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Article in *Journal of Personality and Social Psychology* · August 1981

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Consciousness of Body: Private and Public

Lynn C. Miller, Richard Murphy, and Arnold H. Buss
University of Texas at Austin

A self-report instrument yielded two separate factors: private body consciousness (awareness of internal sensations) and public body consciousness (awareness of observable aspects of body). For each factor, norms, test-retest reliability data, and correlations with other personality measures are presented. An experiment on reaction to ingestion of caffeine revealed that only subjects high in private body consciousness or high in both private body consciousness and private self-consciousness were stimulated by caffeine; individual differences in public body consciousness and in private self-consciousness alone had no impact. These findings have implications for biofeedback, false physiological feedback, and excitation transfer.

When we attend to ourselves, what do we observe? Though there may be various answers to this question, one is to classify the diverse components of the self into private and public aspects. The private aspects can be observed only by the experiencing person: thoughts, images, memories, motives, and feelings—all concerning oneself. The public aspects can be observed by anyone else: appearance, manners, and style of behavior.

People differ considerably in the extent to which they attend to the private aspects of themselves, and there are marked individual differences in consciousness of the public or social aspects of oneself. These two dispositions, private and public self-consciousness, are measured by the Self-Consciousness Inventory (Fenigstein, Scheier, & Buss, 1975). Among the highest loading items on the Private Self-Consciousness Scale are, "I reflect about myself a lot," "I'm generally attentive to my inner feelings," and "I'm alert to changes in my mood." Among the highest loading items on the Public Self-Conscious-

ness Scale are, "I usually worry about making a good impression," "I'm concerned about the way I present myself," and "I'm self-conscious about the way I look." Subsequent research has established that both private self-consciousness and public self-consciousness are important determinants of behavior (see Buss, 1980, for a review).

Does this private-public distinction apply to awareness of the body? Offhand, the answer would appear to be yes. Everyone has experienced stomach gurgles, itchy scalp, or tense muscles—experiences not open to observation by others. And most people are aware of the appearance of their face, body, and hair and their posture and body build—all of which can be observed by anyone else. Though these examples suggest that the private aspects of the body can be distinguished from the public aspects, examples can be cited to prove virtually anything. We need a more rigorous basis for maintaining this distinction and for demonstrating that there are two separate personality dispositions, one for each kind of body awareness.

The authors thank LuAnne Dumas, Lou Hunt, Nancy Nunn, Janice Woods, Susan Young, Sharon Kasanoff, Dubrovka Hrgovic, Nancy High, and Cheryl Nugent, who ably served as experimenters and helped record data. We are also grateful to Bill Underwood, John Loehlin, and Jeffrey Berman for their valuable help on methodological questions. Finally, we are grateful to Richard Archer, Stephen Read, and Stephen Briggs, who commented on earlier drafts of the manuscript.

Requests for reprints should be sent to Arnold H. Buss, Department of Psychology, University of Texas, Austin, Texas 78712.

The Body Consciousness Questionnaire

Seymour Fisher (1968), well known for his research on awareness of the body, devised measures of body prominence and body focus, but neither measure separates the private aspects of the body from the public aspects. Another self-report measure inquires about the body sensations experienced by

people when they are anxious or happy (Mandler, Mandler, & Uviller, 1958); this scale deals with the physiological concomitants of affective states. We could find no self-report measure of the private and public aspects of the body in neutral (nonaffective) states. We therefore devised one.

Item Selection and Factor Analysis

We started with a set of items that, taken at face value, dealt with awareness of either the private or the public aspects of the body. To avoid overlap with hypochondriasis, we omitted items dealing with pain or illness. None of our body awareness items dealt with evaluation of the body, so we added several items that concerned the strength, effectiveness, and grace of the body.

After pilot work, we administered the final form of the questionnaire, containing 15 items, to 561 college men and 720 college women. They answered each item on a scale that ranged from 0 (extremely uncharacteristic) to 4 (extremely characteristic). Each item was correlated with every other item.

