Career Maturity: A Particular Type of Personal Maturity?

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Prepared for presentation at the annual meeting of the American Counseling Association

March 28 - April, 1998, Indianapolis, IN

Abstract

Models of career maturity, first formulated at midcentury, have been criticized for not incorporating innovations in personality and developmental psychology. This isolation from general models of and debates about personal maturity has kept career maturity from receiving widespread acceptance in mainstream psychology. The present study investigated whether Super's model of career maturity could be linked to Gough's 28-cell taxonomy of personality and development. To explore relations between the two models, 200 college students responded to Gough's <u>California Psychological Inventory</u> and Super's <u>Career Development Inventory</u>. Results indicated that career maturity can be characterized by a particular orientation to social norms and interpersonal relationships. Also, Gough's four personality styles associated with four different approaches to developing a career.

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In defining the construct of career maturity, researchers at midcentury relied heavily on the then current models and methods in personality and developmental psychology. For forty years, career maturity researchers have continued to ground their work in those models, paying minimal attention to innovations in personality and developmental psychology. Of course, the same can be said about research on vocational interests which also could be linked to mainstream psychology, yet this link is still missing twenty years after Holland (1976) criticized vocational psychology for being unable "to draw on the strength of personality and learning theory and vice versa" (p. 523). Osipow (1993) made a similar observation about the need to "mainstream" vocational psychology. In the last few years, researchers on vocational interests have begun to link the structure of vocational interests to the structure of personality, often comparing Holland's (1997) RIASEC hexagonal model of interests to personality styles, the "Big Five" model of personality (Costa, & McCrae, 1992) and Wiggin's (1982) interpersonal circumplex (Borgen & Harmon, 1996; Schneider, Ryan, Tracey, & Rounds, 1996; and Tokar & Swanson, 1995). This embryonic work linking interest theories to personality theories has clarified the structure and meaning of interests.

The success achieved by linking research on interests to personality prompted us to investigate whether models of career maturity could also be linked to models in mainstream psychology, specifically personality and developmental psychology. We could find only one prior study that linked career maturity to a more general model of personality, a superb study by Heath (1976) that unfortunately never received the attention it deserved. Heath asserted that the

construct of career maturity has yet to receive widespread acceptance in mainstream psychology, probably because the construct continues to be "developed in isolation from more general models of and debates about maturity" (p. 1). To advance career maturity theory, the construct must be seen as a specific example of more general developmental and personality principles. One step in this direction involves investigating relations of career maturity to personality and development.

In selecting a model of personal maturity to compare to career maturity, we had to choose between two fundamentally different models. On the one hand, some personal maturity models focus on an individual's ability to function effectively in society. On the other hand, some models focus on individuation, that is, intrapsychic differentiation and autonomy. We selected an interpersonal, rather than an intrapsychic, model because it seemed more appropriate to link a social approach to personal maturity to career maturity, which we generally view as behavioral responses to social expectations known as vocational developmental tasks.

We decided to examine possible links between the preeminent model of career maturity developed by Donald Super (Super, Savickas, & Super, 1996) and Harrison Gough's (1990) cuboid model of personality and maturity. Gough's structural model of personal maturity emerged from research on his *California Psychological Inventory* (CPI) which measures characteristics of everyday, interpersonal behavior such as responsibility, flexibility, and selfcontrol. The CPI measures adaptive behavior and coping mechanisms in contrast to the MMPI which measures psychopathology and defense mechanisms. Gough groups the 20 CPI scales into four clusters: seven scales measure interpersonal style and orientation, seven scales measure normative orientation and values, three scales measure cognitive and intellectual functioning, and three scales measure role and personal style. Higher scale scores and overall profile elevation on the CPI indicate better intrapersonal integration and more effective interpersonal functioning.

