I. Introduction

The following is the second in a series of research reports on continuing research in Brazil examining the social, cultural, psychological and dietary precursors of cardiovascular disease. The intent of these reports is to provide a picture of the research as it unfolds. In the first of this series (Dressler 2001), I described the use of techniques from cognitive anthropology in relation to two objectives: (a) to explore the structure of cultural models of five cultural domains hypothesized to be of primary relevance to individual adaptation; and (b) to use those data to structure the collection of data in an epidemiologic survey, in order to measure cultural consonance in each of the five domains. Cultural consonance is defined as the degree to which individuals approximate in their own behaviors the prototypical cultural models for behavior of the society in which they live. The primary hypothesis guiding this research is that low cultural consonance (or the inability to live in accordance with widely shared cultural models) is a major precursor of stress outcomes, including arterial blood pressure, serum lipids, and depressive symptoms. Low cultural consonance describes a circumstance in which individuals live (mostly due to severe social structural obstacles, but perhaps in part by choice) outside the space of meaning defined by those five domains. It is hypothesized that this is a profoundly stressful state of affairs, leading to long-term adaptive problems as measured by health status.

The current research report has several different, but related, objectives. The first is to describe the metric properties of the new scales developed to measure cultural consonance. As I

* This research is funded by research grant BCS-0090193 from the National Science Foundation, William W. Dressler, Principal Investigator, José Ernesto Dos Santos, Co-Principal Investigator. The members of the research team include: Mauro Campos Balieiro, Rosane Pilot Ribeiro, Camila Dellatores Borges, Emília Maria Paulina Campos Chayamiti, Débora Consoni Florenzano, Mislene de Camarga Molina and Daniela Vieira Pallos. Dr. Manoel António dos Santos offers helpful advice and guidance, and without the help and support of Dr. Kathryn S. Oths, none of this would be possible.
described this project in the previous research report (Dressler 2001), we are breaking new ground in the measurement of cultural consonance. In prior research (Dressler and Santos 2000) we were able to assume a measurement strategy of connecting cultural models and actual (although reported) behaviors. In the current study, we are developing measures of the concept of cultural consonance to include a match between the cultural models of particular domains and how individuals perceive themselves relative to that domain. In other words, we are extending the concept of cultural consonance to include the space of individual perception as well as the space of behavior. But, this requires that we develop scales for the measurement of individual perception that both satisfy the conventional standards of measurement theory in the social sciences, and that can be used to measure the correspondence of individual perception and shared knowledge. This research report provides a first look at our success in accomplishing this task.

The second objective is to describe a new line of inquiry. This set of procedures for the collection of new data was stimulated by Crossley’s (2001) superb exegesis of the phenomenological dimensions of Bourdieu’s thought. Simply put, Crossley emphasizes the pragmatic features of the habitus, which is Bourdieu’s term for the complex mix of cultural models, individual schemas, and habits that guide individual behavior in everyday life. That the habitus has pragmatic dimensions means that individuals draw on this mix of representations to make practical decisions about what to do from moment to moment. It is, in short, a working structure (along with being, in Bourdieu’s memorable phrase, a “…structuring structure that is also structured…”). This new line of inquiry is designed to illuminate this pragmatic aspect of the habitus (or cultural models). By employing extensive, open-ended, qualitative interviews, we plan to observe individuals and groups of individuals thinking through common problems of everyday life. We intend, in other words, to use qualitative methods to observe the habitus at work. The research team decided to use a focus group technique here.

The third objective is to examine some of the survey results that we are beginning to obtain. One feature of this study is that we are sampling the same four neighborhoods that we studied ten years ago (Dressler and Santos 2000). This is not a prospective study, but rather a longitudinal study involving the repeated sampling of the same research sites. As such, it gives us two snapshots of Brazilian society, one from 1991 and one from 2001. By comparing these snapshots, separated by ten years, we can begin to better understand how social change is associated with health status.

One final note of introduction: this research is moving along at a rapid pace. While we are attempting as much as possible to keep up with data collection in terms of data entry and preliminary analyses, the data are coming in faster than we can really deal with them. Therefore, this research report will be illustrative of how we intend to analyze the data rather than an exhaustive analysis of those data. The quantitative data can be somewhat more completely analyzed at this stage, because the aim is a modest one: to analyze various coding schemes for the scales of cultural consonance and to evaluate the construct validity of those scales by examining their correlations with psychological variables that we have, in a previous paper (Dressler, Campos and Balieiro 2002), shown to be associated with cultural consonance. At the same time, the amount of data that we have collected thus far has made it difficult to get

* This is perhaps not the place for an extended epistemological discussion; however, the logic of terms like “quantitative” versus “qualitative data” can break down quickly under careful scrutiny. This distinction between results generated by structured observations that are quantified, and semi-structured observations not quantified (even if enumerated) is nevertheless a useful one. This distinction will be used here with the knowledge that it is only heuristic.
to all of the survey data and to experiment with these coding schemes. Left out of this report is a preliminary analysis of cultural consonance in the domain of food and food behaviors, simply because there was insufficient time to work those data up; however, the approach illustrated in other cultural domains for the measurement of cultural consonance will be applied to the domain of food, as well.

