

- MAYFIELD, D. Alcoholism, alcohol, intoxication, and assaultive behavior. *Diseases of the Nervous System*, 1976, 37, 288-291.
- MILLER, A. G., GILLEN, B., SCHENKLER, C., & RADLOVE, S. The prediction and perception of obedience to authority. *Journal of Personality*, 1974, 42, 23-42.
- ORNE, M. T. On the social psychology of the psychological experiment: with particular reference to demand characteristics and their implications. *American Psychologist*, 1962, 17, 776-783.
- PAGE, M. M., & SCHEIDT, R. J. The elusive weapons effect: demand awareness, evaluation apprehension and slightly sophisticated subjects. *Journal of Personality and Social Psychology*, 1971, 20, 304-318.
- PEAY, M. Y. The effect of social power and preexisting attitudes in public and private responses to an induced attitude. *Human Relations*, 1976, 29, 1115-1129.
- ROSENBERG, M. J. The conditions and consequences of evaluation apprehension. In R. Rosenthal & R. L. Rosnow (Eds.), *Artifact in behavioral research*. New York: Academic Press, 1969. Pp. 280-349.
- RULE, B. G., & HEWITT, L. S. Effects of thwarting on cardiac responses and physical aggression. *Journal of Personality and Social Psychology*, 1971, 19, 181-187.
- SHEMBERG, K. M., LEVENTHAL, D. B., & ALLMAN, L. Aggression machine performance and rated aggression. *Journal of Experimental Research in Personality*, 1968, 3, 117-119.
- SHUNTICH, R. J., & TAYLOR, S. P. The effects of alcohol on human physical aggression. *Journal of Experimental Research in Personality*, 1972, 6, 34-38.
- SHUPE, L. M. Alcohol and crime. *Journal of Criminal Law and Criminology*, 1954, 44, 661-664.
- TAYLOR, S. P. Aggressive behavior and physiological arousal as a function of provocation and the tendency to inhibit aggression. *Journal of Personality*, 1967, 35, 297-310.
- TAYLOR, S. P., & GAMMON, C. B. Effects of type and dose of alcohol on human physical aggression. *Journal of Personality and Social Psychology*, 1975, 32, 169-175.
- TAYLOR, S. P., & GAMMON, C. B. Aggressive behavior of intoxicated subjects. *Journal of Studies on Alcohol*, 1976, 37, 917-930.
- TAYLOR, S. P., & LEONARD, K. E. Alcohol and human physical aggression. In R. G. Geen and E. J. Donnerstein (Eds.), *Aggression: theoretical and empirical reviews*. Vol. 2. New York: Academic Press, 1983. Pp. 77-101.
- TAYLOR, S. P., SCHMUTTE, G. T., & LEONARD, K. E. Physical aggression as a function of alcohol and frustration. *Bulletin of the Psychonomic Society*, 1977, 9, 217-218.
- TURNER, C. W., & SIMONS, L. S. Effects of subject sophistication and evaluation apprehension on aggressive responses to weapons. *Journal of Personality and Social Psychology*, 1974, 30, 341-348.
- WOLFE, B. M., & BARON, R. A. Laboratory aggression related to aggression in naturalistic social situations: effects of an aggressive model on the behavior of college students and prisoner observers. *Psychonomic Science*, 1971, 24, 193-194.
- WOLFGANG, M. E., & STROHM, R. B. The relationship between alcohol and criminal homicide. *Quarterly Journal of Studies on Alcohol*, 1956, 17, 411-425.

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EXPERIENCED LEVELS OF EMPTINESS AND EXISTENTIAL CONCERN WITH DIFFERENT LEVELS OF EMOTIONAL DEVELOPMENT AND PROFILE OF VALUES

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Summary.—This study explored the relationships of experienced levels of emptiness and existential concern with level of emotional development, as measured by the Definition/Response instrument of Gage, Morse, and Piechowski and profile of values as measured by the Allport, Vernon, and Lindzey Study of Values. 24 respondents completed measures of experienced levels of emptiness and existential concern, the Definition/Response instrument and the Study of Values. Hypotheses were tested using Pearson's r and multiple regression. Experienced level of emptiness was positively correlated with theoretical interest and level of emotional development and was inversely correlated with economic interest. Experienced existential concern was correlated directly with religious interest and with emotional development. These results question hypotheses about emptiness that (a) argue the experience of emptiness results solely from developmental deficits, (b) do not differentiate between "revealed emptiness" and "concealed emptiness," and (c) neglect to include profile of values in the explanation.

