

Measuring Career Concepts: An Examination of the Concepts, Constructs,
and Validity of the Career Concept Questionnaire¹

A Doctoral Dissertation by Michael Wallace Coombs

University of Southern California, 1987

Synopsis by Jonathan I. Klein, Ph.D.

Editor's Note:

1. The version of the Driver - Brousseau Career Concept Questionnaire currently in use as the CareerView® Questionnaire includes only the "ideal career concepts" and the "future motives" subscales of the Career Concept Questionnaire. The term "Expert" is now used in place of the older term, "Steady State."

Introduction

"Career Concept" (Driver, 1979a) refers to the modality of an individual's career decisions. Career Concepts vary along the three dimensions of a) frequency of job change, b) direction of movement, and c) type of change in job content. Four Career Concepts are defined as follows:

a) "Steady State," which is characterized by little or no job change; b) "Linear," which represents moderate and consistent upward movement within a single field; c) "Spiral," which is more gradual long-term upward movement in related fields, through short-term lateral changes among them; and d) "Transitory," which refers to frequent short-term changes in variable directions among jobs representing unrelated fields.

The Career Concept construct in part grew out of the work of earlier theorists in defining career models such as "career environments" (Holland, 1985), "career anchors" (Schein, 1975; 1978; 1987), and "success orientations" (Derr, 1986). Career environment represents a set of external demands and associated responses, varying among "Realistic," "Investigative," "Artistic," "Social," "Enterprising," and "Conventional." Career anchors refer to the needs, objectives, and job features addressed through career decisions, and varies among "security," "autonomy," "technical," "managerial," "entrepreneurial," "service," "challenge," and life-style." Success orientation refers to the five career objectives of progress, security, autonomy, upward mobility, and balance. Other work in this literature stream has focused on locus of control (Rotter, 1971), which varies between "internal" and "external," the former of which is theoretically associated with job satisfaction, career mobility, self-exploration, and high involvement in job activities.

Research into Career Concepts extends this literature stream by focusing on the cognitive, decision-making determinants that are arguably most

proximate to career decision outcomes. The purposes of the present study were to evaluate the reliability and construct validity of Career Concept measures.

Reliability

Reliability was assessed in a pilot study by determining: a) the level of consistency between both responses to each item on two administrations of (i.e., "test-retest" reliability) the Driver - Brousseau Career Concept Questionnaire (CCQ), in successive weeks to business administration students at two universities, and b) the level of, and changes in, consistency among such item responses in single questionnaire administrations (i.e., through calculation of Cronbach's "alpha"), both in the university setting and among 700 nonmanagerial employees at an aerospace firm in the western U.S. Organizational respondents were selected through stratified sampling of work units, genders, and salary and skill levels.

Items were grouped by those that concern a) frequency of job change; b) direction of movement; c) job content changes; d) General Career Pattern, or the Career Concept with which the respondent subjectively identifies, and e) Career Decision Factor, or the motive that dominates the respondent's career decisions. Respondents were asked to indicate the level of each item's applicability to past, future, and ideal career in the first four sections, and to the past and likely future in the fifth section. Career Concept items were evaluated both singly and as elements of "Calculated Career Concepts," which are factors representing highly-intercorrelated items in the first three sections of the CCQ. Statistical methods included correlation and chi-square.

Construct Validity

Construct validity was assessed in the organizational setting through correlation between General Career Pattern on the one hand and, on the other hand, a) frequency, direction, and type of change; b) Career Decision Factor; and c) Decision Style. Decision Style varies by amount of information used (viz., low or high) and number of decision foci (viz., single or multiple); crossing the two dimensions yields the following types: "Decisive," low amount of information and single focus; "Flexible," low amount of information and multiple focus;

"Hierarchic," high amount of information and single focus; "Integrative," high amount of information and multiple focus; and "Systemic," which migrates from Integrative to Hierarchic within a single decision. The decision-maker identifies with and adopts a "role" style subjectively appropriate to situations presenting clear demand characteristics, employing a relatively involuntary "operating" style in other situations. Additionally, the "dominant" style is reactive to the most frequently-encountered level of information load, while the "back-up" style is used in other situations.

