

Recent work has suggested that passionate love may be conceived of within cultures as an emic that may consist of several dimensions. This study explored the factor dimensionality and cultural relativity of passionate love using the Passionate Love Scale (PLS) with data from 9 samples from North America, Europe, the Middle East, and a Pacific Island and analyzed with 3 Mode Factor Analysis with Point-of-View solutions (3M-POV). A 6-factor group-common structure was found to best explain variance in PLS responses collapsed across cultures. 3M-POV hierarchical clustering procedures yielded 6 idealized cultures separated by gender. Principal component analysis of PLS responses by idealized culture groups revealed unique factor structures for each of these groups. These results suggest passionate love to be a multifactorial construct uniquely defined within cultures.

CROSS-CULTURAL ASPECTS OF PASSIONATE LOVE

An Individual Differences Analysis

DAN LANDIS
WILLIAM A. O'SHEA III
University of Mississippi

Most researchers admit that human sexual behavior varies across cultures (Beall & Sternberg, 1995; Buss, 1988; Hatfield & Rapson, 1987a; Hendrick & Hendrick, 1987; Reiss, 1986). However, this most interesting area of work is often left to the anthropologists, with most references, at least in introductory textbooks, to the classic Ford and Beach (1951) work. Other authors may also cite Frayser's (1985) study using the Human Relations Area Files data-

AUTHORS' NOTE: An earlier version of this article was presented at the 1991 Annual Meetings of the Society for the Scientific Study of Sex in New Orleans. The authors express their appreciation to Bobbie Sullivan, Elaine Hatfield, Tulsi Saral, Jeff Fross, Sheila McLain, Roger Ware, Eugene Levitt, Jeff Victor, Rolf Kuschel, Carol Sherrard, Yehuda Amir, Carole Christensen, and Steven Frank. Douglas Bell translated the 3M-POV program from a DEC to an IBM system, a not inconsequential task. This article was facilitated by Grant Number N00014-98-1-0347 from the Office of Naval Research to the first author. The opinions in this article are those of the authors and do not represent the official position of the U.S. Government, the Department of the Navy, the Department of Defense, or their agencies. Eugene Levitt and Yehuda Amir died between the gathering and reporting of these data. Their contributions to the field as well as the present study are gratefully acknowledged. We also thank an associate editor and two anonymous reviewers for their helpful comments. Comments or requests for reprints should be addressed to the first author at the Center for Applied Research and Evaluation, 301 Leavell Hall, University of Mississippi, University, MS 38677; e-mail: landisd@watervalley.net.



JOURNAL OF CROSS-CULTURAL PSYCHOLOGY, Vol. 31 No. 6, November 2000 752-777
© 2000 Western Washington University

base. A cursory review of articles in the major human sexuality publication outlets would easily reveal that research based on data from different cultural groups is hardly common. This is not to say that cross-cultural research has been seen to be unimportant. Indeed, in the 1960s and 1970s there were a number of such reports, spurred by the work of Christensen and his colleagues (e.g., Christensen & Carpenter, 1962; Christensen & Gregg, 1970; Luckey & Nass, 1969). However, their frequency seems to have waned in the early to middle 1980s, only to be rediscovered in the wake of the AIDS epidemic (Carballo, Cleland, Carael, & Albrecht, 1989; Ross, 1986).

More recently, the development of cross-cultural research and theory (e.g., Hofstede, 1998b) has influenced some theoretical (e.g., Beall & Sternberg, 1995; Dion & Dion, 1988, 1993) and empirical (e.g., Cho & Cross, 1995; Hatfield & Rapson, 1987a; Simmons, vom Kolke, & Shimizu, 1986; Ting-Toomey, 1991; Wang, 1994) explorations of love across cultures. The results of these more recent efforts have suggested that the nature of passionate love across cultures is more complex than was previously assumed. This article will review theoretical, methodological, and analytical trends in the literature on passionate love across cultures and present the results of a multinational study of the construct.

THEORETICAL MODELS OF PASSIONATE LOVE ACROSS CULTURES

Passionate love is defined as a "longing for union" with another (Hatfield & Rapson, 1987b). It includes "appraisals or appreciations, subjective feelings, expressions, patterned physiological processes, action tendencies, and instrumental behaviors" (Hatfield & Rapson, 1993). Previously, most theoretical models of passionate love seem to have assumed that the effect of culture on the experience or quality of passionate love was minimal (e.g., Hatfield & Rapson, 1987a, 1993). However, current theoretical models (e.g., Hatfield & Rapson, 1996) do include the effect of culture on such variables as affective reaction to one's feelings and the expression of feelings. Dion and Dion (1988, 1993) explored the affect of individualism and collectivism on intimate relationships. They concluded that individualism affects relationships in terms of the basis for marriage, satisfaction with the relationship, and the ease with which intimacy is developed. Beall and Sternberg (1995) provide another theoretical consideration of culture and love. They consider love to be a social construction that is defined as a function of the time period and the culture of the lover and beloved.

Most models of sexual behavior include variables related to affect associated with the behavior (e.g., Hatfield & Rapson, 1987b; Hatfield & Walster,

1978; Rubin, 1970; Singer, 1985a, 1985b). This domain is often focused on the nature of erotic responses (Gonzalez-Crussi, 1989). Yet when measures of these variables are developed, they are validated on single culture populations (e.g., Hendrick & Hendrick, 1987). Cultural variation is assumed to be nonsignificant and less than the variation within groups (e.g., Hatfield & Rapson, 1987a, 1993; Singelis, Choo, & Hatfield, 1995).

However, this assumption of an etic passionate love and the data provided to support this assumption is called into question by recent developments. This assumption is challenged theoretically by Beall and Sternberg (1995). They developed a social constructionist model of love that concludes that the experience and definition of love are culturally determined. Further, in many of the studies, the data offered in support of this assumption are collected from exchange students or Asian American populations that may not be representative of native populations at home (e.g., D. Dinnel, personal communication, February 17, 1998; Kitayama, Markus, Matsumoto, & Norasakunkit, 1995, p. 20). Questions arising from these theoretical and methodological confounds have developed into several lines of research on the matter.

RESEARCH ON PASSIONATE LOVE ACROSS CULTURES

Much of the research in the area of love and culture has been somewhat exploratory. Cho and Cross (1995) explored Taiwanese exchange students' attitudes toward love using Lee's (1977) six love styles. They found the Taiwanese exchange students' love styles to be similar to those of Americans. However, other research using exchange students has found that they are often not adequate representatives of their home cultures and tend to reflect some of the host culture's attitudes (e.g., D. Dinnel, personal communication, February 17, 1998; Kitayama et al., 1995, p. 20). Wang (1994) tested American and Italian students with the Passionate Love Scale and found that Italian males report less passionate love feelings in their relationships than do Americans. Simmons, vom Kolke, and Shimizu (1986) compared German, Japanese, and American students on measures of romanticism and attitudes toward love. They found the Japanese and German samples to be most different on measures of romanticism and concluded that romantic love is valued less in more traditional societies and that concepts of love are culture specific. These studies all seem to assume that passionate love is an etic and a single-dimensional construct that only differs in degree or amount.

