Digital Commons @ CIIS

2024

Assessing Bodily Location of the Egocenter: Testing Content Validity of the Dispositional Self-Location Questionnaire

Marie Sester
University of West Georgia, Carrollton, Georgia

Recommended Citation

Assessing Bodily Location of the Egocenter:
Testing Content Validity of the
Dispositional Self-Location Questionnaire

Marie Sester[1]
University of West Georgia
Carrollton, GA, USA

This study reports on preliminary work to develop a questionnaire for identifying self-location and test it against self-location as indicated on a human silhouette. Self-location, also known as the egocenter or the seat of attention, is the sense of where the "I" or subject is experienced relative to the body. Determining the location of the sense of self is of value since variations in self-location have been associated with differences in attitudes, motivations, and behaviors. A 14-item questionnaire was developed based on demonstrated characteristics of head-located self and heart-located self. Results showed greater than 90% congruence between self-location as determined by this questionnaire and as indicated by marking self-location graphically on a silhouette. A revised version of the questionnaire is presented in preparation for further validation.

Keywords: *self-location, egocenter, seat of attention, head-located self, heart-located self*

This study reports on preliminary work to develop a questionnaire for identifying self-location based on behaviors associated with different bodily locations of the egocenter and test it for content validity against self-location as indicated on a human silhouette. Self-location, also known as the egocenter, is the bodily location where the "I" or subject is experienced. Hartelius et al. (2022) have used the term *seat of attention* to indicate that self-location is not a target of attention, but rather what is experienced as the source of that attention. Determining self-location is of value since variations in bodily location of the egocenter have been associated with differences in attitudes, motivations, and behaviors.

The location of the egocenter has been measured in various ways. A commonly used method asks participants to arrange pairs of stimuli so that they point toward themselves; lines drawn through two such sets should intersect at the subject's self, whether those stimuli are visual (Howard & Templeton, 1966), auditory (Neelon et al., 2004), or kinesthetic (Shimono et al., 2001). Other studies have asked participants to point at the location of self relative to the body (e.g., Bertossa et al., 2008), identify the location of self on a human silhouette (Limanowski & Hecht, 2011; Hanley et al., 2021), describe the location of self (Anglin, 2014), or report which of two items is closer to the self (Starmans & Bloom, 2012).

Self-location is most commonly reported to be in the head or the area of the chest associated with the heart (e.g., Hanley et al., 2021). As compared to a heart-located self, a head-located self has been associated with lower intensity of affect, less empathy, less emotional warmth, less attraction to intimacy-related activities, greater disagreeableness, greater reliance on rational thinking, and higher academic performance (Fetterman & Robinson, 2013); a head-located self has also been found to have greater association with independent self-construal than with interdependent self-construal (Adam et al., 2015). There is modest representation of body areas other than head and heart in reports of self-location (e.g., Anglin, 2014; Hanley et al., 2021; Limanowski & Hecht, 2011; Starmans & Bloom, 2012).

Studies that force participants to choose one location of self naturally find a single self-location, and one study reported that most participants agreed with the notion that self was situated in just one location (Limanowsky & Hecht, 2011). A recent

study that permitted reporting of self-location in more than one area found that 70% of respondents located their sense of self in more than one body region, and that a widely distributed sense of self as well as self-location in the torso were associated with greater psychological well-being than self-location in a small area of the body or in the head (Hanley et al., 2021). Irvin et al. (2023) found that self-location is malleable, and that participants reported greater well-being on heart-located days than days they were head-located.

Another recent study found that participants were able to intentionally shift self-location rapidly and with ease, and regulate whether the sense of self was point-located or situated across a wider area of the body (Hartelius et al., 2022). These researchers also demonstrated that each of 11 self-locations—or attentional stances—produced a pattern of cortical activity that was characteristic and unique in at least one frequency band when tested with high-density whole-head EEG; more importantly, repetitions of the same attentional stance showed that cortical activity in beta and gamma frequencies showed strong trial-on-trial correlation, indicating that returning to an attentional stance recreated highly similar patterns of activation in those bands. This suggests that self-location is associated with objective changes in neural activity.

There are several potential shortcomings with current methods of establishing self-location. Crucially, self-location has been demonstrated to be highly malleable. Irvin and colleagues (2023) reported on three studies in which daily measures of self-location was reported to be in one of four self-locations: head, heart, and two intermediary points. Given the degree of reported fluctuations, intraclass correlation coefficients (ICCs) were calculated to determine the degree of durable between-subject difference; results suggested that just 18-30% of variation was attributable to stable differences between participants (ICC $= .18 - .30$). For this reason, the self-location on a particular day may not reflect where a person most commonly tends to self-locate. In addition, for some individuals a psychological testing context may induce a shift toward head-located self, and reporting of self-location may be influenced by a desire to identify oneself with qualities typically associated with head

or heart. These concerns led to development of a questionnaire to identify dispositional self-location and conduct an initial test of accuracy by comparing results of this questionnaire with those of a self-location measure graphically indicating the location of self on a human silhouette.