The qualitative data are, however, more complicated to deal with, because of the labor intensive nature of qualitative analyses, even given current computer software that can be used. Therefore, what we will present here is not a complete analysis, but rather an illustration of how we will go about using the focus group data to contribute to the overall goals of the research. Fundamentally, we aim to use the focus group data in a process of methodological triangulation, especially to help to evaluate the validity of the data on cultural models collected in 2001 that were used as the foundation for the measurement of cultural consonance. While we are, obviously, already committed to using those data on cultural models and the measures of cultural consonance that follow logically from them, we are still very much interested in continuing the evaluation of these methods. The presentation of the analysis of one set of qualitative data collected in 2002 will illustrate this methodological triangulation.

II. Psychometric Properties of Scales Used in the Survey Component

Sampling

As noted above, we are sampling as much as possible the same neighborhoods that were studied in our 1991 research and described in detail in a number of publications from that work (Dressler, Balieiro and Santos 1997; 1998), as well as in the Research Proposal that is available in pdf format elsewhere on this website. I say “as much as possible” because events in the intervening 10 years have altered substantially one of the sampled neighborhoods. In 1991, the economically poorest neighborhood studied was a *favela*, often erroneously translated as “shanty-town” in the literature. This is an erroneous translation because *favelas* can become permanent communities. What distinguishes them from other communities is their illegal or semi-legal status. The land on which the neighborhood is built is land that has either been appropriated by squatters, or it has been developed by an owner outside the legal requirements of the municipality. In either case, *favelas* lack the basic services (roads, sewers, water, electricity, trash pick-up) that legal communities have. Not surprisingly, the residents of *favelas* (or “*favelados*”) tend to be the poorest members of society, usually employed, but in low-paying, manual-labor occupations such as cane-cutter or construction laborer. Oftentimes, especially in the South of Brazil, *favelados* are migrants from the chronically economically depressed Northeast of the country.

We sampled a *favela* in 1991 and, as it turned out, just barely in time for it still to be a *favela*. The mayor of the city in 1991 undertook a series of developments to improve the quality of life of *favelados*, including the construction of a variant of a “*conjunto habitacional*.” A *conjunto habitacional* is a kind of public housing project, but one in which residents are able to purchase their homes. In order to qualify for the purchase of a house, the prospective resident must demonstrate stable employment, something few *favelados* can do. The 1991 project, however, developed a modest *conjunto* into which the residents of several *favelas* were moved, without regard to the wishes of the *favelados* themselves. The *favelados* then paid rent to the city in the new neighborhood. The *favela* in which we worked was destroyed shortly after we carried out our interviewing. In the intervening 10 years we kept in touch with residents in their new neighborhood, and we were able to see how the community was changing. In the first place, a substantial proportion (we cannot quantify this exactly but rely rather on informants’
characterizations) of the residents moved back to other favelas not long—within the next couple of years—after moving to the new neighborhood (known as Maria Casagrande). The primary reason for this, according to our informants, was that many favelados were unable to cope with the economic demands of the neighborhood, such as paying rent, an electric bill and a water bill, and all on time. Some persons preferred to return to a favela. In the second place, and as a consequence of the preceding, the population of the neighborhood has changed. One informant lamented this early on, saying that, while the favela had many problems (especially with respect to crime and drug trafficking), she felt safer there than in the new neighborhood, because people knew one another and looked out for one another. She felt that they were strangers in the new neighborhood. Also, the problems of the favela, especially with respect to drug trafficking, were quickly transplanted to Maria Casagrande. The neighborhood has an unsavory reputation in this respect.

This sense of greater social atomism may have been exacerbated for some, since the favela that we had sampled in 1991 was remarkably well-organized, due to the efforts of a local priest and a very energetic member of the community. It seems that this sense of organization has not continued in the new neighborhood.

Finally, we have anecdotal evidence, very sketchy at this point, that Maria Casagrande may have become an endpoint in a process of downward mobility. There are reports of persons who owned houses in somewhat more affluent neighborhoods having fallen on hard times, then selling their homes and buying instead in Maria Casagrande, despite its reputation for crime. Clearly we need to collect more data in Maria Casagrande to get a better sense of how the neighborhood has changed, but the point is clear that it has changed, probably more than any other of the neighborhoods that we are sampling. This must be kept in mind in the analysis of the survey data.

As of this writing, we have completed survey work in three of the four neighborhoods to be sampled; data from two of those neighborhoods, Maria Casagrande (the poorest, n=66) and Vila Tibério (a solidly middle class community, n=71) are available for preliminary analyses. Data from the third neighborhood (José Sampaio, a true conjunto habitacional that can be characterized as roughly “working class,” or in between Maria Casagrande and Vila Tibério economically) is currently being cleaned and entered. For simplicity, in the remainder of this report Maria Casagrande will be referred to as the ‘lower class’ community, and Vila Tibério will be referred to as the ‘middle class’ community. Extensive descriptive statistics on the sociodemographic characteristics of the two samples are reported in section IV of this report, in Figs. 10-22.

