Decision Styles
Overview of 20 Years of Research

Michael J. Driver
University of Southern California

Decision Style theory proposes that individuals learn cognitive habits concerning information use and solution focus which can be termed decision styles. Each person learns to use each of five styles in varying degrees. For most people one style predominates when environment pressure is moderate while a second style predominates under extreme pressure.

Decision style measures have proven reliability and validity. They predict decision making behavior in a wide variety of laboratory studies and also predict behavior and success in varied occupations and management levels. Style theory relates well to other personality models and is continuing to generate interesting research.

In 1967 the book *Human Information Processing*[18] set forth the first major presentation of the model which is now called Decision Style. This book contained the two major ideas of the model:

(1) That individuals learn different styles of processing information based on school and work experience.

(2) That environmental forces can systematically change people's information use styles in predictable recurrent patterns.

The essence of the first point is that people learn to develop general information processing structures of varied complexity which permit a prediction of how much complexity they will process in varied settings. This general information processing complexity style will be best seen in new situations where past memory storage differences between people are minimized.

The impact of environment on information processing complexity was formalized in the concept of Environmental Load. Factors which contribute to Load include information complexity, noxity (negative affect arousal), and eucity (positive affect arousal). At a later point, uncertainty was included as a Load factor.

Early style research supported both premises. Projective measures of cognitive complexity level were found to predict information processing differences in areas as diverse as impression formation and group decision making. The idea of a measurable general habit pattern in information use, transcending most content domains, seems to be valid.

Early research also demonstrated the curvilinear impact of Load on information use. It was shown that as any Load factor increased information use first rose then fell as an overload region was reached. All individuals followed the general inverted U curve pattern; however the more complex style persons used more information at all points except extreme load conditions. A key concept emerges that each person learns a characteristic pattern of response in information use as load varies.

In 1969, our article in *Administrative Science Quarterly*[12] expanded the model by adding a second dimension in information style; focus. It was argued that individuals differed both in information use and in how much they focused solutions around single or multiple possibilities. Uni-focus styles generally seek to obtain a single

answer or course of action. Multi-focus styles operate with multiple answers and tactics.

This framework lead to the development of four basic style categories based on information use and focus. The Decisive style uses enough data to reach a single solution then moves on. It will tend to hold to decisions despite change. The Flexible style uses enough data to select several options, e enacts one and holds the others in reserve in case the first option fails. The Hierarchic style obtains all useful data and formulates a complex long range plan with many tactics but one basic goal. The Integrative style also uses maximal information but enacts multiple strategic simultaneously. At a later point research revealed a fifth style - Systemic - in which maximum data is used to develop a prioritized list of multiple options[8].

At this point, two objective tests of Decision style were developed. The *Driver Decision Style Exercise* (DDSE) is a mini case problem which taps people's operating style - that is, their non self-conscious or day to day style.. It can detect which styles are likely to appear under moderate and under extreme loads.

The *Driver-Streufert Complexity Index* (DSCI) reflects which styles a person feels comfortable with in public situations. This is termed Role Style and appears to predict behavior when people are highly self conscious as in briefings before important others.

Both measures have generated acceptable reliability and validity; however only operating style research will be reviewed here. The most intensive study of reliability for the DDSE[5] showed that although simple test-retest correlations ranged from .57 to .64 a more meaningful pattern analysis could be carried out. One of two patterns generally emerge; either style scores stayed the same or the person shifted to a predictable second style which reflected environmental load. For instance, Flexible style persons showed no change over

three months whereas Decisive persons either showed no change if in a relatively simple environment or showed a shift to the more complex style predicted for them in a complex environment. In general a concept of *metastability* - a predictable pattern of change is supported.

Validity studies have taken two directions: laboratory studies and field tests. One of the most important laboratory studies[8] showed that each style developed a unique pattern of behavior in a complex, structured business game. Decisives found the game an overl ad and became slow and ineffective. Flexibles moved quickly and varied their strategy with the situation. Hierachics at first used a lot of data then moved quickly with a set strategy. Integratives seemed to find the game boring - too structured. Systemics used large data sets at all times, moved slowly and were very effective.

Other laboratory type studies showed significant differences in creativity[11], learning curves[15], aptitude test taking behavior[21] and perceptions of task difficulty[14].

A second line of research examined style in organizational settings. For instance styles were correlated with performance and satisfaction of supervisors[3] and middle managers [1]. In general, Decisive style works better at lower management levels while more complex styles fit middle management. Other studies[13] focused on the relevance of styles to success in varied occupational groups. Most recently we have found that style strongly associates with the type of firm successful CEO's ran. Decisive relates to small firms in stable environments; Flexibles to small firms in varied unstable environments; Hierarchic to large stable firms and Integrative to large firms in unstable environments[16].

