

BETTER THAN THE ALPHABET:
TAXONOMIES OF PERSONALITY-DESCRIPTIVE TERMS
IN ENGLISH, DUTCH, AND GERMAN

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Despite the fact that at this European Conference on Personality English is the official language, we want to begin our contribution with at least one sentence in Dutch, a quotation from the Dutch philosopher, Cosquino de Bussy (1915), who said: "Het karakter wordt niet *gekend* maar *toegekend*." In German there is a straightforward translation: "Der menschliche Charakter wird nicht *erkannt*, nur *zuerkannt*." In English, on the other hand, the pun involving the two verbs is lost: "Human character is not to be *known*; it is to be *attributed*." Perhaps one can capture the flavor of the Dutch original best by translating: "Human character is not to be *recognized*, only *cognized*."

Cosquino de Bussy directs our attention to two important aspects of human personality: First, he emphasizes that personality is a construct, invented by humans in order to structure, understand, and explain their social experience. Second, this implies that personality comes into existence, becomes part of our experience, only through communication between persons. And, since most of our communication about people, their attributes, desires, and problems, is conveyed via our major communication system - language - one possible access road to an understanding of the human character is to study the language of personality. Along this stony, steep, but rewarding road we will now try to lead you.

Let us begin with our own daily experiences. We find ourselves chatting about the kind of person our new colleague will turn out to be. Or, we have to write letters of recommendation for students, and we ponder how to accurately describe their personal strengths and weaknesses. What do we say and write about ourselves and others? In Figure 1, we listed a few examples from a recent study of everyday person descriptions. Examples 1 and 2 are from free-response descriptions that we obtained from 30 undergraduate students at the University of Bielefeld under fairly natural conditions. In general, these descriptions were highly similar to those from a recent study by Fiske and Cox (1979), whose content analyses of free-response descriptions indicated that persons tend to describe others in terms of six broad categories: The four most commonly used were physical appearance, internal properties (that is, personality characteristics), relationships, and behaviors.

There are two striking features of those everyday person descriptions. First, we were surprised by the high percentage of adjectives and nouns used to denote dispositional attributions of the person in both self and peer descriptions. Second, we noticed a remarkable similarity in both content and form between personality

Figure 1

Some Examples of Everyday Person-Descriptions

- (1) Self-description written by a male undergraduate student at the University of Bielefeld, who was instructed to write what he would say when introducing himself to an encounter group:
- "My name is _____. I am 20 years old. I would describe myself as: sociable, most of the time; ambitious for personal goals; striving for independence; a bit musical; superficial with 'unimportant' things; partially timid; average intelligent; somewhat talented in craftsmanship (impetus to work!); friend of animals and plants; tolerant; urge to comprehend the world around me (in German: "Umwelt")."
- (2) Two free descriptions of a university professor, written anonymously by undergraduate students during the first class meeting, so as to inform another student considering the class about "what the teacher is like":
- A. Female student, 23 years old: "I don't know this teacher very well yet. He has quite appealing looks; seems to be competent too. He impresses me as relatively calm and self-confident. He is obviously not overly distant, but doesn't feel the need to chum up to us."
- B. Female student, 21 years old: "Personally, I think he is sympathetic. I perceive him as calm and objective, with friendly eyes. It is easy for me to listen to him, since he has a tranquil and fairly articulate way of communicating his knowledge."
- (3) After assessments of the professional potential of temporarily unemployed people, the staff psychologists of most German labor offices ("Arbeitsamt") regularly include a section on the assessee's personality in their reports to the job counselor. After sections on the client's level of intelligence, working performance, and interests, a fairly typical report continues:
- "E. is of average height, a slender but sturdy, appealing and well-groomed young man. The personality characteristics obtained from a standardized self-description task (Freiburger Personality Inventory) correspond well with behavioral observations. E. is emotionally stable, natural and sociable in personal contacts, lively and outgoing. He appears self-controlled and free of aggression."

descriptions written by our students and those written by professional psychologists. As you can see from example 3 in Figure 1, applied psychologists describe their clients' appearance, dispositions, and behaviors just as students do. And, although their wording is generally more sophisticated, they use trait adjectives and nouns as well.