Reliabilities of Standardized Scales

Before proceeding to an examination of the scales developed to measure cultural consonance, it is worth pausing to examine briefly the way in which standardized instruments are working thus far in the research. I am referring to these as “standardized scales” in order to emphasize that these are conceptualized as typical individual-difference variables, as distinct from the cultural consonance variables that measure individual deviations from a culturally-defined central tendency.

The standardized scales being employed in this research include: Cohen’s perceived stress scale (PSS) (Cohen, et al. 1983); a measure of health locus of control developed by Coreil and Marshall (LOC) (Coreil and Marshall 1982); a religiosity scale (REL) developed for this study; and, the Center for Epidemiologic Studies Depression Scale (CES-D). The PSS and the LOC
were used in our prior research (Dressler, Balieiro and Santos 1998). The PSS was used in exactly the form originally developed by Cohen. The LOC was used with a slightly different scoring. In its original use, the LOC items were simply answered “yes” or “no.” We observed a number of interesting associations of the LOC with cultural consonance (Dressler, Balieiro and Santos 2002), but I decided that the scale was likely to perform even better with a Likert-response format. Therefore, the response format was changed to “agree-disagree,” with each alternative elaborated as “agree-strongly agree,” or “disagree-strongly disagree.” For the total, a higher score is indicative of an internal locus of control and a lower score is indicative of an external locus of control. The CES-D was the Brazilian Portuguese translation developed and validated in Brazil. All of the scales are scored 0-3, with 0 indicating strong disagreement and 3 indicating strong agreement. For the religiosity scale, 0 indicates participating infrequently in the behavior described, while 3 indicates participating frequently.

The reliabilities, range of item-total correlations, and descriptive statistics for the scales are given in Table 1. All of these scales show acceptable internal consistency reliability for the total sample. There is, however, an interesting variation between the lower class sample and the middle class sample. Overall, the reliabilities tend to be higher for the middle class respondents than for the poorest respondents. For two of the scales (locus of control and religiosity) this difference is actually quite large. At this point in the research it would be premature to speculate too much on this difference, since with the addition of the other two sampled neighborhoods the reliabilities could change substantially. At the same time, these differences may be indicative of something interesting happening in the data.

Table 1: Psychometric properties of standardized scales

<table>
<thead>
<tr>
<th>Scale:</th>
<th>Cronbach’s alpha</th>
<th>Range of item-total correlations</th>
<th>Mean (s.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES-D (20 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.89</td>
<td>.10 - .72</td>
<td>14.51 (11.0)</td>
</tr>
<tr>
<td>Maria Casagrande</td>
<td>.85</td>
<td>-.10 - .66</td>
<td>15.48 (9.8)</td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>.91</td>
<td>.27 - .79</td>
<td>13.61 (12.0)</td>
</tr>
<tr>
<td>PSS (10 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.78</td>
<td>.09 - .57</td>
<td>10.15 (5.9)</td>
</tr>
<tr>
<td>Maria Casagrande</td>
<td>.73</td>
<td>.15 - .55</td>
<td>10.45 (5.7)</td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>.83</td>
<td>.02 - .65</td>
<td>9.87 (6.2)</td>
</tr>
<tr>
<td>LOC (14 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.68</td>
<td>.09 - .44</td>
<td>26.59 (5.6)</td>
</tr>
<tr>
<td>Maria Casagrande</td>
<td>.59</td>
<td>-.07 - .51</td>
<td>23.86 (5.3)</td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>.76</td>
<td>.20 - .51</td>
<td>27.81 (5.9)</td>
</tr>
<tr>
<td>REL (6 items)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.77</td>
<td>.48 - .54</td>
<td>12.51 (3.7)</td>
</tr>
<tr>
<td>Maria Casagrande</td>
<td>.61</td>
<td>.20 - .52</td>
<td>12.27 (2.9)</td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>.84</td>
<td>.52 - .67</td>
<td>12.73 (4.2)</td>
</tr>
</tbody>
</table>

It is also instructive to examine the correlations among these measures, to get a preliminary sense of the construct validity of the scales. Again, these correlations need to be viewed with caution, based as they are on a two subsamples with a restricted range of socioeconomic variability and the correlations among the variables will no doubt change with the addition of the other two neighborhoods. The correlations are shown in Table 2.
Nevertheless, the depression scale and the perceived stress scale are highly correlated, as we observed in our previous study (indeed, these two scales are more highly correlated in Brazil than they are in American samples, indicating that they both may be measuring aspects of mood, as opposed to the perceived stress scale assessing some dimension of the individual’s interaction with the social environment). These correlations are consistent across the neighborhoods. A higher internal locus of control is associated both with lower depression and less perceived stress, but the lower reliability of locus of control in Maria Casagrande leads to an attenuation of that correlation within that site and for the two sites combined. The religiosity scale has a weak inverse association with perceived stress. Given the small sample and the restricted range of variability, these correlations can be regarded as evidence of the construct validity of the scales.