Another weakness among many of these studies is that they deal primarily with attitudinal variables with little empirical relation to sexual behavior

(e.g., Buunk & Hupka, 1987, which used seven groups; this study, however, dealt with a restricted attitudinal domain with little behavioral data to provide a context). Although these studies are quite interesting, the failure to include behavioral data reduces their ability to either generate or validate theories of human sexuality. Further, the analytic techniques often do not appear capable of capturing the potential richness in the differences and similarities between the cultural groups (Little, 1997). So, the use of differences between means calculated over a number of items may obscure more than it illuminates. Hence, we would argue that it may be useful to explore the cross-cultural meaning structure inherent in a set of items before etic comparisons are made (van de Vijver & Leung, 1997). Such an exploration will require many and heterogeneous populations. The present study is in that spirit of inquiry.

ANALYTICAL APPROACHES IN THE STUDY OF PASSIONATE LOVE ACROSS CULTURES

It is assumed, regardless of cultural influence, that groups vary in passionate love along a single-dimensional continuum (e.g., Perlman, Josephson, Hwang, Begum, & Thomas, 1978; Singelis et al., 1995). However, there is considerable evidence from other domains that the continuum hypothesis may not be all that accurate (e.g., Fross, 1986; Landis, Silver, Jones, & Messick, 1967). A further problem in cross-cultural research on sexuality derives from the analytic approach taken for such work.

Typical research on cross-cultural differences in sexuality locate populations with relation to some common (often factorially derived) set of scales based on mean scores. Buunk and Hupka (1987) use this approach in a study of sexual jealousy. Although appearing to be multidimensional, these studies assume that all of the factors—which are often derived using the total sample—are present to some degree in each of the subgroups. Much of the work on individual differences multidimensional analysis (e.g., Kroonenberg & Kashima, 1997; Landis et al., 1967; Silver, Landis, & Messick, 1966; Tucker & Messick, 1963; Tzeng & Landis, 1978) questions the tenability of such a hypothesis. Further, the use of such scores without adjustment for culturally unique biases in the use of scales (e.g., the Pollyanna effect, Boucher & Osgood, 1969) is questionable because samples will vary to the extent that they prefer particular points along whatever response dimension is being used (Osgood, May, & Miron, 1975).

In sum, the general points of debate regarding the study of passionate love across cultures include the theoretical structure of passionate love within a culture (single or multifactorial), the emic or etic nature of the factor or fac-

tors, and how the nature of the construct may be revealed. The present study is designed to explore the above points and propose the following hypotheses:

Hypothesis 1: Passionate love is a multifactorial construct.

Hypothesis 2: The nature of these passionate love factors is culturally determined, and, therefore, each culture will have a unique multifactorial structure.

Further, this study will employ an individual differences multidimensional analysis called 3M-POV, described by Tzeng and Landis (1978), to investigate these assumptions.

METHOD

PARTICIPANTS

There was a total of 1,709 participants divided across 9 sites. Basic information about each site is given in Table 1. Subjects were asked to report the primary ethnic group with which they identify. Note that the following percentages may not add up to 100% due to missing responses and the fact that in cases where only a single individual represents an ethnic group, he or she may be combined into the "other" category. The Montreal, Canada, sample was comprised of 53% Caucasian, 6% Chinese, 4% Black, 33% other, and 2% Native subjects. The Bar-Ilan, Israel, sample comprised 79% Middle Eastern Jewish, 14% Western Jewish, and 3% Christian Arab subjects. The Indiana, United States, sample comprised 77% Caucasian, 9% Black, 8% Native American, and 4% other subjects. The Hawaii, United States, sample comprised 12% Chinese, 49% Japanese, 6% Hawaiian, 20% Caucasian, 3% Korean, 6% Filipino, and 5% other subjects. The Houston, United States, sample was 90% White, 5% Native American, and 2% other subjects. The Oxford, United States, sample comprised 87% Caucasian, 6% Black, 4% Native American, and 3% other subjects. The Copenhagen, Denmark, sample comprised 79% Caucasian, 21% other subjects. The Jamestown, New York, United States, sample comprised 23% Caucasian, 20% Middle Eastern Jewish, 11% Western Jewish, 17% mixed ethnic background, and 17% other subjects. The Bradford, England, sample comprised 87% Caucasian, 3% Chinese, 4% South-East Asian, and 6% other subjects. The percentages of reported ethnic group representation in the overall sample (i.e., collapsing across locations) are 2% Chinese, 4% Japanese, 69% Caucasian, 5% Black, 3% Native, 7% Middle Eastern Jews, 2% Western Jews, and 1% mixed ethnic background. The remaining percentages comprise subjects reporting an "other" category and groups comprising less than 0.5% of the total sample.

TABLE 1
Locale and Characteristics of Each Site in the Study

<i>Site</i>	<i>Country</i>	<i>Female (n)</i>	<i>Male (n)</i>	<i>Modal Age</i>	<i>Modal Marital Status</i>
Honolulu, HI	U.S.A.	121	68	21	Single/going steady
Houston, TX	U.S.A.	58	22	22	Married
Oxford, MS	U.S.A.	348	340	19	Single/unattached
Indianapolis, IN	U.S.A.	94	53	20	Married
Jamestown, NY	U.S.A.	67	24	19	Single/unattached
Copenhagen	Denmark	59	17	22	Single/going steady
Bradford	England	70	96	19	Single/unattached
Bar-Ilan	Israel	129	53	21	Single/going steady
Montreal	Canada	145	45	20	Single/unattached

QUESTIONNAIRE

The respondents completed a comprehensive sexual behavior and attitudes questionnaire called PLATO-B (Passionate Love, Attitudes, and Observed Behavior). PLATO-B was first developed in 1983 (e.g., Fross & Landis, 1985) and currently consists of seven sections: (a) extensive demographic information (e.g., age, sex, ethnic group, marital status, strength of religious beliefs, etc.); (b) sexual behaviors; (c) frequencies of sexual behaviors (both proximal and distal past); (d) sexual attitudes of self, peers, and parents; (e) passionate love; (f) a measure of self-image; and (g) attitudes toward AIDS. Though the questionnaire appears quite long (347 total variables), most respondents seem able to complete it within a single class period.

Each colleague followed whatever human uses procedures were applicable in their institution. All questionnaires were given in English except for the Israeli sample, for whom the questionnaires were translated and back translated into Hebrew. Respondents are requested to complete the questionnaire within class time (to avoid the responses becoming group projects) and are carefully informed that they need not answer any part that is intrusive or offensive. The data collection setting is arranged so that refusal can be done confidentially.

Because the present study deals only with the Passionate Love Scale (PLS), that instrument will be described in somewhat more detail. The PLS scale was developed by Hatfield and colleagues and has received considerable research attention (e.g., Fross, 1986; Hatfield & Sprecher, 1986; Sullivan, 1985; Sullivan & Landis, 1984; Wang, 1994). The measure consists of 30 items that may or may not be true of the respondent. Hatfield and

Sprecher and Sullivan maintain that the scale is unifactorial and report a .94 coefficient alpha for data collected in the United States. However, Fross found evidence of at least four unique factors. In any case, these items reflect the emotional state when the respondent thinks of a person with whom he or she is involved.

Responses are made on a five point scale from *definitely true* to *not at all true*. Our modification consisted of requesting information about the person being the target, that is, the lover. We also allowed the respondent to fantasize his or her reactions to somebody that they had not been in a relationship with. For the purposes of this article, however, all these data were aggregated.

