THE FORTÉ® INSTITUTE

•INTERPERSONAL COMMUNICATIONS•

FORTÉ® Monograph

An overview of the research in developing the Forté Interpersonal Communications System

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Fax: (910) 452-4339

THE FORTÉ MONOGRAPH

This monograph provides an overview of the research done by C.D. Morgan III in developing the Forté computer based communication style programs.

Research from many sources was blended to develop this interpersonal communications tool.

This monograph does not include proprietary formula or data. It represents the sum total of information available for review. The Forté systems are copyrighted and the sole property of C.D. "Hoop" Morgan III. Duplication of any Forté materials is strictly forbidden without the written permission of Forté and Mr. Morgan.

Most communication style surveys available today fall into these categories:

A. Those based on a theory origin system (cognitive).

B. Those that originated as statistically validated instruments (quantitative).

The Forté system is a quantitatively validated instrument (B). What sets it apart from other instruments is the conversion of data into high-level mathematical formulas processed by a personal computer. By developing a quick, easy-to-use data collection system (survey), a computer-generated descriptive communication style report is processed in less than two minutes.

Equally important was the development of easy-to-read, understandable reports to be shared with others for enhanced interpersonal communication.

The research processes first sought to establish the statistics. Field studies followed the statistics. The acute sensitivity of the instrument continues to grow from broad usage in the business, industrial, and service communities.

Prior to the era of the 1970's, reference materials in university libraries listed wellknown and accepted concepts of personality and interpersonal communication such as: Hippocrates' traits of behavior (melancholy, sanguine, choleric, and phlegmatic) expounded 400 years before Christ, the wisdom of the Old Testament's King Solomon: "...as a man thinks in his heart, so is he…," the "self-image" of Darwin, and habitualized reaction to stimuli as revealed in the studies of Pavlov's dogs.

Forté represents a new, ever unfolding process driven by the lifespan study of personal and interpersonal communication and behavior.

The early research into lexical theory (of or relating to words or the vocabulary of a language as distinguished from its grammar and construction) was done by Galton, (1884) and suggested that personality traits are captured in the words that people use to describe one another.

Galton began the task of cataloguing personality traits based upon Roget's Thesaurus. His estimation was it "contained fully one thousand words expressive of character, each of which as a separate shade of meaning, while each shares a large part of its meaning with some of the rest". (Galton, 1884, p181.)

Allport and Odbert (1936) built on Galton's work producing a list of 17, 953 trait Descriptive terms from Webster's new International Dictionary. They argued 4,504 of these words denoted specific traits, many of them denoting the same trait.

Allport and Odbert (1936) suggested that the trait descriptions are adaptive in the sense that they enable the knower to understand and possibly to control behavior, whether one's own or that of others.

R.B. Cattell (1943) reduced the 4,504 trait descriptors to 171 trait descriptors by the process of elimination, clustering and by surveys. Further, correlation studies reduced the 171 descriptors to 60 descriptors (Cattell 1945). He further reduced the 60 to 35 by integrating clusters of descriptors that seemed to overlap.

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The 35 clusters were further reduced by factor analytic studies, which eventually led to the Cattell 16PF personality profile instrument. This approach has been basic to the construction of other instruments, including Forté, PI, Big Five, etc. In fact, Forté's development by C. D. Morgan III (1978) is truer to the lexical approach in using stimulus words ***only*** that are most other surveys/tests developed in this way which use ***descriptive statements.***

In the mid 1970's, Morgan reviewed over 200 instruments seeking a strengths-based survey and report. None existed.

Morgan began with 185 words or descriptors known to be reflective of the communication styles of dominance, extroversion, patience and conformity based upon his (C. D. Morgan III (1978-1983)) and the earlier works of Thurstone (1934); Cattell (1950); Guilford (1954); Daniels (1973); Horst (1968); and Solomon (1978). In Morgan's early experimental administrations of the list, the respondents… as they are today…were asked to respond to each adjective based on the 5-point Likert scale under two separate perceptions – "basic self" and "self as others expect me to be". The 185 descriptors were reduced to the 30 on Forté survey 1 and 30 on Forté survey 2/3. Using this process provided the position to allocate equivalents with equal loadings to each environment – primary and adapting.