Method

This comparison study tested participants on a graphical measure in which they were asked to mark the location of their experience of self on a human silhouette, and asked to respond to a questionnaire designed to determine the body location of their egocenter as indicated by tendencies associated with a head- or heart-located self, and the bodily location of various experiences thought to occur in close proximity to self.

Participants

Participants were adults of any race, sex, and educational level age 25 to 65 living in the United States, fluent in spoken and written conversational English, not taking psychotropic recreational or medical substances, and identified by a selection questionnaire as self-located in either heart or head. Individuals were excluded if they did not meet the inclusion criteria or self-reported a current diagnosis of a serious psychiatric or neurological disorder such as psychotic disorder.

Recruitment

Participants were recruited through Qualtrics® participant panels and notices posted on social media. Respondents through Qualtrics® completed the DSLQ-P, and on that basis were automatically assigned to either the head-located or heart-located subsample; unassigned individuals scoring between -4 and +4 were disqualified from the study. The number of individuals disqualified in this way was not available from Qualtrics. Qualifying participants were also assigned to an age bracket: 25–34, 45–54, or 55-65, and the recruitment process continued with incremental selections of 10 candidates until the heart-located and head-located groups were matched by gender, age, and level of education. Applicants recruited through social media were qualified and tested using the same instruments as those recruited through Qualtrics®.

Instruments

Two instruments were used for this portion of the study: the DSLQ, which is a questionnaire based on evidence of behaviors associated with head- and heart-located egocenters, respectively, and a Somatic Phenomenology (SP) Body Map.

Provisional Dispositional Self-Location Questionnaire (DSLQ-P; Appendix A). The DSLQ-P is a 14-item instrument constructed based on findings by Fetterman and Robinson (2013) and Adam et al. (2015) demonstrating characteristic differences in self-reported head-located and heart-located individuals (e.g., rational vs. emotional, interpersonally cold vs. warm; 4 items), a direct question about self-location (1 item), and questions formulated to assess the bodily location of cognitive processes closely associated with self (caring, authenticity, closeness, decision-making, empathy, strong conviction, experience of beauty, knowing, and strong interpersonal connection; 9 items). Each multiple-choice question asked respondents to select one of two to four possible responses: one representing the response expected from a heart-located individual, one reflecting the response expected from a head-located individual, one indicating another organ in the torso, and one indicating "Somewhere else or don't know." Heart-related responses are scored +1 points, head-related responses scored –1 points, other responses are scored 0. For example, Item 13 asks: "When it comes to knowing, which part of your body do you trust the most?"; choices were between Liver, Heart, Brain, and Somewhere else or don't know," for which the scores are 0, +1, -1, and 0, respectively. Possible scores range from +14 to -14. Individuals with a score of +5 or higher are assessed as heart-located, and individuals with a score of -5 or less are assessed as head-located. Participants scoring between -4 and +4 are considered to have variable self-location. No previous psychometric studies of this measure have been conducted.

Somatic Phenomenology Body Map (SP Body Map). This assessment was compared to a graphical mapping of the location of self, using a Somatic Phenomenology Body Map (SP Body Map; Hartelius, 2021). Somatic phenomenology is a research method for reporting body-located qualitative experience in a graphical form that can be quantified. For this study a human silhouette was divided into seven body zones (head, chest, right arm, left arm, abdomen, pelvis, and legs). Participants were asked to click in the zone where they felt their self was located. Identification of self-location in the chest was scored as +1, and self-location in the head was scored as zero.

Procedures

All participants completed a measure asking them to indicate where their self was located on the SP Body Map.

Data Analysis

Sample size was determined by power analysis, with the criterion that each of two groups of 100 participants would have a Cohen's effect size of 0.5, allowing the use of p value in hypothesis testing. Data were imported from Qualtrics® and supplemented with results from the social media group, and SPSS v.27 was used for data analyses. The False Discovery Rate (FDR) was applied to adjust for multiple comparisons, thus testing for Type I errors. Basic descriptive data were also computed for demographic and scale variables. The SP Body Map was expected to show congruence with the DSLQ scores, as evidence of the latter questionnaire's content validity.