The resulting correlation matrix was evaluated against the three criteria of suitability for factor analysis specified by Dzuiban and Shirkey (1974). The Kaiser-Meyer-Olkin test of sampling adequacy was .83, Bartlett's test of sphericity was 3,940.5 ($p < .00001$), and the number of off-diagonal elements was 17.4%. These figures establish the suitability of the correlation matrix for factor analysis. We used the Joreskog Factor Analysis Program in SPSS (Burns, 1976) and a maximum likelihood solution with varimax rotation. The factor patterns for men and women were similar, so we combined their data in all subsequent factor analyses. The factor analysis for men and women combined yielded three factors similar to the factors obtained in pilot work. These three factors, selected with a criterion of an eigenvalue of 1.0, accounted for 46% of the variance. As a check on reliability, we administered the Body Consciousness Questionnaire to two new samples of 460 and 680 college students, both times replicating the basic factor structure.

The items making up the three factors are presented in Table 1. The names we assigned

to these factors appear to reflect their item content: private body consciousness, public body consciousness, and body competence. Notice that the two body consciousness factors are nonevaluative but that the body competence factor is evaluative.

Next, we correlated the three factors, using the data from a sample of 628 subjects. Private and public body consciousness correlated .37, which suggests that people who attend to one aspect of their body also attend to the other major aspect as well. The correlations between body competence and the two kinds of body consciousness were the same (.21); evidently there is a link between body consciousness and self-evaluation of competence, but it is weak. Perhaps people with stronger, more graceful bodies simply pay more attention to them.

Stability of the Body Consciousness of Scales Over Time

We administered the three scales of the Body Consciousness Questionnaire to a sample of 130 undergraduate men and women on two separate occasions, 2 months apart. Test-retest reliabilities for the Private Body Consciousness Scale, Public Body Consciousness Scale, and Body Competence Scale were, respectively, .69, .73, and .83. As Nunnally (1978, p. 245) points out, these coefficients are quite acceptable, especially given that the number of items on each scale varied between four and six.

Norms

Table 2 contains the norms for 568 men and 731 women on the three Body Consciousness Questionnaire scales. Women scored significantly higher on public body consciousness ($p < .01$). There were no other gender differences.

Relationship to Relevant Personality Traits

Are the two kinds of body consciousness related to the two kinds of self-consciousness? Public self-consciousness is moderately correlated with social anxiety (Fenigstein et al., 1975), but is public body consciousness also correlated with social

Table 1
Items and Factor Loadings of the Body Consciousness Questionnaire Scales

Scale/item	Factor loading
Private Body Consciousness	
I am sensitive to internal bodily tensions.	.45
I know immediately when my mouth or throat gets dry.	.50
I can often feel my heart beating.	.54
I am quick to sense the hunger contractions of my stomach.	.39
I'm very aware of changes in my body temperature.	.39
Public Body Consciousness	
When with others, I want my hands to be clean and look nice.	.53
It's important for me that my skin looks nice . . . for example, has no blemishes.	.68
I am very aware of my best and worst facial features.	.48
I like to make sure that my hair looks right.	.68
I think a lot about my body build.	.44
I'm concerned about my posture.	.47
Body Competence	
For my size, I'm pretty strong.	.44
I'm better coordinated than most people.	.63
I'm light on my feet compared to most people.	.69
I'm capable of moving quickly.	.69

Note. The data for men and women were combined to yield an *N* of 1,281. Only factor loadings of over .30 are reported; using this criterion, there were no overlapping items.

anxiety or with other kinds of distress? To answer these questions, we correlated the scales of the Body Consciousness Questionnaire with several relevant personality dispositions.

The Self-Consciousness Inventory (Fenigstein et al., 1975) also has three scales. Two of these, measuring private and public self-consciousness, have already been mentioned. The third scale, measuring social

anxiety, involves tendencies to become embarrassed, shy, and upset when with others. We also used a modified version of the Hypochondriasis (*Hs*) scale of the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1967). Some of the items on this scale were essentially the same as items on the Body Consciousness Questionnaire; to avoid a built-in relationship, we omitted these items from the *Hs* scale. The latter scale also contains repetitive items; we eliminated later items that were merely reworded versions of earlier items. Several *Hs* items appear to deal with pathology (e.g., "I am troubled by attacks of nausea and vomiting," or "I have never vomited blood or coughed up blood"); such items were also eliminated. The resulting modified scale contained 14 items.¹ The last personality measure was the Emotionality Scale of the EASI (Emotionality, Activity, Sociability, Impulsivity) Temperament Survey (Buss

Table 2
Means and Standard Deviations on Body Consciousness Questionnaire Scales for Men and Women

Scale	Men		Women	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Private Body Consciousness	11.7	3.0	12.0	3.3
Public Body Consciousness	15.7	3.6	17.1	3.3
Body Competence	10.5	2.5	10.0	2.5

Note. Based on an *N* of 275 men and 353 women.

