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PERCEIVED LOCUS OF SELF IN TWO CULTURES[1]

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ABSTRACT. Locus as well as frequency and extent of change of locus was studied at one North American and two Latin American universities under four stimulational conditions using 40 students of each sex at each university. On most measures one Latin university was more similar to the Anglo than to the other Latin university. Differences between universities are regarded as sampling differences, and transcultural validity of the findings is affirmed. No consistent relation was found between perceived self-locus and several personality measures.

RESUMEN. En esta investigación las localizaciones del sí mismo (yo) como sujeto y el sí mismo (yo) como objeto fueron estudiadas en individuos procedientes de culturas latinoamericanas y estadounidenses. En tres universidades de diferentes países (University of Florida, E.U., Universidad de Costa Rica, y Universidad del Valle, Colombia) 40 alumnos y 40 alumnas contestaron varios cuestionarios acerca de la localización corporal de varios aspectos del sí mismo, bajo distintas condiciones de estimulación física. Datos sobre tres aspectos de la localización del sí mismo fueron obtenidos: la frecuencia de localizaciones del "yo" en la cabeza, los cambios o variaciones en las localizaciones del "yo", y la relación entre el lugar de estimulación y las variociones en la localización del "yo". Los analisis estadísticos de los datos obtenidos indican que no hay diferencia en localización del sí mismo atribuible a las distintas culturas de los tres grupos de estudiantes investigados. La mayoría de los estudiantes localizaron el sí mismo en la cabeza. La estimulación física por medio del tacto en diferentes partes del cuerpo produjo cambios en la localización del sí mismo. No se encontró relación alguna entre la localización del sí mismo y las varias medidas de personalidad obtenidas de los individuos estudiados.

The referent of the first person singular pronoun is the subjective center of the world, and the individual structures his world along dimensions which his self-structure permits. The aim of this study is to explore one aspect of self-structure. The experience of one's body and the internal dialogue one carries on with himself, as well as perception and communication generally, assumes a self-referent as one pole in the perceptual and in the communication process. The reflexive character of self-perception poses interesting questions about how and where one localizes the perceiver and the perceived since both are the same person. Is one higher and the other

lower or do they share or alternately occupy the same space or shift with circumstances? Where is the perceiver's point of reference when he says that his hands clasped overhead are "above" and that his navel is "below"?

Such questions prompted a recent study of the effects of shifts in attentional focus on the locus of self (Dixon, 1972). The present investigation tests the generality of the findings of that study by testing their transcultural validity. It also explores the relation of differences in self-locus to other aspects of personality. Since an earlier omnibus attempt based on oblique factor measures of personality did not hit upon any clearly related personality variables (Deldin, 1970), this study will address itself to more orthogonal factors and to some experimental measures.

The terms, subject-self and object-self, will be used analogous to the grammatical use of the terms, subject and object, in a reflexive sentence. Thus, in the reflexive statements, "I pinched myself" and "I feel my heartbeat," the term "I" will refer to the subject, observer, experiencer, agent, or judge; and "myself" or "my heartbeat" will refer to the object aspects of self which are reflectively observed, experienced, acted upon or judged. Since subject-self is apprehended as more central than what is perceived, including perceived object-self, the locus of subject-self is inferred from the reference points used in locating various aspects of object-self.

Several investigators have located this central subjective focal point in the mid-vertical forehead as a sort of cyclopean eye (Claparede, 1924; Critchley, 1950; Sherrington, 1941), but the blind-deaf Helen Keller observed that, if someone had asked her where her self was when she first learned finger language, she would have located it in her hands (Keller, 1920). This suggests that locus of self has a functional focus which may shift with circumstance. In effect the previous study on attentional focus confirmed that, under varying tactual self-stimulation, locus of subject-self tends to change consistent with site of self-stimulation.

Fortunate circumstance allowed the senior investigator to visit the University of Costa Rica in San José and the University del Valle in Cali, Colombia and to interest his colleagues there in a study to test the transcultural validity of the findings. Is there reason to believe that there may be cultural differences or is it more likely that the locus of subject-self transcends cultural variations? Beliefs about the seat of the soul or cathexis on certain body parts immediately suggest themselves as possible cultural variables but no clear evidence is available to suggest that Anglos and Latins differ in this respect. To the extent that language is a culture carrier, it has been observed that Spanish makes greater use of the reflexive grammatical form than does English, but it is difficult to generate hypotheses regarding self-locus which are strictly deducible from this fact (Dixon,

Garcia & Sigvartsen, 1968). Rather than concentrate on specific factors, it was decided that, at this early stage of investigation of the problem, the better strategy might be to do a gross comparison of the three state universities (Florida, Costa Rica and del Valle) and then consider more specific studies based on what the present study might reveal. It may be noted that the inclusion of two different Latin American universities reduces the chance that any obtained difference will be erroneously attributed to Anglo-Latin differences. Another possible source of difference is sex, since Himelstein (1964) has noted a trend for males to localize relatively more frequently in the head. Therefore, self-localization will be treated separately for sex as well as university.