The experience of emptiness has received attention from a wide variety of scholars, theologians and artists. The definitions of the terms vary from author to author as do the explanations offered of the bases. In this study the experience of emptiness is comprised of three components: an inner sense of "hollowness," a generalized feeling of emotional "numbness," and a feeling that part of the self is missing. The experience of existential concern is comprised of three components: a concern about authenticity—about the true nature of the self, a concern about death, and a concern about the meaning and purpose of life (Hazell, 1984).

Kernberg (1975, 1976) describes the experience of emptiness and distinguishes it from feelings of depression and boredom. He argues that the experience results from disturbances in object relations. Kohut (1971, 1977) who shares Kernberg's psychoanalytic perspective, describes the experience of emptiness as a result of narcissistic pathology. Sartre (1938, 1956) treats experiences of emptiness in the context of existentialist philosophy. Emptiness, for Sartre is a feeling that is part and parcel of the experiences of consciousness and freedom. The experience of emptiness is discussed at some length by the existential psychologists Frankl (1958, 1965, 1967, 1969, 1975) and May (1953), who relate the experience to the dissolution of meaning. The theologian Tillich (1952) writes about these experiences and adds that

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the emptiness is caused by a lack of creative cultural participation. Suzuki (1956) and Streng (1967) describe and discuss the experience of emptiness as a religious experience—the "satori" experience of Zen Buddhism.

Artists such as Hemingway (1966), Kafka (1925, 1926, 1927), Beckett (1958, 1966, 1966a), and Eliot (1934) have delineated the experiences of emptiness and existential concern. Painters such as Edward Hopper in "Nighthawks" and George Tooker in "The Subway" have expressed these experiences in visual form.

While many thoughtful explanations have been offered for these emotions, they have only tangentially been related to values and developmental processes. To find relationships of this sort explored, we must go to the philosopher Kierkegaard (1843, 1846, 1849). Furthermore, there is a wide array of definitions of these experiences. It is the purpose of this study to take a measure of the experience of emptiness—a measure which coincides closely with the delineation of Kernberg (1975) and demonstrate that the incidence of these experiences is related to level of emotional development, profile of overexcitabilities, and a profile of values of the individual.

METHOD

Subjects

The 24 subjects were 7 men and 17 women, ranging in age from 17 to 34 yr. old (one was over 55 yr. old); 22 were students, 2 were involved in professional work, 11 were undergraduates, and 12 had undergraduate degrees and one had a baccalaureate. Nineteen were majoring in the social services, 16 were single, 5 married, 2 divorced, and one separated. Five subjects were in psychotherapy. All subjects were located, at the time of the study, in or near a large midwestern city.

Materials

Materials involved the questionnaire to measure experienced levels of emptiness and existential concern developed by Hazell (1984), the Study of Values (Allport, Vernon, & Lindzey, 1960), the definition/response instrument to measure level of emotional development (Gage, Morse, & Piechowski, 1981), a test to measure overexcitabilities (Lysy & Piechowski, 1983), and a brief demographic questionnaire.

The questionnaire to measure levels of emptiness and existential concern (Hazell, 1984) is a 17-item, Likert-scaled questionnaire developed with an adequate sample and having acceptable reliabilities.

The Study of Values (1960) measures as a paper and pencil test relative dominance of six basic interests in personality: theoretical, economic, political, social, aesthetic and religious.

The definition/response instrument is a six-item paper and pencil free-

response questionnaire that measures level of emotional development according to Dabrowski's theory of positive disintegration (1977).

The overexcitabilities questionnaire is a paper-and-pencil, 21-item, free response instrument that measures the five types of overexcitabilities posited by Dabrowski (1977): psychomotor, sensual, emotional, imaginal, and intellectual. An overexcitability is a predisposition of the individual to respond to certain categories of stimuli more than others and in an above average fashion.

Procedure

Subjects were sought in psychology classes, a philosophy class and through therapists in private practice. Subjects volunteered to complete and respond to the questionnaires and received no payment. The time taken to complete the questionnaires varied from 1½ to 3 hr. Instructions on how to complete the questionnaires were written and respondents completed questionnaires in privacy. Anonymity of the subjects was preserved throughout by using code numbers.