More than 50 factor-analytic studies of the 18 original scales (now 20) consistently have identified two major latent themes that structure the manifest scales: interpersonal orientation and adherence to social norms. In 1970, Levin and Karni published the first smallest space analysis of the CPI which indicated a third orthogonal latent dimension indexed by three CPI scales: well-being, tolerance, and intellectual efficiency. Gough (1990) argued that this third dimension reflected overall profile elevation and indicated level of realization of personality potential. Guided by the accumulated research on the CPI, Gough constructed three structural scales to represent the latent dimensions manifested in the CPI's 20 scales.

Gough (1990) called the three structural scales Vectors 1, 2, and 3. Vector 1 (V.1) denotes an interpersonal continuum from substantial social engagement (low scores) to social detachment which Gough labeled externalization (focused outward) versus internalization (focused inward) in behavior. Vector 2 (V.2) denotes an orientation to social norms on a continuum from norm doubting and questioning to norm acceptance, upholding, and favoring. Thus, V.2 ranges from undercontrol to overcontrol in the regulation of behavior. Vector 3 (V.3) denotes level of realization, that is, the degree of effective functioning an individual has achieved. V.3 seems particularly relevant to career maturity in that it signifies the type of interpersonal behavior and intrapersonal mentation which facilitates achieving social goals in everyday life and adjusting comfortably to expectations set by society, including vocational development tasks.

Gough's model of maturity

Gough (1990) used the three vectors as axes in a geometric, cuboid model of personality

and maturity. In Gough's structural model of maturity, V.1 and V.2 conjointly define (by using cutting scores) four quadrants, with each quadrant containing about 25% of the general population (Gough, 1990, 43). The quadrants represent four ways of living, life styles, or types of people. *Alphas* are low on V.1 and high on V.2 because their behavior is externally oriented and norm favoring. Alphas focus on constructive and appropriate social behavior. *Betas* are norm favoring but internal (high on both V.1 and V.2) so they tend to display quietly reflective and conventional behaviors. *Gammas* are externally oriented and norm questioning (low on both V.1 and V.2) so they value success and social rewards yet remain skeptical about the legitimacy of authority. They can be innovative because they quickly notice flaws and creatively propose new ways of doing things. *Deltas* are internal and norm questioning (high V.1, low V.2). They can called artistic or intellectual because they tend to display reflective, imaginative, and creative behavior. Deltas often disagree with social conventions and traditional value systems, typically preferring to center their lives around their own private, internal world.

Cutting scores divide V.3 into seven levels of effectiveness. So individuals assigned to a quadrant and, within that quadrant, placed at a level of realization that indicates how well they are executing that way of life. Dividing each of four quadrants into seven levels produces a 28-cell taxonomy of personality functioning.

Gough's quadrants resemble Holland's (1997) RIASEC types in that both are personality typologies and both indicate adjustive orientations. The typologies differ in that the RIASEC hexagonal model has nothing like V.3, level of realization, which would indicate how effectively a RIASEC adjustive orientation is working for the individual. In other words, Holland's (1997) hexagonal model might indicate that two individuals display the same lifestyle, say ISA, yet does not indicate directly how adaptive the two individuals actually are in implementing their lifestyle in a social context. Of course by bringing in the secondary constructs of congruence, consistency, identity, and differentiation, Holland's (1997) theory does address adjustment, particularly success, satisfaction, and stability. At first blush, V.3 seems to relate to Tracey and Rounds's (in press) conceptualization of prestige as the third dimension in their spherical model of RIASEC types.

Super's model of career maturity

Super and his colleagues, over a course of four decades, developed a theoretical model of career maturity in adolescence (Super, 1955; Super, Savickas, & Super, 1996). The model defines two basic dimensions of maturity: attitudes toward career development and competencies for occupational decision making.

Attitudes. The attitudinal dimension consists of two variables: attitudes toward career planning and attitudes toward career exploration. Planning attitudes mediate involvement in thinking about and planning the vocational future. Mature attitudes incline individuals to look ahead, take a planful approach, and actively involve themselves in career planning activities. Immature attitudes usually disincline individuals from looking ahead to their future in the world-of-work; therefore, they do not feel a need to acquaint themselves with or relate themselves to occupations. Attitudes toward career exploration address willingness to find and use good resources for career planning. Immature attitudes toward exploration usually mean that individuals are unconcerned with using good sources of data about the fields and levels of work.