Most of the systematic research into the language of personality has focused on just these two linguistic forms: personality-descriptive adjectives and nouns. There are two kinds of nouns: A large class denoting attributes of a person, like *strength*, *happiness*, or *persistence*, and a somewhat smaller set describing types or kinds of persons (e.g., *blood-sucker*, *cynic*, *jerk*), the latter including many negatively evaluated terms, at least in English (Goldberg, 1982) and in German. It appears that the type nouns are used predominantly in oral communication, while attribute nouns and adjectives are preferred in writing.

The German language contains a large set of person-descriptive adjectives, approximately 4500, plus 3000 attribute nouns and 2000 type nouns. Thus, nearly half of the 10,000 person-descriptive terms in German are adjectives. Goldberg (1982) has recently summarized some of the major findings in English, based on the initial work by Allport and Odbert (1936) and especially the later work of Norman (1967), who collected information on such characteristics of English trait words as their social desirability, difficulty, ambiguity, endorsement rates, and sex differences in self and other descriptions.

An extensive series of analyses of Dutch personality adjectives has been carried out over the past seven years by Hofstee and Brokken at the University of Groningen in The Netherlands (Brokken, 1978). The Dutch team used as their source the 1970 edition of an authoritative unabridged Dutch dictionary. Two research assistants independently culled all adjectives except those which in their opinion could not possibly be applied to a person. Their combined list included 8690 adjectives. Four other team members then made a preliminary screening of this list, employing seven exclusion categories; discarding only those terms about which they were unanimous, 6055 terms were retained. At this stage, paid judges were recruited, 10 students in psychology and 8 students of the Dutch language; judgments from the two samples turned out to be indistinguishable. The judges unanimously rejected 1771 of the 6055 terms. Those adjectives which were rejected by between 7 and 12 judges were administered to a new sample of 20 judges. To construct the final set, all terms that 50% or more of the combined samples had judged as unsuitable were eliminated. The resulting set included 1204 personality-descriptive adjectives. In later studies, Brokken (1978) compared the structures from self and peer ratings using these 1204 terms, and rotated six factors from each of the two types of data to a position of maximum congruence.

A Summary of the Major Taxonomies

What are the most important differences between individuals, those that people notice and talk about? What is meant by "calm and self-confident" on the one hand, and "calm and objective" on the other (see Figure 1)? Did the two people who wrote this about a university

professor mean the same thing? Something similar? Or something very different? What is sought in all these questions is an orderly structure, a taxonomy of those words that express differences in the experiences and behaviors of individuals.

By orderly, we mean a structure that groups terms according to their similarity in culturally shared meaning, such that words like *sociable* and *outgoing* are represented as being very close to each other, but very distant from terms like *reclusive* and *restrained*. Second, we believe that such a structure should be hierarchical, that is from the most specific up to the most general, like the branches of an inverted tree (e.g., *exact*, *orderly*, *reliable*). And third, we prefer a dimensional structure over a typological one, since many (if not most) languages can modify the degree or intensity of a trait with quantifiers, or even encode these gradual differences as single words (e.g., *thrifty*, *niggardly*, *miserly*, *stingy*, *greedy*).

A compelling semantic taxonomy of individual-difference terms would greatly facilitate communication between personality researchers. It could provide a common vocabulary shared by the culture of personologists. It would serve to decode the Babel that has been created by researchers using their own labels for constructs, and speaking therefore their own idiosyncratic tongues. Nonetheless, a word of caution is in order. Although much can be learned about personality from language, as Klages already noted in 1926, we must not confuse the language which people use in their constructions of social experience with the scientific constructs that are supposed to describe, explain, and predict human behavior. The introductory examples demonstrate that the psychology of personality still lacks an adequate scientific terminology to describe the object of its study; the practicing psychologist has to resort to the natural language for descriptive purposes. A taxonomy of these personality descriptors can provide us with a systematic account of how people who speak that language conceive of personality, especially which kinds of individual differences they regard as most important in their daily transactions.

Until the utility of these lay conceptions has been demonstrated, however, there is reason to distrust the "accumulated wisdom" of any language. A single example from the development of physics as a science may illustrate this point. Weight in ordinary language is assumed to be an intrinsic attribute of an object, causing it to fall to the ground, whereas in physics it is defined as a product of mass, the intrinsic attribute, and gravitational force, the situation. Thus, we view a natural language taxonomy of personality terms as a rich source for phenomenological personality descriptions, and as a useful starting place for a scientific terminology.