All career-related variables were measured using the CCQ. Decision Style was measured using the Driver Decision Style Exercise (Driver, 1971a) and the Driver-Streufert Complexity Index (Driver, 1971b). Face validity dictated the various hypotheses pairing Decision Style with Career

Concept: viz., through orientation to a single career choice, Steady State appears to reflect the Decisive's use of minimal information and single focus; Transitory vacillates, Flexible-style, among multiple foci; Linear appears to pursue the Hierarchic's single objective with an information-rich, long-term career plan; and the Spiral seems to implement such a plan by entertaining the Integrative's characteristically multiple options.

Attention is now directed to the results of the study.

Results

Pilot Study: Reliability Assessment

Correlations between responses to the same individual items on successive administrations of the CCQ were significant at the

.05 level in all cases and at the .01 level in all but one case. All correlational and chi-square measures of relatedness between Calculated Career Concepts and Career Decision Factors were significant at the .05 level. Cronbach's alpha analysis of Calculated Career Concepts and Career Decision Factors revealed reliabilities that were generally strong and improved across administrations; exceptions included a) the "Future" Career Concept subscale, in which reliability was either initially weak (for Spiral) or declined (for the other types), along with b) the "Future" Career Decision Factor, in which reliabilities were strong but improved only for Steady State.

Organizational Survey

Calculated Career Concepts analyzed in the organizational survey included two Steady State subscales: "Career Change After Ten Years" and "No Change in Career Area."

Reliability assessment. Based upon Cronbach's alpha for Calculated Career Concepts and Career Decision Factors, reliabilities were generally strong: exceptions included the "Past" subscales for Transitory and Steady State. All correlations of General Career Pattern with the Calculated Career Concept in the corresponding time frame (i.e., past, future, and ideal) were significant.

Construct validation. Frequency of change, measured in the first section of the CCQ, varied among "none" and 1-4, 5-10, and after 10 years; within each time frame, these values were hypothesized to most strongly correlate, respectively, with Transitory, Spiral, Linear, and Steady State General Career Patterns, measured in the fourth section, and Calculated Career Concepts. These predictions were generally supported, except for "after 10 years," which was more weakly correlated with Linear than with the Transitory and Spiral General Career Patterns and the Spiral Calculated Career Concept. Additionally, "no change" was most highly correlated with both "Steady State" measures, as predicted, but, with the exception of the "Ideal" subscale, not very strongly for the General Career Pattern.

There was general support for hypotheses regarding correlations between General Career Pattern and Calculated Career Concept on the one hand and

direction of movement on the other: as predicted, responses in each Transitory, Spiral, Linear, and Steady State subscale were correlated, respectively, with "inconsistent," "lateral," "vertical," and "no" movement in the time frame represented by that subscale. However, the correlation of "none" to Steady State was not as strong as predicted, while fairly strong for Linear "Future" and "Ideal"; and the correlation between lateral movement and Spiral, while generally strong, exceeded those for other patterns only on the "Ideal" subscale and, contrary to predictions, was exceeded on the other subscales by correlations with Transitory.

Job content changes focused on managerial, skill refinement, changes related to current job content, and changes unrelated to current job content: it was hypothesized that these were most strongly correlated, respectively, with Linear, Steady State, Spiral, and Transitory General Career Patterns and Calculated Career Concepts. As predicted, managerial changes were correlated most strongly with Linear, but also strongly with Spiral and (except for the "Ideal" subscale) Transitory; skill refinement was strongly correlated with Linear as well as with Steady State "Ideal"; and, as predicted, "related" and "unrelated" changes were most strongly correlated with Spiral (followed closely by Linear) and Transitory (followed closely by Spiral), respectively.

The next group of hypotheses concern correlations of Career Decision Factors with Career Concepts, measured as General Career Pattern and Calculated Career Concept. Presented in this section are results that were obtained in relation to those that were predicted.