<u>Competencies.</u> The two variables in the cognitive dimension deal with decision-making competence and fund of occupational information. Low competence indicates that individuals

need to learn about types of occupations, the mores of work, and career development tasks. They probably do not know much about the range of occupations available to them. In contrast, an adequate fund of information means good knowledge about types of occupations and ways to obtain and succeed in jobs. High competence means that individuals are sufficiently knowledgeable to apply occupational information to self and to begin crystallizing field and level preferences. Decision-making competence means the ability to apply decision-making principles and methods to solve problems involving educational and occupational choices. Low competence suggests that individuals do not know what to consider in making choices. This means those individuals are not ready to use the occupational information they have acquired for career planning. High competence means good knowledge of the principles and practices of decision making.

According to the complete model, when decision-making competence is supported by an adequate fund of occupational information based on planful exploration, then individuals are ready to make tentative career choices that are viable and suitable.

<u>Hypotheses</u>

The present study investigated the relation between Super's model of career maturity in late adolescence (Super, Savickas, & Super, 1996) and Gough's (1990) model of personal maturity. We hypothesized that career maturity, because it is a response to social expectations and involves development tasks, is better developed among norm-upholding individuals than for norm-questioning individuals. Also, we anticipated that externality in interpersonal relations associates with higher career maturity because externality fosters greater responsiveness to social expectations. In combining V.1 and V.2, we expected the highest career maturity in the group

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high in both externality and norm-accepting (i.e., Alphas) and the lowest career maturity in the group high in both internality and norm-questioning (i.e., Deltas). With regard to the dimensions of career maturity, we thought that Alphas would display the most well developed attitudes toward exploration, that is willingness to use authoritative sources or information. We expected that Deltas would, although low in career maturity, nevertheless display the most highly developed decision-making competence because their norm-questioning, internality makes them more likely to have experience in making personal choices. Furthermore, we anticipated that career maturity correlates higher to level of realization (V.3) than it does to either normative orientation (V.1) or interpersonal orientation (V.2) because level of realization qualitatively differs from both orientations in that it indicates degree of adjustment more than style of trying to adjust. We also hypothesized that career maturity strongly correlates to level of realization, especially planning attitudes.

Methods

Participants

The participants for the study consisted of 200 college students at a large public university located in the southwestern USA. In all, 98 males and 100 females, and two unspecified participants who were excluded from the analyses, participated in the study. The participants were enrolled in undergraduate courses offered by the Psychology Department. Students who volunteered to participate in the study earned extra credit in their particular psychology course.

Human subjects guidelines were followed in recruiting students and conducting the study. Measures

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The construct of personal maturity was operationally defined with scales from the *California Psychological Inventory* and the construct of career maturity was operationally defined with scales from the *Career Development Inventory-College and University Form* (Super, Thompson, Lindeman, Jordaan, & Myers, 1981). Each participant responded to the complete 462-item CPI and the complete 80-item CDI.

California Psychological Inventory. The CPI yields three structural scales scores, called vectors, representing interpersonal orientation (internality versus externality), normative orientation (upholding versus questioning), and level of realization of potential for effective functioning (competence). We used the following cutting scores to place each participant into one quadrant: V.1 was divided at 19.5 and V.2 was divided at 23. The realization or social competence scale (V.3) consists of 58 CPI items. It was constructed to be orthogonal to the first two vectors yet have a maximum correlation with profile elevation for the CPI's 20 scale scores. Cutting scores on V.3 divide the scale into seven levels of effectiveness. Low scores or levels indicate people who feel unfulfilled and who others judge as low in social competence. Individuals at higher levels of V.3 display the ego-strength, inner resources, and personal integration needed to achieve a fulfilling life. In a norming sample of 1,000 women, V.3 correlated highly with CPI Tolerance (.87), Achievement via Independence (.86), Intellectual Efficiency (.83), Psychological Mindedness (.79), Well-Being (.77), Capacity for Status (.72), Achievement via Conformity (.69), Responsibility (.67), Independence (.66), and Empathy (.65). Helson and Wink (1987) reported that V.3 correlated to extracurricular activities and academic interests in college, ego control and resourcefulness, coping, and expression of feelings in socialized ways.