Three aspects of self-localization will be measured: the frequency of head locus, the extent of change of locus, and the relation between site of stimulation and the direction of change of locus. Frequency of head locus, and the extent of change in locus of subject-self will be related to extroversion, neuroticism and to experimental measures of depersonalization, dream frequency, and the evaluative meaning of subject-self and object-self in various contexts.

SUBJECTS

At each university 40 men and 40 women students, mostly sophomores and juniors in the social sciences, participated in the study as volunteers. Each student was seen individually. Three friends, named by the student, also participated by filling out a questionnaire, "*Who is (name of student)?*" identical to one filled out by the student except phrased in the third rather than the first person.

PROCEDURE

Five tasks were presented, usually in the order listed below. Each task was translated to Spanish independently by two translators, then independently re-translated into English. Differences were resolved in conference.

1. "*What are your attitudes toward yourself?*" This is a slight adaptation of Eysenck's 48-item Personality Inventory (1959) which yields his more or less orthogonal factors "E" (extraversion-introversion) and "N" (normal-neurotic). This measure was selected to determine whether differences and changes in self-locus are more related to "E" or "N." Before answering the questionnaire the student named three friends, as indicated above, to fill out a similar form. This probably provides some control for different response sets. Discrepancy between the two sets of scores also yields a measure of the extent to which we report seeing ourselves as friendly others report seeing us.

2. *I and myself.* This is an experimental scale which consists of five reflexive statements (I see myself, I talk to myself, I feel myself, I blame myself, I praise myself), and the task is to rate "I" and "myself" independently in each sentence on a common set of 7-point scales. That is, the same scales are used to rate "I" five times and "myself" five times, once in each sentence context. The scales are happy-sad, good-bad, relaxed-tense, impulsive-reflective, active-passive, careful-careless, light-heavy, irresponsible-responsible, slow-fast, reckless-cautious. The student is asked to assume that the statements are his own. The difference between the sum of the "I" and "myself" ratings will be used as a measure of the extent to which the individual distinguishes subject and object in this context.

3. *Self-experience.* Ten items constitute a common core of depersonalization experiences selected from a larger group of items which had been subjected to factor analysis (Dixon, 1963). The score is the number of items checked which indicate that the checker agrees that he has had one or more similar experiences during the past two weeks. It is assumed that these experiences involve some degree of subject-object change, e.g., "I seemed to be standing apart from myself observing myself."

4. *Dreams.* The number of nights the student remembers having dreamed during the past two weeks is the score for this measure. Frankly experimental, the assumption is that greater dream recall may relate to greater self-awareness and thus possibly relate to differences in experienced change of self-locus.

5. *Self-localization.* This is the task of central importance. Subject-self locus is determined indirectly by a series of tasks which require concentration on a particular body part and tactual self-stimulation of the part. The student is then asked to locate that aspect of object-self as above or below and then shift his attention to the point of reference (subject-self) he used to locate that body area as above or below. He remains in an upright seated position with eyes closed during the exercises and body stimulation is in the median plane. Two orders of presentation, alternated by subject and sex, help control for order effects. One order is (a) finger pressure on navel, (b) tongue pressed against palate, (c) hands clasped together on lap, (d) clasped hands extended directly overhead. The other order is (c), (d), (a), (b). At the University of Florida (UF) two student assistants, one male and one female, presented the tasks to half of each sex and to half of each order of presentation. At the University of Costa Rica (UCR) there were four assistants, two male and two female, while two males and three females collected similar data at the Universidad del Valle (UV).

Locus of subject-self is categorized as Head or as Other (trunk or whole body). Thus a person may score from zero to four head localizations. Ex-

tent of change in locus during the four exercises is scored on a scale from one to four where one indicates no change during the four exercises and four represents shifts between Head and Other as well as change within one or both categories. A score of two represents change within one category and three indicates change from one category to another without change within either.

RESULTS

Tabular data are presented first for overall frequency of Head localization by university and sex, then frequency of Head and Other localization as a function of the four stimulating conditions, followed by extent of change in locus for the students of each sex at each university. Then the relation between frequency of Head localization and the several other personality measures will be presented followed by similar correlations for extent of change in self-locus.