Several taxonomic solutions have been proposed for the domain of personality over the years. In Table 1, the fifty-year history of this inquiry is documented. As with so much of psychology, it all started in Germany in the early 20th century. The basic rationale for most of the research summarized in Table 1 was first articulated by Klages in 1926, and subsequently elaborated by Allport (1937), Cattell (1943), and most recently Goldberg (1982): *Those individual differences that are most salient in the daily transactions of persons with each other will eventually become encoded into their language. The more important such a difference is, the more will people notice it and wish to talk about it, with the result that it will eventually become a single word.*

TABLE 1: A Taxonomy of Taxonomies of Person-Descriptive Terms

AUTHOR and TOPIC	WHAT?	HOW MUCH?	HOW STRUCTURED?	HOW ABSTRACT?	CRITERIA FOR EVALUATION
(1) Baumgarten (1933) <i>Inventory of German Character Terms</i>	Terms denoting human character: 941 adjectives and 688 nouns from "some German dictionaries"	No reduction	Alphabetical listing	-	-
(2) Allport and Odbert (1936) <i>List of Trait-Names</i>	All terms distinguishing behavior of one individual from that of another: 17, 954 terms from Webster's II unabridged dictionary	No reduction	Categorized into 4 broad domains of individual differences; within these domains, alphabetical listings	-	-
(3) Cattell (1943, 1947) <i>Primary Personality Factors</i>	Domain I from (2): 4504 terms denoting "stable traits"	Several reduction steps (semantic judgments and correlational evidence) to 171 variables	External structure Hierarchical: (from peer ratings); criterion: simple structure in oblique rotation yielding 12 to 15 factors empirical	Correspondence to external structures derived from Q and T-data; factor generalizability	
(4) Norman (1967) <i>Replication of Allport and Odbert</i> - see (2) -	All 17, 954 terms from (2) plus 171 additional ones from Webster's III	60% of the terms excluded; criteria: - obscurity - ambiguity - pure evaluations - reference to appearance only	Categorized into 3 broad domains of individual differences by consensus; external data collected for 2797 stable-trait terms	Interjudge agreement on categorizations and ratings of terms	

TABLE 1 (continued)

AUTHOR and TOPIC	WHAT?	HOW MUCH?	HOW STRUCTURED?	HOW ABSTRACT?	CRITERIA FOR EVALUATION
(5) Norman (in Goldberg, 1978) <i>Five Factor Taxonomy</i>	Domain I from (4): 2797 stable trait terms	Reduced to 1566 terms (according to difficulty, self-rating extremity, and slanginess of the terms); 1431 categorized	First theory-guided, then empirical sorting of terms according to semantic similarity (internal structure)	5 broad dimensions, divided into 75 categories containing 571 tight synonym clusters	Convergence between internally and externally derived structures
(6) Goldberg (1982) <i>Evaluation-Explicit Taxonomy for Trait-Adjectives (Round IX)</i>	Domain I from (4): 2797 stable trait terms	Reduced to 1710; excluded: - nouns - too difficult adjectives - peripheral terms 893 central terms categorized	Bipolar, evaluation-specified categorization according to semantic similarity (internal structure); empirical	42 categories mapped into five broad dimensions	Consensus on internal structure; convergence between internal and external structures
B. <i>Evaluation-Explicit Taxonomy for Trait-Nouns (Types)</i>	Catalogue of 1947 nouns from various sources	"Most common" terms classified: 1342 words	See above (6) A.	50 categories, 42 of which are parallel to those in (6) A.	Convergence of noun structure with adjective structure
C. <i>Preliminary Mood Taxonomy</i>	384 prime terms denoting temporary states from Norman's (1967) domain II - see (4) -	All 384 terms classified	Similarity of meaning (internal structure); empirical	13 categories (with some subcategories)	-

TABLE 1 (continued)