And the process has evolved from there.

(*See Technical Development on page 4*)

As much of the research focused on the respondent's reaction to words classified as adjectives or descriptors, survey efficiency would evolve. Accuracy was proven following the criteria of: ***validation*** (construct, content, concurrent, and predictive), ***reliability*** (test and re-test), ***structural invariance, trait intercorrelations,*** and ***intrinsic/extrinsic validity***. Continuing field testing procedures are used to refine the wording and uses of the instrument.

Communication style analysis determines, independently, the isolated reactive value of an adjective or descriptor. The next step was to identify a grouping of like-reactive value adjectives or descriptors (i.e. called primary trait loading) and determining what they signify. From the studies of L.L. Thurstone (The Vectors of the Mind: 1934), R.B. Cattell (Trait Clusters For Describing Personality, etc.: 1945 & 1950), J.P. and R.B. Guilford (Factor Analysis, etc.: 1954), D.W. Fiske (Personality Ratings, etc.: 1949), P. Horst (1968), C.D. Morgan III (1978-1983) and Morgan's research accomplished in the decade of the 1970's a grouping of reactive-value adjectives or descriptors were identified as all evidencing high style loadings for each of the primary styles of the tool or instrument. The system of measuring styles obtained from three points of view (i.e. self, adapting environment(s), and how the individual is perceived by others) was further improved by developing a multiple complexity communication style analysis.

This is, simply, the cluster-sample technique. A sample is taken from identified strength clusters, which allows the computer to project the actual communication/behavior profile. The Forté survey card is a simulated environment of the real world. The individual taking the survey does not need to understand all the words, as the words are stimuli, to ***trigger reaction***. A sampling, then, has meaning when properly computed.

The field case studies helped describe the behavior of individuals with similar responses to trait clusters. The system determined the type of and degree of behavior. Trait intensity was measured. Variance was determined.

The knowledge, upon which the Forté system is based, is not new. Investigators in both the academic and industrial communities have understood the research methodology for centuries. What is different about the Forté system is its state-of-the-art uniqueness...i.e., the end result is: ***more effective interpersonal communications through individual and group insights gained from the exchange of computer-generated reports.*** To our knowledge, no other instrument can be so described at this time. The technology used by the Forté system became available with the personal computer finding its way into the world of commerce and industry. Thus, the Forté system is both old (historical data base) ***and*** new (technologically-advanced). The Forté processes and software are updated every six (6) months, reflecting enhancements from both self-perception and observed behavior validations.

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Collective Forté® Theoretical Discussions

Self-description is actual human behavior studied by methods used in the search for consistencies in communication style. Theory suggests partial distortion is an inevitable characteristic of such data. Likewise, "erroneous" self-perceptions may predict actual behavior in some situations better than "objective" data derived from external sources. The practical use of self-descriptions relies on the ***assumption that respondents do not*** intentionally distort their responses. This may be evidenced by the observed fact that respondents react ***easily*** to positive stimuli and ***with difficulty*** to negative stimuli. Forté continues to cross-validate self-perception to observed styles as an element of the Forté CPI system.

Forté is unique in it's mathematical weighing of each descriptor, then further intensifying each trait with specific, individual reaction values for the corresponding Likert Scale (1 to 5).

Systematic tracking of self-descriptive data from large groups of people reveals certain consistencies in response patterns. These consistencies can be considered dimensions along which persons array themselves at defined positions. Such dimensions can be defined as "Introversion-Extroversion," as presented in the independent research of Cattell (1950) and Eysenck (1947). This communication style was originally described in the theories of the Swiss physician and psychologist C.G. Jung (1933). Forté has refined such dimensions to communication style versus "personality" traits.

Communication style dimensions can be used to locate a ***communication style space*** within which individuals locate themselves at particular points. Both Cattell and Eysenck found evidence of a two-dimensional space. Cattell even employs as many as 16 "factor" or style dimensions. Forté identifies over 250,000 profile dimensions via the primary, current adapting and perceiver profiles. Current logic, stamina and goals index data is also provided.