TABLE 1

Frequency of Subject-Self Head Localization of Males and Females at Three Universities

	UCR		UF		UV	
Frequency	M	F	M	F	M	F
4	8	19	11	9	21	18
3	15	5	9	12	9	6
2	6	8	10	15	5	5
1	7	5	9	3	2	7
0	4	3	1	1	3	4

Table 1 shows the frequency of Head localization. A test of the overall differences among the six groups by a completely randomized design yields an F equal to 1.88, which fails to reach stastical significance. By arbitrarily defining Head localizers as those who localize in the Head at least three out of four occasions, it may be noted that about half of the UCR and UF students and two-thirds of the UV students may be classified as Head localizers under the conditions of this study. A comparison of the difference between proportions of Head localizers at the three universities does not approach statistical significance.

Shifting from number of persons to frequency of Head and Other localizations under each stimulating condition, some simple summations confirm what a glance at Table 2 suggests. Overall there are twice as many Head localizations (646) as Other (314). At all three universities Head is the most frequent locus for both sexes. Head frequency is greatest at UV

TABLE 2

Frequency of Head and Other Localizations of Males and Females at Three Universities Under Four Stimulating Conditions: P — palate, O — overhead, N — navel, L — lap.

	HEAD						OTHER					
	UCR		UF		UV		UCR		UF		UV	
Condition	M	F	M	F	M	F	M	F	M	F	M	F
P	33	36	33	34	35	30	07	04	07	06	05	10
O	26	27	27	33	32	29	14	13	13	07	08	11
N	20	25	20	21	30	24	20	15	20	19	10	16
L	20	24	20	17	26	24	20	16	20	23	14	16

(230 out of 320), next at UCR (211) and least at UF (205) but the differences do not reach statistical significance. UCR and UF are more similar to each other than to UV in 10 of 16 possible comparisons (Site X Sex X Locus). UCR and UF males are somewhat more similar in all 8 same-sex comparisons, while UCR and UV females are somewhat more similar in 6 of 8 possible comparisons.

Table 2 also shows that the stimulating conditions are effective in changing the perceived locus of subject-self. Palate and Overhead sites (upper body stimulation) yield more frequent Head localizations than Navel and Lap sites (lower body stimulation) with no inversions of this order for either university or sex. The difference between proportions (Z equals 3.58) is significant beyond the .001 level. The proportions of the 646 Head localizations associated with upper body stimulation compared to lower body stimulation are: UF equals 62:38, UCR equals 58:42, UV equals 55:45. The proportions of the 314 Other localizations associated with upper compared to lower body stimulations are: UF equals 29:71, UCR equals 35:65, UV equals 38:62. Thus UF students change perceived locus of subject-self relatively more frequently and UV students less so as a function of site of stimulation.

TABLE 3

Extent of Change in Site of Localization of Subject-Self of Males and Females at Three Universities

	UCR		UF		UV	
Change Score	M	F	M	F	M	F
1	9	22	2	4	14	18
2	4	0	12	6	10	4
3	17	9	3	4	7	8
4	10	9	23	26	9	10

TABLE 4

Relation Between Two Measures of Self-Locus (Frequency and Change) and Other Personality Measures

	Product-Moment Coefficients of Correlation											
	Frequency of Head Locus						Extent of Change of Locus					
University	UCR		UF		UV		UCR		UF		UV	
Personality Measures	M	F	M	F	M	F	M	F	M	F	M	F
"E" Self-report	13	07	05	-14	-15	-01	13	-17	24	25	05	02
"E" Others' Report	03	14	24	-10	-18	11	-07	-31	-25	15	-02	-02
"N" Self-report	-10	-43	02	-03	-05	-13	-10	16	00	11	12	20
"N" Others' Report	-21	-25	-38	-24	-16	07	16	17	25	19	11	-13
"N" Self-Others Diff.	07	-27	24	15	-15	-27	-27	03	-15	-04	00	22
Self-experience	-23	01	02	-20	25	00	20	-01	08	08	-24	-06
Dreams	-31	11	34	-40	24	24	31	-08	-14	32	-09	-16
"I-Myself" Diff.	-06	08	-10	-18	-11	-26	31	07	34	21	17	44

Extent of change provides a measure of stability and/or differentiation of locus, since a score of 1 may represent a consistent localization behind the eyes or a consistent locus in the heart region during the four exercises, whereas a maximum score of 4 means a shift in locus between Head and Other as well as change within one or both of these categories. Table 3 shows that twice as many UF students receive a maximum score as those at the other two universities, and that the most pronounced sex differences are found at UCR with women maintaining greater consistency in locus. Overall, however, UV shows the lowest change. UF is more similar to UCR than to UV in overall change score. The differences between groups, tested by a completely randomized design, yields an F equal to 7.55 which, with 5 and 234 *df*, is significant beyond the .001 level.