Another line of research has examined style change. One study showed how styles can alter through long term training[2]. Another study

examined affinity of styles to short term decision making training[9].

Finally a large number of studies relate decision styles to related theoretical constructs. Styles connect meaningfully to values and attitudes. For instance Decisives dislike detail whereas Hierarchics do[17]. Integratives like investigative occupations while Flexibles trend toward social occupation (using Holland's scheme) [19].

On more formal personality measures style correlates in meaningful ways. For example, Decisives correlate with Sensing and Integratives with Intuiting in the Myers Briggs Typology[20].

Decisive and Flexible styles tended to be convergers in Kolb's model, while the more complex styles were not[4]. Finally Integratives tend to be Field Independent in Witkens model[17]. As far as emotional well being goes, styles are associated with positive states when the environment they are in fits their style[10].

Current research is continuing to look at issues such as; the nature of executive style, style change and career assignments, style and expertise, style and crisis management and the continued use of Decision Style as a tool in selection, management, development team building, and organization design[7].

References

[1] Alawi, H. Cognitive, Task and Organizational Complexities in Relation to Information Processing Behavior in Business Managers. D.B.A. diss., University of Southern California, 1973.

[2] Athey, T. The Development and Testing of a Seminar for Increasing the Cognitive Complexity of Individuals. D.B.A. diss., University of Southern California, 1976

[3] Boulgarides, J. Decision Style, Values, and Biographical Factors in Relation to Satisfaction and Performance. D.B.A. diss., University of Southern California, 1973

[4] Ching, C. Learning Style and Information Usage in Managerial Decision Making. M.S. project, School of Business, Cal-State University, Sacramento, 1980.

[5] Driver, M. Person-environment Metastability I. Decision Style Reliability. Paper presented at ORSA - TIMS meeting, 1979.

[6] Driver, M. A Human Resource Data Base Approach to Organizational Design. Journal of Human Resource Planning. 1983, 6, 169-82.

[7] Driver, M., Brousseau, K., & Hunsaker, P. The Dynamic Decision-maker. N.Y.: Harper & Row, 1990.

[8] Driver, M. & Mock, T. Human Information Processing, Decision Style Theory and Accounting Information Systems. Accounting Review,1975, 50, 490-508.

[9] Driver, M. & Pate, L. Efficacy of the Four Aces Decision Making Techniques for Changing Cognitive Style. Paper given at Wester Academy of Management, Salt Lake City, 1990.

[10] Driver, M. & {Prince, B. Person-environment Metastability II: Affective and Motivational Correlates of Decision Style in Varied Work and Educational Environments. Paper at Academy of Management Meeting, San Diego, 1981.

[11] Driver, M. Reynolds P. & Boulgarides, J. Effects of Decision Style and Creativity Training on Creative Performance. Paper read at American Psychological Association Meeting, 1971.

[12] Driver, M. & Streufert, S. Integrative Complexity. Administrative Science Quarterly,14, 272-85, 1969.

[13] Hager, J. The Feasibility of Using Decision Making Style as a Criterion for Career Assignment in the U.S. Air Force. D.B.A. diss., University of Southern California, 1977.

[14] Meshkati, N. A Conceptual Model for the Assignment of Mental Workload and Its Utilization in Enhancing Industrial Productivity. PhD. diss., University of Southern California, 1983.

[15] Mock, T., & Driver, M. An Experimental Study of Alternate Accounting Feedback Systems and Differences in Cognitive Style of Information Processing. Proceedings of the American Accounting Association Meeting, Tucson, Arizona, 1975.

[16] Pate, L. Driver, M. Gatewood, E., Goodman J., & Coombs, M. Decision Styles and New Venture Success. Paper given at Babson Entrepreneurship

Research Conference, Wellesley, Mass., 1990.

[17]   Ridgeway, C. Patterns of Environmental Adjustments Underlying Measured Cognitive Complexity and Field Independence in Men and Women. *Perceptual and Motor Skills*, 1977, 44, 99-112.

[18]   Schroder, H.., Driver, M. & Streufert, S. *Human Information Processing*, N.Y. Holt, Rinehart, Winston, 1967.

[19]   Schutt, D. Strong Vocational Interest Blank Score and Decision Style. Unpublished ms., Dept. of Management & Organization, University of Southern California, 1976.

[20]   Schutt D. Myers-Briggs Junigan Typology and Decision Style. Unpublished ms., Dept of Management & Organization, University of Southern California, 1978.

[21]   Testerman, W. Decision Style and Job Selection in the Computer Industry. D.B.A. diss., University of Souther California, 1976.