ANALYSES OF DATA

To examine the greatest number of potential commonalities in the responses given by the subjects, the sites and gender groups within each site were entered as unique culture groups. The several sites within the United States were entered as unique culture sites to allow for exploration of site level patterns of passionate love through how they group in the 3M-POV (Three Mode Factor Analysis with Point-of-View solutions) results as defined by commonalities in their responses to the PLS. This exploration of site syndromes of passionate love will not represent the within-group variability at the individual level of the site samples (e.g., ethnic differences). Support for our level of analysis may be found in such work as Hofstede (1980). He discussed the difference between “within-society correlations” and “ecological correlations” (p. 29) and used ecological correlations in his research. There also is reason in the literature for entering males and females as separate entities. These reasons include Hofstede’s explorations of gender cultures (e.g., Hofstede, 1998b) and the existence of some contention about the effect of gender on views of love and sex (e.g., Hatfield & Rapson, 1996; Singelis et al., 1995). The grouping of these sample sites (e.g., the four from the United States) and gender groups will be interpreted further in the discussion.

After coding and entry, means for each item were calculated for each gender within each culture site (i.e., 30 item means for each gender at each culture site). These item means were then standardized within each of the 18 groups and an interitem Euclidean distance matrix (\mathbf{X}) formed. The purpose of standardization was to control for culturally based response bias in the utilization of the rating scale, a procedure used by Osgood, May, and Miron (1975). There were 435 such unique distances for each group. From \mathbf{X} , a scalar products matrix (\mathbf{XX}') was computed and then cast as a three-dimensional

matrix, \mathbf{Z} ($30 \times 30 \times 18$) and subjected to the 3M-POV (Tzeng & Landis, 1978) procedure.

The 3M-POV produces the following results:

1. Multidimensional analysis along the item axis, collapsed over sites, that is, orthogonal group-common item factors.
2. Multidimensional analysis along the group axis, collapsed over items, that is, similarities among the sites.
3. Hierarchical clustering of the sites within the site factors (the groups so identified are called "idealized cultures").
4. Multidimensional analysis of the items within each idealized culture.
5. A comparison of each idealized culture dimension with each of the others, using a congruence coefficient procedure.

It is important to note that all of the analyses are on scalar products, not covariances. In the latter case, the means are effectively removed by the use of standardized scores as the correlations are computed. In our case (i.e., scalar products), the mean values are retained. Hence, the eigenvalue associated with the first principal factor will always be large because it contains those mean values in addition to some group loading. Hence, the usual paradigms for selecting significant factors may not be appropriate. As Tucker and Messick (1963) noted: "To avoid giving undue weight to the consistently large first root of a cross-products matrix, criteria for deciding the number of factors should include, in addition to relative amount of variance accounted for, the search for patterns in the distribution of roots and for sudden breaks in the distribution of successive differences in roots" (p. 344).

Unlike most three-mode principal component analyses of culturally heterogeneous samples (e.g., Kroonenberg & Kashima, 1997), 3M-POV uses an orthogonal extraction for the group-common factor structure, then identifies idealized culture groups in that orthogonal factor space. Although this procedure may ignore possible hierarchical factor structures and may seem to force us to perform a secondary factor analysis on uncorrelated (orthogonal) first-order factors, there are benefits to an orthogonal solution. The first reason for an orthogonal solution is that it eases interpretation, because correlated factors may be so similar as to be difficult to distinguish (Tzeng & Landis, 1979). In addition, a hierarchical factor structure (i.e., a first-order layer of factors identified by the items of the PLS and a second-order factor identified by the first-order factors) may be anomalous, because one would not expect meaningful correlations among emic factors. Further, the process of identifying idealized cultures among the orthogonal factor space can be understood as looking for clusters of the gender and site groups in a space defined by orthogonal factors. In other words, whereas the factors defining

the space are orthogonal, the culture and gender groups may cluster in meaningful ways within this space.

The objective of the procedures used in this study is to explore the similarity of the dimensions of the construct measured by the PLS across a heterogeneous set of groups. A secondary aim is to test a hypothesis regarding the multifactorial structure of the PLS cross-culturally. It seems that the 3M-POV method may be best suited for these types of goals.

RESULTS

GROUP-COMMON FACTORS OF PASSIONATE LOVE

Using the principal components extraction, six factors were retained when the data were collapsed over sites (i.e., the total sample, $N = 1,809$). These factors accounted for 96% of the variance and had the following eigenvalues: 10,317; 808; 185; 125; 116; and 10. As expected when scalar products are analyzed, the first factor is large, representing the mean judgments (Tucker & Messick, 1963; Tzeng & Landis, 1978). Determination of which factors to be retained was by a scree line procedure, using Cattell's recommendation that one factor past the break point be included for interpretation. These factors were rotated using a Varimax procedure. We used a consensual approach to interpret the factors. Each collaborator independently named each factor. These were then collated by the first author, and disagreements were resolved by an iterative process.

Table 2 presents the marker items for each of the six factors (numbers in parentheses are scale loadings). The positive or negative sign of the items is not given in the table because they are assumed arbitrary and thus have no interpretive value other than indicating which items are not on the same pole.

IDEALIZED CULTURE DIMENSIONS OF THE SITES

When these data are collapsed over items and group distances used as the input to the analysis (e.g., constructing an 18×18 matrix), six factors were judged to be significant (using, again, a scree line procedure), with eigenvalues of 7,709; 981; 194; 228; 119; and 45. These factors accounted for 90% of the variance. Table 3 presents the Varimax rotated loadings of each site/group on each dimension.

TABLE 2
Group-Common Dimensions of the Passionate Love Scale
Across Nine Sites, Males and Females in Each Site

<i>Tentative Name for Factor Poles</i>	<i>Loadings and Scale Items</i>
Factor 1	
Commitment	.529 "An existence without him/her would be dark and dismal." .231 "I would feel despair if he/she left me after we were involved." .217 "I want him/her to know me, my thoughts, my fears, and my hopes." .181 "I will (would) love him/her forever." .174 "I (would) melt when looking deeply into his/her eyes." .155 "Sometimes my body trembles with excitement at the sight of her/him."
Affection	.423 "I (would) eagerly look for signs indicating his/her desire for me." .286 "I am (would be) most happy when doing something to make him/her happy." .225 "I (would) sense my body responding when she/he touches me." .200 "I want her/him physically, emotionally, mentally."
Factor 2	
Insecurity	.397 "I would get jealous if I thought he/she were falling in love with someone else." .363 "I (would) get extremely depressed when things don't go right in my relationship with him/her." .302 "If she/he were going through a difficult time, I would put away my own concerns to help him/her out." .238 "He/she is the person who makes me feel the happiest." .181 "I would rather be with her/him than anyone else."
Security	.280 "I yearn to know all about him/her." .324 "I want her/him physically, emotionally, mentally." .424 "I will (would) love him/her forever." .184 "I sometimes find it difficult to concentrate on work because thoughts of her/him occupy my mind."
Factor 3	
Other-Centered	.435 "No one else could love her/him like I do (would)." .341 "Sometimes I feel I can't control my thoughts; they are obsessively on her/him." .230 "For me, she/he is (would be) the perfect romantic partner."
Self-Centered	.400 "I want him/her to know me, my thoughts, my fears, and my hopes." .386 "He/she can make me feel effervescent and bubbly." .275 "I (would) feel tender toward him/her." .207 "If she/he were going through a difficult time, I would put away my own concerns to help him/her out."