The Technical Development of Descriptors

(Words on the Survey Cards)

The original descriptor list included 185 adjectives drawn from the works of Thurstone (1934), Cattell (1950), Guilford (1954), Fiske (1949), Daniels (1973), Horst (1968), Solomon (1978) and Morgan (1981).

In the first experimental administration of the list, subjects were requested to respond to each adjective on a five-point Likert scale (1932) under two separate perceptions (Primary [Self]/Adapting to others). Factor analytic techniques (non-orthogonal factor structure, followed by appropriate rotations) were employed to reduce the dimensions of the instrument and identify appropriate adjectives. The final instrument contains 60 such adjectives — these adjectives had factor loadings that exceeded .600 and were of complexity one. In addition, each of the 60 adjectives used on the Likert (1932) five-point scale (0, 2, 4, 6 and 8) correlated 0.547 or higher with each one of 19 considered factors. Intercorrelations among 11 selected primary factors range from -.03 to -.69.

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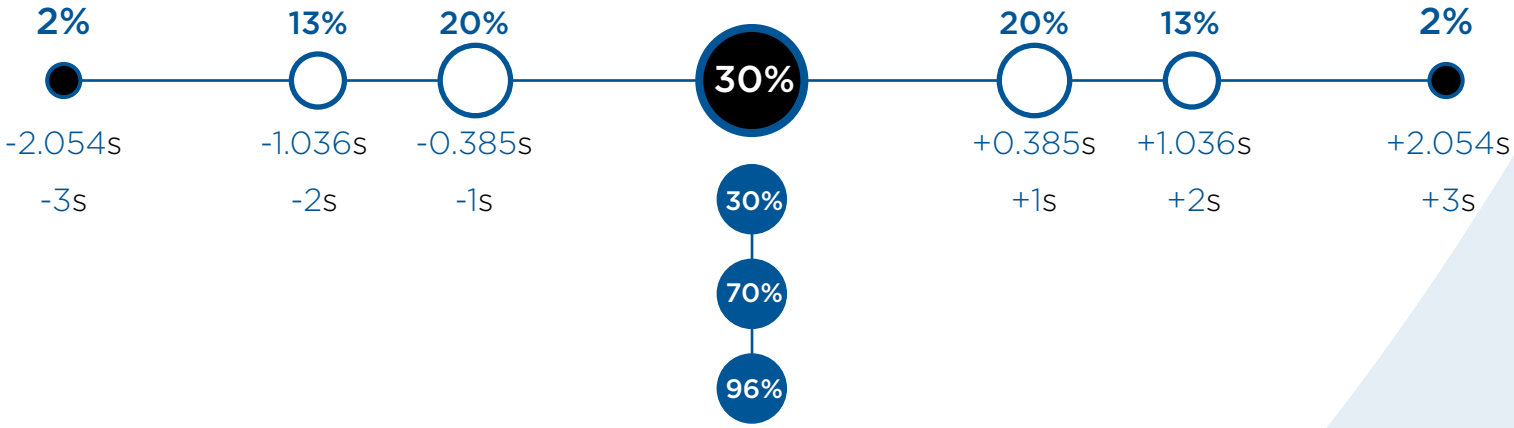
DISTRIBUTION OF TRANSFORMED SCORES

The above scale follows a normal distribution. For instance, a transformed score below or equal to -2.054 standard deviations occurs 2% of the time. On the other hand, a score equal to or in excess of +2.054 standard deviations would place an individual in the top 2% (percent) of the cases. A score between -.3853 standard deviations and a +.3853 standard deviations would occur in the middle 30% of the cases. All scores for each of the 19 considered factors were transformed by normalization procedures so that they follow the distribution described above. Using this formula, norming can be shown:



Reliability

Reliability measures the extent of the consistency or stability of the testing instrument. Reliability coefficients are usually expressed as Pearson Product Moment Correlation Coefficients. Several approaches are available to researchers to demonstrate that an instrument is reliable. Both test-retest and split-half techniques (a measure of internal consistency) were selected. These processes continue within the Forté Lifespan validation program.