The definition/response and the overexcitability instruments were rated by two independent trained raters and interrater reliability on the scores derived from these instruments averaged .79 ($p = .001$) using the Pearson product-moment coefficient. Raters were trained by Dr. M. M. Piechowski, a colleague of the late Dr. Dabrowski, and they scored the instruments without communicating with one another.

Hypotheses

It is hypothesized that measures of existential concern will increase with level of emotional development ranging from 1, the lowest level through 3, the middle level. Measures of existential concern are not predicted to increase significantly above level 3. This hypothesis grows out of the theory of emotional development (Dabrowski & Piechowski, 1977) which states that concern about death and other existential concerns only emerge in an individual who is at level three of emotional development or above.

The measure of emptiness is hypothesized to increase with level of emotional development through levels 1 to 3 and decline through levels 4 and 5. Since this study only includes subjects ranging from levels 1 to 3, a positive correlation between emptiness and level is hypothesized.

The reasoning behind this pattern for the experience of emptiness is as follows. At level one, according to the theory of emotional development, the individual is in a state of more or less total conformity to the environment, while what in other contexts is called "other directedness" is at a high level. Self-reflection and awareness are at relatively low levels. For these reasons, the experience of emptiness is not available, for the experience of emptiness

is hypothesized to require a certain degree of self-reflectiveness and a suspension of total adaptation to what may be broadly termed "material reality." At level two the obdurate organization of level one breaks up. "Chaos is come again," as the Bard would have it. This phase is characterized by the experience of "many selves" and a sense of personal fragmentation. We hypothesize that this state provides fertile ground for the growth of the experience of emptiness.

At level three the sense of fragmentation may continue, and so indeed does the experience of emptiness, or so it is here hypothesized. The fragmentation, however, is of a different order. Existential concerns enter the picture. Concerns for authenticity lead the person to seek his true self. In this internal quest, he may often draw a blank and feel, as a result, an emptiness—an emptiness, however, of a more existential sort than that experienced at level II.

At level four, the person has gained increased contact with himself. The experience of emptiness becomes less severe as the person embarks on different work, the work of achieving closeness to the "personality ideal." The individual at level four of emotional development experiences an inner fullness and a growing sense of internal psychological organization that does not predispose the individual to prolonged or intense experiences of emptiness.

Viewing this in another way and following the lead of Maddi (1967), we may hypothesize that the individual at level two is "premorbid" as far as the unadulterated experience of emptiness is concerned and that the individual at level three is "premorbid" as far as the experience of existential concern is concerned.

A series of hypotheses relating levels of emptiness and existential concern to profile of values were posited. These were derived from the notion that the experiences of emptiness and existential concern derive from an introverted attitude and from low "materialism." Indeed, the experiences of emptiness and existential concern can only be experienced if the individual turns his attention to his internal state, suspends his concern with sensuous reality and external affairs, and directs his awareness to the non-sensuous, internal world. It is hypothesized that this inward-turning of awareness, away from external concrete events, is a precondition for the experiences of emptiness and existential concern and is more prevalent in persons who tend to display theoretical, aesthetic, and religious values and is less prevalent in persons who display economic, social and political values.

A direct correlation is hypothesized between levels of emptiness, existential concern and theoretical, aesthetic, and religious scores on the Study of Values and an inverse correlation is hypothesized between levels of emptiness and existential concern and economic, social, and political values on the Study of Values.

It was also hypothesized that measures of emptiness and existential concern would correlate directly with measures of imaginal, intellectual and emotional overexcitability and would correlate inversely with sensual and psychomotor overexcitability.

The instrument to measure profile of overexcitabilities (Lysy & Piechow-ski, 1983) measures psychological responsiveness along the five dimensions of sensual, psychomotor, imaginal, intellectual, and emotional. The definitions of these dimensions are as follows:

Sensual: This manifests through a heightened sensitivity to sensual experience—skin stimulation, sexual excitability, the desire for stroking, physical comfort, etc.

Psychomotor: This is manifest in a tendency for vigorous movement, violent games and sports, rapid talk and a pressure to be moving. Excitement is expressed in movement that is highly charged with energy.

Imaginational: This is shown in a sensitivity to the imagined possibilities of things. There is a rich association of images and metaphors flow freely.