(continued)

TABLE 2 Continued

<i>Tentative Name for Factor Poles</i>	<i>Loadings and Scale Items</i>
Factor 4	
Instability	.850 "During my involvement with him/her, my emotions were (are, or would be) on a roller coaster."
Stability	.209 "No one else could love her/him like I do (would)." .209 "I will (would) love him/her forever." .163 "He/she always seems to be on my mind."
Factor 5	
Affective Passion	.268 "If I were separated from him/her for a long time, I would be intensely lonely." .260 "I sometimes find it difficult to concentrate on work because thoughts of her/him (would) occupy my mind." .186 "An existence without him/her would be dark and dismal."
Physical Passion	.547 "I take delight in studying the movements and angles of his/her body." .458 "Sometimes my body trembles with excitement at the sight of her/him." .276 "I would feel despair if he/she left me after we were involved." .262 "Sometimes I feel I can't control my thoughts; they are obsessively on her/him."
Factor 6	
Physical Affection	.326 "I (would) have an endless appetite for affection from her/him." .246 "I want him/her physically, emotionally, mentally."
Cognitive Affection	.579 "I sometimes find it difficult to concentrate on work because thoughts of her/him (would) occupy my mind." .353 "Sometimes my body trembles with excitement at the sight of her/him." .319 "I (would) melt when looking deeply into his/her eyes."

There is considerable variation in the level of between-sex similarity across the sites. First, in a number of cases, the homogeneity within sites was strong (e.g., Denmark, Mississippi, rural New York, Bradford, and Houston). Heterogeneity between the sexes was apparent in Hawaii, Israel, and Canada. However, the size of loadings would appear to make the factor interpretation reasonably clear.

Factor 1 is marked by the English sample (both males and females), the Canadian males, and the Hawaiian males. Factor 2 is clearly the Israeli females. Factor 3 is made up of the Indiana and Houston groups (both males and females). Factor 4 is the Mississippi males and females together with the

TABLE 3
Rotated Loadings of Each Site-Gender
Combination on Six Group Factors

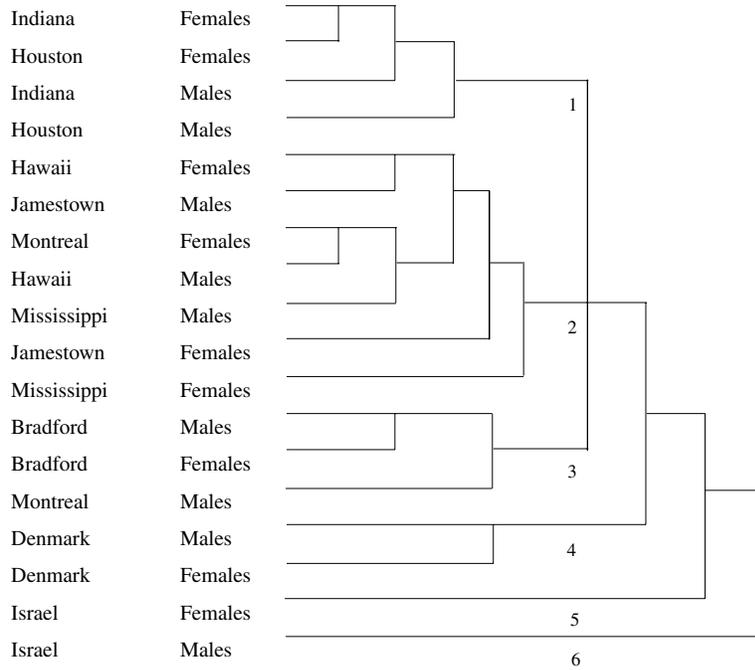
<i>Site</i>	<i>Gender</i>	<i>Group Factors</i>					
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Bradford	Males	.480	.037	.094	.002	-.099	-.086
	Females	.391	.249	.002	-.031	-.041	.104
Montreal	Males	.597	-.213	-.044	-.069	.089	.034
	Females	.189	-.116	.057	.183	.235	.077
Denmark	Males	.057	-.159	.016	-.055	.112	.691
	Females	-.065	.198	-.010	-.044	-.109	.679
Hawaii	Males	.281	.024	.051	.149	.083	-.015
	Females	.051	.187	.180	.215	-.050	.045
Indiana	Males	.135	-.118	.311	.029	.024	.076
	Females	.054	.079	.433	.020	-.052	-.034
Mississippi	Males	.069	-.234	.014	.387	.165	-.036
	Females	-.001	.066	-.223	.627	.024	-.069
Jamestown	Males	.120	.125	.014	.383	-.195	-.034
	Females	-.237	-.081	.168	.426	.031	.132
Houston	Males	-.188	-.121	.581	.009	.143	-.020
	Females	.053	.116	.499	-.059	-.052	-.040
Israel	Males	-.023	.136	-.042	-.058	.887	-.033
	Females	.010	.793	.011	.009	.102	-.012

rural New York sample (both males and females). Factor 5 includes only the Israeli males and Factor 6 is uniquely Danish (both males and females). At the same time, site projection along the axis of a six-dimensional space may not reflect actual clustering. Hence, a clustering algorithm is applied.

Using a six-factor solution, the factor loadings were used as the input into a Johnsonian cluster routine. Using a proximity value cutoff of .2284, six idealized groups were defined. Group 1 is made of the Israeli males ($n = 53$); Group 2 of the Israeli females ($n = 129$); Group 3 of the English males and females as well as the Montreal males ($n = 211$); Group 4 is a largely rural subgroup containing Mississippi males and females, Jamestown males and females, Hawaiian males and females, and Montreal females ($n = 1,113$); Group 5 seems to be an urban sample consisting of Indianapolis males and females and Houston males and females ($n = 227$); Group 6 is made up of both Danish groups ($n = 76$). The dendrogram of the cluster analysis is given in Figure 1. Table 4 provides loadings of these idealized groups on the six group-common factors. It is these six idealized cultures that we will now analyze.

TABLE 4
Rotated Group Mean Coefficients of
Idealized Cultures on Group Factors

<i>Idealized Cultures</i>	<i>Group Factors</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1	.877	.139	.045	.112	-.098	-.010
2	.138	.752	-.088	-.185	.048	-.108
3	-.057	.029	-.043	.012	.488	.114
4	.064	-.107	-.002	.467	.013	.056
5	-.004	-.051	.060	.053	.091	.345
6	.035	-.070	.709	-.002	-.057	.100



Cutoff value = .2284

Figure 1: Dendrogram of Idealized Culture Groups With Group Numbers at Clustering Cutoff

TABLE 5
Latent Roots and Proportion of
Common Variance for Each Viewpoint

<i>Viewpoint</i>	<i>Latent Roots (Common Variance)</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Israeli males	28.073 (.910)	1.960 (.070)	0.446 (.016)	0.162 (.006)	-0.580 (-.021)	-2.236 (-.080)
2. Israeli females	27.066 (.880)	2.565 (.097)	1.122 (.043)	-0.312 (-.012)	-0.791 (-.030)	-3.321 (-.126)
3. Bradford males and females, Montreal males	26.980 (.940)	1.126 (.046)	0.381 (.015)	-0.112 (-.005)	-1.552 (-.063)	-2.230 (-.091)
4. Mississippi males and females, Jamestown males and females, Hawaii males and females, Montreal females	27.072 (.900)	1.500 (.056)	0.794 (.030)	0.564 (.021)	-0.372 (-.014)	-2.898 (-.109)
5. Indiana males and females, Houston males and females	25.553 (.88)	2.114 (.076)	0.855 (.031)	0.172 (.006)	0.060 (.002)	-0.986 (-.035)
6. Danish males and females	27.506 (.910)	1.371 (.051)	0.759 (.028)	0.407 (.015)	-0.657 (-.024)	-2.400 (-.089)

FACTORS OF PASSIONATE LOVE WITHIN IDEALIZED GROUPS

Table 5 gives the eigenvalues and proportion of sums of squares accounted for by each factor within each idealized group. It seems clear that between two and three dimensions are adequate for each group. As an aid to interpretation, a second-order factor analysis in which the group-common factors were combined with the idealized group factors was used. In Table 6, results of this analysis are provided as an interpretive aid in comparing the factor structures (reproducing only the significant loadings).