Results

A sample of 218 participants (107F/110M/1X) aged 25–65 (M = 47) was recruited for the study, 208 of these through Qualtrics® (101F/106M/1X), and 10 through social media (6F/4M). When analyzed by self-location (heart vs. head) there were no significant between-group differences in age, gender, race, education, or income bracket: Gender: $X^2(2) = 0.37$, $p = 0.848$; Age: $X^2(2) = 0.196$, $p = 0.907$; Race: $X^2(2) = 7.606$, $p = 0.179$; Education: $X^2(2) = 1.999$, $p = 0.849$; Income: $X^2(2) = 0.626$, $p = 0.731$ (see Table 1a). Religious identity was similar between both groups, showing evidence of remaining relatively stable over time, with some decrease in identification with Christianity and increase in identification as "Spiritual but not religious" and "Other or none" (Table 1b). No demographic factors appeared to be of relevance for the study.

Characteristic	Head Group			Heart Group			Full Sample	
	n	%		*n*	%		*n*	%
Gender								
Female	51	49.51%		56	48.7%		107	49.09%
Male	51	49.51%		59	51.3%		110	50.45%
Other	1	0.98%		-	-		1	0.46%
Total *n*	**103**	**100.00%**		**115**	**100%**		**218**	**100.00%**
Age								
25–34								
Female	18	17.47%		12	10.44%		30	13..76%
Male	9	8.74%		20	17.39%		29	13.30%
Total	27	26.21%		32	27.83%		59	27.06%
35–54								
Female	9	8.74%		22	19.13%		31	14.22%
Intersex	1	0.97%		-	-		1	0.46%
Male	26	25.24%		15	13.04		41	18.81%
Total	36	34.95%		37	32.17		73	33.49%
55–65								
Female	24	23.30%		22	19.13%		46	21.10%
Male	16	15.54%		24	20.87%		40	18.35%
Total	40	38.84%		46	40.00%		86	39.45%
Total *n*	**103**	**100.00%**		**115**	**100.00%**		**218**	**100.00%**
Educational Level								
High School or GED	46	44.66%		49	42.61%		95	43.58%
Associates or Technical	21	20.39%		19	16.52%		40	18.35%
Bachelors Degree	20	19.41%		28	24.35%		48	22.02%
Masters Degree	15	14.56%		17	14.78%		32	14.68%
Doctoral Degree	1	0.98%		1	0.87%		2	0.91%
Other Degree	-	-		1	0.87%		1	0.46%
Total *n*	**103**	**100.00%**		**115**	**100.00%**		**218**	**100.00%**
Income								
Lower: Less than $50k / yr	52	50.48%		56	48.70%		108	49.54%
Middle: $50k–$99,999 / yr	32	31.07%		41	35.65%		73	33.49%
Higher: $100k and up / yr	19	18.45%		18	15.65%		37	16.97%
Total n	**103**	**100,00%**		**115**	**100.00%**		**218**	**100.00%**
Race								
Asian	-	-		2	1.74%		2	0.92%
Black or African American	13	12.62%		14	12.17%		27	12.39%
Native American or First Nations	-	-		1	0.87%		1	0.46%
Pacific Islander	-	-		-	-		-	-
White or Caucasian	81	78.64%		82	71.30%		163	74.77%
Latino or Hispanic	-	-		5	4.35%		5	2.29%
Multiracial	9	8.74%		11	9.57%		20	9.17%
Other	-	-		-	-		-	-
Total *n*	**103**	**100%**		**115**	**100%**		**218**	**100%**

Table 1a. *Demographic Characteristics of Participants: Gender, Age, Education, Income, and Race*
Note. None of these demographic categories had statistically significant differences across groups. Gender: $X^2(2) = 0.37$, $p = 0.848$; Age: $X^2(2) = 0.196$, $p = 0.907$; Race: $X^2(2) = 7.606$, $p = 0.179$; Education: $X^2(2) = 1.999$, $p = 0.849$; Income: $X^2(2) = 0.626$, $p = 0.731$.

As expected, congruence in reported self-location between the two measures was high: in the group identified as heart-located by the DSLQ-P, 90.43% reported the chest as their self-location on the SP Body Map, with a high confidence level ($p < .00005$) and a medium effect size ($\eta^2 = 0.68$); in the group identified as head-located, 88.34% ($p < .00005$) self-identified as head-located on the SP Body Map (Table 2). The response options for the distractor response of "Liver" and the neutral response of "Somewhere else or don't know" were not relevant for the comparison and were excluded from the calculation.

A few answers to the location of self on the body maps differed from the answers provided by the DSLQ-P scoring. In the Head group, 7 participants (6.80%) located their self in the heart (upper torso), 4 participants (3.88%) located their self in the lower torso, and 1 in the legs (0.97%). In the Heart group, 6 participants (5.22%) located their

self in the head, and 5 participants (4.35%) located their self in the lower torso.