¹ Item numbers of the MMPI Hypochondriasis scale used were 2, 18, 23, 43, 55, 72, 108, 163, 175, 189, 190, 243, 273, and 281.

Table 3
Correlations Among the Body Consciousness Questionnaire Scales and Relevant Personality Traits

Trait	Private Body Consciousness		Public Body Consciousness		Body Competence	
	Men	Women	Men	Women	Men	Women
Private self-consciousness	.37*	.45*	.32*	.33*	.17	.31*
Public self-consciousness	.30*	.28*	.71*	.66*	.13	.09
Social anxiety	.15	.12	.10	.12	-.17	-.20
Hypochondriasis	.10	.21	-.04	.03	-.32*	-.10
Emotionality	.16	.24	.14	.30*	-.19	-.17

Note. $N = 275$ men and 353 women.

* $p < .01$.

& Plomin, 1975). This scale involves the negative end of emotionality: tendencies to become frightened, upset, or angry.

The correlations among these various measures are presented in Table 3, in which men's and women's data are kept separate because there were some gender differences in the correlations. Concerning the question of how body consciousness relates to self-consciousness, the answer may be found in the first two rows of the table. Private self-consciousness correlates moderately with private body consciousness and only slightly less with public body consciousness. The similarity of these relationships is surprising; on the face of it, private self-consciousness should be related to private body consciousness but not to public body consciousness. Private self-consciousness also has a very modest correlation with body competence for men and a slightly higher correlation for women.

The correlations for public self-consciousness, shown in the second row of Table 3, are more in line with expectations. The correlations are moderate for private body consciousness, high for public body consciousness, and not far from zero for body competence. The correlation between public self-consciousness and public body consciousness is sufficiently strong to suggest that, given the reliabilities of each scale, they are measuring approximately the same personality disposition.

Now consider the last three rows of Table 3. The relationships are too modest to warrant comment, with two exceptions. One is the men's correlation of $-.32$ between body

competence and hypochondriasis, perhaps because men with body complaints devalue their bodies. The other exception is the women's correlation of $.30$ between public body consciousness and emotionality, and here the direction of causality could go either way. Concerning the last three rows of the table, notice that the correlations for body competence, though modest to moderate, are consistently negative, whereas the correlations for private and public body consciousness are virtually all positive. Though these correlations are slight, their opposite signs suggest that the presence of negative affect (social anxiety, hypochondriasis, and emotionality) is associated with more body consciousness and less body competence.

We also administered one other personality measure, not previously mentioned. This was a three-item self-report of self-esteem, which correlated near zero with the two body self-consciousness scales and in the 30s with body competence. The near-zero correlations tell us that paying attention to one's body, either the private or the public aspects, has nothing to do with self-evaluation. The positive relationship between self-esteem and so evaluative a scale as body competence is entirely in line with expectations.

Our main interest in Table 3 concerns the Private Body Consciousness Scale and Public Body Consciousness Scale, so let us briefly examine the columns of this table. As expected, private body consciousness correlates with private self-consciousness, but also, and this was not expected, with public self-consciousness. Public body con-

consciousness correlates with private self-consciousness and is strongly related to public self-consciousness, with both relationships stronger than expected. Three sets of facts emerge from this pattern of correlations. First, an interest in the psychological aspects of oneself (self-consciousness) is associated with an interest in the bodily aspects of oneself, regardless of whether the focus is on private or public aspects of oneself. Second, private body consciousness and private self-consciousness, though related, are distinct personality traits, but public body consciousness and public self-consciousness seem to be essentially the same. Third, neither kind of body consciousness appears to be related to social anxiety, hypochondriasis, or emotionality. (The correlations are too low to suggest any meaningful relationship.)

Laboratory Research

Past and continuing research has shown that subjects high in private self-consciousness behave differently than those low in private self-consciousness (Buss, 1980). What about private body consciousness? The experiment to be reported is the first step in using behavioral outcomes to evaluate the worth of both the scale and the extrapolation of the private-public dichotomy from the psychological self to the body self.