Intellectual: In this the individual displays a voracious curiosity and desire to learn and understand. There is a persistence in asking probing questions and a reverence for logic.

Emotional: This is the most important overexcitability in that if this is absent or weak, it is unlikely that development will proceed. Emotional overexcitability is manifested in the person's ability to form strong emotional attachments to others, living things, and places.

The hypotheses linking measures of emptiness and existential concern to profile of overexcitabilities are, in a number of ways, parallel to those immediately preceding. For here, once again, the assumption that underlies these hypotheses is that to undergo these experiences in question, an orientation toward psychological and emotional "realities" as opposed to purely material "realities" is a prerequisite. This orientation to reality will, it is hypothesized, be measured by the overexcitability instrument. Individuals with strong predispositions to experience the world and express themselves through psychomotor and sensual means will report lower levels of emptiness and existential concern since their awareness is not usually directed toward such experiences in their stream of consciousness.

Statistical Procedures

The hypotheses were tested by using the Pearson product-moment correlation between scores for pairs of variables. As a confirmatory technique, multiple regression analysis was used holding, in turn, emptiness and existential concern as dependent variables and the measures of level of emotional development, overexcitabilities and values as independent variables to see which of the independent variables contributed, in this sample, most to the variance of experienced levels of emptiness and existential concern.

RESULTS

The means, standard deviations, and ranges of all variables are given in Table 1. As can be seen, emotional development of the subjects ranges from

TABLE 1
MEANS, STANDARD DEVIATIONS, AND RANGES FOR VARIABLES IN STUDY

Variable	M	SD	Range
Emptiness	3.8	2.0	9.7
Existential Concern	7.5	2.2	9.7
Level of Emotional Development	2.2	.4	1.3*
Overexcitabilities			
Sensual	.6	.3	1.2
Psychomotor	.5	.3	1.2
Intellectual	.5	.4	1.4
Imaginational	.5	.4	1.5
Emotional	1.3	.5	2.1
Study of Values			
Religious	32.0	9.9	34.0
Theoretical	40.0	8.0	33.0
Aesthetic	47.5	7.2	24.0
Social	43.5	7.3	25.0
Political	39.7	6.6	28.0
Economic	37.7	8.0	30.0

*Scoring methods on the definition response instrument are such that this range at levels 1.4 to 2.7 traverses the lowest three levels of emotional development. Level 1 = 1.0 — 1.5, Level 2 = 1.6 — 2.5, Level 3 = 2.6 — 3.5.

1.4 to 2.7 (i.e., levels 1 to 3). This is owing to the fact that level four respondents are very uncommon and level five respondents extremely rare. Later studies with different designs will explore these higher levels of development.

TABLE 2

PEARSON r 'S FOR EMPTINESS AND EXISTENTIAL CONCERN BY LEVEL OF EMOTIONAL DEVELOPMENT, OVEREXCITABILITIES, AND SUBSCALES OF STUDY OF VALUES

	Level Develop.	Overexcitabilities				
		Emo-tional	Intel-lectual	Sen-sual	Imagi-native	Psycho-motor
Emptiness	.46†	-.007	.33	-.14	.14	.02
Existential Concern	.36*	.01	.03	-.06	-.05	.26
Study of Values						
	Theoret-ical	Eco-nomic	Aes-thetic	So-cial	Politi-cal	Reli-gious
Emptiness	.52†	-.34*	.15	-.08	.17	-.29
Existential Concern	-.19	-.29	-.11	.14	-.31	.57

† $p \leq .01$. * $p \leq .05$.

TABLE 3
SUMMARY OF STEPWISE MULTIPLE REGRESSION: DEPENDENT VARIABLE EXISTENTIAL CONCERN, INDEPENDENT VARIABLES, STUDY OF VALUES SCORES, LEVEL AND OVEREXCITABILITIES (OE)

Variable Entered	F to Enter	p to Enter	Multiple R	R ²	Simple R	Over-all F
Religious	10.82	.01	.57	.329	.574	10.82*
Level	2.53	.12	.63	.401	.362	7.05*
Emotional OE	1.92	.18	.67	.454	.006	5.55*
Social	1.85	.19	.70	.502	.143	4.80*
Psychomotor OE	1.63	.21	.73	.544	.261	4.30*
Imaginational OE	1.34	.26	.76	.577	-.047	3.87*
Economic	.15	.70	.76	.581	-.291	3.17*
Aesthetic	.07	.78	.76	.583	-.114	2.63*
Political	.04	.84	.76	.585	-.319	2.19†
Theoretical	1.42	.25	.79	.626	-.193	2.17†
Sensual OE	.16	.68	.79	.631	-.063	1.86
Intellectual OE	.02	.88	.79	.631	.030	1.57

* $p \leq .05$. † $p = .09$.