It is clear from these data that the pattern of six group-common dimensions do not reflect any one subgroup, rather, the subgroup factors make up unique patterns in each group. However, some of the subgroup factors are related. Further, there are three unique factors (i.e., Excitement vs. Melancholy, Protective Intimacy vs. Tender Intimacy, Realistic Closeness vs. Idealistic Closeness). The Excitement vs. Melancholy, unique to the U.K. males

TABLE 6
Loading of Idealized Culture Factors on Group-Common Factors

<i>Idealized Culture</i>	<i>Within-Culture Factors</i>	<i>Common Factors^a</i>					
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Israeli males	1	-.80					
	2						.94
2. Israeli females	1		.94				
	2			.78			
	3						.88
3. Bradford males and females, Montreal	1	.76					
	2						
4. Mississippi males and females, Jamestown males and females, Hawaii males and females, Montreal females	1		.74				
	2	.84					
5. Indiana males and females, Houston males and females	1						
	2				.93		
6. Danish males and females	1						
	2	.91					

a. See Table 2 for explanation of common factors.

and females and Canadian males, is defined by items communicating physical excitement, delight, emotional exhilaration, on one pole, and dramatic perceptions of love, depression, and appetite for affection on the other. The factor unique to Indiana and Houston males and females is defined by tenderness, affection, jealousy, and self-sacrifice on the Protective Intimacy pole and perceptions of timeless and inequitable love, fear of loss, and softness on the Tender Intimacy pole. The factor unique to the Danish males and females has on its Realistic Closeness pole items denoting excitement and delight regarding one's partner and, on its Idealistic Closeness pole, items denoting how irreplaceable the relationship is, that is, love forever, difficulty, and difficulty concentrating. The items comprising these unique factors are given in Table 7. Table 8 provides a list of factors by idealized culture groups and indicates which of these factors are similar to the group-common factors. The stability of these factors is enhanced by the larger sample sizes afforded by using idealized groups (the exact sample sizes for the idealized groups were given above in the section titled "Idealized Culture Dimensions of the Sites").

TABLE 7
Factors Loading on Idealized Cultures Not Present in Common Set

<i>Tentative Name for Factor Poles</i>	<i>Loadings and Scale Items</i>
Bradford males and females, Montreal males (Idealized Culture 3); Factor 2	
Excitement	.516 "Sometimes my body trembles with excitement at the sight of her/him." .252 "I take delight in studying the movements and angles of his/her body." .245 "I want him/her to know me, my thoughts, my fears, and my hopes." .240 "He/she can make me feel effervescent and bubbly." .200 "During my involvement with him/her, my emotions were (are, or would be) on a roller coaster.
Melancholy	.406 "No one else could love her/him like I do (would)." .247 "I (would) get extremely depressed when things don't go right in my relationship with him/her." .205 "I (would) have an endless appetite for affection from her/him." .188 "He/she always seems to be on my mind." .205 "An existence without him/her would be dark and dismal."
Indiana males and females, Houston males and females (Idealized Culture 5); Factor 1	
Protective Intimacy	.274 "I would get jealous if I thought he/she were falling in love with someone else." .253 "I (would) sense my body responding when she/he touches me." .267 "I (would) feel tender toward him/her." .295 "If she/he were going through a difficult time, I would put away my concerns to help him/her."
Tender Intimacy	.423 "No one else could love her/him like I do (would)." .363 "I will (would) love him/her forever." .185 "I (would) melt when looking deeply into his/her eyes." .416 "An existence without him/her would be dark and dismal."
Danish males and females (Idealized Culture 6); Factor 1	
Realistic Closeness	.243 "Sometimes my body trembles with excitement at the sight of him/her." .266 "I take delight in studying the movement and angles of his/her body." .198 "I would feel despair if he/she left me after we were involved." .249 "I would get jealous if I thought he/she were falling in love with someone else." .305 "If she/he were going through a difficult time, I would put away my concerns to help him/her out."
Idealistic Closeness	.453 "No one else could love her/him like I do." .258 "I sometimes find it difficult to concentrate on work because thoughts of her/him (would) occupy my mind." .314 "I will (would) love him/her forever." .172 "For me, she/he is (would be) the perfect romantic partner."

TABLE 8
Tentative Names of Each Factor Within Each Idealized Culture

<i>Idealized Culture</i>	<i>Factor and Tentative Name</i>
1. Israeli males	1. Commitment vs. Affection* ¹ 2. Physical vs. Cognitive Affection* ⁶
2. Israeli females	1. Insecurity vs. Security* ² 2. Other-Centered vs. Self-Centered* ³ 3. Physical vs. Cognitive Affection* ⁶
3. Bradford males and females, Montreal males	1. Commitment vs. Affection* ¹ 2. Excitement vs. Melancholy
4. Mississippi males and females, Jamestown males and females, Hawaii males and females, Montreal females	1. Insecurity vs. Security* ² 2. Commitment vs. Affection* ¹
5. Indianapolis males and females, Houston males and females	1. Protective Intimacy vs. Tender Intimacy 2. Instability vs. Stability* ⁴
6. Danish males and females	1. Realistic Closeness vs. Idealistic Closeness 2. Commitment vs. Affection* ¹

NOTE: Idealized culture factors marked with an asterisk are highly related to a group-common factor, the number of which is indicated in superscript.

DISCUSSION

GROUP-COMMON FACTORS

The six factors resulting from the analysis of the scalar products across site group may be interpreted as potentially etic factors of passionate love (this potential is qualified by the idealized group analysis). The naming of these factors assumes that these are nuances of passionate love as conceptualized by Hatfield and Rapson (1987a, 1987b). The bipolar nature of these factors indicate a continuum along which feelings of passionate love may vary. This variability may be influenced by the conditions or the development of the relationship in which the student is involved. These factors may indicate differences in the subjective experience of passionate love along emotional, physical, and cognitive dimensions.

The one pole of Factor 1, Commitment, suggests a need to be in the relationship characterized by a fear of aloneness and a desperation to be together. The second pole, Affection, is more positive and involves a sensual nature that is more confident in the relationship. The Insecurity pole of Factor 2 is characterized by jealousy and depression with weaker indications of desire to help and be with the target of the subject's passion. The second pole, Security, does not have the negative influences of the other pole and suggests a

trust and willingness to submerge oneself into the relationship. Factor 3's Other-Centered pole suggests a focus on the partner's qualities and satisfaction, whereas the Self-Centered pole is characterized by what the participants want their partner to know about them and how their partner makes them feel. Factor 4's Instability pole is clearly characterized by one highly loaded item referring to the volatile nature of the relationship as a roller coaster. The other pole, Stability, suggests evenness in the confidence that this love is forever, irreplaceable, and always present. Factor 5 seems to contrast the emotional and the physical in that the Affective Longing pole contains references to emotional experience and the intrusion of these feelings whereas the Physical Longing pole refers to bodily sensations and a focus on the partner's body. Factor 6 describes a quality of affection ranging along a continuum from Physical Affection, characterized by appetite and physical wanting, to Cognitive Affection, characterized by difficulty concentrating and reactions to seeing one's partner.