AUTHOR and TOPIC	WHAT?	HOW MUCH?	HOW STRUCTURED?	HOW ABSTRACT?	CRITERIA FOR EVALUATION
D. Preliminary Taxonomy for Social Roles and Effects	The 1476 terms comprising Norman's (1967) domain III - see (4) -	"Most common" terms classified: 424 words	Similarity of meaning (internal structure); empirical	24 categories	-
(7) Layman (in Goldberg, 1978) Unconstrained Semantic Taxonomy for Trait Adjectives (Round 3)	Expanded version of the inventory of 1710 trait-descriptive adjectives - see (6) A. -	1750 adjectives categorized	Words classified according to semantic similarity (dictionary definitions) into bipolar categories, (internal structure); empirical	712 central and 1038 peripheral terms in 45 categories mapped into 8 superordinate dimensions, from self-rating data	Well-formedness of internal structure; convergence with external structures
(8) Brokken and Hofstee (in Brokken, 1978) Empirical Taxonomy of Dutch Trait-Descriptive Adjectives	Basic list of Dutch person-descriptive adjectives from Van Dale's unabridged Dutch dictionary (8690 terms)	Reduction to 1204 stable trait terms; seven criteria (obscure, metaphorical, anatomical and medical terms, and temporary state terms, etc.)	External structure: broad factors based on both self and peer rating data	6 factor dimensions	Factor generalizability; conceptual clarification of factor interpretation

TABLE 1 (continued)

AUTHOR and TOPIC	WHAT?	HOW MUCH?	HOW STRUCTURED?	HOW ABSTRACT?	CRITERIA FOR EVALUATION
(9) Wiggins (1979) <i>Psychological Taxonomy of Interpersonal Trait - Adjectives</i>	Approximately 900 interpersonal traits selected rationally from 1710 inventory - see (6) A. -	864 trait-adjectives categorized	Iterative item-selection strategy to fit a theory-determined 8 scales (with 16 items each) as circumplex structure from self-rating data (theoretical-external-structure)	864 adjectives classified into 16 categories; theory-determined 8 scales (with 16 items each) as marker variables of the principal vectors of the system	Generalizability to other samples; goodness of fit to postulated structure
(10) John (1983) <i>Cross-Cultural Study of Trait-Adjectives</i> (in progress)	1826 trait-descriptive adjectives, classified within the taxonomies described in (5), (6), (7), (9)	Representative set of 162 adjectives selected according to 6 criteria (esp., content-coverage, ambiguity, difficulty)	A priori structures according to (5), (6), (7) and (9), tested with self-rating data from bilinguals (American and German)	Approximately 45 categories and 3-8 possible dimensions	Convergence between competing taxonomies; between internal and external structures; and across languages
(11) John and Angleitner (1983) <i>Person-Descriptive Terms in the German Language</i>	All adjectives and nouns denoting person-attributes, plus those nouns referring to types of people, selected from Wahrig's unabridged German dictionary (1981 Edition)	(in progress)	Listed according to linguistic form and term difficulty; otherwise alphabetically	(in progress)	- see (10) -

Note: If not explicitly stated, the language under investigation was American English.

The first empirical study listed in Table 1 dates back to 1933, when Franziska Baumgarten took up the challenge posed by Klages and provided a list of over 1600 German "character-trait" terms. Three years later, Allport and Odbert (1936) published their classic monograph "Trait names: A psycho-lexical study" in the United States. For the next three decades, the study of the language of personality was mostly left to the Americans. Cattell's (1943, 1947, 1957) well-known efforts to discover a set of basic personality factors were undertaken in the early 1940's and heavily constricted by the methodological and computational limitations of that period of time (see Angleitner & Rudinger, in press; Digman & Takemoto-Chock, 1981). It was not until Norman's (1967) refined replication of the original Allport and Odbert study that an American group of researchers began to construct taxonomies for different personality domains. At the bottom of Table 1 some European researchers are listed who have recently rediscovered these old, yet still new, questions: the taxonomic work done at the University of Groningen in The Netherlands (Brokken, 1978), and a similar project, although with a somewhat different focus, currently being carried out at the University of Bielefeld in West Germany.

Five major features that provide a common framework by which these various taxonomic enterprises can be characterized were used as organizing principles for the literature review presented in Table 1. The first question that all taxonomers must face is: "What should be included in the taxonomy?" That is, they must select a domain of individual differences, thus specifying the kinds of terms to be included within the taxonomic structure. In most of the research reviewed here, all terms that can be used to describe individual differences have been considered as the initial data base. Then a particular subset of terms has been selected; for example, both Cattell and Norman chose to study the stable-trait terms culled by Allport and Odbert from Webster's unabridged dictionary. Goldberg (1982), on the other hand constructed - besides his taxonomy of stable traits - preliminary taxonomies for the domains of temporary mood and activity terms and for social roles, relationships, and effects. In Table 1 the preferences of the researchers become obvious: Of the taxonomies listed, most have categorized the domain of stable traits, and most have included only trait-adjectives.