Analysis of congruence between individual DSLQ-P questions and score-based self-location revealed that in 9 of the 14 questions the correlation between scored self-location on the overall questionnaire and on the individual question was above .70, indicating that participants chose the response congruent with their self-location as identified by the questionnaire more than 70% of the time (Table 3). In 6 questions that correlation fell below the .70 threshhold for one of the two self-locations; in each of these cases the responses for the alternate self-location was .80 or greater. Questions where this occurred pertained to interpersonal style and the experience of closeness (both fails with head-located participants), as well as interpersonal style, moral decision factors, and the bodily location of the experiences of decision-making, and knowing (fails with heart-located participants).

Characteristic	Head Group			Heart Group			Full Sample	
	n	%		*n*	%		*n*	%
Religion Past								
Christian	72	69.90%		83	72.17%		155	71.10%
Jewish	1	0.97%		1	0.87%		2	0.92%
Musliim	1	0.97%		-	-		1	0.46%
Buddhist	-	-		-	-		-	-
Hindu	-	-		1	0.87%		1	0.46%
Taoist	-	-		-	-		-	-
Spiritual but not religious	7	6.80%		11	9.57%		18	8.26%
Atheist / Agnostic	9	8.74%		3	2.61%		12	5.50%
Other or none	13	12.62%		16	13.91%		29	13.30%
Total *n*	**103**	100.00%		115	100.00%		218	100.00%
Religion Present								
Christian	53	51.46%		73	63.48%		126	57.80%
Jewish	1	0.97%		1	0.87%		2	0.92%
Musliim	1	0.97%		1	0.87%		2	0.92%
Buddhist	-	-		2	1.74%		2	0.92%
Hindu	-	-		1	0.87%		1	0.46%
Taoist	-	-		1	0.87%		1	0.46%
Spiritual but not religious	16	15.53%		17	14.78%		33	15.13%
Atheist / Agnostic	10	9.71%		3	2.61%		13	5.96%
Other or none	22	21.36%		16	13.91%		38	17.43%
Total *n*	**103**	100.00%		115	100.00%		218	100.00%

Table 1b. *Demographic Characteristics of Participants: Past and Present Religious Identity*
Note. Religious identity remained relatively stable over time in participants. The largest differences between past and present were a decrease in identification with Christianity and increases in the categories "Spiritual but not religious" and "Other or none."

	Head-Located Group		Heart-Located Group		p-value	Between groups ANOVA		
	M	SD	M	SD		F ratio	df	η2
	0.12	0.32	0.94	0.24	< 0.0005	456.986	1	0.68

Table 2. *Satistics for Comparison of DSLQ-P and Somatic Phenomenology Body Map Results*
For this calculation, identification of self-location in the heart was scored as +1, self-location in the head was scored as zero, and liver was an excluded distractor not selected by any participants; the mean score of 0.12 for the Head group thus translates to an 88% congruence between DSLQ and SP Body Map measures. The η2 score of 0.68 indicates a medium effect size. These numbers were calculated on 217 of 218 participants, with one self-location in the leg region eliminated as an outlier, and the small number of lower torso responses combined with upper torso responses.

Discussion

The relatively high congruence of reported self-location between responses to the Provisional Dispositional Self-Location Questionnaire (DSLQ-P) and Somatic Phenomenology Body Map (SP Body Map), the medium effect size, and the robust level of statistical significance ($p < .00005$; Table 2) suggests that the DSLQ-P has good content validity and is an effective instrument for determining self-location that is fairly comparable to marking self-location on a silhouette.

Of particular interest is the areas where answers between the two instruments differed. Given that self-location has been shown to be malleable with the potential to change from day to day (Irvin et al., 2023), the fact that the two assessments were completed at different times may have contributed to the 23 instances in which self-location on the SP Body Map differed from the result obtained using the DSLQ-P. It may also be that self-location on the SP Body Map was in some instances influenced by opinion about where self is located rather than experience. For example, a head-located person might be of the belief that self is located in the heart, or in the lower torso, even if that is not their direct experience. Defects in individual questions, as identified in the Results section, may also have contributed to variances in results from the two assessments.