As predicted, "gain prestige and status" was correlated least positively with the Transitory General Career Pattern and Calculated Career Concept, more positively with Spiral and Linear, and not at all with Steady State. Also as predicted, "remain free of organizational constraints" tended to correlate most strongly with the Transitory General pattern but second to the Spiral Calculated Career Concept on both subscales for the General Career Pattern and "Future" subscale for the Calculated Career concept, while the predicted correlation of this motive with Linear was confined to both "Future" subscales. It was predicted that "do job without close supervision" would be correlated positively with all General Career Patterns and Calculated Career Concepts; this prediction failed to receive support only for Transitory. Also as predicted, "absence of strict rules and regulations" was correlated most strongly with Transitory, but only on the "Future" subscales; was exceeded on the "Past" subscale by the Steady State and Spiral Calculated Career Concept; and was positively correlated most weakly with Linear (for which there were no significant correlations on the Calculated Career Concepts). "Ability to influence goals" was correlated most positively with Linear on both measures, least positively with the Steady State General Career Pattern, and more positively with the other two General Career Patterns, as predicted, but with the Transitory trailing the Steady State Calculated Career Concept in last place, contrary to predictions. As predicted, "ability to move among jobs" was correlated not at all with Steady State, least with Linear, and more positively with the other two Career Concepts. Due largely to male respondents, however, "refinement of technical skills and abilities" was generally correlated with Steady State least (exceeding only Transitory for the "Past" Career Decision

Factor) rather than (as predicted) most positively; more positively with Transitory (except as just indicated); and most positively with Spiral and Linear. Contrary to predictions, "gain employment stability" was most strongly correlated not with Steady State (except on the "Past" Calculated Career Concept subscale) but rather with Linear; as predicted, this correlation was weakest with Spiral and zero with Transitory. Also as predicted, "development of supervisory and managerial skills," "gain a high income," "influence and direct others' activities," and "use talents to improve the organization" all showed the following pattern of correlations: zero with Steady State (except on the "Past" subscale for correlations of the second and fourth factors with Calculated Career Concepts), positive with Spiral and Transitory, and strongest with Linear. As predicted, "being involved with and around others" as well as "receive recognition for special knowledge" were uncorrelated only with Steady State, except for the correlation of the "Past" subscale with the former factor and the "Future" subscale with the latter. Contrary to predictions, however, Linear rather than Spiral was most strongly correlated both with "develop and train others," with Steady State rather than Transitory bringing up the rear, and with "develop myself as a person," particularly for the Calculated Career Concept, while (except for the relationship between the "Past" Career Decision Factor subscale and the General Career Pattern) Spiral rather than Transitory was most strongly correlated with "being involved in new and different activities." As predicted, "develop and create something and different" was correlated most strongly with the Spiral General Career Pattern, next with Linear and Transitory, and not at all with Steady State; however, the order for Calculated Career Concept was Linear, then Spiral, followed by Steady State leading Transitory on the "Past" subscale and trailing it on the "Future" subscale. Also as predicted, "prove myself against challenging goals" was correlated most strongly with Linear and weakly with Steady State, with the other two Career Concepts in between. Finally, the Transitory General Career Pattern and Calculated Career Concept exceeded Spiral only on the "Past" subscale, rather than, as predicted, all rivals on the motive to "explore to find the type(s) of work you can do best." As predicted, though, Steady State showed no correlation and Linear a positive correlation with this Career Decision Factor.

As noted earlier, it was hypothesized that Decisive, Integrative, Hierarchic, and Flexible Decision Styles are most strongly correlated with Steady State, Spiral, Linear, and Transitory Career Concepts, respectively. Significant chi-squares were obtained only for the relationship between role style and past, future, and ideal careers, but not consistently in the predicted directions. Nonparametric correlations also failed to support the various hypotheses regarding operating styles. Role styles showing predicted correlations with General Career Patterns included Decisive on the "Ideal" subscale, Flexible on the "Future" and "Ideal" subscales, Hierarchic on the "Past" and "Future" subscales, and Integrative on the "Future" and "Ideal" subscales. Decisive and Flexible operating styles showed some predicted positive correlations with Steady State and Transitory Calculated Career Concepts, respectively. Flexible, Hierarchic, and Decisive role styles showed some predicted correlations with Transitory, Linear, and Steady State Calculated Career Concepts.