Table 2: Correlations among standardized scales

<table>
<thead>
<tr>
<th></th>
<th>CES-D</th>
<th>PSS</th>
<th>LC</th>
<th>REL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CES-D</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PSS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.72**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maria Casagr.</td>
<td>.72**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>.72**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-.33**</td>
<td>-.31**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Maria Casagr.</td>
<td>-.17</td>
<td>-.32**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>-.43**</td>
<td>-.26**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-.16</td>
<td>-.19*</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>Maria Casagr.</td>
<td>-.07</td>
<td>-.15*</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Vila Tibério</td>
<td>-.21</td>
<td>-.21</td>
<td>.08</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10     **p<.01

Properties of Scales Measuring Cultural Consonance

In prior research, cultural consonance had been measured in only two domains: cultural consonance in lifestyle and cultural consonance in social support. The measurement of cultural consonance was facilitated by working in these two domains, because it was reasonable to assess both lifestyle and social support at the individual level as reported behaviors. That is, persons could report whether or not they owned a particular item, or whether or not they engaged in a related behavior, for the style of life scale. The correspondence between these individual reports and the weights assigned to the items in the consensus model could then be calculated in a couple of different ways. In one method, a cut-off point of the cultural importance of the items was selected, and the number of culturally more important items that an individual reported was counted and divided by the total number of items. This provided a coefficient that varied between 0 and 1, and the higher the value, the greater the match between the individual’s behaviors and the culturally valued behaviors (see Dressler 1996). Cultural consonance in lifestyle turned out to be a symmetrically distributed variable. In another method (employed in a different data set, see Dressler and Bindon 2000), I used the weights assigning cultural importance to the items as weights for reported ownership in the survey data. This simply means that the higher the score, the more the individual owns (or reports behavior consistent with) culturally valued items.
Cultural consonance in social support was assessed in a way resembling this latter approach. In the consensus model, alternate sources of social support were ranked in terms of their likelihood of being chosen in response to a particular problem. In the survey data, individuals reported whether or not they were likely to choose a particular source of support. To measure cultural consonance, the ranks were used as weights for sources of support employed by the respondent. The higher the weighted sum of supports utilized, the closer the individual matched the cultural model of social support. In the Brazil data from 1991, individuals tended to fall into one of three groups: one that matched the cultural model perfectly; one that nearly matched the cultural model; and, one that was quite different from the cultural model (Dressler, Balieiro and Santos 1997).

There are two differences between the current project and the project from ten years ago in terms of the measurement of cultural consonance. First, in the domains of lifestyle and social support, we have tried to improve substantially the evaluation of shared culture using the consensus model. To do so, we expanded considerably the number of items in each domain, and the ways in which those items were rated in both the consensus data and in the survey data. These differences lead to differences in the measurement of cultural consonance. Second, we are measuring cultural consonance in three new domains: family life, national characteristics and food behaviors. New measures in old domains, and new domains, mean that new ways of measuring cultural consonance have to be developed. In the following pages, I will describe preliminary steps in the development of these new measures.

Cultural consonance in lifestyle – Thirty-three items were used to measure style of life, roughly equally divided between items assessing the ownership of material goods (15 items) and items assessing related behaviors (16 items). The two additional items proved to be highly salient in the cognitive analyses, but are somewhat anomalous in terms of their classification. These are “having enough money for extras” and “having enough money for school” (this being applicable either to the respondent’s children or to the respondent himself or herself). As noted above, in the original development of a scale of cultural consonance in lifestyle (Dressler 1996), I simply selected the items that were considered to be more important in the culturally-preferred lifestyle and counted the number of these that each respondent reported in the survey research.

In the current research, respondents in the consensus analysis rated the importance of different lifestyle items on a 4-point scale, from “not at all important” to “very important” (and there was high consensus on the preferred lifestyle, see Research Report I). Therefore, one approach to measuring cultural consonance would be simply to select the items rated as “important or very important,” and to count the number of those items that a survey respondent reports.

This approach to measurement is, however, somewhat wasteful, in that: (a) information regarding degrees of importance of various items is lost; and (b) information regarding the ownership of items that are not regarded as particularly important is also lost. A second approach to measuring cultural consonance in lifestyle, one that is more sensitive but perhaps less intuitively appealing, is to use the ratings from consensus analysis as weights for the individual items making up the scale (see Dressler and Bindon 2000 for an example). In this approach, all of the information available in the items, both in terms of cultural salience and in terms of their distribution in the community, is used. The higher the value for an individual on the scale, the higher his or her cultural consonance in lifestyle. The approach is somewhat less intuitive, in that there is no obvious point on the scale at which to say that a person is lacking in cultural consonance, but again, it is more sensitive.
The second approach to measuring cultural consonance in lifestyle was used here. Table 3 presents a standard internal consistency item analysis of the 33 lifestyle items, prior to weighting. Overall, the scale has high internal consistency (alpha = .82), despite the fact that there are a few items with low item-total correlations (and there are a couple of items with zero variance that were, of course, omitted from the item analysis).

