

https://dspace.org/

The relationship of field dependence-independence to perceptual defence and selective memory

Bryce, Gillian

2015-01-12
http://hdl.handle.net/10539/16468

Downloaded from a DSpace repository. https://dspace.org/

them still further and questioned not only the correlations between Fd-Fdi and personality variables but also the correlations between the various measures of Fd-Fdi themselves. Furthermore, the questions raised by Gruen concerning the validity of Witkin's correlations between the various Fd-Fdi measures have also been raised by other writers and it may now be of value to examine these correlations and questions.

5 An Examination of the Correlations between Field Dependence-Independence Measures

Witkin (100, p. 67, 85) quoted the following inter-correlations among his Fd-Fdi measures.

TABLE III

Witkin's Original Inter Test Correlations

	EFT	DAP	BAT
RFT	.21(.54)	.68(.72)	.52(.64)
BAT	.51(.60)	.65(.77)	

Key: Unbracketed correlations: Correlations for female subjects;
Bracketed correlations: Correlations for male subjects.

.../As

As can be seen from the following however, somewhat lower correlations than the above ones have been found by subsequent authors who have for example correlated the RFT and EFT for male subjects. While Witkin found a correlation of .64, Adevai and Silverman (1) found a correlation of .49, Rudi and Stagner (83) found a correlation of .55 and Dubois and Cohen (19) found a correlation of .56. Similarly in the present study, where female subjects were used correlations lower than those reported by Witkin were found. The correlations found in the present study are presented below.

TABLE IV

Fd-Fdi Inter Test Correlations found in the Present Study

	BAT	DAT
RFT	.49	.47
BAT		.30
DAT	(Interjudge correlation)	.65

Thus it can be seen that Gruen's (42) questions concerning Witkin's correlations between Fd-Fdi measures were justified. However despite the

.../fact

fact that Witkin's original correlations seem to be inflated nevertheless subsequent correlations have still been in the expected direction and therefore Witkin's theory cannot be declared invalid on the basis of the inflation of his Fd-Fdi inter test correlations. Nevertheless, a reassessment of his theory and its implications does become necessary. Before doing this, however, it might be of value to recapitulate the criticisms which relate to the present study and which have been leviad against Witkin's theory to date.

6 Recapitulation of the Criticisms of Witkin's Work

(i) Taylor (91) has pointed to the fact that in Fd-Fdi studies the sex composition of the sample is a vital factor determining results. He pointed to examples in which sex differences across samples resulted in a reversal of the correlations found between Fd-Fdi and various personality measures. This factor is important when one considers the discrepancy in the results of this study and that of Hinard. However this factor of sex

.../differences

differences is even more important when the value of the Fd-Fdi concept as an explanatory one is assessed because it detracts from the possibility of using Fd-Fdi as a unitary explanatory concept underlying all human functioning.

(ii) Gruen (42) has pointed out that the correlations found by Witkin between his Fd-Fdi measures are inflated. Similarly Adavai and Silverman (1) have also criticised the Fd-Fdi measures per se and have pointed out that they are factorially impure especially the EFT. This criticism of Witkin's work is relevant to the present study but in the present study the correlations between the Fd-Fdi measures were independently checked and the EFT was not used at all, thus reducing the impact of this criticism.

(iii) A final criticism which has been levied against Witkin's work and which has most relevance to the present study concerns

.../itself

itself with Witkin's interpretation of his results. Zigler (107) criticised Witkin's interpretation of the correlations between Fd-Fdi and personality measures in terms of decontextualisation. He explained Witkin's correlations in terms of the relationship the Fd-Fdi and personality measures had in common with intelligence. This view of Zigler ties in with the present study which found a higher correlation between Fd-Fdi and the cognitively loaded selective memory task than between Fd-Fdi and perceptual defence. It also ties in with the fact that Minard who used a cognitively loaded experimental design found a positive relation between Fd-Fdi and perceptual defence while the present study did not.