Another possible explanation of the variance between results from the two measures may be a difference between self-location at the time the assessment was made and dispositional self-location. In this regard it is noteworthy that the difference between self-location as scored by the DSLQ-P and as indicated on a graphical measure is of about the same magnitude as between the graphical assessment and the DSLQ-P question, "Which of the following locations do you think of as the location of your 'self'"? Responses to this latter question showed an approximately 90% congruence with the DSLQ-P determination of head-located self as compared to 88% congruence with the graphical result, and about a 93% congruence with with the DSLQ-P determination of heart-located self, as compared with 94% congruence with graphical results. This demonstrates similar variance between the DSLQ-P identification of self-location and two forms of direct query of self-location, which may indicate differences between current self-location and dispositional self-location.

It is also possible that self-location may be malleable not only from day to day, but from one cognitive process to another. Anglin et al. (2014) found frequent within-subject differences between identified location of self, mind, and soul, with self and mind more frequently identified as located in the head and soul identified as located in the heart. It may be that some of the self-associated cognitive processes asked about in the DSLQ-P are subject to similar variance. The possibility of such variances adds to the argument for an assessment of dispositional self-location that attempts to account for both fluctuations across time and across a variety

Questions		Head-Located		Heart-Located		Full Sample	
Question Domain	Response Options	*n*	%	*n*	%	*n*	%
Functioning style	Rational / logical	92	89.32%	49	42.61%	141	64.68%
	Emotional	11	10.68%	66	57.39%	77	35.32%
Interpersonal style	Cold	31	30.10%.	7	6.09%	38	17.43%
	Warm	72	69.90%	108	93.91%	180	82.57%
Moral decision factors	Rational factors	90	87.38%	55	47.83%	145	66.51%
	Emotional factors	13	12.62%	60	52.17%	73	33.49%
Self-location	Liver	-	-	-	-	-	-
	Brain	93	90.29%	5	4.35%	98	44,96%
	Heart	8	7.77%	107	93.04%	115	52.75%
	Intestines	2	1.94%	3	2.61%	5	2.29%
Life maxim	Use your head	87	84.47%	13	11.30%	100	45.87%
	Follow your heart	16	15.53%	102	88.70%	118	54.13%
Caring locus	Liver	-	-	-	-	-	-
	Brain	84	81.56%	2	1.74%	86	39.45%
	Heart	16	15.53%	111	96.52%	127	58.26%
	Somewhere else or don't know	3	2.91%	2	1.74%	5	2.29%
Authenticity locus	Liver	-	-	-	-	-	-
	Brain	87	84.47%	6	5.22%	93	42.66%
	Heart	6	5.82%	106	92.17%	112	51.38%
	Somewhere else or don't know	10	9.71%	3	2.61%	13	5.96%
Closeness locus	Liver	-	-	-	-	-	-
	Brain	70	67.96%	1	0.87%	71	32.57%
	Heart	23	22.33%	113	98.26%	136	62.39%
	Somewhere else or don't know	10	9.71%	1	0.87%	11	5.04%
Decision making locus	Liver	-	-	-	-	-	-
	Brain	103	100.00%	60	52.17%	163	74.77%
	Heart	-	-	52	45.22%	52	23.85%
	Somewhere else or don't know	-	-	3	2.61%	3	1.38%
Empathy locus	Liver	-	-	-	-	-	-
	Brain	78	75.73%	4	3.48%	82	37.62%
	Heart	20	19.42%	111	96.52%	131	60.09%
	Somewhere else or don't know	5	4.85%	-	-	5	2.29%
Strong conviction locus	Liver	-	-	-	-	-	-
	Braiin	95	92.24%	18	15.65%	113	51.84%
	Heart	3	2.91%	89	77.39%	92	42.20%
	Somewhere else or don't know	5	4.85%	8	6.96%	13	5.96%
Beauty experience locus	Liver	-	-	-	-	-	-
	Brain	90	87.38%	20	17.39%	110	50.46%
	Heart	5	4.85%	91	79.13%	96	44.04%
	Somewhere else or don't know	8	7.77%	4	3.48%	12	5.50%
Knowing locus	Liver	-	-	-	-	-	-
	Brain	100	97.09%	30	26.09%	130	59.63%
	Heart	2	1.94%	80	69.56%	82	37.62%
	Somewhere else or don't know	1	0.97%	5	4.35%	6	2.75%
Strong connection	Liver	-	-	-	-	-	-
	Brain	84	81.55%	2	1.74%	86	39.45%
	Heart	8	7.77%	111	96.52%	119	54.59%
	Somewhere else or don't know	11	10.68%	2	1.74%	13	5.96%

Table 3. *Frequencies of Response to DSLQ Questions by Self-Location Group (*N = 218)*

Note. Total *n* for head-located group = 103; total *n* for heart-located group. = 115. Questions in which fewer than 70% of respondents from the target self-location selected the correct discriminating response have been revised.

of cognitive contexts likely to be experienced as self-related.