A second major decision to be made concerns the number of terms to be classified. The English language contains approximately 27,000 words that refer to attributes of people (Goldberg, 1982). How is one to select from this immense number a set of reasonable size to be included in the classification system? Various more-or-less objective criteria like obscurity and ambiguity of meaning, difficulty, and frequency of usage have been employed over the years to exclude the least useful terms. It is always difficult to find the golden road between, on the one hand, the compulsive comprehensiveness that characterized Allport and Odbert's list of 18,000 personality terms and, on the other, the radical reductionism of Cattell's work that left only a small fraction of these terms for further study.

A third issue: How small the domain under study be structured? First, a decision must be made about the kind of data to be used. "Internal" data are based solely on the judgments of the semantic similarity among the words, as, for example, Layman's unconstrained

semantic taxonomy. "External" data are based on similarity in usage, most commonly derived from person ratings, as in Wiggins' (1979) psychological taxonomy of interpersonal trait terms. Moreover, one has to decide whether the categories or dimensions of the model should be determined *a priori*, that is, derived from a theory about the structure of this domain, or emerge in the process of structuring, that is, derive empirically. Wiggins, for example, selected Leary's (1957) circumplex model of interpersonal behavior to impose an *a priori* structure on that domain, while Layman's 45 categories emerged empirically in the process of semantic sorting. And, finally, Goldberg used a mixed strategy, since he employed a semantic sorting algorithm based on Peabody's (1967) theoretical distinction between evaluative and descriptive components of the meaning of personality-terms, coupled with some factor analyses of self and peer ratings.

A fourth issue of major importance: At which level of abstraction should the taxonomy be constructed? Or, to phrase it alternatively, how many dimensions or categories are necessary to adequately represent a domain? Are the 45 categories devised by Layman more useful than the six broad factor dimensions proposed by Brokken and his Dutch colleagues? Clearly, the answer to this question depends upon the purposes to which the structure shall eventually be put. However, a structure that offers several levels of generality seems preferable to one at just one level. Most of the taxonomies reviewed here are hierarchically organized. A good example is Norman's five-factor taxonomy. At the highest level of generality there are five, theoretically predetermined, abstract dimensions, which were repeatedly identified in factor analyses of person-rating data (Norman, 1963). These are subdivided into 75 categories, based on semantic similarity judgments, which in turn include 571 synonym clusters; in all, more than 1400 adjectives are classified.

How good are these taxonomies? How can they be evaluated? Since none of these structures arrived from heaven, none is exclusively valid, final, or true; they all are based on differing assumptions; they all have shortcomings; they all serve some purposes better than others. But any of these structures is much better than no structure at all, and considerably better than an alphabetical one. As an example, London and Exner (1978) used the alphabet to order the chapters on the personality constructs discussed in their recent book. This chapter has served its purpose if we can convince you that today there are more compelling structural alternatives for the personality domain than the alphabet!

But the question remains: What is the most useful structure of personality descriptive terms? Are there any generally agreed-upon criteria for evaluation of the different trait taxonomies? Although we subscribe to a pluralistic view of scientific conceptualizations of a discipline, we believe there are several criteria which can be used to evaluate the quality of a taxonomy, beyond purely practical considerations. The criteria employed by each taxonomer are listed in the sixth column of Table 1. In most of the factor analytic investigations of person-ratings, researchers have attempted to demonstrate factor generalizability across subject samples to test the validity of their structural solutions. In the same vein, investigations into internal structures (those based on semantic similarity judgments) have used semantic ratings made by nonpsychologists to demonstrate

intersubjective agreement on their classifications - that is, to test their generalizability across judges.

The convergence between internally and externally derived structures has been the most widely used criterion in the research carried out in the seventies. Often it was applied in an iterative fashion such that the convergence between semantic-similarity and person-rating structures increased with each refinement of the proposed structure (e.g., Goldberg, 1982). Thus, it is difficult to come to a conclusive evaluation of a taxonomy on this criterion, because it is impossible to specify in advance how much convergence is required to accept a structure as final. In all probability, complete convergence can never be achieved, since person-ratings are influenced by a host of psychological processes besides semantic ones, and they will therefore yield structural results which differ systematically from those based on semantic ratings.