In conclusion then it appears that Witkin's use of the Fd-Fdi concept as an explanatory principle underlying human functioning can be questioned both from an experimental and a theoretical viewpoint. However, it should not be assumed that because the Fd-Fdi construct fails to be an encompassing explanatory concept that it is without

.../any

any value. Similarly, although Witkin's Fd-Fdi inter test correlations are inflated they still have some validity as other workers have also found positive correlations. Thus although the Fd-Fdi concept is not an adequate explanatory principle of all human functioning it still has value and its more limited scope of depicting a single aspect of the way in which people perceive and react to the environment. Writers who have considered the value of the Fd-Fdi concept in its more limited scope include Vernon (97) and Gardener (33).

7 The Work of Vernon with Reference to Field Dependence -Independence

According to Vernon (97) Fd-Fdi attempts to incorporate too wide a range of perceptual characteristics and personality qualities within a single dichotomous classification. Vernon sees Fd-Fdi as only one aspect of the manner in which people perceive and react to the environment. Gardener (33) is in agreement with Vernon and in fact he included Fd-Fdi as one dimension in the broader principle of cognitive control which he developed. The cognitive control principle included many dimensions of which

.../Fd-Fdi

Fd-Fdi was only one. The other dimensions included, e.g. extensiveness of scanning and levelling versus sharpening.

Gardener (33) saw Fd-Fdi as similar to selectiveness of attention, i.e. the capacity to direct attention to the significant features of the field and to disregard the irrelevant aspects. Extensiveness of scanning operates independently of selectiveness of attention and refers to the tendency either to deploy attention over a wide field or to concentrate it narrowly on a small area. Sharpening and levelling on the other hand refer to the tendency in successive reproductions of material to diverge from originals by either accentuating differences or by reducing them towards symmentry.

Having established these cognitive control dimensions, Gardener (33) and Klein (53) then tried to relate these dimensions to various aspects of personality. Extensiveness of scanning for example was found to be related to the Freudian defences as measured by the Rorschach. Extensive scanning was found to be related to projection and isolation while narrow scanning

.../was

was found to be related to repression. Extensiveness of scanning was also found to be related to adequacy of reality testing, delayed response and good impulse control.

Thus the work of Gardener (33) is in many ways similar to that of Witkin but his conceptual system is much broader. Neither should it be thought that Witkin was the first person to attempt to relate perceptual modes to personality. Thurstone (94) carried out very extensive investigations on differences in perceptual s in a variety of perceptual situations administered 40 different perceptual tests to 170 subjects and then subjected his results to a factor analysis. From this, two main factors were extracted. The first factor referred to the ability to perceive closure rapidly and strongly and to maintain it during distraction. The second factor referred to the ability to manipulate configurations flexibly and to pass easily from one configuration to another. Pemberton (75) then related these perceptual dimensions to personality qualities. He showed that individuals with a strong tendency towards closure were on the whole outwardly and socially oriented, were uninterested in

.../analysing

analysing situations and did not theorise about them. Similarly he showed that individuals who demonstrated flexibility in manipulating configurations were detached from the environment, lacked sociability and possessed a tendency towards abstract analysis.

From the above then, it becomes clear that the relationships between personality qualities and modes of perceiving are more subtle and varied than can be defined by a single dichotomous typology. At present therefore, hypotheses as to consistency in an individual's mode of perception must remain highly speculative because the area requires much more extensive and more controlled work than has been done up to the present date.

However, an important factor to remember in work of this nature is that although perceptions may be partially selective, this selection cannot vary with individual disposition to more than a minor extent if it is to perform its essential functions efficiently. Veridical perception of the environment is essential for the maintenance of life in a constantly varying environment.

.../It

It is for these reasons that Vernon (97) maintains that the influence of individual motivational and personality qualities on perception may be inconsiderable except in highly restricted circumstances. Vernon believes that the main effects of individual personality and motivational factors are indirect. He sees these factors as operating through the varied acquisition of particular knowledge and skills by different individuals. He believes that individual motivational and personality variables act indirectly to modify or even initiate the organisation of cognitive schemata which direct selective attention, discrimination, identification and reaction along different lines. This is done, however, without impairing the veridical perception of the environment. Vernon therefore advocates further investigations into the nature and mode of operation of these schematic organisations.