GROUP-COMMON FACTORS VERSUS IDEALIZED CULTURE FACTORS

The above group-common factors are qualified by our findings that suggest that factoring across heterogeneous groups is likely to give spurious results. In this study, we found a total of six factors when collapsing across the 18 site-by-gender groups. No single group, when examined separately, completely reflected the group-common solution. Rather, each idealized culture or subgroup was found to have a unique factor structure of two to three dimensions. While the factor structures are unique, the factors themselves are related to some of the group common factors and are shared with other idealized culture groups. As such, interpretation of the idealized culture group factors will focus on the uniqueness of the pattern of factors.

These unique factor structures within cultural groups lead to a further conclusion. As Silver et al. (1966) noted more than 3 decades ago, in even a presumably homogeneous group, there will exist consistent subgroups of subjects who will see the world in fundamentally distinct patterns from each other. Though the Silver et al. study used random visual forms, it is quite likely that attitudinal and affective responses will show corresponding heterogeneity (as Tucker & Messick, 1963, found with political attitudes and Tzeng & Landis, 1978, reported with affective reactions). Thus, the use of site and gender entities in the analysis allowed for exploration of intranational (i.e., the U.S. sites) and gender (i.e., the Israeli and Canadian males and females) heterogeneity.

Another finding of note relates to the tendency for American researchers to exhibit a kind of ethnocentrism and assume similarity in factor pattern across disparate groups, even when the groups are part of a larger whole (Landis, Dansby, & Faley, 1994). With the exception of the Canadian females, none of the non-American groups exhibited a pattern similar to any American locale. Although there may be overlap in part of the pattern, the structure for each culture group as a whole is quite different. These findings should give caution to the application of factor patterns derived from American samples to even Western non-American groups.

The analytic technique used here (3M-POV) demonstrates its advantage over other nonmetric multidimensional techniques. Those approaches, of which INDSCAL is the best known, require that the groups, or individuals, be defined a priori. Further, it is also assumed that the group-common dimensions are the ones that will appear in the subgroups and that there are no additional significant and unique dimensions. The approach here demonstrates that there are subgroupings of the different locale data. In the present case, the 18 groups reduce to 6. At the same time, three additional dimensions appeared that were not present in the group-common solution. Thus, we have a much more detailed description of the structure of passionate love than would be possible using other techniques.

IDEALIZED CULTURE GROUPS

As was just mentioned, an advantage of the 3M-POV method is that the sample sites may be grouped into idealized cultures by their responses regarding the construct of interest, in this case passionate love. Although other within-site distinctions may be interesting (e.g., ethnicity), post hoc analyses indicate that site location and gender account for significant variability in overall PLS scores whereas self-reported ethnicity does not, thus providing a gross indication that our site-by-gender groupings are the most salient to differences in passionate love. Interpretation of these idealized groups may be speculative but useful for exploring gender and ecological (after Hofstede, 1980) commonalities and differences between males and females and geographic locations.

Seven of the nine sites (Bradford, Indianapolis, Houston, Mississippi, Jamestown, Hawaii, and Denmark) showed essential identity between males and females. This result partially supports the view that gender has little effect on one's view of sex and love (Hatfield & Rapson, 1996; Singelis et al., 1995). The similarity for the Danish sample may be interpreted as an effect of the masculinity-femininity cultural dimension. Denmark is characterized as a relatively feminine culture (Hofstede, 1980; 1998b), which is hypothesized

to result in fewer attitude and value differences between males and females (Hofstede, 1998b). Given Hofstede's (1998b) observations, one may have expected some differences between males and females in the Bradford, Indianapolis, Houston, Mississippi, Jamestown, and Hawaii sites. However, it seems that the cultural impact on these sites may be seen in the nature of their passion factors in terms of security and commitment. Masculine culture may foster more self-centered relationships (Hofstede, 1998a) causing the nature of longing for someone to be focused on the security of the relationship and the commitment to one another.

Qualifying the above neutral gender effect, men and women in the Israeli and Montreal samples seemed to have rather distinct views of passionate love, thereby partially supporting such views of gender effects as Hofstede (1998a). In the case of the Israelis, this difference is surprising given the relatively moderate masculinity index score Hofstede (1980) assessed in Israel. The one shared factor, Physical Versus Cognitive Affection, may be interpreted in light of masculine cultural influences toward more physical relationships (Hofstede, 1998a). The Canadians also share a dimension (i.e., Commitment vs. Affection). This factor is similar to the common factors in the American samples and may also be related to the level of masculinity and femininity in Canadian culture. Perhaps masculine cultural values (Hofstede, 1998a) influence relationships toward more egocentric physical relationships and away from more feminine committed relationships, a dichotomy expressed in this common factor.

Some of the site groupings may suggest different structures of passionate love for rural (i.e., Idealized Culture Number 4) and urban (i.e., Idealized Culture Number 5) samples. Whereas we might have expected a Southern U.S. perspective to emerge (at least we would expect so if the various popular writings, e.g., King, 1981, are to be believed), such was not the case. The Hawaiian sample, although it does originate in Honolulu (the Manoa campus of the University of Hawaii), is made up largely of Asian Americans, which may suggest that this group would adhere to traditional values and family structures (Kirkpatrick, 1987). One might have expected this predominately Asian sample to be much different than the other American sites and perhaps approximate Japanese performance. However, this seems unlikely given the idealized culture cluster the Hawaiian sample fit into and the expectation (based on Hofstede's, 1980, 1998b, assessments of high cultural masculinity in Japan) that a Japanese sample would have rather disparate factor differences between male and female perceptions of passionate love.

One possible cultural interpretation for the different groupings of urban and rural samples may be the increased individualism in urban areas compared to rural areas (Hofstede, 1980). Greater individualism affects intimate

relationships by increasing uncertainty about the stability of the relationship and subjugating the values and goals of the relationship to the values and goals of each individual (Dion & Dion, 1993). The result of higher individualism's impact on relationships is increased incidence of divorce (Dion & Dion). Therefore, one concern for individualistic couples is stability in their relationship, as indicated in some of the idealized culture group factors.

However, the urban group exhibits a second characteristic that may confound a simple "urban" description. A relatively high percentage of the respondents were married. So, it is possible that the pattern here (stability and intimacy) reflects a shift due to the taking on of family responsibility. Acting as a caution on this hypothesis, however, is the fact that a relatively large proportion of the Danish females were also married. The fact that this group was similar to its culture mates and not samples similar in marital status means that we should look at this variable somewhat more closely.