In general, however, support for the hypothesized relationship between

Career Concept and Decision Style was compromised by the large number of nonpredicted correlations, both positive and negative, consigning this phenomenon to the domain of future research.

Summary

Pilot Study

Clearly, the CCQ demonstrated a generally and almost uniformly high level of test-retest reliability. Exceptions included Steady State "Future" and "Ideal" subscales in the "frequency of career change" items, demonstrating greater instability on the "Future" and particularly "Ideal" subscales than on the "Past," perhaps reflecting the greatest level of certainty regarding events that have already transpired. Career Decision Factor item responses exhibited greater consistency than did General Career Patterns, indicating perhaps greater knowledge of self than career in a student population.

Based on chi-square analyses, Career Decision Factors and Calculated Career Concepts also demonstrated a high degree of reliability, although the external validity of the latter finding may be limited by the student population from which respondents were drawn, as indicated by the disproportionately high number of Transitory "Past," Linear "Future," and Spiral "Ideal" responses.

Test-retest reliabilities for Calculated Career Concepts and Career Decision Factors were uniformly high. Use of Cronbach's alpha revealed generally strong reliabilities, which tended to improve a) on "Past" subscales; b) on Spiral, Transitory, and "No Change" Steady State "Ideal" subscales; and c) for all Career Decision Factors; and decline a) on "Future" Linear and b) on "Change After 10 Years" Steady State "Ideal" subscales.

Organizational Survey

Reliability analyses. Alpha values were also generally high for Career Concepts and Career Decision Factors in the organizational survey, although generalizability may be circumscribed by the far greater number of males than female employees (as well as by some pronounced gender differences observed in response patterns). Linear was most frequently followed by Spiral in both "Past" and "Future" Career Decision Factors. Transitory tended to replace Steady State in last place moving from "Past" to "Future." Strong reliability was also demonstrated by generally high correlations between Calculated Career Concepts and General Career Patterns.

Construct validation. Differences among correlations between General Career Pattern and "frequency of change in career area" were generally consistent with predictions. Representing a hugely notable exception was the Linear General Career Pattern, which trailed correlations of Spiral and, for females, Transitory patterns with "less frequent changes in career area," a result perhaps explainable by an absence of managerial personnel in the sample, from whom the predicted responses were adjudged to be likeliest.

Direction of change also displayed predicted differences in correlation

with General Career Pattern; representing one anomaly, however, was a strong correlation between the Transitory pattern and lateral movement, which was theoretically associated with the Spiral pattern. Finally, results for job content changes were consistent with predictions, with no serious exceptions observed.

Correlations between General Career Patterns and Career Decision Factors were largely consistent with predictions, but not universally: exceptions noted in the "Results" section included the association of the Linear rather than predicted Spiral pattern with the motives to "develop and train others" and "develop myself as a person." Although contrary to expectations, this finding is perhaps not counterintuitive, given the long-term, incremental focus implied in both individual development and the Linear career path. Underscored in light of this is the urgent need to address personal development in future work concerning the Linear Career Concept.

In general, results for Calculated Career Concepts, like those for General Career Patterns, strongly supported the hypotheses regarding frequency, direction, and content of change. This was also true for Career Decision Factor, with the following exceptions: stronger- and weaker-than-expected motives to remain free of organizational constraints among Spirals and Linears, respectively; weaker-than-expected positive correlations with the motives to avoid "close supervision" and "strict rules and regulations" among all groups; the strongest correlation of "being involved in new and different activities" with the Spiral rather than, as predicted, Transitory pattern; less-than-expected correlations between the Transitory pattern and both "being involved in new and different activities" and "being involved with and around other people," in deference to Spirals and Linears in the first case and Linears and Spirals in the second; and a stronger correlation of Linear rather than Spiral with "developing and creating something new" and "receiving high recognition."