Based on these findings the questionnaire was modified in several ways, as reflected in the version presented in the Appendix. Revisions were made to the instructions as well as to any question for which the selection rate by a target group fell below 70%. For example, for the *Interpersonal style* question the heart-located group chose the heart-designated response just 57.39% of the time, indicating that the question required revision to discriminate more effectively for this group. Changes are as follows:

- Instructions were modified to ask the respondent to consider their experience over the past 30 days and choose an answer that reflects the one they would most often choose, so as to more reliably reflect their disposition rather than their current state.

- The *Interpersonal style* question did not discriminate well for respondents scored as head-located, so response options were modified such that the alternate choice to "interpersonally warm" is "interpersonally reserved" rather than "interpersonally cold."

- The *Moral decision factors* question did not discriminate well for respondents scored as heart-located, so response options were revised such that the alternate choice to "rational factors" is "intuitive and feeling factors" rather than "emotional factors."

- The *Closeness locus* question did not discriminate well for respondents scored as head-located, so it was changed from, "When you feel close to someone, where in your body do you feel the closeness?" to "When you feel close to someone, where do you believe the sense of closeness comes from?"

- The *Decision making locus* question did not discriminate well for respondents scored as heart-located, and so was revised to, "When you are making *important life* decisions, where in your body do you feel that a decision comes from?" (added words in italics).

- The *Knowing locus* question did not discriminate well for respondents scored as heart located, so the question was reworded as, "When it comes to *deep* knowing, which part of the body do you trust the most?" (added word in italics).

- Given that the response of "Liver" was not chosen by any participants, it was deemed an ineffective distractor and replaced with "Gut," which may be a more plausible response option.

Content validity was shown to be good for the DSLQ-P prior to these adjustments, with approximtely 90% agreement between determination of self-location by the DSLQ-P and by graphical response. This is similar to within-measure agreement between reported self-location and self-location as scored by the DSLQ-P. As such, this variance appears to indicate that the questionnaire provides a broader assessment of self-location than simply asking where an individual believes their self resides. While this revised version, the DSLQ, requires re-testing to determine whether results are improved, as well as future work on factor analysis, the questionnaire is shared here since it may be useful for informal applications even in its current form.

Note

1. This study is based on the author's dissertation entitled, "When the self dwells in the heart: How a heart-located attentional stance facilitates a felt sense of connection" (Sester, 2024). Generous credit is due to the dissertation chair, Glenn Hartelius, for his guidance in the development of the DSLQ-P and DSLQ.

Appendix A
Provisional Version of
Dispositional Self-Location Questionnaire
Used to Qualify Participants

Instructions:
Regardless of your knowledge of biology, please feel your body and choose one answer per question
1. 1. Which of the following do you consider a better characterization of how you function in the world:
   a. Rational and logical   -1
   b. Emotional   +1

2. Which of the following do you think would be a more accurate reflection of how others might characterize your interpersonal style:
   a. Interpersonally cold   -1
   b. Interpersonally warm   +1
3. Which factors are more important in your moral decision-making processes:
   a. Emotional factors   +1
   b. Rational considerations   -1
4. Which of the following locations do you think of as the location of your "self"?
   a. Liver   0
   b. Brain   -1
   c. Heart   +1
   d. Intestines   0
5. Which of the following maxims do you consider to carry more importance in life:
   a. Follow your heart   +1
   b. Use your head   -1
6. When you care about someone, where in your body do you think the caring comes from:
   a. Liver   0
   b. Heart   +1
   c. Brain   -1
   d. Somewhere else or don't know   0
7. When you feel authentic, or true to yourself, where in your body do you feel the authenticity:
   a. Liver   0
   b. Brain   -1
   c. Heart   +1
   d. Somewhere else or don't know   0
8. When you feel close to someone, where in your body do you feel the closeness?
   a. Liver   0
   b. Heart   +1
   c. Brain   -1
   d. Somewhere else or don't know   0
9. When you are making decisions, where in your body do you feel that a decision comes from?
   a. Heart   +1
   b. Brain   -1
   c. Liver   0
   d. Somewhere else or don't know   0
10. When you feel empathy for someone, where in your body do you feel the empathy?
   a. Brain   -1
   b. Heart   +1
   c. Liver   0
   d. Somewhere else or don't know   0
11. When you feel a strong conviction about something, where in your body is the conviction coming from?
   a. Brain   -1
   b. Liver   0
   c. Heart   +1
   d. Somewhere else or don't know   0
12. When you experience beauty, where in your body do you feel the recognition of beauty?
   a. Liver   0
   b. Heart   +1
   c. Brain   -1
   d. Somewhere else or don't know   0
13. When it comes to knowing, which part of the body do you trust the most?
   a. Brain   -1
   b. Heart   +1
   c. Liver   0
   d. Somewhere else or don't know   0
14. When you feel a strong connection with someone, where in your body do you sense the connection?
   a. Liver   0
   b. Brain   -1
   c. Heart   +1
   d. Somewhere else or don't know   0

Scoring: Total score of 5 or above indicates prevalence of heart-located self, -5 or below indicates prevalence of head-located self. Between 4 and -4 indicates mixed self-location.