Final Conclusion

The results of the present study indicated that Fd-Fdi was not related to perceptual defence or selective memory. Thus it was concluded that Fd-Fdi was not related to the

.../ability

ability to keep thought, percept and affect separate.

These results were not in line with Witkin's predictions and some explanation for this was therefore sought. A careful analysis of Witkin's work leading up to the derivation of the separation hypothesis revealed several faults in Witkin's logic and work.

Gruen (43) demonstrated that Witkin's original inter test correlations were inflated and questioned the statistical techniques used by him. Zigler on the other hand criticised Witkin's interpretation of his results in terms of Fd-Fdi (107). Zigler postulated that the correlations found between Fd-Fdi and personality variables were due to the common relationship these variables have with intelligence and the results of the present study support this postulate.

Vernon, however, sees the main fault in Witkin's work to be the endeavour to incorporate too wide a range of perceptual and personality characteristics within a single dichotomous classification (97). However, he sees the Fd-Fdi concept as having validity if it is applied in a more limited way as in the work of Gardener where Fd-Fdi is seen as only one dimension of perceptual functioning (33). The present writer is in accordance

.../with

with this view and thus it might be stated in conclusion that the concept of Fd-Fdi is a valid one only if it is considered to be one dimension of perceptual functioning and not if it is considered to be the explanatory principle underlying all human behaviour as Witkin originally advocated.

REFERENCES

1 ADEVAY, G., SILVERMAN, A.J. and McGOUGH, W.E. Perceptual correlates of the rod and frame test. Perc. and Mot. Skills, 1968, 26, 1055-1064.

2 ALPER, T.G. Memory for completed and incompleted tasks as a function of personality: correlation between experimental and personality data. J. Pers., 1948, 17, 104 - 137.

3 ALPER, T.G. The interrupted task method in studies of selective memory: a re-evaluation of some recent experiments. Psychol. Rev., 1952, 59, 71 - 88.

4 ATKINSON, J.S. The achievement motive and selective recall of interrupted and completed tasks. J. exp. Psychol., 1953, 46, 381 - 390.

5 BLUM, G.S. An experimental reunion of psychoanalytic theory with perceptual vigilance and defence. J. abn. and soc. Psychol., 1954, 49, 94 - 98.

6 BROWN, W.P. Conceptions of perceptual defence. Brit. J. Psychol., Monograph Supplement, 1961.

7 BRUNER, J.S. and POSTMAN, L. Emotional selectivity in perception and reaction. J. Pers., 1947, 16, 69 - 77.

8 BRUNER, J.S. and POSTMAN, L. Perception, cognition and behaviour. J. Pers., 1949, 18, 14 - 31.

9 BRUNER, J.S. and POSTMAN, L. Symbolic values as an organising factor in perception. J. Soc. Psychol., 1948, 27, 203 - 208.

10 BYRNE, D. Repression-sensitisation as a dimension of personality. In Maher, B. (Ed.), Progress in personality research, London, Academic Press, 1964, 169 - 220.

11 BYRNE, D The repression-sensitisation scale, reliability and validity. J. Pers., 1961, 29, 334 - 340.

12 CABLE, D.G. — Perceptual defence or set: A re-examination. Psychonom. Sci., 1969, 331 - 332.

13 CARPENTER, P. and CARPENTER, J. — The predictability of perceptual defence. J abn. and soc. Psychol., 1956, 52, 380 - 383.

14 CARSON, R.J. and WALLACH, M.A. — The recall of interrupted tasks under stress: A phenomenon of memory or learning. J. abn. and soc. Psychol., 1959, 55, 372 - 381.

15 CARVEN, E.L. and DEIER, C.G. — The influence of threat and expectancy on perception. J. Pers., 1950, 19, 85 - 94.

16 CHODORKOFF, B. and CHODORKOFF, J. — Perceptual defence: An integration with other research findings. J. gen. Psychol., 1958, 58, 75 - 80.