Method

Subjects. People who are aware of the private aspects of their body should be especially sensitive to changes in their bodily state. In contrast, people who are low in private body consciousness should be relatively insensitive to bodily changes. In searching for a chemical substance that would induce a bodily change and still fall within the bounds of ethical standards and practicality, we came up with a substance in common use: caffeine.² Pilot research revealed a fact probably known to coffee drinkers: Habitual caffeine users report little or no physiological reaction to a cup or two of a caffeine-containing beverage.³ We therefore restricted our research to subjects who consume less than a cup of tea or a cup of coffee daily. In addition, subjects who had consumed any cola, iced tea, coffee, hot tea, wine, beer, or hot chocolate 2 hours preceding the experiment were not allowed to sign up for or participate in the study. That is, these restrictions were explicitly listed on the subject sign-up sheets. The noncaffeinated beverages were added to the list of beverages to reduce subject suspicion that they would drink a caffeinated

beverage during the study. As an additional check on caffeine consumption, we asked subjects at the conclusion of the study how many cups of coffee and tea they normally consumed. The data of subjects who indicated that they drink one or more cups of either coffee or tea daily were not analyzed.

There were three samples of subjects. Each sample was drawn from introductory psychology classes in which the body consciousness and self-consciousness scales were administered. In the first sample, 59 men were preselected from the top and bottom thirds of the distribution of private body consciousness scores. The second sample of 65 men and the third sample of 64 women were not so selected.

Procedure. All subjects drank hot chocolate. In the experimental group, this beverage contained caffeine in the form of No-Doze, a commercial drug available over the counter. No-Doze tablets were pulverized so that they would not be detected in the hot chocolate. As a rough control for body weight, men received 300 mg, and women, 200 mg. In the control group, the hot chocolate contained no caffeine. In all other respects, the experimental and control groups were treated the same. The experimenter who interacted with the subject was blind to both the subject's personality scores and whether he or she was in the experimental or control condition.

The subjects, run individually, were given the following cover story. We were ostensibly testing whether drinking a beverage would affect the taste of food eaten afterward. We gave subjects a list of beverages that they might drink in the study. Some of these beverages, they were told, contained alcohol (wine, beer) and others contained caffeine (coffee, tea). Subjects were explicitly asked if they would mind drinking an alcoholic or caffeinated beverage. In addition, all subjects were asked if they were currently taking medication or had any chronic medical problems. Those subjects who preferred not to drink a beverage or had a medical problem were excused. Then subjects were told that physiological and psychological states, having been found to affect taste, needed to be controlled. Therefore, we would record their heart rate, and they would rate themselves on a questionnaire.⁴ This questionnaire asked subjects to rate themselves on a scale from 1 (not at all) to 5 (intensely)

² Caffeine is known to stimulate the central nervous system, elevate cardiovascular functioning, and reduce mental and physical fatigue (Grollman, 1965).

³ This finding is in accord with previous pharmacological research which indicates that, compared with a placebo control group, nonhabitual consumers report more caffeine-related bodily sensations than do habitual consumers (Colton, Gosselin, & Smith, 1968).

⁴ Though caffeine definitely appears to increase heart functioning (Grollman, 1965), causing a more pronounced heartbeat (Vander, Sherman, & Luciano, 1975), the actual beats per minute may be diminished (Colton et al., 1968). Furthermore, we could find no research that assessed pulse change after consumption of 300 mg of caffeine for nonhabitual caffeine consumers. Therefore, it is unclear whether pulse should go up, down, or stay the same after caffeine administration. In any event, pulse rate yielded no significant effects.

for experiencing each of 12 bodily states. They filled out this questionnaire twice, once before drinking the chocolate and 30 minutes later, when caffeine begins having its maximal effects. During this 30-minute period, the subjects worked on puzzles. After their second set of ratings, they were debriefed and they left.

Dependent variables. The above questionnaire included questions about two different kinds of bodily sensations. The first kind concerned sensations previously reported to occur after ingestion of caffeine (Gilbert, 1976; Goldstein, Kaizer, & Warren, 1965; Goodman & Gilman, 1965; Grollman, 1965): alert, stimulated, exhilarated, shaky, jittery, restless, not fatigued, nervous, and heart pounding. These nine sensations were grouped into a composite, with an internal consistency (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975) of .73. Subsequent mention of caffeine-associated sensations will refer to this composite.

