



Individual Types: Subcultural or Transcultural?

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Introduction

In several branches of psychology, sociology, political science, international business, human resources management, and to a lesser extent anthropology, we now see a renewed or newly emerging interest in individual perceptual/cognitive/cogitative/behavioral types (abbreviated as IETs: individual epistemological types, or in some disciplines, mindscape types, or MTs)

In developmental psychology, one of the central questions is whether MTs are genotypically or prenatally phenotypically inborn or postnatally learned, and if learned, how and at which age levels. In educational psychology, one of the foci is on the individual's maturing understanding of context and complexity. In comparative psychology and ethology, an emerging interest is in the individual differences and interaction among individuals of different types, especially in primates. The research on this topic is rapidly expanding as a new branch of neuropsychology, neurosociology and evolutionary anthropology.

In business consulting psychology, the use of the heterogeneity of mindscape types is important in: (1) the matching between the individual mindscape types and the corporate culture of the firm; (2) allocation of human resources; (3) in the case of firms operating in foreign countries, to look beneath the surface of learned cultural stereotype behavior to find applicants or employees whose hidden mindscape types are compatible with and useful to the corporate culture of the expatriate firms.

In sociology, the study of individuals' self-heterogenization, i.e. the design of ego-identity by careful composition using heterogeneous elements including foreign elements, which are compatible with each person's mindscape type, is beginning. In mental hygiene, a new view is that in each culture, even in an ethnically pure culture, heterogeneity of individual mindscape types exists, and these individual types cut across cultural boundaries and are therefore transcultural, contrary to the widely held assumption that individual types must be subcultural. In this view, mental health is seen as follows:

Cultural differences consist in the way the individuals of some mindscape type become powerful for historical or political reasons and utilize, ignore or suppress the

individuals of other mindscape types. This is not an anti-cultural view, because many cultures utilize the heterogeneity of individual mindscape types. But if the individuals of some mindscape types are suppressed, they resort to various strategies for social or political survival. Examples of strategies are: (a) to form niches to avoid the powerful or official mainstream type; (b) to camouflage one's own mindscape type; (c) to intentionally switch back and forth between one's own type and feigning to be of the mainstream type; (d) reversible repression of one's own type into the unconscious; (e) irreversible repression; (f) alienation or withdrawal; (g) rebellion; (h) emigration. Migration for the purpose of cultural milieu selection to match the mindscape types is increasing even among the workers who are considered as mere labor force.

The author devised a new method "heterogram analysis" to analyze quantitative data to identify individual types that are transcultural. In cross-cultural psychology and sociology, the widely held assumption has been that individual types must be subcultural variations. With this assumption, the accepted procedure of analysis has been to compare cultures or social groups in terms of the means and standard deviations. In this process, the heterogeneity of individual characteristics within each culture or social group was made to disappear. Therefore I have devised a new methodology: Put all individuals of all cultures or all social groups, who are tested, in a common score space; examine whether there are clusters of individuals, each of which contains individuals from many cultures or social groups. If there are such clusters, they indicate individual types that are transcultural or transsocial. If there are no transcultural or transsocial clusters, divide the common score space into sections, and examine whether any section is transcultural or transsocial.

This article consists of four parts: (1) case studies; (2) heterogram analysis; (3) the link between the case studies and the results of the heterogram analysis; (4) the future role of general psychology.

Part I: Case studies.

Maruyama conducted in-depth case studies of mindscape types among scientists and professionals, as well as in arguments in public hearings of urban plan-

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ning in North America, Europe, Asia and Africa in the 1960s and 1970s, and identified some frequently found mindscape types. Though there can be as many mindscape types as there are individuals, the following four types and their mixtures accounted for about two-thirds of the population in most of the cultures.

H-type	I-type	S-type	G-type
homogenistic	heterogenistic	heterogenistic	heterogenistic
hierarchical	independent	interactive	interactive
classificational	random	pattern-maintaining	pattern-generating
universalist	individualist	mutualist	mutualizing
sequential	no order	simultaneous	simultaneous
competitive	unique	cooperative	cogenerative
zero-sum	negative-sum	positive-sum	positive-sum
opposition	separation	absorption	unfolding
extension	caprice	stability	evolution
one truth	subjectivity	poly-ocularity	poly-ocularity

In each individual, different aspects of his/her daily life are manifestations of the same underlying mindscape type, and are therefore interrelated. For example, an H-type individual understands things by classification, sees people in terms of hierarchy and rank-order, is competitive, and finds beauty in design unity by symmetry, repetition and similarity.