Finally, two important criteria have not received appropriate attention in the research cited: The inclusiveness of a given taxonomy, that is, the degree to which the constructs from a particular domain of individual differences can be represented within the structure postulated for this domain; and second, the cross-language generality of a taxonomy. The former criterion, inclusiveness, seems difficult to operationalize, and has been proposed by only a few authors, notably by Wiggins (1979), who provides an explicit decoding algorithm by which any interpersonal behavior can be represented within his taxonomy of interpersonal trait-terms.

The demonstration of the latter criterion, that of generality of a particular taxonomic structure across languages and cultures, requires an extensive amount of work, time, and international cooperation. A project comparable to the investigation into the universality of affective meaning carried out by Osgood and his international team (Osgood, May & Myron, 1975) has not been attempted by researchers within the field of personality. But recent reports of language universals in various domains of human experience (demonstrated most convincingly by Rosch (1975) in the domain of color terms) suggest the enormous value that such a research strategy may have. Is the experience and categorization of people's social experience similarly organized across the languages of this world? Does a universal order of the encoding of individual differences into the languages exist, as it does for color terms?

Goldberg (1981) has recently stated the rationale for studies into the universality of personality lexicons. It is clear that stringent tests of the universality hypothesis require the sampling of languages that are more distant from each other than those that have been studied to this date. In the following section, some preliminary findings will be reported from a cross-cultural study of trait-descriptive adjectives (John, 1982), a modest attempt to provide empirical answers to a few of the questions just raised.

Some Initial Explorations of German Personality Terms

There were three major goals of this study: (a) to test the convergence among four different taxonomies of adjectives denoting stable traits; (b) to test the cross-cultural and cross-language convergence for each of these models; and (c) to develop an

overarching representation of the personality lexicons of the English, German, and Dutch languages which, in turn, can serve as a preliminary structure to be used in future investigations into the universality of the person concepts in other languages.

We began by trying to make use of the knowledge that has been accumulated about English trait-terms. A representative sample of such terms was selected, consisting of 162 from a set of 2000 trait-descriptive adjectives previously categorized within four American taxonomies; terms from every category of each of these four structural models were included. This basic list was translated into German by two independent translators, and subsequently also into Dutch.

Most of the cross-cultural research employing two or more different languages is substantially handicapped by the fact that any observed differences between samples or cultures can be attributed to language differences, cultural differences, sample differences, or some combination of the three. To disentangle these influences in the same study, a design was chosen in which the two cultural groups to be compared were tested with both the English and the German stimulus materials. Thirty-two American and 38 German, highly verbal bilinguals completed self-ratings and social desirability ratings for the adjectives in both languages. The adjective lists were administered two weeks apart to attenuate memory effects; additionally, the order of administration was counterbalanced within each cultural group.

Is it possible to translate single trait-adjectives from English to German? In most cases, the answer seems to be "Yes". The mean correlation across the 70 subjects between the two versions of each of the 162 terms was .52, uncorrected for attenuation due to imperfect reliability of the repeated measurements. The prospects for the development of a cross-culturally applicable adjective list of approximately 140 terms appear promising. Moreover, a demonstration of remarkable cross-language generality was found for Norman's trait taxonomy. For this purpose, eight adjectives from the list of 162 terms were selected for each pole of the five trait dimensions from Norman's taxonomy (i.e., 16 adjectives for each dimension). These terms are listed in Table 2; on the left are the English adjectives, with their corresponding German translations on the right. Scale scores were calculated across the 16 adjectives targeted for each dimension; the internal consistency reliability estimates (Coefficient Alpha) computed for the five English and the five German scales across the 70 subjects were all adequate, ranging in size from .70 for Culture to .87 for Emotional Stability, with a median of .82 for the English and .77 for the German scales. These coefficients are not the result of a sophisticated item writing and selection strategy, but are based solely on one taxonomy of English terms. Personality questionnaire constructors would be happy to find such results based on the first round of scale construction, especially since the values are respectable even for the translated German scales.

Table 3 presents the intercorrelations among the ten English and German trait scales. This correlation matrix is arranged as a multi-trait multi-method matrix, with the difference that construct validity is here assessed across languages rather than methods. The usefulness of a natural language taxonomy for personality scale construction is obvious. All criteria suggested by Campbell and Fiske (1959) are fulfilled.