Following this item analysis, the cultural consonance in lifestyle scale was formed by first weighting each item in the scale by the corresponding value from the consensus analysis of the

Table 3: Scale analysis of cultural consonance in lifestyle

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total correlation</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>washing machine</td>
<td>.27</td>
<td>.53</td>
<td>.50</td>
</tr>
<tr>
<td>car</td>
<td>.40</td>
<td>.55</td>
<td>.50</td>
</tr>
<tr>
<td>microwave</td>
<td>.36</td>
<td>.33</td>
<td>.47</td>
</tr>
<tr>
<td>internet access</td>
<td>.50</td>
<td>.20</td>
<td>.40</td>
</tr>
<tr>
<td>stove</td>
<td>1.00</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>cell phone</td>
<td>.28</td>
<td>.36</td>
<td>.48</td>
</tr>
<tr>
<td>sofa and chairs</td>
<td>.18</td>
<td>.82</td>
<td>.38</td>
</tr>
<tr>
<td>table and chairs</td>
<td>.18</td>
<td>.96</td>
<td>.21</td>
</tr>
<tr>
<td>home ownership</td>
<td>.05</td>
<td>.70</td>
<td>.46</td>
</tr>
<tr>
<td>vcr</td>
<td>.44</td>
<td>.59</td>
<td>.49</td>
</tr>
<tr>
<td>computer</td>
<td>.48</td>
<td>.24</td>
<td>.43</td>
</tr>
<tr>
<td>refrigerator</td>
<td>1.00</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>telephone</td>
<td>.30</td>
<td>.81</td>
<td>.39</td>
</tr>
<tr>
<td>television</td>
<td>.12</td>
<td>.95</td>
<td>.22</td>
</tr>
<tr>
<td>stereo sound system</td>
<td>.16</td>
<td>.85</td>
<td>.36</td>
</tr>
<tr>
<td>have money for extras?</td>
<td>.18</td>
<td>.12</td>
<td>.32</td>
</tr>
<tr>
<td>have money for school?</td>
<td>.25</td>
<td>.45</td>
<td>.45</td>
</tr>
<tr>
<td>go out to clubs</td>
<td>.39</td>
<td>.319</td>
<td>.640</td>
</tr>
<tr>
<td>listen to music</td>
<td>.22</td>
<td>2.481</td>
<td>.9709</td>
</tr>
<tr>
<td>go to the shopping center</td>
<td>.62</td>
<td>.8131</td>
<td>.8423</td>
</tr>
<tr>
<td>go to church</td>
<td>.01</td>
<td>1.430</td>
<td>1.1662</td>
</tr>
<tr>
<td>go to bars</td>
<td>.35</td>
<td>.4818</td>
<td>.8584</td>
</tr>
<tr>
<td>study for personal development</td>
<td>.34</td>
<td>.9197</td>
<td>1.2311</td>
</tr>
<tr>
<td>go out for lunch</td>
<td>.45</td>
<td>.5328</td>
<td>.8229</td>
</tr>
<tr>
<td>spend time resting</td>
<td>.11</td>
<td>1.562</td>
<td>1.1431</td>
</tr>
<tr>
<td>use the internet</td>
<td>.44</td>
<td>.4307</td>
<td>.9837</td>
</tr>
<tr>
<td>practice sports</td>
<td>.30</td>
<td>.9051</td>
<td>1.2654</td>
</tr>
<tr>
<td>go to parties</td>
<td>.51</td>
<td>.6934</td>
<td>.6593</td>
</tr>
<tr>
<td>watch TV</td>
<td>.18</td>
<td>2.7983</td>
<td>.6690</td>
</tr>
<tr>
<td>go to the movies</td>
<td>.50</td>
<td>.1971</td>
<td>1.5122</td>
</tr>
<tr>
<td>spend time with friends</td>
<td>.28</td>
<td>2.2190</td>
<td>1.0622</td>
</tr>
<tr>
<td>read</td>
<td>.25</td>
<td>1.7445</td>
<td>1.2720</td>
</tr>
<tr>
<td>go to the theater</td>
<td>.33</td>
<td>.1000</td>
<td>.2353</td>
</tr>
<tr>
<td>Cronbach's alpha</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

importance of those items, and then summing those weights. Weights could range from 1 to 4. Given the large number of items, the range of possible scores is quite large (0-396). Fig. 1 presents a histogram for the distribution of cultural consonance scores. The distribution is symmetric, with a mean of 155.5 and a standard deviation of 37.7.

Cultural Consonance in Family Life – Family life is one of the new cultural domains in which we are measuring cultural consonance. As I noted in the research report from Year 01, the measurement of cultural consonance in this domain presents special challenges. The cultural domain of family consists of two broad clusters of terms, one cluster referring to negative characteristics of families in Brazil (such as egoism and disrespect), the other referring to
positive characteristics (such as love, understanding and perseverance). Within the cluster of positive characteristics, one subset of terms refers to the emotional climate of the family while another refers to family structure and organization. The negative characteristics also have two subsets, with one referring to behaviors such as drug abuse, and the other referring to interpersonal behaviors like disrespect.