In a given culture during a given historical period, some type may become powerful and official, and the powerful type may change from period to period. A clear example can be seen in Japanese prehistory and history. The prehistoric Jomon culture which began 16,500 years ago was predominantly of G-type. The Yayoi culture which began 2,300 years ago was of S-type. The Yamato culture which arrived via Korea 1,500 years ago was of the hierarchical H-type. In some cases the dominant type may vary from a social class to another. For example during the Edo Period in Japan, the ruling class was of H-type, and their farmers' class was of S-type, while the merchants' class was of G-type.

The dominance of types in science theories underwent historical changes. The Newtonian physics was of H-type; the 19th century thermodynamics based on random movements of molecules was of I-type; the cybernetics of the 1940s and 1950s based on the concept of automated error correction was of S-type; the cybernetics of the 1960s which Maruyama initiated - using pattern-generating causal loops was of G-type. The subsequent development of non-equilibrium thermodynamics and self-organizing systems of the 1970s was also of G-type. Here you see that the science sequence was H-I-S-G, whereas the cultural sequence in Japan was exactly the opposite: G-S-H. In other words, the scientifically newest was the culturally oldest.

Because the mindscape types are logically different, persons with different mindscape types may consider one another to be illogical. For example, for H-type persons the concept of personal integrity consists in adhering to absolute principles regardless of the situation. For I-type persons, personal integrity consists in adhering to one's own principle regardless of what others say or think. For S-type persons, personal integrity consists in behavior and opinion which is congruent with the social situation and context. For G-type persons, personal integrity consists in inventing new activities which generate mutual benefit in new situations and context. Therefore persons of different mindscape types consider one another to be illogical and immoral.

Part II: TOB Tests and heterogram analysis.

In the early 1990s Maruyama began to design pictorial tests around the notion of nonredundant complexity (which corresponds to Types S and G) versus symmetries and/or repetitions (which correspond to Type H) (Maruyama 1992). The final 42 stimuli in TOB Test II are shown in Figure 2-1 (Maruyama 1995). They are based on the following rationale. Aesthetic designs, architecture and landscape architecture are expressions of mindscape types. For example, Gothic architecture, baroque music, Forbidden City in Beijing and Versailles Garden are of H-type. Paintings by Picasso, compositions by Stravinsky, traditional Japanese gardens and floral Ikebana, Pergamon in Greece are of G-type and S-type. In Figures 2-2 and 2-3, heterogeneous elements interact to enhance the individuality of each element. In contrast, in Dutch tulip gardens, flowers are used as color carpets, in which the individuality of each flower is lost. In the 42 stimuli in Figure 2-1, nonredundant complexity, redundancy (repetitions), symmetry (horizontal, vertical, diagonal, rotational and color reversal) can be quantified.