Career Development Inventory-College and University Form. The CDI (Super, Thompson, Lindeman, Jordaan, & Myers, 1981) consists of four scales that measure the two attitudinal and the two cognitive variables in Super's model of career maturity during adolescence and young adulthood. Two 20-item attitudinal scales measure attitudes toward career planning and exploration. The Career Planning Scale uses a 5-point Likert response scale, so scores range from 20 to 100. The Career Exploration Scale uses a 4-point Likert scale, so scores ranges from 40 to 80).

Two CDI cognitive scales measure knowledge about decision making and about the world of work. Each scale uses a multiple choice response format with four options. Thus, scores range from 0-20 on each scale. The CDI manual consists of two volumes and a supplement. The 27-page *User's Manual* (Thompson & Lindeman, 1981) presents the rationale, description of item content, administration instructions, scoring procedures, interpretation methods, and recommended uses. The 48-page *Technical Manual* (Thompson & Lindeman, 1984) presents the theory and research supporting the development of the CDI and detailed data on its psychometric characteristics. The 20 page *College and University Supplement* (Thompson & Lindeman, 1982) discusses psychometric characteristics of and normative data for that form. The manual appropriately cautions users about low test-retest reliability for the CDI scales (Career Planning, .79; Career Exploration, .73; Decision Making, .70; World of Work, .67) and encourages use of a CDI total score that increases reliability to .84 for the CDI total score.

The CDI possesses superior content validity because it explicitly operationalizes a model of career maturity that has been refined by four decades of programmatic research. Although the instrument's construct validity needs more empirical support, its factor structure and relations to age, grade, and school curricula provide an adequate base. In regard to criterion-related validity, Thompson and Lindeman (1984) cite three concurrent validity studies that showed the CDI related as expected to ability, work salience, and other career development measures. Savickas and Hartung (1996), in reviewing CDI studies published from 1979 through 1995, concluded that the reliability and validity evidence for the CDI is substantial.

Results

Table 1 reports the number of males and females in each quadrant and the number of participants in each quadrant at each of the seven levels of realization. Although Gough expects about 25% of the general population to fall in each quadrant, we found for our college student participants a disproportionately high percentages in the Alpha (31.3%) and Gamma (39.9%) quadrants with correspondingly low percentages in the Delta (17.7%) and Beta (11.1%) quadrants. Apparently this group, or maybe college students in general, are more externally oriented than the general population--- a full 71% fell into the two externality quadrants. With regard to level of realization, as one would expect, most participants (132/198) scored in the middle three levels, with 30 more falling into level 2. Looking at V.3 levels 1, 2, and 3, we find 90 participants and at levels 5, 6, and 7 we find only 54 participants, with another 54 at level 4. Thus we found that the lower three levels of realization more populated than the higher three levels.

Insert Table 1 About Here

Table 2 reports the means and standard deviations for the total group and the four CPI

subgroups on the four CDI scales and the three CPI vectors. The CPI scores indicated that as a total group the participants were Gammas at level 4 (they were near the point where the two axis intersect as one might expect for a heterogenous group of college students). Each of the four CPI types were also at level 4, with the exception of Alphas who were at level 3. These results did not support the hypothesis that Alphas would have the highest degree of career maturity. The Betas (mean = 158.36) had this distinction but by less than a point more that the Alphas (mean = 157.72). As hypothesized, the Deltas had the lowest degree of career maturity (mean = 136.2). The difference between means scores for the Betas and Deltas produced a significant (p<.001) result on the ANOVA.