Table 4 shows the relation between perceived locus of subject-self and other measures of personality or self-structure, namely, extraversion-introversion, neuroticism, the difference between self-report and others' judgments on neuroticism, self-experience (depersonalization scale), dream frequency and subject-object ("I-Myself") difference. Two different measures of perceived locus of self are correlated with the other personality measures, namely, frequency of Head localization and extent of change in site of locus.

With 39 *df* a coefficient of .39 is required for significance at the .01 level. Inspection of the 48 correlations between frequency of Head locus and the eight personality measures reveals two coefficients which meet this criterion, a coefficient of −.43 between frequency of Head locus and self-reported neuroticism for females at UCR, and one of −.40 with dream frequency for females at UF. The 48 correlations between extent of change of locus and the same personality measures yields one coefficient of .44 between extent of change and subject-object ("I-Myself") difference for females.

There appears to be no consistent sex or university relationship between either of the measures of self-locus and the other personality measures. Therefore a conservative evaluation would question the significance of only 3 out of 96 coefficients which reach statistical significance.

DISCUSSION

Since one of the Latin universities, UCR, is more similar to UF than to the other Latin university, differences in locus of subject-self and the degree of shift in locus cannot be attributed simply to Anglo-Latin differences. Indeed, the transcultural validity of the findings for both sexes is confirmed by the major similarities and minor differences. The head region is the most frequent locus of subject-self for both sexes at all three univer-

sities, and both sexes at each university show a significant tendency to shift locus as a function of object-self stimulation. The extent of shift from one category to another and within each category is greater at UF than at UCR or UV and may suggest a cultural difference or a sampling difference within the two cultures since UF is the only North American sample.

The attempt to relate differences in self-locus to other personality differences must be regarded as a failure. Some positive findings at one university are suggestive until compared with the other two. Thus dream frequency is negatively related to head locus among women and positively related among men at UF. This relation is reversed at UCR, while both sexes at UV show a slight positive relation. The question whether extraversion, introversion, or neuroticism is more related to self-locus has to be answered largely in the negative for all, but "N" shows a more consistent (negative) relation to Head locus than does "E". Likewise, the experimental measures failed to prove their value, although subject-object ("I-Myself") difference does show a consistently positive relation to extent of change in locus at all universities and with both sexes. A majority of students regarded "I-Myself" as the most difficult task and it is likely that this factor reduced a more sensitive differentiation.

The consistent and confirmed transcultural findings regarding self-locus and change in locus contrast with the teasingly inconsistent and not quite significant relations to other personality measures. The major question remains unanswered: what is the functional significance, if any, of the demonstrated differences in self-locus phenomena? Before speculating about directions of future efforts, it should be reported that frequency of head-locus and the extent of locus-change show a moderately negative average correlation of $-.52$ and hence may be considered as related but distinct measures rather than two measures of the same thing.

It seems reasonable that Helen Keller would be an Other localizer, while a visually and auditorily and verbally "face" dominant person would relate to the world more from a Head orientation. Closely related may be the question of strength of body cathexis or emotional investment in a particular body area. The fact that no gross sex differences were found should not discourage further efforts in this direction since college men and women are probably not representative of the several dimensions which distinguish the sexes. Indeed sex should not be considered alone in considerations of body cathexis.

The tendency to shift locus may be related to a more general cognitive skill in differentiating and integrating experience at a conceptual level in an unstereotyped way. It may be profitable to relate changes in self-locus to the work of Fisher (1968), Wapner and Werner (1965) and Witkin *et al.*

(1962) on body perception and cognitive functions. Experimental changes in body perception, such as might be experienced by astronauts under gravity and gravity-free conditions, might be usefully related to changes in subject-self locus. Drug-induced altered states of consciousness provide another avenue of exploration.

The structure of one's belief system may also be a significant factor in determining shift of locus. In this connection it can be reported that several students who shifted locus during the exercises remarked spontaneously that they had always conceived of the self as being located in the head, and some expressed puzzlement or amusement at the discrepancy between their beliefs and their experience of change in locus.

Finally, it should be observed that confirmation of the transcultural validity of the self-locus phenomena explored in this study includes only three samples of two groups within a larger Western culture. It is clearly a human phenomenon and to what extent it shows non-western cultural variants remains to be determined. Likewise the failure to find clearly associated personality factors should not discourage further attempts. Neither our dimensions nor our measures are so well developed that we can dismiss the likelihood of a relation between any aspect of self-perception and other aspects of personality.

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FOOTNOTES

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