TABLE 2: Bipolar Scales Measuring the "Big Five" Personality Factors

<u>English Adjectives</u>	<u>German Adjectives</u>
I. Surgency	
1. passive - active	passiv - aktiv
2. unenergetic - energetic	untätig - tatkräftig
3. submissive - dominant	nachgiebig - dominant
4. timid - bold	furchtsam - mutig
5. dependent - independent	abhängig - unabhängig
6. humble - proud	bescheiden - stolz
7. shy - assertive	schüchtern - durchsetzungsfähig
8. reclusive - outgoing	zurückgezogen - gesellig
II. Agreeableness	
1. cold - warm	kalt - warm
2. uncooperative - agreeable	ungefällig - gefällig
3. critical - lenient	kritisch - nachsichtig
4. stubborn - flexible	stur - flexibel
5. suspicious - trustful	misstrauisch - vertrauensvoll
6. unfair - fair	unfair - fair
7. self-seeking - selfless	selbstsüchtig - selbstlos
8. undiplomatic - tactful	undiplomatisch - taktvoll
III. Conscientiousness	
1. undependable - reliable	unzuverlässig - zuverlässig
2. negligent - conscientious	nachlässig - gewissenhaft
3. sloppy - exact	unachtsam - sorgfältig
4. unsystematic - methodical	unsystematisch - systematisch
5. lazy - hardworking	faul - fleissig
6. untraditional - traditional	modern - traditionell
7. liberal - conservative	liberal - konservativ
8. impractical - practical	ungeschickt - praktisch
IV. Emotional Stability	
1. unstable - stable	unausgeglichen - beständig
2. insecure - self-assured	unsicher - selbstsicher
3. nervous - at ease	nervös - gelassen
4. high-strung - relaxed	angespannt - entspannt
5. temperamental - even-tempered	launisch - ausgeglichen
6. excitable - calm	reizbar - ruhig
7. discontented - contented	unzufrieden - zufrieden
8. sentimental - tough-minded	gefühlbetont - kühl
V. Culture	
1. provincial - cultured	ungebildet - gebildet
2. uninformed - informed	unwissend - informiert
3. stupid - intelligent	dumm - intelligent
4. imperceptive - perceptive	beschränkt - scharfsinnig
5. uncreative - creative	einfallslos - einfallsreich
6. simple - complex	einfach - kompliziert
7. uncurious - curious	uninteressiert - wissbegierig
8. intuitive - rational	intuitiv - rational

TABLE 3: A Multi-Trait Multi-Language Matrix:
Correlations among the "Big Five" Personality Dimensions^a

		English (E)					German (G)			
E N G L I S H		I-E	II-E	III-E	IV-E	V-E	I-G	II-G	III-G	IV-G
		I-E	-							
	II-E	.13	-							
	III-E	.43	.25	-						
	IV-E	.37	.59	.28	-					
	V-E	.35	.15	.12	.10	-				
G E R M A N	I-G	.83	.14	.35	.35	.31	-			
	II-G	.19	.80	.33	.42	.17	.16	-		
	III-G	.37	.29	.84	.29	.07	.26	.36	-	
	IV-G	.39	.46	.32	.78	.08	.36	.41	.26	-
	V-G	.34	.13	.13	.04	.72	.33	.19	.16	.07

Note: $N=70$ bilingual subjects. Correlations are not corrected for attenuation due to unreliability (two-week interval between administrations of the English and German list).

^a Based upon scores summed across 16 self-ratings on a scale from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic).

Compare, for example, the (italicized) convergent validity coefficients in the mono-trait hetero-language diagonal with any of the values in the same row or column. The median difference between the validity coefficients and the highest off-diagonal values was .38. An effect of this size cannot easily be attributed to chance. Or, consider the requirement that the theoretically specified nomological network in which the assessed constructs are embedded be represented similarly across methods (here languages). Agreeableness and Emotional Stability (Dimensions II and IV) consistently correlated highest with each other, as predicted from a semantic analysis of these dimensions. On the other hand, Culture was not related to Agreeableness, Conscientiousness, and Emotional Stability in any of the four hetero-trait triangles below the main diagonal. The Spearman rank-order correlation coefficient, used as a measure of similarity between the two mono-language hetero-trait triangles, is .88.