Insert Table 2 About Here

With regard to individual scales, norm-upholding individuals had higher means scores on planning attitudes (Alphas = 77.57; SD = 12.03 and Betas = 76.15, SD = 10.46) than did norm-questioning groups (Gammas = 71.7, SD = 13.31 and Deltas = 62.91, SD = 17.85). We expected career maturity would be higher for externals than internals because externals are more responsive to social expectations. This did not prove to be true in that Betas (158.36), who are internal, scored as well as the two external groups-- Alphas (157.72) and Gammas (150.37). We hypothesized that Alphas would have the highest CDI exploration scores because this scale indicates a willingness to use authoritative, information resources. This proved true, but again Betas were not far behind. We had expected that Deltas, although low in career maturity, would nevertheless have the highest CDI decision-making scores because their norm-questioning,

internality makes them more likely to have substantial experience in making personal choices. This did not prove to be the case; in fact, they scored the lowest in decision making.

Table 3 shows zero-order correlation coefficients between the four CDI scales and the three CPI vectors across the total group (see Table 4 for correlations within each of the four quadrants). The correlations for the total group show that both of CDI attitudinal scales correlate significantly to V.1: Externality correlated .20 (p<.05) to planning attitudes and .16 (<.05) to exploration attitudes. V.2, norm-favoring, had a similar pattern in correlating .31 (p<.01) to planning attitudes and .19 (<.05) to exploration attitudes. Both V.1 and V.2 were unrelated to the two CDI cognitive scales. V.3 had a different, and more complex, relation to the CDI scales. Most obviously, V.3 level of realization correlated .37 (<.01) to decisional competence and .36 (p<.01) to informational competence. With regard to the two CDI attitude scales, V.3 correlated .27 (p<.01) to planning attitudes but was unrelated to attitudes toward exploration. The pattern of zero-order correlations between the CDI scales and CPI vectors was generally similar within three of the four quadrants. The exception was in the Beta group wherein V.3 was virtually unrelated to the four CDI scales.

Insert Tables 3 & 4 About Here

We had hypothesized that career maturity, especially planning attitudes, would strongly correlate to V.3 scores for level of realization. Multiple regressions, with V.3 as the criterion and the four CDI scores entered as a block **G** predictors, attained a multiple R of .44 for the total group. A stepwise multiple regression for the total group showed that decision making (R=.37)

and occupational information (R=.41) were the only two significant predictors of V.3. Multiple regressions for each group, with CDI scales entered as a block, produced a multiple R of .52 for Alphas, .12 for Betas (not significant because the highest zero-order correlation coefficient was with occupational information competence and that was a nonsignificant -.11), .58 for Deltas, and .37 for Gammas. When the four CDI scales were entered stepwise into multiple regression analyses, (except for Betas) the three groups each had only one significant step. Alphas were .45 for occupational information, Deltas were .46 for planning attitudes, and Gammas were .32 for decision making.

We had anticipated that career maturity would correlate higher to V.3 than it does both to V.1 and to V.2. Recall the multiple R for CDI scales with V.3 was .44 for the total group. The same correlation for V.1 was .25 and for V.2 it was .33. For both V.1 and V.2, the stepwise multiple regression analyses showed only one significant step. In both cases it was for planning attitudes. Planning attitudes correlated .20 with V.1 (externality) and .31 with V.2 (norm upholding). In comparing the three vectors, it seems that V.1 and V.2 relate to attitudes but not competencies yet V.3 relates to attitudes and competence. Actually, V.3 relates to planning not exploration attitudes; in this case, the zero-order correlation coefficients are quite informative.

Conclusions

Super's model of career maturity seems to reflect a norm-upholding approach to developing one's career. The orientation toward internality or externality does not seem as important as whether or not an individual is oriented toward social norms and expectations as presented in vocational development tasks.

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Table I.	Number (of participants	$\sin \ln \ln 2\delta$	cens or	Gougn's (1990) taxonomy.