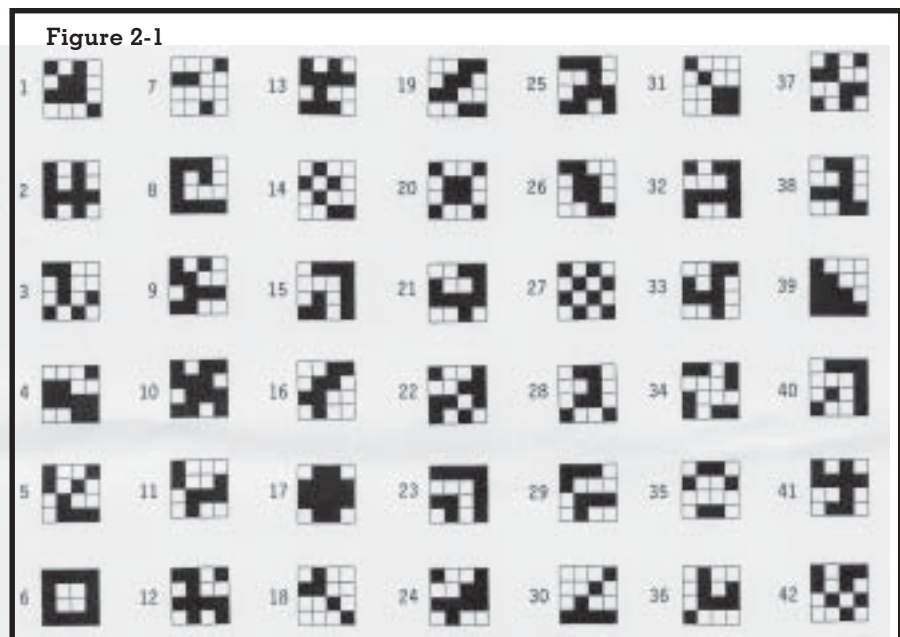




Figure 2-2



Figure 2-3

Figure 2-4 is a heterogram obtained by analyzing the data collected by Maruyama, Zankovsky and Fatehi in Russia, Japan, Germany, Mexico and Croatia. For each of the 42 stimuli, the subjects were asked to rate it on a seven-point scale between three pairs of adjectives: ugly/beautiful, interesting/boring, and simple/complex, and to indicate whether the stimulus had any meaning, and if so, to write the meaning, and to indicate whether the meaning was positive or negative, and rate the strength of the meaning on a five-point scale.

All subjects of the six countries were placed together in a common score space, and by a cluster analysis we found four clusters, each of which consisted of individuals of several cultures. The test consisting of the 42 stimuli was named "TOB Test" because we used them first in Tokyo, Brussels and Budapest.

Part III: The link between the case studies and the heterogram analysis.

In order to link the mindscape types obtained in case studies with the transcultural individual types found in the heterogram analysis, we tried several methods. First, we tried some existing methods, especially those which are used in correspondence analysis. However, these did not yield clearly distinguishing characterization of the clusters of the individuals. After many frustrating trials, I hit upon the idea of taking two stimuli as coordinates, to see whether any specific pair of stimuli would

yield distinguishing characterization of individual types. And indeed, we found that the pair of Stimulus #6 and Stimulus #22 produced a very interesting result, as shown in Figure 3 - 1.

Figure 3-1 has four tables, corresponding to the four transcultural individual clusters shown in Figure 2-4. Actually the Cluster IV consisted mostly of Azerbaijanians who were not included in the short version, used in this article, of Figure 2-4 which originally included Azerbaijanians. Figure 3-1 can be read as follows: It shows tallies as to how many individuals in respective clusters rated the two stimuli in each square of the matrix. For example, take Cluster II. The number "5" at the top left corner indicates that five individuals in Cluster II rated Stimulus #6 as most ugly and Stimulus #22 as most beautiful.

Cluster I rated both #6 and #22 as ugly; Cluster II rated #6 ugly and #22 beautiful. Cluster III rated #6 ugly but wide-spread on #22. Cluster IV had scattered distribution on both #6 and #22. Cluster II came close to our notion of mindscape types S and G. This made a link between the mindscape types found in case studies and the individual clusters identified in heterogram analysis.

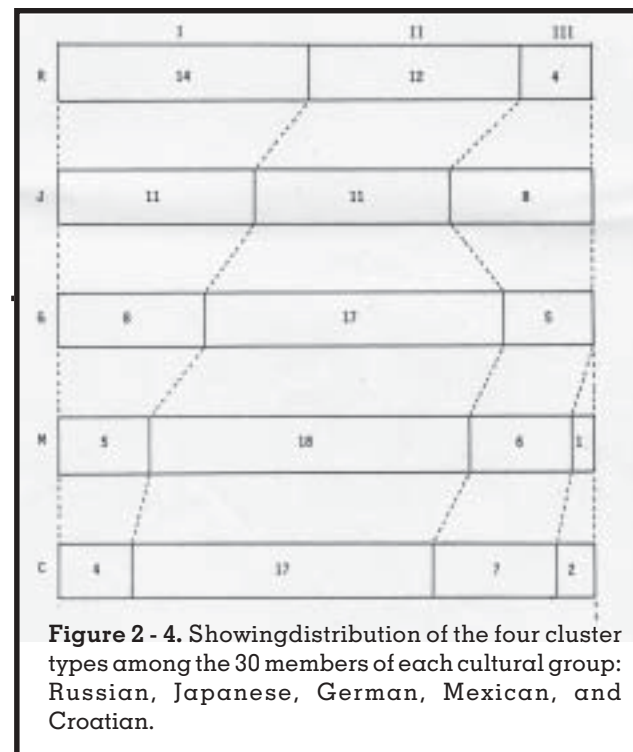


Figure 2 - 4. Showing distribution of the four cluster types among the 30 members of each cultural group: Russian, Japanese, German, Mexican, and Croatian.