The simultaneous study of only two languages is, of course, not entirely satisfying. One would like to see generalization across more than two languages. For this purpose, the first author is currently working with Brokken to test whether these findings can be replicated in self-rating data collected from Dutch students in the Groningen taxonomy project. Of course, the really fascinating, and correspondingly really difficult, work starts now; we hope to extend these analyses to more distant cultures and languages (for example, the Chinese and Japanese subcultures in the U.S., thereby comparing such distant languages as English, Chinese and Japanese).

SOME DIRECTIONS FOR THE FUTURE

This chapter has focused on various attempts to structure the concepts by which persons communicate about personality. However, it is also important to understand what is communicated about a person's *behaviors* when trait terms are applied, and how this information is used. Besides the cross-cultural efforts summarized above, we are currently extending the existing trait taxonomies by analyzing the behavioral referents of a set of German trait-descriptive words. Since traits are usually inferred from behaviors perceived within a particular context, trait concepts can be conceptualized as categorizing constructs employed by people to impose a useful structure upon their social experiences (Hampson, 1982). The internal structure of these categorizing constructs is assumed to be very similar to those found for categories of natural objects, which have been studied extensively by Rosch (1973).

Using her terminology, we assume that the various behavioral instances that are judged to belong to a particular trait category share only some of the features which are associated with the meaning of the category. Thus, behavioral instances of a trait can be ordered according to their number of category-associated features. Prototypical members of the category have more of these features than less prototypical ones. Using procedures similar to those described by Buss and Craik (1980, 1981) and Hampson (1982), one can obtain descriptions of the behavioral content of any trait for a given situational context. Thus it becomes possible to study empirically: (a) the organization of (relevant) behaviors for each trait, (b) the relationship between traits and perceived behaviors, (c) the relationship among traits, (d) the structural characteristics of particular traits, (e) the conceptual meaning of trait categories in the form of feature lists, and (f) the variations in the behavioral meaning of a trait category across (different) situational contexts. A lot should be learned from these kinds of analyses about the differences among trait concepts in their meanings, structures, and functions as person-descriptors.

Studying the categorization of behaviors as trait concepts across situations presupposes an understanding of the similarities and differences between various kinds of situations. In recent years, psychologists have paid increasing attention to characteristics of situations, and some taxonomies of situations (see, e.g., van Heck, this volume; Magnusson, this volume) and of types of persons within situations (Cantor, 1981; Cantor, Mischel, & Schwartz, 1981, 1982) have been recently proposed. We hope that within the next years even closer linkages between the taxonomies of person characteristics and situation characteristics will be established. Such a fusion between these still largely unconnected lines of research could provide substantial progress in the phenomenological description of individual differences in human behavior. It seems to us that a more complete and unified approach to social cognition is emerging, a perspective that regards both traits and situations as important, categorically organized constructs employed by people to summarize, understand, and predict events in the various domains of their life.

How do people arrive at statements like "Jane is friendly" and "I'm not smart enough to get into graduate school"? Research

addressing such questions should focus on the processes by which behavioral information is combined and categorized via particular trait terms. Such process-oriented research will be of major importance for understanding the differences between individuals in the way they construct and experience themselves, others, and the situations they face in life. Some semantic preferences in the construction of subjective experience are documented by the Kreitlers (this volume).

Although it has been known in psychology for decades that it is not so much the objective stimulus, but the subjective construction of the stimulus, that influences behavior (Kelly, 1955), personality theorists have remained hesitant about incorporating this assertion into their accounts of differences in individual behavior (see Mischel, 1980). It was only recently (e.g., Epstein, 1973; Mischel, 1973; Hetteema, 1979) that the aspect of personal construction has again been assigned a major role in personality theorizing. The "return of the self and personal constructs" (Mischel, 1981), the growing interest in the representation and processing of person information, the more frequent use of experimental-cognitive methods in the empirical study of personality, all indicate that the cognitive revolution has reached the psychology of personality. Unquestionably, it will be difficult to apply a cognitive-experimental methodology to the study of personality, as Glucksberg (1981) and Posner (1981) have pointed out, but the venture is worth trying. There is now some reason to believe that a comprehensive approach to personality may result in a reconciliation of the "two disciplines of scientific psychology" (Cronbach, 1957). There is movement in the muddled field of personality psychology. Although the results are not yet clear, it looks to us like progress.

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