		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>	<u>Delta</u>
Level of I	<u>Realization</u>				
1. M=9	F=6	8	1	3	3
2. M=17	F=13	11	2	14	3
3. M=26	F=19	13	4	23	5
4. M=21	F=33	10	9	21	14
5. M=13	F=20	13	3	10	7
6. M=7	F=9	5	3	6	2
7. M=3	F=2	2	0	2	1
N=19	98	N=62	 N=22	N=79	N=35
M=98	F=100	M=36 F=26	M=9 F=13	M=41 F=38	M=12 F=23

Table 2. Means and Standard Deviations for the Three CPI Vectors and the Four CDI Scales for Total Group and Four Personality Types

		Total Group		Alphas I		Be	letas Gar		imas	Deltas	
		x	S.D.								
CPI											
	V.1	16.21	6.35								
	V.2	21.42	4.82								
	V.3	34.19	9.08	32.45	9.98	36.35	8.14	34.43	7.80	34.31	10.16
CDI											
	Plan	72.40	10.10	77.57	12.03	76.15	13.60	71.70	13.31	62.91	17.85
	Explore	51.00	10.10	53.85	10.51	51.95	10.46	50.24	9.91	47.34	8.32
	Occ Info	14.84	3.03	14.32	3.09	16.65	1.63	14.94	2.91	14.37	3.49
	Decide	12.13	3.44	11.98	3.80	13.60	2.23	12.00	3.33	11.59	3.53
	Total	150.37	23.00	157.72	24.81	158.36	22.80	148.88	21.24	136.2	25.2

Table 3. Correlation Coefficients Between CPI Vectors and CDI Scales.

	РА	GA	DM	OI	V.1	V.2	V.3	Coef. Alpha
РА	1.00							.91
EA	.39	1.00						.84
DM	.33	03	1.00					
OI	.30	02	.59	1.00				
V.1	20	16	.03	.05	1.00			
V.2	.31	.19	.05	.08	04	1.00		
V.3	.27	.08	.37	.36	.07	05	1.00	

P < .05 = .16P < .01 = .26

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Table 4. Means, SD, and Correlations within quadrants

Alphas							
	<u>X</u>	<u>SD</u>	<u>Plan</u>	Explo	Decid	<u>le Info</u>	<u>V. 3</u>
Plan	77.57	12.03	1.00				
Explo	53.85	10.51	.16	1.00			
Decide	11.98	3.80	.35	13	1.00		
Info	14.32	3.09	.35	07	.67	1.00	
V.3	32.45	9.98	.37	.07	.42	.45	1.00

CDI Totai=157.72 (24.81)

N=62 (36M; 26F)

Gammas										
	X	<u>SD</u>	Plan	Explo	Decid	le Info	<u>V. 3</u>			
Plan	71.70	13.31	1.00							
Explo	50.24	9.91	.36	1.00						
Decide	12.00	3.33	.27	.13	1.00					
Info	14.94	2.91	.24	.02	.50	1.00				
V.3	34.83	7.80	.24	.17	.32	.22	1.00			

CDI Total=148.88 (21.24)

N=79 (41M; 38F)

		-,					
	<u>x</u>	<u>SD</u>	<u>Betas</u> <u>Plan</u>	<u>Explo</u>	Decid	<u>le Info</u>	<u>V. 3</u>
Plan	76.15	13.60	1.00				
Explo	51.95	I0.46	.61	1.00			
Decide	e13.60	2.23	.50	.25	1.00		
Info	16.65	1.63	03	.12	.06	1.00	
V.3	36.35	8.14	.01	.00	.03	11	1.00

CDI Total=158.36 (22.8)

N=22 (9M;13F)

			<u>Deltas</u>				
	<u>X</u>	<u>SD</u>	<u>Plan</u>	<u>Explo</u>	Decide	<u>Info</u>	<u>V. 3</u>
Plan	62.91	17.85	1.00				
Explo	47.34	8.32	.42	1.00			
Decide	11.59	3.53	.37	- 27	1.00		
Info	14.37	3.49	.45	05	.63	1.00	
V. 3	34.31	10.16	.46	.13	.46	.45	1.00

CDI Total=136.20 (10.16)

N=35 (12M; 23F)