Though much more work remains to be done, we accomplished the important first step. Note that Cluster II consisted of 12 Russians, 11 Japanese, 17 Germans, 18 Mexicans, and 17 Croatians. (See Figure 2-4.)

Part IV: Future role of general psychology.

There are several ways to be a general psychologist. One way is to be encyclopedic, as exemplified by Philip Zimbardo. Another way is to discover relations between seemingly unrelated parts of psychology, which has been the traditional strength of the Division of General

Psychology. The third way is to outbreed beyond the boundary of psychology into other disciplines and create new frontiers of inquiry. All these directions are needed. However, the third direction is relatively unexplored, and I would like to give some specific examples of how this can be carried out at the present moment and in a near future. A basic change is occurring in neuropsychology and neurosociology, from the past focus on brain injury, mental disorder, effects of drugs and chemicals to the analysis of complex thought processes in normal individuals, from the neuron studies to the study of relations between different parts of the brain, from the assumption of the sameness of brain functioning in all individuals to qualitative individual differences, from remedial studies to longitudinal developmental and evolutionary studies. For example magnetoencephalography has become capable of identifying individual cerebral response patterns to complicated stimuli such as various sequences of music harmony chords, called "harmonic progressions" in music (Kölsch 1999). Neuropsychology is used also in the study of art forms such as painting and sculpture (Zeki 2001). Because technology such as magnetoencephalography can be used with human infants as well as animals, longitudinal, developmental and evolutionary studies of heterogeneity of individual

mindscape types, which already are known to be transcultural but may turn out to be also transspecies, will become possible within a few years. The evolutionary advantages of interaction between different mindscape types may become clarified. I have been publishing on the heterogeneity of mindscape types since 1960. But mindscape types are not as tangible as a discovery of a new galaxy, a new black hole or a new gene, and therefore do not make a headline in science news. But magnetoencephalography will make mindscape types visible and tangible. Another frontier is experiments on lati-evolution: evolution of earth-originated humans and animals outside the Earth, especially in *environments where the gravity is stronger than on the surface of the Earth, in which the body movements become faster and body size smaller, affecting the nerve system and the mind. Experiments in stronger gravity environments can be conducted on the Earth by combining the Earth gravity and artificial centrifugal force.*

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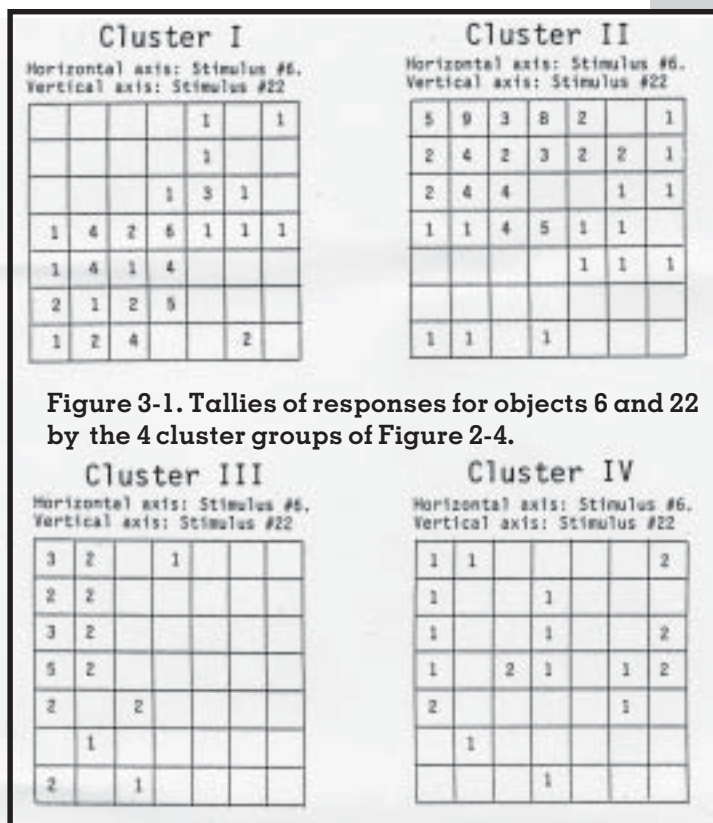


Figure 3-1. Tallies of responses for objects 6 and 22 by the 4 cluster groups of Figure 2-4.

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