17 DAMARIN, T. Stability in resistance to field forces. Unpublished doctoral dissertation. Purdue University, 1955. In Witkin, H.A. Psychological differentiation and forms of pathology. J. abn. and soc. Psychol., 1965, 76, 316 - 336.

18 DUBOIS, T.E. and COHEN, W. Relationships between measures of psychological differentiation and intellectual ability. Perc. and Mot. Skills, 1970, 31, 411 - 416.

19 DE LUCIA, J.J. and STAGNER, R. Emotional vs frequency factors in word recognition times. J. Pers., 1953, 22, 229 - 309.

20 ERIKSEN, C.W. Defence against ego threat in memory and perception. J. abn. and soc. Psychol, 1952, 47, 230 - 235.

21 ERIKSEN, C.W. Discrimination and learning without awareness: A methodological survey and evaluation. Psychol. Rev., 1960, 67, 279 - 300.

22 ERIKSEN, C.W. Individual differences in selective forgetting. J. exp. Psychol., 1952, 44, 442 - 446.

23 ERIKSEN, C.W. Perceptual defence as a function of unacceptable needs. J. abn. and soc. Psychol., 1951, 46, 551 - 564.

24 ERIKSEN, C.W. Psychological defences and ego strength in the recall of completed vs incompleted tasks. J. abn. and soc. Psychol., 1954, 49, 45 - 50.

25 ERIKSEN, C.W. The case for perceptual defence. Psychol. Rev., 1954, 61, 175 - 182.

26 FISHBEIN, G.M. Perceptual modes and asthmatic symptoms. An application of Witkin's hypothesis. J. consult. Psychol., 1963, 27, 54 - 58.

27 FLAVELL, J.H. The developmental psychology of Jean Piaget. New York: Von Nostrand Press, 1963.

28 FERGUSON G.A. Statistical analysis in psychology and education. New York: McGraw Hill, 1966.

29 FRANKMAN, J.P. and ADAMS, J.A. Theories of perceptual vigilance. Psychol. Bull., 1962, 59, 257 - 272.

30 FREEMAN, J.T. Set or perceptual defence. J. exp. Psychol., 1954, 48, 283 - 288.

31 FREEMAN, J.T. Set vs Perceptual Defence: A confirmation. J. abn. and soc. Psychol., 1955, 51, 710 - 712.

32 FREUD, S. The complete psychological works of Sigmund Freud. London: Hogarth Press, 1950.

33 GARDNER, R.W. Cognitive control. Perc. and Mot. Skills, 1968, 26, 311 - 315.

34 GIBSON, J.J. The relation between visual and postural determinants of the phenomenal vertical. Psychol. Rev., 1952, 59, 370 - 375.

35 GILETTE, A.L. Learning and Retention: A comparison of three experimental procedures. Arch. Psychol. 1936, 28, 40 - 45.

36 GLIXMAN, A.F. An analysis of the uses of the interruption technique in experimental studies of repression. Psychol. Bull., 1948, 45, 491 - 506.

37 GLIXMAN, A.F. Recall of completed and incompleted tasks under varying degrees of stress. J. exp. Psychol., 1949, 39, 281 - 295.

38 GOLDIAMOND, I. Indicators of perception: Subliminal perception, subception and unconscious perception. Psychol. Bull., 1958, 55, 373 - 411.

39 GOLDIAMOND, I. and HAWKINS, W.F. Vexiversuch: The log relationship between word frequency and recognition obtained in the absence of stimulus words. J. exp. Psychol., 1958, 56,457 - 463.

40 GOLDSTEIN, M.J. A test of the response probability theory of perceptual defence. J. exp. Psychol., 1962, 63, 23 - 68.

41 GOLDSTEIN, M.J. and RATI[illegible]F, J. — The relationship between frequency of word usage and ease of recognition with response bias controlled. Perc. and Mot. Skills, 1961, 13, 171 - 177.

42 GOSSETT, J.T. — An experimental demonstration of Freudian repression proper. Unpublished doctoral dissertation, Univer. of Arkansas, Fayetteville, Arkansas, 1964.