We have suggested, based on the results of the 3M-POV analysis, that the PLS is multidimensional and that those dimensions vary across cultures and, in some cases, by gender. The results presented here also suggest a number of directions to explore the meaning of the differences reported in this article. For example, given that the participants were all university students, exploration of passionate love among more mature and, relationshipwise, more stable (e.g., married) adults may indicate interesting developmental patterns. One obvious analysis would be to increase the number of groups by dividing them along the married-unmarried dimension. In the present data set, this possibility could be explored in the Indiana and Texas samples. However, there are too few married individuals in most of the other locales, and new samples would have to be drawn. Indeed, the present study suggests that future work on passionate love should be careful to include variation in marital status in defining the populations.

LIMITATIONS OF THIS STUDY

One problem with the present study lies in the site level of analysis and, therefore, the inability to study heterogeneity in any full sense within each group (i.e., the ecological fallacy, Hofstede, 1980; van de Vijver & Leung, 1997). With the exception of the Mississippi sample, samples are simply too small. We are forced to make the simplifying assumption that each gender-by-site group is fairly homogeneous regarding their experience of passionate love, despite misgivings that this might not be so. Our technique, in principle, would allow each person to be considered a culture. An analysis over the 1,709 cultures would show if the site/sex groupings did indeed

reflect homogeneous units. Unfortunately, the computational routines for 3M-POV do not yet permit cultures numbering over 50.

Another problem is the exploratory nature of the study. Many areas of cross-cultural research have amassed a solid base of exploratory and theory-driven empirical studies on which to develop meaningful theories to direct future empirical efforts (e.g., intercultural training, Landis & Bhagat, 1996; Bhawuk & Triandis, 1996). We hope that this article may be a theory-generating study, because it cannot be a theory-confirming study. This type of study is necessary because of the sparse number of theories and empirical studies with which to develop theories on the matter of passionate love and culture. Of course, due to the exploratory nature of our tentative conclusions, substantive interpretation of the relationships between culture, gender, and passionate love will require replication with fresh data.

ON COMMON ETICS, GROUP ETICS, AND EMICS

Recently, Hofstede and Trompenaars engaged in a debate as to which of their uncovered dimensions truly represented factors of cultural differences and similarities (Hofstede, 1996, 1997; Hampden-Turner & Trompenaars, 1997). The nub of the debate revolved around the universality of the Hofstede dimensions. Trompenaars (1993) maintained that cultures used the dimensions (he has seven as opposed to the Hofstede five) in unique ways and that, hence, it could not be said that, for example, individualism-collectivism was the primary factor in any one culture. Nevertheless, both Hofstede and Trompenaars would argue that their dimensions were indeed universal and qualify, therefore, as true etics. Our data paint a somewhat different picture, at least with regard to the domain of passionate love.

None of the group-common dimensions (in deference to factor theory, e.g., Thurstone, 1947, we will call them "common" etics) appeared in all viewpoints. The closest was Factor 1, which appears in four idealized groups. Factors 2 and 6 show up in two viewpoints each, whereas 3 and 4 appear in only one viewpoint each. Had we a larger sample of sites, each of the common etics might well be part of the passionate love structure of some subset of locales. By the same token, our data would suggest that none of the factors would appear in all cultures. To the extent that this patterning is true, then our data are more consonant with the theoretical position of Hampden-Turner and Trompenaars than they are with Hofstede. However, at the same time, we can be said to be pushing the envelope a bit further suggesting that not only do groupings of cultures (i.e., viewpoints or idealize cultures) pick and choose from a larger set of common etics which ones they will use to map the passionate love domain, but they will also construct unique dimensions that

reflect their ecological reality. These are the true emics. We see such a patterning in Idealized Cultures 3 (the English group) and 5 (the older, urban groups in the United States). These emics with a larger and more heterogeneous set of sites might well appear elsewhere. In that case, they will cease to be emics and will move into the category of group etics. If this proves to be the case, then questions may legitimately be raised as to whether or not true emics do, indeed, exist. Ultimately, this is an empirical question that must wait upon a sufficiently large sample of cultures for analysis. We would suggest that analytic tools such as 3M-POV can provide the method by which common etics, group etics, and emics can be separated and identified.

CONCLUSION

The present study had both methodological and substantive aims. Methodologically, we wanted to show the usefulness of individual differences multidimensional analysis for exploring cultural differences in conceptions of passionate love. The 3M-POV method of analysis appears to give interpretable results. Substantively, we wanted to explore whether passionate love, as measured by the Hatfield and Walster's (1978) PLS, was (a) unifactorial and (b) whether the structure was the same across cultures. Our findings suggest, on the contrary, that PLS is not unifactorial and that the structure of the factors does vary as a function of culture.

REFERENCES

- Beall, A. E., & Sternberg, R. J. (1995). The social construction of love. *Journal of Social and Personal Relationships, 12*, 417-438.
- Bhawuk, D. P. S., & Triandis, H. C. (1996). The role of culture theory in the study of culture and intercultural training. In D. Landis & R. Bhagat (Eds.), *Handbook of intercultural training*, (2nd ed., pp. 17-34). Thousand Oaks, CA: Sage.
- Boucher, J., & Osgood, C. E. (1969). The Pollyanna hypothesis. *Journal of Verbal Learning and Behavior, 8*, 1-8.
- Buss, D. M. (1988). Love acts: The evolutionary biology of love. In R. J. Sternberg & M. L. Barnes (Eds.), *The psychology of love*. New Haven: Yale University Press.
- Buunk, B., & Hupka, R. B. (1987). Cross-cultural differences in the elicitation of sexual jealousy. *Journal of Sex Research, 23*, 12-22.
- Carballo, M., Cleland, J., Carael, M., & Albrecht, G. (1989). A cross-national study of patterns of sexual behavior. *Journal of Sex Research, 26*, 287-299.
- Christensen, H. T., & Carpenter, G. R. (1962). Value-behavior discrepancies regarding premarital coitus in three Western societies. *American Sociological Review, 27*, 66-74.
- Christensen, H. T., & Gregg, C. F. (1970). Changing sex norms in America and Scandinavia. *Journal of Marriage and the Family, 32*, 616-627.
- Cho, W., & Cross, S. E. (1995). Taiwanese love styles and their association with self-esteem and relationship quality. *Genetic, Social, and General Psychology Monographs, 121*, 283-309.