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SPLIT-HALF RELIABILITY

The database was essentially divided into two halves, odd vs. even questions, for each of the 11 primary factors. For a random sample of the total population, the following reliabilities are reported:

Factor D	(Primary/Self)	r = .913
Factor E	(Primary/Self)	r = .901
Factor P	(Primary/Self)	r = .887
Factor C	(Primary/Self)	r = .923
Factor L	(Primary/Self)	r = .862

Factor D	(Adapting & Adapting Track - Others)	r = .889
Factor E	(Adapting & Adapting Track - Others)	r = .886
Factor P	(Adapting & Adapting Track - Others)	r = .865
Factor C	(Adapting & Adapting Track - Others)	r = .901
Factor L	(Adapting & Adapting Track - Others)	r = .804

Self/Environmental Style Descriptors

Style description of the Primary (self) and Adapting styles follows. Each style description is positive with above line locations most characteristic of the style description. ***Style (Descriptors)***

Dominance (Primary/Self)

Respondents located above line in Dominance view themselves as concerned with getting things done, very competitive, decisive, calculating and a risk taker. Respondents located below line tend to see themselves as modest, congenial, cautious, and not a risk taker.

Extroversion (Primary/Self)

Respondents located above line view themselves as outgoing, friendly, optimistic and persuasive. Respondents located below line tend to see themselves as private, quiet, introspective, serious and reserved in social situations.

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Patience (Primary/Self)

Respondents located above line view themselves as relaxed, stable, likeable, and at ease with life's complexities. Respondents located below line tend to see themselves as intense, action-oriented, quick-minded, and anxious for change.

Conformity (Primary/Self)

Respondents located above line view themselves as very precise, careful, concerned about what is "right" and dedicated. Respondents located below line tend to see themselves as very independent, free thinkers, not concerned about the "establishment," and more concerned about the big picture.

Dominance (Adapting & Adapting Update)

Respondents located above line view the important outside environment as expecting them to be authoritative, fearless, commanding and bold. Respondents located below line believe that they are expected or trying to be congenial, deferring, and cooperative.

Extroversion (Adapting & Adapting Update)

Respondents located above line perceive themselves as needing or being expected to be gregarious, eloquent, enthusiastic, and a good mixer. Respondents located below line are expected or trying to be creative, introspective and removed from too much people involvement.

Patience (Adapting & Adapting Update)

Respondents located above line perceive themselves as needing or being expected to be easygoing, dependable, and relaxed. Respondents located below line perceive themselves as being expected to be hasty, quick-witted, intense, and change-oriented.

Conformity (Adapting & Adapting Update)

Respondents located above line perceive themselves as being expected to be disciplined, dedicated, precise, and devoted. Respondents located below line perceive themselves as being or expected to be open-minded to change, unstructured, more freedom of choice and independent.

Norms

Experimental norms have been established for respondents studied on each of the 19 factors (11 primary and 8 secondary). The 1205 initial respondents represent a wide variety of occupations of both sexes drawn from sales, military personnel, nurses, managers, students, administrators, stock brokers, business, government, ministers, attorneys, teachers, etc. The distribution of responses tends to follow a negatively skewed distribution — this is the case with instruments in which the subjects are requested to make ratings. However, the scores have been transformed by a non-linear normalization procedure so that they follow a normal distribution — this transformation technique allows for easier interpretation as the transformed scores follow a normal distribution.

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Test - Retest Reliability

The test-retest reliability estimates are presented here. The values are three-month retest coefficients.

THREE-MONTH RETEST RELIABILITY

STRENGTHS

Primary/Self:

Dominance	.83
Extroversion	.81
Patience	.78
Conformity	.85
Logic	.76

Adapting Environment:

Dominance	.82
Extroversion	.80
Patience	.77
Conformity	.86
Logic	.71

The four scales have reliabilities in the .70s, and six scales have reliabilities in the .80s. The three-month retest reliabilities compare very favorably with many achievement tests. They are somewhat higher than other nationally normed measures in such tools. This process is ongoing in the Forté Lifespan System.