43 GRUEN, A. — A critique and evaluation of Witkin's perception and personality through perception work. J. gen. Psychol., 1957, 56, 73 - 93.

44 HARRINGTON, G.B. and SPIEGEL, T.A. — Fixed and mobile field-independence. Review of studies relevant to Werner's dimension. Psychol. Rep., 1967, 21, 41 - 57.

45 HARVEY, O.J., HUNT, D.E. and SCHRODER, H.M. — Conceptual systems and personality organisation. New York: John Wiley & Sons, 1961.

46 HEBB, D.O. — The organisation of behaviour. New York: John Wiley & Sons, 1949.

47 HOWES, D. and SOLOMON, R.L. — A note on McGinnie's emotionality and perceptual defence. Psychol. Rev., 1950, 57, 229 - 234.

48 HOWES, D. and SOLOMON, R.L. — Visual duration threshold as a function of word probability. J. exp. Psychol., 1951, 41, 401 - 418.

49 HOWIE, D. — Perceptual defence, Psychol. Rev., 1952, 59, 308 - 315.

50 KARP, S.A., POSTER, D. and GOODMAN, A. — Differentiation in alcoholic females. J. Pers., 1963, 31, 386 - 393.

51 KARP, S.A., WITKIN, H.A. and GOODENOUGH, D.R. Alcoholism and psychological differentiation. Effects of the achievement of sobriety on field dependence. Quart. J. Stud. Alch., 1965, 32, 384 - 386.

52 KISSIN, B., GOTTESFELD, H. and DICKES, R. Tachistoscopic thresholds for emotionally charged words. J. Psychol., 1957, 43, 333 - 338.

53 KLEIN, A. Stability of cognitive control. J. abn. and soc. Psychol., 61, 485 - 495.

54 KOHLER, W. Gestalt psychology. New York: Liveright, 1929.

55 KRASNER, L. Studies on conditioning of verbal behaviour. Psychol. Bull., 1958, 55, 148 - 170.

56 LACEY, O.W., LEWINGER, N. and ADAMSON, J.J. Foreknowledge as a factor affecting perceptual defence and alertness. J. exp. Psychol., 1953, 45, 169 - 174.

57 LAZARUS, R.S. — Is there a mechanism of perceptual defence. J. abn. and soc. Psychol., 1954, 49, 396 - 398.

58 LAZARUS, R.S., ERIKSEN, C.W. and FONDA, C.P. — Personality dynamics and auditory perceptual recognition. J. Pers., 1951, 19, 471 - 482.

59 LINTON, H.B. — Dependence on external influence: Correlates in perception, attitudes and judgements. J. abn. and soc. Psychol. 1955, 51, 502 - 507.

60 MARKOWITZ, A. — The influence of the repression sensitisation dimension, affect value and ego threat on incidental learning. J. Pers. and soc. Psychol., 1968, 11, 374 - 380.

61 MATTHEWS, A. and WERTHEIMER, M.A. — A pure measure of perceptual defence uncontaminated by response suppression. J. abn. and soc. Psychol., 1958, 57, 373 - 376.

62 MATTSON, J.M. and MATSONLAS, J. Emotional arousal and stimulus duration as determinants of stimulus selection. J. abn. and soc. Psychol., 1962, 65, 142 - 144.

63 McGINNIES, E. Emotional and perceptual defence. Psychol. Rev., 1949, 56, 244 - 251.

64 McREYNOLDS, P. and ULLMAN, L.P. Differential recall of pleasant and unpleasant words as a function of anxiety. J. clin. Psychol., 1964, 20, 79 - 80.

65 MINARD, J.G. Frame disappearance and rod and frame performance. Perc. and Mot. Skills, 1967, 24, 66.

66 MINARD, J.G., BAILEY, D.H. and WERTHEIMER, M. The measurement and conditioning of perceptual defence, response bias and emotionally biased recognition. J. Pers. and soc. Psychol., 1965, 631 - 638.

