories and techniques. As noted by Basseches, (1997) this can be accomplished through utilizing coursework and supervision experiences that foster developmental growth by challenging trainee assumptions with “alternative frames of reference” (p. 102). It is important to deliver the message that it is not one’s technique that defines “expertise” but rather, the ways in which one goes about gathering knowledge. This becomes even more important as modern cost reduction efforts place increasing pressures on clinical psychologists to practice within specified parameters of service delivery.

## Limitations

The study presented here was clearly limited by a sample that was primarily female. The

limited sample in this study can do little to fully explore these differences to the extent that they should be. Further, the rather consistent finding in over thirty years of research is that women are more field dependent than men when compared to each other. Conservatively, it is wise to consider the role of higher educational status and an unbalanced sample as possible explanations at this time. In any case, this is an area that should be examined more closely in the future.

It is important to appreciate the recent perspective presented by Glicksohn and Kinberg (2009) as attempting to further elucidate individual differences in cognitive style. Their model, takes into consideration the inherent limitation of dichotomizing any conceptual model into an “either or” format. By examining FDI measures outside of traditional accuracy scores (i.e., utilizing response latency times), Glicksohn and Kinberg’s work has opened a new door in studying individual differences from a slightly more ecological perspective.

The findings presented here should be viewed within the context of the training model utilized by the educational program the sample was taken from (scientist-practitioner). It would be wise to consider that many graduate programs in psychology are dichotomized as being primarily research based or clinically based and focus most of their training in one of these two areas. The scientist-practitioner model places significant emphasis on both research and clinical training and should therefore be considered substantially different from more traditional programs in graduate psychology. At this time, it would be premature to generalize these findings to graduate training in psychology as a whole. The cultural background related to this sample is limited in that most participants in this study were Caucasian in ethnicity. Cultural differences have been noted elsewhere in relation to cognitive style (Berry, 1991) and should continue to be examined in future research.

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**Figure 1.** Distribution of participant cognitive style index scores ( $N = 59$ ).