The challenge here is locating individuals in the space of meaning defined by these terms. For lifestyle this was unproblematic, because we could inquire directly about individual behaviors in

Fig. 1: Distribution of cultural consonance in lifestyle (CCLS)

![Cultural consonance in lifestyle](image)

a nonthreatening way in the interview. For family characteristics, is it really possible to ask “Do you love your family?” and get anything other than a stereotypical response? I doubt it. At the same time, to measure cultural consonance, we need a way to locate individuals in cultural space, but not with respect to their cultural competence. An individual’s cultural competence locates them in the space of knowledge (e.g. “Is love an important family characteristic?”), whereas cultural consonance locates them in the space of cultural meaning with respect to their enactment or performance of culturally prototypical models for a domain.

To do this, we fell back on a time-honored social scientific tradition: we measured individual perceptions (or attitudes or beliefs—these terms tend to be used interchangeably). So, instead of asking “Do you love your family?”, we stated “Sometimes I feel as if there is not enough love in my family,” and had interviewees respond on a 4-point Likert scale, from “disagree completely” to “agree completely.” In this way, we hope to locate individuals in the space of cultural meaning with respect to their self-perceptions. Again, this is not “cultural competence,” in the sense that they know love is an important characteristic of a family, but rather it is “cultural consonance” in the sense that they perceive themselves to be congruent (or not) with what the cultural model defines as important. It is, however, a consonance in terms of personal belief as opposed to a consonance in behavior.
In developing the interview schedule, we generated 18 items, each of which corresponded to one of 13 concepts used in the cultural consensus analysis. Some positive items (e.g. good relationships) were virtually the obverse of some of the negative items (e.g. disrespect), so a single item could capture aspects of each. Obviously, each of the 13 major concepts had one item, and we tended to over sample the more positive characteristics.

Table 4 provides data on the items, the distribution of responses across the 4-point Likert scale, and item-total correlations. The full items are available in Research Report I (p. 35). The distributions of the item responses are shown in reverse-coded form for those items that must be reversed (e.g. the culturally appropriate response to the sixth item is to disagree, since one’s family should be full of love). The item-total correlations were calculated with all items coded in the same direction, that is, agreement signifies locating oneself closer to the culturally prototypical response. The item-total correlations, and the internal consistency reliability (alpha = .89), indicate that these items reliably measure an individual’s perception of his or her location in the space of family culture in Brazil. And like CCLS, the reliabilities are the same in both neighborhoods.

There are two ways to go about creating a summary measure of cultural consonance in family life (CCFL). The first is to simply sum the items shown in Table 4. Since all of the items measure aspects of family culture, the more that an individual agrees (or disagrees) with the items in a culturally appropriate way, the higher his or her cultural consonance. On the other hand, some of the cultural concepts underlying these items are given higher weight in the cultural model of family life than others, and indeed, some are even seen as threats to family life. Therefore, these differential weights, and the positive or negative aspect of the item, can also be used in scale construction.

Table 4: Item analysis of scale of cultural consonance in family life (CCFL)

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total correlation</th>
<th>Mean (range 0-3)</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel close to one another</td>
<td>.45</td>
<td>2.50</td>
<td>.79</td>
</tr>
<tr>
<td>Family should be organized*</td>
<td>.32</td>
<td>2.15</td>
<td>.96</td>
</tr>
<tr>
<td>Don’t have help*</td>
<td>.35</td>
<td>1.04</td>
<td>.88</td>
</tr>
<tr>
<td>Family are hard workers</td>
<td>.32</td>
<td>2.70</td>
<td>.52</td>
</tr>
<tr>
<td>We avoid one another*</td>
<td>.69</td>
<td>.86</td>
<td>.92</td>
</tr>
<tr>
<td>Wish for more love in family*</td>
<td>.49</td>
<td>1.62</td>
<td>1.09</td>
</tr>
<tr>
<td>We are well-adjusted</td>
<td>.66</td>
<td>2.05</td>
<td>.82</td>
</tr>
<tr>
<td>Act without thinking of family</td>
<td>.22</td>
<td>.76</td>
<td>.83</td>
</tr>
<tr>
<td>Family too critical</td>
<td>.54</td>
<td>1.08</td>
<td>.80</td>
</tr>
<tr>
<td>Family confronts problems</td>
<td>.46</td>
<td>2.26</td>
<td>.79</td>
</tr>
<tr>
<td>Mine is happy family</td>
<td>.61</td>
<td>2.31</td>
<td>.73</td>
</tr>
<tr>
<td>We understand each other</td>
<td>.71</td>
<td>2.17</td>
<td>.80</td>
</tr>
<tr>
<td>We help each other</td>
<td>.61</td>
<td>2.33</td>
<td>.75</td>
</tr>
<tr>
<td>Don’t have time to listen*</td>
<td>.46</td>
<td>1.05</td>
<td>.89</td>
</tr>
<tr>
<td>Don’t have enough respect</td>
<td>.66</td>
<td>.82</td>
<td>.82</td>
</tr>
<tr>
<td>We talk about important things</td>
<td>.62</td>
<td>2.32</td>
<td>.72</td>
</tr>
<tr>
<td>Feel love for one another</td>
<td>.67</td>
<td>2.38</td>
<td>.69</td>
</tr>
<tr>
<td>Wish didn’t fight so much</td>
<td>.41</td>
<td>1.45</td>
<td>1.08</td>
</tr>
</tbody>
</table>