67 MINARD, J.G. and BATCHER, J. Disappearance of naturally fixated stimuli and the stability of phase sequences: A selective review and related experiments. Perc. and Mot. Skills, 1967, 24, 747 - 752.

68 MINARD, J.G. and MOONEY, W. Psychological differentiation and perceptual defence. J. abn. Psychol., 1969, 74, 131 - 139.

69 MINARD, J.G. The response bias interpretation of perceptual defence. Psychol. Rev., 1965, 72, 74 - 87.

70 MULLER, C. Consistency of cognitive behaviour as a function of personality characteriscs. J. Pers., 1954, 23, 233 - 249.

71 NEISSER, U. Cognitive psychology. New York: Appelton Century Crafts, 1966.

72 NOBLE, C.E. The familiarity - frequency relationship. J. exp. Psychol., 1954, 47, 13 - 16.

73 NOTHMAN, F.H. The influence of response conditions on recognition thresholds for taboo words. J. abn. and soc. Psychol., 1962, 65, 154 - 161.

74 PARDES, A. and KARP, S.A. Field dependence in obese women. Psychosom. Med., 1965, 27, 238 - 244.

75 PEMBERTON, C.L. Closure factors related to temperament. J. Pers., 1952, 21, 159 - 163.

76 PIAGET, J. The child's conception of the world. London: Routeledge and Kegan Ltd., 1929.

77 POLLOCK, I.W. and KIEV, A. Spatial orientation and psychotherapy. An experimental study of perception. J. nerv. and ment. Dis., 1963, 137, 93 - 97.

78 POSTMAN, L. Personality through perception: A review. Psychol. Bull., 1955, 52, 79 - 83.

79 POSTMAN, L. and SCHNEIDER, B.H. Personal values, visual recognition and recall. Psychol. Rev., 1951, 58, 271 - 284.

80 POSTMAN, L., BRONSON, W.C. and GROPPER, G.S. Is there a mechenism of perceptual defence. J. abn. and soc. Psychol., 1953, 48, 215 - 224.

81 ROSENZEIG, S. The investigation of repression as an instance of idiodynamics. Psychol. Rev., 1952, 59, 339 - 345.

82 ROSENZEIG, S. and SARASON, S. An experimental analysis of the triadic hypotheses - reaction to frustration, ego defences and hypnotisability. Charact. and Pers., 1942, 11, 1 - 20.

83 RUDIN, S.A. and STAGNER, R. Figure-ground phenomena in the perception of physical and social stimuli. J. Pers., 1958, 45, 213 - 225.

84 RUSSEL, W.A. Retention of verbal material as a function of motivated instructions. J. exp. Psychol., 1964, 60, 387.

85 SHANNON, D.T. Clinical patterns of defence as revealed in visual recognition thresholds. J. abn. and soc. Psychol., 1962, 64, 370 - 377.

86 SHERRIF, M. Some social factors in perception. Arch. Psychol., 1935, 27.

87 SPENCE, D.P. A new look at vigilance and defence. J. abn. and soc. Psychol., 1957, 54, 103 - 108.

88 SPENCE, J.T. Contribution of R-bias to recognition thresholds. J. abn. and soc. Psychol., 1963, 66, 339 - 345.

89 STRAUSS, M. Cognitive style and the use of individual cues in problem solving. J. Psychol., 1969, 73, 69 - 74.

90 SYMONDS, P.M. The dynamics of human adjustment New York: Appleton Century Crafts, 1946.

91 TAYLOR, J.A., ROSENFELDT, D.C. and SCHULTZ, R.W. The relationship between word frequency and perceptibility with a forced choice technique. J. abn. and soc. Psychol., 1961, 62, 491 - 496.

92 TAYLOR, T.R. Personality and behavioural correlates of field dependence-independence. CSIR Special Report, 145, 1971.

Author Bryce Gillian
Name of thesis The Relationship Of Field Dependence-independence To Perceptual Defence And Selective Memory. 1972

PUBLISHER:
University of the Witwatersrand, Johannesburg
©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.