The second kind of sensations, deliberately included as a control measure, consisted of bodily states not previously associated with the ingestion of caffeine: feeling dry, feeling dizzy, and having a headache. The occurrence of these sensations after ingestion of caffeine should not be related to individual differences in private body consciousness. On the other hand, private body consciousness should be related to the caffeine-associated sensations.

Results

Concerning sensations not associated with ingestion of caffeine, there were no significant main effects or interactions for any personality dispositions or for the experimental condition. This finding, expected because of the nature of the symptoms, requires no further comment.⁵

Concerning sensations associated with caffeine ingestion, we examined the initial reports of sensations, which could not be affected by the subsequent experimental manipulations. Again, there were no significant differences for private body consciousness, though there was variability among subjects. To correct for this variability, we covaried initial composite scores for the caffeine-associated sensations from final scores (Cronbach & Furby, 1970). To obtain means for each of the groups in the study, we adjusted final scores for initial scores using the formula specified by Kerlinger and Pedhazur (1973, pp. 270-274).

The adjusted means (final scores adjusted for initial scores) for the first sample of men are presented in the first two columns of Table 4. Notice that one cell stands out from the others; in the caffeine condition, men high in private body consciousness reported

more changes in bodily state than men in the other three cells. In line with these differences among means, an analysis of covariance yielded a significant interaction between experimental condition (caffeine vs. no caffeine) and level of private body consciousness, $F(1, 54) = 3.88, p = .05$. Among men high in private body consciousness, those who received caffeine reported significantly more bodily change than those who did not, $t(54) = 3.61, p < .01$. Among men who received caffeine, those high in private body consciousness reported significantly more bodily change than those who were low, $t(54) = 2.10, p < .05$. No other comparisons were significant.

The second and third samples were unselected with respect to private body consciousness. To make the distribution of subjects for the last two studies comparable to the first sample, we divided these two samples at the top and bottom 40% of the distribution of private body consciousness.⁶

The adjusted means for the second sample (men) are shown to the right of the first sample in Table 4. As before, among men high in private body consciousness, those who received caffeine reported significantly more bodily changes than those who did not, $t(49) = 3.5, p < .01$. Among men who received caffeine, those high in private body consciousness tended to report more bodily change than those who were low, $t(49) = 1.94, p < .06$. The Condition \times Private Body Consciousness interaction was of borderline significance, $F(1, 49) = 3.76, p < .06$. For both samples of men, the main effect for condition (caffeine vs. no caffeine) was significant, $F(1, 54) = 9.72, p < .005$, and $F(1, 49) = 10.19, p < .005$, respectively.

The adjusted means for the third sample (women) are shown in the last two columns of Table 4. Again, one cell stood out: subjects high in private body consciousness who re-

⁵ We covaried initial from final scores using a regression approach to analysis of variance to equate for unequal *ns*. All final dependent variables in the research reported here are corrected for initial differences using a covariance approach.

⁶ Eleven subjects were excluded in the second sample and 10 subjects were excluded in the third sample. In subsequent regression analyses, to be reported below, the data of all subjects in these samples were included.

Table 4
Reported Bodily Changes in Subjects High and Low in Private Body Consciousness

Condition	Men										Women	
	First sample				Second sample				High		Low	
	High		Low		High		Low		High		Low	
	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>
Caffeine	23.9	13	21.1	18	22.0	11	18.7	11	21.3	12	18.7	11
No caffeine	18.6	13	19.7	15	16.3	14	17.3	18	17.7	15	20.7	16

ceived caffeine. These women reported significantly more bodily changes than either women high in private body consciousness who received no caffeine, $t(49) = 3.33, p < .01$, or women low in private body consciousness who received caffeine, $t(49) = 2.22, p < .05$. In line with these differences, the Condition \times Private Body Consciousness interaction was significant, $F(1, 49) = 13.37, p < .001$. The only other significant finding was that, for control subjects only, women low in private body consciousness reported significantly more bodily change than those who were high, $t(49) = 2.99, p < .05$. There is no obvious explanation for this anomalous finding, which did not occur among the men; we suggest that it may be due to sampling error among the control subjects. The crucial finding, which occurred in all three samples, was that administration of caffeine caused more reported bodily change only in subjects high in private body consciousness.