*Item reverse coded  Cronbach’s alpha = .868
In the consensus analyses conducted last year, we obtained consensus rankings of the importance of items. The reverse of the ranking (i.e. giving the item ranked first—in these data, “love”—a higher numerical weight, which in this case would be 13) can be used to weight the item. Because a total of 13 items were ranked in the consensus analysis, the weights theoretically could range from 1 to 13; however, because some informants in the consensus interview will interchange items, there can be “ties” of sorts (not true ties, but rather the weighted rankings of items coming out close in value). Therefore, I gave items that were relatively close in rank similar weights, reducing the full 1-13 range to a range of 1-7. Furthermore, the negative items (criticism, fights, disrespect and egoism) each can receive a negative weight, so that an individual actually loses points on the scale to the degree that s/he sees this negative feature as characteristic of his or her family. So, the final ranks ranged from a -3 to a +4. To calculate CCFL, an individual’s response to an item was first weighted, and then the weighted items were summed. The scores for CCFL range from -7 to 108, with a mean of 66.5 and a standard deviation of 21.5.

A histogram for this scale is shown in Fig. 2. The scale is symmetrically distributed, although there appears to be a little separation of cases at the low end of the scale, where individuals perceive their family life to be quite different from the prototypical cultural model of the family.

Fig. 2: Distribution of cultural consonance in family life (CCFL)

Cultural Consonance in Social Support – Social support is a domain in which the measurement both in the consensus study and in the survey data has been expanded considerably. In the consensus study, respondents were presented with 9 typical problems and 7 potential social sources of support, and they were asked to rank order the potential sources of support in terms of their importance relative to that problem. Satisfactory consensus on the task was achieved.
In the survey data we used exactly the same approach, but with two differences. First, respondents in the survey were asked only to rank their first three alternatives in response to the problem, and then they were asked to add any other sources of support that might be relevant. We did this because it proved (in pretesting) very difficult for respondents to rank 7 alternatives without visual aids (such as cards with the names of the alternatives), and because with 9 different problems, the process could become lengthy. In the consensus interviews this was no problem, because that was the only point of the interview. In the survey interview, however, we decided that this could slow things down too much. Hence, we opted for an approach that was less complete, but that would still return data on an individual’s rankings that could be compared to the consensus rankings. As it turned out, about 50% of the time respondents added at least one alternative to the ranking, so that in most cases we have at least four alternatives ranked. When an individual did not rank a social support alternative, in data entry this was treated as missing data; however, in analyses, missing data was recoded to 7, indicating that this was an alternative of no importance to that person. The second major difference was, of course, that individuals were reporting on their own hierarchy of resort, as opposed to what was perceived as typical in the community.

Given the nature of the data collected, there is one approach to measuring cultural consonance in social support that seems most reasonable for these data. Since in the consensus data we have complete rankings for the alternative sources of social support, we can calculate for each respondent in the survey a correlation coefficient between his or her profile of support rankings and the consensus profile. This measure will then vary between 0.00 and 1.00. The closer to 1.0, the more an individual’s profile of social support responses resembles the consensus ranking of social support. Also, this measure can take a sign, if the individual ranks social support options in precisely the opposite way as the consensus analysis.

Fig. 3: Distribution of cultural consonance in social support (CCSS)
A histogram describing the distribution of cultural consonance in social support (CCSS) is shown in Fig. 3. The distribution (with a mean of .47 and a standard deviation of .19) is somewhat skewed to the left, indicating that there is a majority of the sample fairly evenly distributed about the mean, but with a substantial minority having very low levels of cultural consonance in social support.

Cultural Consonance in National Characteristics – The cultural domain of national characteristics is another in which the measurement of cultural consonance departs considerably from the measurement models developed in earlier research. I selected this domain for inclusion in this research for several reasons, not the least of which was that this is a domain that corresponds more closely to many conventional notions of culture and to many lay conceptions of culture. That is, “culture” has been viewed as an overarching set of characteristics that separate “Brazilians” from “Swedes” from “Americans” (a lay sense of the term). In professional discourse, this same basic view of culture is implicit in historic conceptualizations (e.g. national character studies; configurationist theories) and in contemporary views (e.g. nationality as identity) of culture.

As we discovered last year, the cultural domain of national characteristics is fractured and highly contested. There are views of Brazilians as hard-working and honest that are held simultaneously with views of Brazilians as lazy and ready to take advantage of others. In between these poles lie more descriptive characteristics such as the Brazilian love of *futebol* and *carnaval*. Consensus exists that these are indeed characteristics of Brazilians, but it is not a strong consensus, and many individuals object to the definition of “Brazilian-ness” in these terms.

As in the domain of family life, the task in the survey data was to capture the way in which an individual located himself or herself in the space defined by these descriptors. To do so, we developed eighteen items with which an individual could describe himself or herself, based on the concepts from the cultural model. For example, for the idea of “o jeitinho brasileiro,” a concept that describes how one can get around the rules of everyday life, we used the following item: “It is impossible to live without the jeitinho brasileiro,” with the respondent agreeing or disagreeing on a 4-point Likert scale. Agreement with the item places the individual more squarely in the space of Brazilian national characteristics; disagreement places him/her outside that space. The eighteen items can be found in Research Report I (p. 37).