Appendix B
Dispositional Self-Location Questionnaire
Instructions:
Thinking back on your experience over the past 30 days, select the answer that reflects the one you would most often choose, regardless of your scientific knowledge of biology.
1. Which of the following locations do you think of as the location of your "self"?
   a. Brain   -1
   b. Heart   +1
   c. Gut   0
   d. None of these or don't know   0

2. When you care about someone, where in your body do you think the caring comes from:
   - a. Brain   -1
   - b. Heart   +1
   - c. None of these or don't know   0
   - d. Gut   0
3. Which of the following maxims do you consider to carry more importance in life:
   - a. Use your head   -1
   - b. Follow your heart   +1
4. When you feel authentic, or true to yourself, where in your body do you feel the authenticity:
   - a. Brain   -1
   - b. Heart   +1
   - c. Gut   0
   - d. None of these or don't know   0
5. When you feel close to someone, where in your body do you believe the sense of closeness comes from?
   - a. Brain   -1
   - b. Heart   +1
   - c. None of these or don't know   0
   - d. Gut   0
6. Which factors are more important in your moral decision-making processes:
   - a. Rational considerations   -1
   - b. Intuitive and feeling factors   +1
7. When you are making important life decisions, where in your body do you feel that a decision comes from?
   - a. Brain   -1
   - b. Heart   +1
   - c. Gut   0
   - d. None of these or don't know   0
8. When you feel empathy for someone, where in your body do you feel the empathy?
   - a. Heart   +1
   - b. Brain   -1
   - c. Gut   0
   - d. None of these or don't know   0
9. Which of the following do you think would be a more accurate reflection of how others might characterize your interpersonal style:
   - a. Interpersonally warm   +1
   - b. Interpersonally reserved   -1

10. When you feel a strong conviction about something, where in your body is the conviction coming from?
    - a. Heart   +1
    - b. Brain   -1
    - c. None of these or don't know   0
    - d. Gut   0
11. Which aspect of you carries the strongest influence in experiencing beauty?
    - a. Heart   +1
    - b. Brain   -1
    - c. Gut   0
    - d. None of these or don't know   0
12. Which of the following do you consider a better characterization of how you function in the world:
    - a. Intuitive and feeling   +1
    - b. Rational and logical   -1
13. When it comes to deep knowing, which part of the body do you trust the most?
    - a. Heart   +1
    - b. Brain   -1
    - c. None of these or don't know   0
    - d. Gut   0
14. When you feel a strong connection with someone, where in your body do you sense the connection?
    - a. Heart   +1
    - b. Brain   -1
    - c. Gut   0
    - d. None of these or don't know   0

The DSLQ is scored in four steps:

1. Add up the number of heart-located responses (the "b" answer on questions 1 through 7 and the "a" answer on questions 8 through 14).
2. Add up the number of head-located responses (the "a" answer on questions 1 through 7 and the "b" answer on questions 8 through 14).
3. Take the number of heart-located responses from step 1 and subtract the number of head-located responses from step 2. The result may be a negative number.
4. If your score is between 5 and 14, dispositional self-location is likely in the heart. If the score is between -5 and -14, dispositional self-location is likely in the head. If the score

is between 4 and -4, self-location may fluctuate between head and heart.

For example, if "a" was selected as the answer to 4 of questions 1 through 7 and "b" was selected as the answer to 6 of questions 8 through 14, then the heart-located score is 10. If "b" was selected as the answer to 2 of questions 1 through 7 and "a" was selected as the answer to 2 of questions 8 through 14, then the head-located score is 4. From the heart-located score (10), subtract the head-located score (4), and find the total score (6). Since this score is between 5 and 14, the usual self-location is likely to be in the heart area of the chest.

Ethics Approval and Informed Consent

Ethics approval for this study was obtained from the California Institute of Integral Studies Human Research and Review Committee. Participants provided written informed consent, and were provided with a Confidentiality Statement and a Participant Bill of Rights.

Conflict of Interest

The author declares no conflicts of interest.