The results of the bivariate correlational study are shown in Table 2. As can be seen, only the following hypotheses received support. The experienced level of emptiness was directly correlated with theoretical interest ($r = .52$, $p = .004$). A significant inverse correlation was noted between scores of emptiness and economic interest ($r = -.34$, $p = .05$). In addition, emptiness was significantly correlated with level of emotional development ($r = .46$,

TABLE 4

SUMMARY OF STEPWISE MULTIPLE REGRESSION: DEPENDENT VARIABLE EMPTINESS, INDEPENDENT VARIABLES, STUDY OF VALUES SCORES, LEVEL AND OVEREXCITABILITIES (OE)

Variable Entered	F to Enter	p to Enter	Multiple R	R ²	Simple R	Over-all F
Theoretical	8.11	.01	.51	.269	.518	8.11*
Level	6.11	.01	.66	.440	.456	8.25*
Sensual OE	4.45	.04	.73	.542	-.148	7.89*
Religious	3.48	.07	.78	.613	-.299	7.52*
Imaginational OE	2.24	.15	.80	.656	.140	6.86*
Aesthetic	1.12	.30	.82	.677	.156	5.94*
Emotional OE	.90	.35	.83	.694	-.007	5.19*
Economic	.97	.34	.84	.713	-.341	4.66*
Psychomotor OE	.25	.61	.84	.718	.023	3.96*
Intellectual OE	.10	.74	.84	.720	.327	3.35*
Political	.04	.82	.84	.721	.168	2.83*
Social	.35	.56	.85	.730	-.088	2.48†

* $p \leq .05$. † $p = .07$.

$p = .01$). Given that the range of emotional development in the sample is from levels 1 to 3 a direct correlation between emptiness and emotional development is as expected. Existential concern was significantly related to religious interest ($r = .57, p = .001$) and to emotional development ($r = .36, p = .04$).

The results of the stepwise multiple regression holding existential concern as the dependent variable are shown in Table 3. It can be seen that 33% of the variance in existential concern is "accounted for" by the level of religious interest ($p = .003$). The results of the stepwise multiple regression holding emptiness as the dependent variable are shown in Table 4. The variance in emptiness is accounted for significantly by theoretical interest, emotional development, and sensual overexcitability. Together these variables accounted for 54% of the variance in experienced emptiness ($p < .05$).

DISCUSSION

Although this study has several weaknesses, i.e., it is based on a small sample on which a large number of hypotheses were tested, certain conclusions can be drawn to suggest further research. The correlation of existential concern with religious interest lends some construct validity to the measure of experienced level of existential concern. The positive correlation of existential concern with emotional development is as predicted by the theory of emotional development (Dabrowski & Piechowski, 1978).

The high positive correlation between emptiness and emotional development at levels 1, 2, and 3 seems unexpected from theoreticians' arguments that the experience of emptiness is pathological. For example, Kernberg (1975) asserts that experiences of emptiness are to be found among patients with the following disorders: chronic neurotic depression, schizoid personality, narcissistic personality structures, borderline and paranoid personality disorders. Masterson (1972) claims that the experience of "void" is one of the essential symptoms of the borderline patient resulting from a breakdown of object relations during the "rapprochement" phase of the separation/individuation process as outlined by Mahler (1975). Kohut (1971, 1977) explains the experience of emptiness as resulting from narcissistic disorders in which self-image is fragmented and ambitions inadequately recognized.

Frankl (1958) suggested that the experience of emptiness is a symptom of the "nöogenic neurosis" which results from failures in responsibility, faith, and appreciating the whole being.