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Instrument Validity

The most appropriate validity measures are validation of the constructs in Jung's theory (1933) of type. This provides a benchmark from which to grow. Two types of information have impact on the validity of the Forté instrument: (1) The structural integrity of the trait descriptions, and (2) the instrument's ability to predict communication style.

Structural integrity is a generic term including four coefficients: replicability, invariance, constancy, and stability; each of which indexes a desirable characteristic of measure. Nesselroade and Bates (1970) have formulated the concept of structural integrity which incorporates systematic style analytic procedures for establishing structural ***replicability, invariance, constancy, and stability.*** **Each of the concepts is briefly described below.**

Replicability

- The extent to which a pattern, regularity, or configuration appears in essentially the same form in random samples or occasions, e.g., random replicates of individuals.

Invariance

- The similarity of the configuration of the item structure across selected groups with varying characteristics, e.g., configurational similarity across race, sex, occupation, age, etc.

Constancy

- The degree to which a pattern or configuration appears in essentially the same form in each quartile of the range of a measure or instrument.

Stability

- The similarity of the pattern across two or more administrations of the instrument to the same subjects.

To determine the replicability of the style descriptions, four random sub-samples were drawn from each of the validation samples. The analytic procedure, previously outlined, was applied to each of the replicates. Each style estimation matrix was used to calculate style scores for each member of the total sample, thus yielding four separate estimates of an individual's score for each style. Correlation coefficient between style analysis score estimates from each replicate pair was computed producing six estimates of the coefficient of replicability for each style. Fisher's r to Z transformation was performed on each of the six coefficients of replicability for each style. The means and standard deviations of Fisher Z values were obtained and r equivalents of the mean Fisher Z values were computed. The forms of the Forté instrument are highly replicable with coefficients of replicability above .94 for all styles.

Since replicability across random sub-samples was demonstrated, the next concern was to investigate the invariance of the styles across race, sex, and occupation. A procedure identical to the one outlined above was applied to groups selected according to race, sex, and occupation, rather than by random selection procedure. There were four occupations (nurses, lawyers, ministers, and military), two race categories (white and non-whites) and two sex categories (males and females). Each of the styles is highly invariant across race, sex, and occupation with coefficients above .87 in all cases.

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Respondent Validity Studies

Ultimately, the criterion for any method of measuring communication style is its relevance to the goals of users. While it is impossible to assess the validity of an instrument for all of the potential uses to which it might be applied, an unreliable instrument cannot be expected to serve any useful purpose.

Forté takes the approach that the real validation and the ultimate refinement of the system rests with the ongoing candid responses of the subjects being profiled and their relationship to others. Following is a comparative summary of random responses received over the period 1981 through 1992, and the ongoing Forté Online Validation studies. A selfvalidation page is now emailed to each respondent, and there is currently a 24.30% response rate (05/04). After reviewing their individual printouts, the respondents were asked to rate the accuracy (validity) of their Forte as it applied to them. In addition to the percent Validity response we also now ask and receive detailed written responses and suggestions.

RESPONDENT VALIDITY STUDIES

% ACCURACY	1981-1992	1993-2004	DIFFERENCE
50% or Less	.5%	2%	+1.5%
60 - 70%	1.5%	4%	+2.5%
70 - 80%	2.5%	13%	+10.5%
80 - 90%	85.5%	40%	-40.5%
90 - 100%	10%	42%	+32%

The shift, and objective, has been to constantly improve the accuracy of the information. As you can see the significant shift on the chart has been at the highest level of validity, from 10% to 42% in the 90-100% validation. In the years to come, from what we have learned over this time frame, expect to see these trends to continue. Other items of importance; today's sample is much broader, and includes a global environment. We now contact respondents via email for more details and have a significantly improved methodology to improve the accuracy of the various Forté reports on a real-time basis.

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Fax: (910) 452-4339

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Phone: (910) 452-5152
Fax: (910) 452-4339