- Dion, K. L., & Dion K. K. (1988). Romantic love: Individual and cultural perspectives. In R. J. Sternberg & M. L. Barnes (Eds.), *The psychology of love* (pp. 264-289). New Haven: Yale University Press.
- Dion, K. L., & Dion K. K. (1993). Individualistic and collectivistic perspectives on gender and the cultural context of love and intimacy. *Journal of Social Issues, 49*, 53-69.
- Ford, C., & Beach, F. A. (1951) *Patterns of sexual behavior*. New York: Harper & Row.
- Frayser, S. G. (1985). *Varieties of sexual experience: An anthropological perspective on human sexuality*. New Haven: HRAF Press.
- Fross, J. D. (1986). *The construct validity of the attitudes toward aspects of human sexuality scale and the Passionate Love Scale*. Unpublished master's thesis, Department of Psychology, University of Mississippi, Oxford.
- Fross, J. D., & Landis, D. (1985, January). *Relationship of attitudes and sexual behaviors: Cross-ethnic X*. Paper presented at the meetings of the Western Region of the Society for the Scientific Study of Sex, Palm Springs, CA.
- Gonzalez-Crussi, F. (1989). *On the nature of things erotic*. New York: Vintage.
- Hampden-Turner, C., & Trompenaars, F. (1997). Response to Geert Hofstede. *International Journal of Intercultural Relations, 21*, 149-159.
- Hatfield, E., & Rapson, R. (1987a). Passionate love: New directions in research. *Advances in Personal Relationships, 1*, 109-139.
- Hatfield, E., & Rapson, R. (1987b). Passionate love/sexual desire: Can the same paradigm explain both? *Archives of Sexual Behavior, 16*, 257-278.
- Hatfield, E., & Rapson, R. (1993). Historical and cross-cultural perspectives on passionate love and sexual desire. *Annual Review of Sex Research, 4*, 67-97.
- Hatfield, E., & Rapson, R. (1996). *Love and sex: Cross-cultural perspectives*. New York: Allyn & Bacon.
- Hatfield, E., & Sprecher, S. (1986). Measuring passionate love in intimate relations. *Journal of Adolescence, 9*, 383-410.
- Hatfield, E., & Walster, G. W. (1978). *A new look at love*. Lanham, MA: University Press of America.
- Hendrick, S., & Hendrick, C. (1987). Multidimensionality of sexual attitudes. *Journal of Sex Research, 23*, 502-526.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1996). Riding the waves of commerce: A test of Trompenaars' "model" of national culture differences. *International Journal of Intercultural Relations, 20*, 189-198.
- Hofstede, G. (1997). Riding the waves: A rejoinder. *International Journal of Intercultural Relations, 21*, 287-190.
- Hofstede, G. (1998a). Comparative studies of sexual behavior. In G. Hofstede and Associates, *Masculinity and femininity: The taboo dimension of national cultures* (pp. 153-176). Thousand Oaks, CA: Sage.
- Hofstede, G. (1998b). Masculinity/femininity as a dimension of culture. In G. Hofstede and Associates, *Masculinity and femininity: The taboo dimension of national cultures* (pp. 3-27). Thousand Oaks, CA: Sage.
- King, F. (1981). *Southern ladies and gentlemen*. New York: Bantam.
- Kirkpatrick, J. (1987). Ethnic antagonism and innovation in Hawaii. In J. Boucher, D. Landis, & K. A. Clark (Eds.), *Ethnic conflict: International perspectives*. Newbury Park, CA: Sage.
- Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1995). *Individual and collective processes of self-esteem management: Self-enhancement in the United States and self depreciation in Japan*. Unpublished manuscript, Kyoto University.
- Kroonenberg, P., & Kashima, Y. (1997). Rules in context: A three-mode principal component analysis of Mann et al.'s data on cross-cultural differences in respect for others. *Journal of Cross-Cultural Psychology, 28*, 463-480.
- Landis, D., & Bhagat, R. (1996). A model of intercultural behavior and training. In D. Landis and R. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed., pp. 1-13). Thousand Oaks, CA: Sage.

- Landis, D., Dansby, M., & Faley, R. (1994). The military equal opportunity climate survey: An example of doing surveys in organizations. In P. Rosenfield, J. Edwards, & M. Thomas (Eds.), *Surveying in organizations* (pp. 210-239). Thousand Oaks, CA: Sage.
- Landis, D., Silver, C. A., Jones, J. M., & Messick, S. (1967). Level of proficiency and multidimensional viewpoints about stimulus similarity. *Journal of Applied Psychology, 51*, 216-222.
- Lee, J. (1977). A typology of styles of loving. *Personality and Social Psychology Bulletin, 3*, 173-182.
- Little, T. D. (1997). Mean and covariance structures (MACS) analyses of cross-cultural data: Practical and theoretical issues. *Multivariate Behavioral Research, 32*, 53-76.
- Luckey, E. B., & Nass, G. D. (1969). A comparison of sexual attitudes and behavior in an international sample. *Journal of Marriage and the Family, 31*, 364-379.
- Osgood, C. E., May, W. H., & Miron, M. S. (1975). *Cross-cultural universals of affective meaning*. Urbana: University of Illinois Press.
- Perlman, D., Josephson, W., Hwang, W. T., Begum, H., & Thomas, T. L. (1978). Cross-cultural analysis of students' sexual standards. *Archives of Sexual Behavior, 7*, 545-558.
- Reiss, I. (1986). A sociological journey into sexuality. *Journal of Marriage and the Family, 48*, 233-242.
- Ross, M. W. (1986). *Psychovenereology: Personality and lifestyle factors in sexually transmitted diseases in homosexual men*. New York: Praeger.
- Rubin, Z. (1970). Measurement of romantic love. *Journal of Personality and Social Psychology, 16*, 265-273.
- Silver, C. A., Landis, D., & Messick, S. J. (1966). Multidimensional analysis of visual form: An analysis of individual differences. *American Journal of Psychology, 79*, 67-72.
- Simmons, C. H., vom Kolke, A., & Shimizu, H. (1986). Attitudes toward romantic love among American, German, and Japanese students. *Journal of Social Psychology, 126*, 327-336.
- Singelis, T., Choo, P., & Hatfield, E. (1995). Love schemas and romantic love. *Journal of Social Behavior and Personality, 10*, 15-36.
- Singer, B. (1985a). A comparison of evolutionary and environmental theories of erotic response—Part 1: Structural features. *Journal of Sex Research, 21*, 229-257.
- Singer, B. (1985b). A comparison of evolutionary and environmental theories of erotic response—Part 2: Empirical arenas. *Journal of Sex Research, 21*, 345-374.
- Sullivan, B. O. (1985). *Passionate love: A factor analytic study*. Paper presented at the 11th annual meeting of the International Academy of Sex Research, Seattle, WA.
- Sullivan, B. O., & Landis, D. (1984, August). *The relationship of sexual behavior and attitudes cross-culturally*. Paper presented at the 7th Congress of the International Association for Cross-Cultural Psychology, Acapulco, Mexico.
- Thurstone, L. L. (1947). *Multiple-factor analysis*. Chicago: University of Chicago Press.
- Ting-Toomey, S. (1991). Intimacy expressions in three cultures: France, Japan, and the United States. *International Journal of Intercultural Relations, 15*, 29-46.
- Trompenaars, F. (1993). *Riding the waves of culture: Understanding cultural diversity in business*. London: Economist.
- Tucker, L. R., & Messick, S. J. (1963). An individual differences model for multidimensional scaling. *Psychometrika, 28*, 333-367.
- Tzeng, O. C. S., & Landis, D. (1978). Three-mode multidimensional scaling with points of view solutions. *Multivariate Behavioral Research, 13*, 181-213.
- Tzeng, O. C. S., & Landis, D. (1979). A multidimensional scaling methodology for cross-cultural research in communications. In M. K. Asante, E. Newmark, & C. A. Blake (Eds.), *Handbook of intercultural communication* (pp. 283-318). Beverly Hills, CA: Sage.
- van de Vijver, F., & Leung, K. (1997) *Methods and data analysis for cross-cultural research*. Thousand Oaks, CA: Sage.
- Wang, A. V. (1994). Passionate love and social anxiety of American and Italian students. *Psychology: A Journal of Human Behavior, 31*, 9-11.

Dan Landis is a professor of psychology and director of the Center for Applied Research and Evaluation at the University of Mississippi. His research interests are the effects of culture on work groups, cross-cultural analysis of sexual behavior and attitudes, and cross-cultural training. He is the coeditor of the Handbook of Intercultural Training (Sage, 1996).

William A. O'Shea III is a doctoral student at the University of Mississippi. His research interests include developing an implicit measure of racial prejudice.