Some rethinking needs to be done with regard to this experience. First, theoreticians should distinguish between "concealed emptiness" (i.e., emptiness of which one is unaware) and "revealed emptiness" (emptiness of which one is aware). The measure of emptiness in this study is a measure of "revealed

emptiness." We have some ground for positing that the process of emotional development involves emerging awareness of emptiness in the subject and that, far from being a pathological process, it is a sign of emotional development *in statu nascendi*.

This possibility is most fully recognized by Sartre (1957). For Sartre, the experience of emptiness is an essential component of consciousness, freedom, and choice, all of which, in his philosophical system, are closely related. If human beings become conscious or self-aware, they of necessity create a "gap" between "observer" and "observed." This gap is experienced as a void or nothingness in the self. This movement of which Sartre writes is parallel to the developmental movement from level one of emotional development (primary integration) to a higher level. The revelation of emptiness may constitute not a symptom of pathology but the sign of an opportunity for development.

Miller (1981), Laing (1969), Bruch (1973, 1979), and Winnicott (1965) come close to stating this explicitly, especially when they deal with the concept of "false self." The experience of emptiness is experienced as the individual shifts from conformity to conscientiousness. During this shift the gap between real self and false self is sharply experienced as emptiness. The emptiness represents the "potential space," to borrow Winnicott's term (1971), in which creativity may occur.

Emptiness is also a direct function of theoretical interest and an inverse function of economic interest and sensual overexcitability. We might, from this, formulate a further hypothesis, consistent with the finding of a direct correlation with emotional development, that emptiness is related directly to a tendency of the person to value abstractness and theory and to undervalue utility and sensual data.

Given the limitations of the present study, the experiences of emptiness and existential concern appear to be mediated by such features in the individual as emotional development and certain aspects of overexcitabilities and values profile.

REFERENCES

- ALLPORT, G. W., VERNON, P. E., & LINDZEY, G. *Study of Values*. Boston, MA: Houghton Mifflin, 1960.
- BECKETT, S. *Endgame*. New York: Grove, 1958.
- BECKETT, S. *En Attendant Godot* [Waiting for Godot]. Paris: Editions de Minuit, 1966. (a)
- BECKETT, S. *Molloy, Malone dies, The unnamable: three novels*. London: Calder & Boyars, 1966. (b)
- BRUCH, H. *Eating disorders*. New York: Harvard Univer. Press, 1979.
- BRUCH, H. *The golden cage*. Cambridge, MA: Harvard Univer. Press, 1979.
- DABROWSKI, K., & PIECHOWSKI, M. M. *Theory of emotional development*. Ocean-side, NY: Dabor, 1977.

- ELIOT, T. S. *The waste land: a facsimile and transcript of the original drafts*. New York: Harcourt, Brace & Jovanovitch, 1934.
- FRANKL, V. E. *Man's search for meaning*. New York: Simon & Schuster, 1958.
- FRANKL, V. E. *The doctor and the soul*. New York: Simon & Schuster, 1965.
- FRANKL, V. E. *Psychotherapy and existentialism*. New York: Simon & Schuster, 1967.
- FRANKL, V. E. *The will to meaning*. New York: Simon & Schuster, 1969.
- FRANKL, V. E. *The unconscious God*. New York: Simon & Schuster, 1975.
- GAGE, D., MORSE, P., PIECHOWSKI, M. M. Measuring levels of emotional development. *Genetic Psychological Monographs*, 1978, 103, 129-152.
- HAZELL, C. G. Scale for measuring experienced levels of emptiness and existential concern. *Journal of Psychology*, 1984, 117, 177-182.
- HEMINGWAY, E. A clean, well-lighted place. In *The short stories of Ernest Hemingway*. New York: Scribner, 1966. Pp. 379-384.
- KAFKA, F. *Der Prozess* [The Trial]. Berlin: Verlag Der Schmeide, 1925.
- KAFKA, F. *Das Schloss* [The Castle]. Munich: Kurt Wolff Verlag, 1926.
- KAFKA, F. *Amerika* [America]. Munich: Kurt Wolff Verlag, 1927.
- KERNBERG, O. F. *Borderline conditions and pathological narcissism*. New York: Jason Aronson, 1975.
- KERNBERG, O. F. *Object relations theory and clinical psychoanalysis*. New York: Jason Aronson, 1976.
- KIERKEGAARD, S. *Fear and trembling*. Princeton, NJ: Princeton Univer. Press, 1954 (1843).
- KIERKEGAARD, S. *Two ages*. Princeton, NJ: Princeton Univer. Press, 1978 (1846).
- KIERKEGAARD, S. *The sickness unto death*. Princeton, NJ: Princeton Univer. Press, 1968 (1849).
- KOHUT, H. *The analysis of the self*. New York: International Universities Press, 1971.
- KOHUT, H. *The restoration of the self*. New York: International Universities Press, 1977.
- LAING, R. D. *The divided self*. New York: Pantheon, 1969.
- LYSY, K., & PIECHOWSKI, M. M. Personal growth: an empirical study using Jungian and Dabrowskian measures. *Genetic Psychology Monographs*, 1983, 108, 267-320.
- MADDI, S. The existential neurosis. *Journal of Abnormal Psychology*, 1967, 72, 311-325.
- MAHLER, M. S. *The psychological birth of the human infant*. New York: Basic Books, 1975.
- MASTERSON, J. F. *The treatment of the borderline adolescent*. New York: Wiley, 1972.
- MAY, R. *Man's search for himself*. New York: Norton, 1953.
- MILLER, A. *Prisoners of childhood*. New York: Basic Books, 1981.
- SARTRE, J. P. *La Nausée* [Nausea]. Paris: Gallimard, 1938.
- SARTRE, J. P. *Being and nothingness*. New York: Philosophical Library, 1956.
- STRENG, F. J. *Emptiness: a study in religious meaning*. Nashville, TN: Abingdon Press, 1967.
- SUZUKI, D. T. *Zen Buddhism*. New York: Anchor, 1956.
- TILLICH, P. *The courage to be*. New Haven, CT: Yale Univer. Press, 1952.
- WINNICOTT, D. W. *The maturational process and the facilitating environment*. New York: International Universities Press, 1965.
- WINNICOTT, D. W. *Playing and reality*. New York: Basic Books, 1971.