Several explanations for these findings are proffered. Rather than, as predicted, resist organizational constraints, perhaps Linears identify with the organization in order to pursue personal development in their characteristically (and, in this study, demonstrated) managerial direction. Additionally, creativity and recognition may receive high priority as indicators of such development. Spirals may place a particularly high priority on novel activities as a short-term, exploratory means to a long-term developmental end; Transitories, by contrast, perceive fewer long-term benefits from this Career Decision Factor, and thus assign a somewhat high but lower priority to it.

With the exception of results from nonparametric correlational analyses of role styles, theoretical associations between Career Concept and Decision Style were not supported. Arguably, this does not compromise the construct validity of the CCQ, since Decision Style is not theoretically elemental to Career Concept. Nevertheless, future research focusing on this relationship is recommended in order to better understand the motives underlying Career Concept as well as the manner in which Decision Style is operationalized.

Other recommended directions for future research include studies in other

settings; identification of additional variables from other models; exploration of gender differences; measurement of the "personal involvement" variable; and analysis of self-esteem as one determinant of career choice.

Conclusions

The Career Concept measures not only met but greatly exceeded universally-accepted standards of reliability, including test-retest, Cronbach's alpha, and chi-square statistics that were generally significant in the predicted directions, often at the highest measurable probability levels. Additionally, construct validity was persuasively demonstrated by correlations that were both significant and consistent with theory, on measures that effected triangulation through their multiplicity, variety, and operationalization of key constructs in a theoretically useful manner. For example, Career Concept was operationally defined both through the respondent's subjective identification with it (i.e., the General Career Pattern) and through quantitative, "objective" measures of career change frequency, directionality, and content.

Statistical outcomes that were inconsistent with theory tended to recommend not a fundamental transformation in theoretical constructs but rather a re-evaluation of the manner in which they are operationalized. Contrary to predictions, for example, a Linear career path was characterized by job changes after ten years no more than was a Spiral career path, indicating perhaps that the frequency of such changes are less central to the definition of the Linear Career Concept than are their directionality and content.

In some cases, re-evaluation of a construct may ultimately entail greater fidelity to it. The Linear Career Concept demonstrated, and intuitively presupposes, a greater-than-expected focus on personal development - of self as well as others.

Finally, other nonpredicted statistical outcomes tended to undermine not Career Concept but rather initial efforts to extend it; representing a clear example was the effort to link Career Concept with Decision Style. It remains not unreasonable to posit such a link, but clearly indicated is further analysis of its precise nature.

In conclusion, then, career Concept demonstrates considerable promise as a practical tool by fulfilling, through rigorous research, its promise as a contributor to theory. Potential beneficiaries include anyone with a professional interest in career development, including management practitioners, consultants, and researchers - as well as anyone whose own development can benefit from the recognition that career strategies are as varied as the individuals pursuing them. In sum, potential beneficiaries of Career Concept theory and research include all of us.

References

Derr, C. B. (1986) Managing the new careerists. San Francisco, CA: Jossey-Bass Publishers.

Driver, M. J. (1979a) Career concepts and career management in organizations. In C. L. Cooper (Ed.), Behavioral problems in organizations. Englewood Cliffs, NJ: Prentice-Hall, pp. 79-139.

Driver, M. J. (1971b) Individual decision making and creativity. In S. Kerr (Ed.), Organizational behavior. Columbus, OH: Grid Publishing, pp. 59-91.

Holland, J. (1985) Making vocational choices: A theory of vocational personalities and work environments (2nd ed.) Englewood Cliffs, NJ: Prentice-Hall.

Rotter, J. B. (1971) External control and internal control. *Psychology today*, June, 37-59.

Schein, E. H. (1975) How "career anchors" hold executives to their career paths. *Personnel*, May-June, 11-24.

Schein, E. H. (1978) Career dynamics: Matching individual and organizational needs. Reading, MA: Addison-Wesley.

Schein, E. H. (1987) Individuals and careers. In J. W. Lorsch (Ed.) handbook of organizational behavior. Englewood Cliffs, NJ: Prentice-Hall, 155-171.