Is this finding specific to private body consciousness? Would the tendency to focus on the other aspects of the self result in the same awareness of an induced bodily change? We performed three simultaneous regression analyses to assess the effects of three related continuous variables: public body consciousness, public self-consciousness, and private self-consciousness. The preselection of subjects in the first sample from the upper and lower thirds of the private body consciousness distribution precluded a regression analysis of their data. Therefore, we analyzed only the data of the second and third samples. Because there were no interactions with gender for any of the predictor variables, we combined the men's and women's data for ease of presentation.

In the first analysis, we examined the effects of public body consciousness, simultaneously entering the following variables: initial symptom reporting, condition (caffeine vs. no caffeine), private body consciousness, public body consciousness, each of the two Condition \times Personality interaction terms, the Private Body Consciousness \times Public Body Consciousness interaction term, and the three-way interaction term.⁷ The second analysis was identical to the first, except that we substituted public self-consciousness (in all of the main effect and interaction terms) for public body consciousness. In both analyses, the Private Body Consciousness \times Condition effect was still significant— $F(1, 120) = 8.94, p < .005$, in the first analysis, and $F(1, 120) = 10.26, p < .005$, in the second analysis—even after controlling for the effects of public body consciousness and public self-consciousness. The only other significant finding was that subjects in the caffeine condition reported more bodily sensations than those in the no-caffeine condition, $F(1, 120) = 9.36, p < .005$, and $F(1, 120) = 10.84, p < .005$, respectively. Thus, neither public self-consciousness nor public body consciousness accounted for the significant

⁷ Simultaneous multiple regression and effect coding of the caffeine or no caffeine condition were used to best approximate analysis of variance for unequal *ns* (Overall, Spiegel, & Cohen, 1975). Values of the personality variables were recomputed as deviations from the mean to reduce the correlation between the main effects and interaction terms (Althaus, 1971; Kenney, 1979). A simultaneous regression approach estimates the unique contribution of every variable controlling for every other variable in the equation. A number of recent articles have argued the merits of this approach over a hierarchical regression approach (Appelbaum & Cramer, 1974; Overall et al., 1975).

effects of private body consciousness reported earlier.

In the third analysis, we examined the effects of private self-consciousness, using the same type of regression model as the one just described. This time we substituted the effects of private self-consciousness for those of the public scales. As above, there was a significant effect for condition, $F(1, 120) = 12.38, p < .005$. Again, there was a significant Private Body Consciousness \times Condition interaction, $F(1, 120) = 15.70, p < .001$, after controlling for the effects of private self-consciousness. For private self-consciousness, neither the main effect nor the interaction with condition was significant, $F(1, 120) = 2.82, p = .096$, and $F(1, 120) < 1.0$, respectively. Finally, the triple interaction, Private Body Consciousness \times Private Self-Consciousness \times Condition, was significant, $F(1, 120) = 4.31, p < .05$. What this interaction suggests is that being high in private body consciousness makes individuals especially aware of an induced change in bodily state only if they are also high in private body consciousness. These findings underscore the importance of private body consciousness, alone or in combination with the private self-consciousness scale, as a determinant of awareness of internal bodily change.

Discussion

Private Versus Public Body Consciousness

This research attempted to apply the public-private distinction, first developed for self-consciousness, to consciousness of the body. Public body consciousness involves a chronic tendency to focus on and be concerned with the external appearance of the body. Private body consciousness is the disposition to focus on internal bodily sensations. Items relevant to these two aspects of the body load on separate, nonoverlapping factors. Though moderately correlated, the two types of body consciousness relate to behavior differently. Subjects who scored high on the Private Body Consciousness Scale were more aware of the stimulating effect of caffeine than those with low scores. Variations in public body consciousness had

no significant effects on awareness of bodily changes after ingestion of caffeine.

There is some additional evidence for the discriminant validity of the two body scales. A recent study (Miller & Cox, Note 1) examined whether women who were high in public body consciousness would be more concerned about their physical appearance than those who were low in this dimension. Examination of color photographs, taken during the experiment, revealed that public body consciousness was significantly correlated with makeup use, but private body consciousness was not. Thus, when one body consciousness scale was effective, the other was not.

Body Consciousness, Body Competence, and Hypochondriasis

We included a hypochondriasis measure on the assumption that people who report body symptoms tend to be high in private body consciousness. The correlations between the two dispositions, .21 for women and .10 for men, suggest little relationship. Evidently, the people who report more symptoms (hypochondriacs) are no more aware of the inside of their bodies than those who do not report symptoms.