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COST-EFFECTIVENESS OF COLLEGE ACHIEVEMENT BY ANDROGYNOUS MEN AND WOMEN

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Summary.—Androgynous college women ($n = 20$) were superior in academic achievement to nonandrogynous women ($n = 20$), and the better achievement was not associated with excessive stress. There was no achievement difference between androgynous ($n = 15$) and nonandrogynous ($n = 16$) men.

The contribution of androgyny to personal effectiveness, as we have studied the issue in college students, has been demonstrated consistently for women but not for men. Suggestive evidence for a gender difference was found in studies of the types of students who sought mental health services on campus (Heilbrun, 1976) and the types of problems that such students brought to mental-health practitioners (Heilbrun, 1981b). The singular advantage of androgyny to women was further affirmed in a study of self-esteem and attributed competence (Heilbrun, 1981a) and in a combination of studies (Heilbrun, 1981a, 1984) that considered cognitive attributes contributing to effective social behavior.

To this point we have not tested the value of being both masculine and feminine to college women in the domain of academic achievement. Such achievement not only represents a critical variable of competence for all college students but also the cornerstone for future career-success of women and equal vocational status with men. The present study concerned whether the advantages of androgyny for women alone extended into academic achievement. In addition, the question of psychological cost of achievement to the individual was considered in terms of how much stress accompanies academic success.

For a sample of 71 college undergraduates (15 androgynous and 16 nonandrogynous men and 20 androgynous and 20 nonandrogynous women) level of androgyny was inferred from an index (Heilbrun, 1983) that varies with the magnitude and balance of independent Masculinity scale and Femininity scale scores (Heilbrun, 1976). The subjects were volunteers from a total pool of about 500. Stress experienced over the previous year was estimated from two self-report inventories. One measured the negative impact of life changes (Sarason, Johnson, & Siegel, 1978), and the other considered prevalence of symptoms of stress (Heilbrun & Pepe, in press). The modestly correlated stress raw scores ($r = .29$) were transformed into standard scores and combined into a single, equally weighted index. College achievement was determined by subtracting predicted GPA (based upon the Emory College prophecy formula involving high school grades and achievement scores) from each student's college cumulative GPA. Plus scores indicate that the student is achieving beyond expectation, whereas negative scores represent underachievement.

The median androgyny score of 88 for the entire sample was used to divide subjects into groups high and low in androgyny. Factorial analysis of variance (androgyny level \times gender) of achievement scores yielded one effect. A significant

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