References

Adam, H., Obodaru, O., & Galinsky, A. D. (2015). Who you are is where you are: Antecedents and consequences of locating the self in the brain or the heart. *Organizational Behavior and Human Decision Processes*, *128*, 74–83. https://doi.org/10.1016/j.obhdp.2015.03.004

Anglin, S. M. (2014). I think, therefore I am? Examining conceptions of the self, soul, and mind. *Consciousness and Cognition*, *29*, 105–116. https://doi.org/10.1016/j.concog.2014.08.014

Bertossa, F., Besa, M., Ferrari, R., & Ferri, F. (2008). Point zero: A phenomenological inquiry into the seat of consciousness. *Perceptual and Motor Skills*, *107*(2), 323–335. https://doi.org/10.2466/pms.107.2.323-335

Fetterman, A. K., & Robinson, M. D. (2013, June 17). Do you use your head or follow your heart? Self-location predicts personality, emotion, decision making, and performance. *Journal of Personality and Social Psychology*, *105*(2), 316–334. https://doi.org/10.1037/a0033374

Hanley, A., Lecy, N., & Hanley, R. (2021). Locating the embodied sense of self and examining its relationship with psychological well-being. *International Journal of Transpersonal Studies, 40*(1), 84–95. https://doi.org/10.24972/ijts.2021.40.1.84

Hartelius, G., (2021). Somatic phenomenology: Maps of body-felt experience. In J. F. Tantia (Ed.), *The art and science of embodied research design* (pp. 87–99). Routledge. https://doi.org/10.4324/9780429429941-8

Hartelius, G., Likova, L. T., & Tyler, C. W. (2022). Self-regulation of seat of attention into various attentional stances facilitates access to cognitive and emotional resources: An EEG study. *Frontiers in Psychology*, *13*, Article 810780. https://doi.org/10.3389/fpsyg.2022.810780

Howard, I. P., & Templeton, W. B. (1966). *Human spatial orientation*. John Wiley and Sons.

Irvin, R. L., Wu, D., Fetterman, A. K., & Robinson, M. D. (2023). Heads of worry, hearts of joy: Daily diary investigations of self-location and well-being. *Affective Science*, *4*(4), 744–756. https://doi.org/10.1007/s42761-023-00196-z

Limanowski, J., & Hecht, H. (2011). Where do we stand on locating the self. *Psychology, 2*(4), 312–317. https://doi.org/10.4236/psych.2011.24049

Neelon, M. F., Brungart, D. S., & Simpson, B. D. (2004). The isoazimuthal perception of sounds across distance: A preliminary investigation into the location of the audio egocenter. *The Journal of Neuroscience*, *24*(35), 7640–7647. https://doi.org/10.1523/JNEUROSCI.0737-04.2004

Sester, M. (2024). *When the self dwells in the heart: How a heart-located attentional stance facilitates a felt sense of connection* (Publication No. 30988319) [Doctoral dissertation, California Institute of Integral Studies]. ProQuest Dissertations and Theses Global. https://www-proquest-com.ciis.idm.oclc.org/docview/2915472338?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20&%20Theses

Shimono, K., Higashiyama, A., & Tam, W. J. (2001). Location of the egocenter in kinesthetic space. *Journal of Experimental Psychology: Human Perception and Performance*, *27*(4), 848–861. https://doi.org/10.1037/0096-1523.27.4.848

Starmans, C., & Bloom, P. (2012). Windows to the soul: Children and adults see the eyes as the location of the self. *Cognition*, *123*(2), 313–318. https://doi.org/10.1016/j.cognition.2012.02.002

About the Author

Marie Sester, PhD, is a French-born architect turned interactive artist, American whole-person psychologist, and researcher in psychophysiology. She obtained her M'Arch degree from the Ecole d'Architecture de Strasbourg, France, and her doctorate in psychology from the California Institute of Integral Studies. Dr. Sester is committed to pursuing her lifelong work and investigation as an artist by applying scientific methods and analysis to the study of the processes of conscious experience, the self or agent, relationality, and meaning. Her recent research examined the impact of self-location—where in the body a person locates their sense of self—on the felt sense of connection with other than self. By investigating relationality, the research filled a gap in the self-location literature, which has primarily focused on how the self is experienced as separate from the world, as an individuality with boundaries, an identity, and a story. Contact: marie@sester.net

About the Journal

The *International Journal of Transpersonal Studies* is a Scopus listed peer-reviewed academic journal, and the largest and most accessible scholarly periodical in the transpersonal field. IJTS has been in print since 1981, is published by Floraglades Foundation, sponsored in part by Attention Strategies Institute, and serves as the official publication of the International Transpersonal Association. The journal is available online at www.transpersonalstudies.org, and in print through www.lulu.com (search for IJTS).