Hypochondriasis is an evaluative disposition, involving the tendency to report negatively (pain and symptoms) about the body. Body competence is also evaluative, but the evaluation is positive; those high in body competence endorse items relevant to effective body functioning.⁸ Therefore, these two evaluative dispositions should be negatively correlated. As expected, the correlation between hypochondriasis and body competence was $-.32$ for men. The correlation for women, however, was near zero. Speed, strength, and coordination of the body, though critical aspects of body evaluation for men, are evidently not important for women.

Body competence had the same correlation (.21) with both public and private body consciousness.⁹ Though significant, these

⁸ Body competence correlates at .37 with self-esteem, which adds credence to the contention that body competence involves positive evaluation.

⁹ There were no gender differences in correlations between body competence and each type of body consciousness, so we combined the men's and women's data.

two correlations suggest only a weak relationship between an evaluative aspect of the body (body competence) and body consciousness. Moreover, both public and private body consciousness correlated near-zero with self-esteem. This pattern of correlations suggests that the two body consciousness scales are essentially nonevaluative.

Body Consciousness and Self-Consciousness

Consider a person as a social object (the public self). Given traditional gender role socialization, it is reasonable to expect that women have a more acute sense of themselves as social objects than men. However, there is no gender difference on the Public Self-Consciousness Scale (Fenigstein et al., 1975). Though this scale contains a few items on appearance, most refer to behavioral style and the impression one makes on others.

In contrast, there is a gender difference in public body consciousness: Women score significantly higher than men. This scale consists solely of items referring to anatomy: hair, face, hands, and body build. These two sets of facts—presence versus absence of gender differences and a difference in the item content of the two scales—suggest that gender role socialization may be more specific than had previously been believed. Perhaps women's greater awareness of themselves as social objects is limited to their appearance, and they are no more concerned than men are about the behavioral aspects of the social self.

Now consider private body consciousness and private self-consciousness. In the present research, private body consciousness was an important determinant of the effect of caffeine, but private self-consciousness was not. Thus, the conceptual distinction between private body consciousness and private self-consciousness, first mentioned at the beginning of the article, has received empirical support.

We would be overstating the case, however, if we suggested that the two dispositions are entirely distinct. First, they are significantly correlated. Second, though subjects

high in private self-consciousness were not significantly more sensitive to body changes induced by caffeine, subjects high in both private self-consciousness and private body consciousness were significantly more sensitive to these effects.

Clearly, as a determinant of awareness of bodily change (in this instance, caused by caffeine), private body consciousness is preeminent. Private self-consciousness, however, does add to awareness, but only in those who are already high in private body consciousness.

Implications for Private Body Consciousness

Inconsistencies in the effect of biofeedback on hypertension, heart rate, and pain (Surwit, Shapiro, & Good, 1978; White, Holmes, & Bennett, 1977) have been linked to variations in ability to alter physiological states through biofeedback (Turk, Meichenbaum, & Berman, 1979). A major source of this variability may be private body consciousness. Subjects high in this disposition, keenly aware of physiological events, would be especially susceptible to the effects of biofeedback. There are also marked individual differences in subjects' responses to false feedback. Individuals low in private body consciousness should be ideal subjects for false feedback research, because they tend to be unaware of their internal bodily states and therefore easily misled.

Private body consciousness may also affect excitation transfer (Zillman, Johnson, & Day, 1974). In this paradigm, low levels of arousal from one source (e.g., strenuous exercise) transfer to and enhance subsequent emotional states (e.g., sexual arousal). However, as Zillman et al. (1974) point out, "Transfer effects can be impaired and possibly prevented by the presence of . . . interoceptive feedback of the excitation associated with the initial [arousing] experience" (p. 504). Individuals high in private body consciousness, being more aware of interoceptive feedback, should be less susceptible to excitation transfer than those who are low.

In sum, private body consciousness has implications for biofeedback, false feedback, and excitation transfer. The present research

has shown that subjects high in private body consciousness may be the only ones affected by weak drugs or by very mild doses of drugs. We suggest that this disposition is an important determinant of the extent to which internal bodily changes are perceived.

Reference Note

1. Miller, L., & Cox, C. Unpublished manuscript, University of Texas, 1980.

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Received May 15, 1980 ■