As in the case of the scale of cultural consonance in family life, there should be an acceptable level of internal consistency reliability in this scale. Item means and standard deviations, and item-total correlations for the whole scale, are shown in Table 5. It turned out, however, that four of the 18 items had negative item-remainder correlations. These four items referred to the Brazilian characteristics of happiness, having fun, solidarity among people and faith. Each of these items was written so that a person could describe himself or herself in these terms. Removing the four items resulted in a scale with acceptable internal consistency reliability (alpha = .68). As with the standardized psychological scales (and unlike the other scales of cultural consonance), there is a relatively large difference in reliabilities between Maria Casagrande (alpha = .64) and Vila Tibério (alpha = .71).

For the remaining fourteen items, the ratings from cultural consensus analysis were used as weights for each of the items, so that an individual’s responses in the survey data represent their individual approximation to the cultural model of national characteristics, or cultural consonance in national characteristics. The distribution of cultural consonance in national characteristics is shown in Fig. 3. The distribution (with a mean of .47 and a standard deviation of .19) is somewhat skewed to the left, indicating that there is a majority of the sample fairly evenly distributed about the mean, but with a substantial minority having very low levels of cultural consonance in social support.
characteristics (or CC/NC) is shown in Fig. 4. Again, there is a symmetrical distribution of the scale. Scores have a range of 49.3 to 129.6, with a mean of 95.7 and a standard deviation of 13.4.

Table 5: Scale analysis of items to measure cultural consonance in national characteristics (CCNS)

<table>
<thead>
<tr>
<th>Item-total correlation</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struggle in life</td>
<td>.35</td>
<td>2.10</td>
</tr>
<tr>
<td>Humble</td>
<td>.35</td>
<td>1.92</td>
</tr>
<tr>
<td>Hard workers</td>
<td>.28</td>
<td>2.15</td>
</tr>
<tr>
<td>Have faith</td>
<td>-.52</td>
<td>.69</td>
</tr>
<tr>
<td>Take advantage of others</td>
<td>-.14</td>
<td>2.00</td>
</tr>
<tr>
<td>Love samba and carnaval</td>
<td>-.17</td>
<td>.37</td>
</tr>
<tr>
<td>Accept a terrible government</td>
<td>.20</td>
<td>2.01</td>
</tr>
<tr>
<td>Leave everything to the last minute</td>
<td>.16</td>
<td>2.58</td>
</tr>
<tr>
<td>Hospitable</td>
<td>.43</td>
<td>2.45</td>
</tr>
<tr>
<td>The rich ignore the poor</td>
<td>.28</td>
<td>2.20</td>
</tr>
<tr>
<td>Happy</td>
<td>.25</td>
<td>2.42</td>
</tr>
<tr>
<td>Do-nothings</td>
<td>-.20</td>
<td>1.18</td>
</tr>
<tr>
<td>Solidarity</td>
<td>.41</td>
<td>2.21</td>
</tr>
<tr>
<td>Love to have fun</td>
<td>.12</td>
<td>2.39</td>
</tr>
<tr>
<td>Want a jeitinho</td>
<td>.15</td>
<td>2.35</td>
</tr>
<tr>
<td>Corrupt</td>
<td>.07</td>
<td>2.42</td>
</tr>
<tr>
<td>Honest</td>
<td>.30</td>
<td>1.68</td>
</tr>
<tr>
<td>Lazy</td>
<td>.19</td>
<td>1.75</td>
</tr>
<tr>
<td>Cronbach's alpha = .43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 4: Distribution of cultural consonance in national characteristics (CCNS)
Correlations among measures of cultural consonance – Finally, how are the various measures of cultural consonance associated? Table 6 presents these correlations. With the exception of a moderately strong association between cultural consonance in the domains of lifestyle and social support, being consonant with a cultural model in one domain does not imply being consonant with a cultural model in another domain.

Correlations of Cultural Consonance with Psychological Variables

In this section, I want to briefly examine some of the correlations between the measures of cultural consonance and the psychological variables of locus of control, depression and perceived stress. As noted earlier, in a previous paper we found both cultural consonance in lifestyle and cultural consonance in social support to be associated with these psychological outcomes in our 1991 data (Dressler, Balieiro and Santos 2002). These are theoretical constructs that we would anticipate would be associated with cultural consonance, and indeed these were a part of our set of hypotheses in the research proposal. Therefore, the use of these scales here can give us a preliminary sense of the construct validity of the measures of cultural consonance.

There is, however, a caveat in order here. This exercise must be approached with a certain caution, primarily because we will be “peeking” at the data, i.e. looking at correlations among relevant variables before there are complete data in. This is, in general, probably not a great idea, because the study was designed to examine associations within a certain range of variation (primarily socioeconomic variation, this being Brazil) and we will be examining correlations without having that full range. Nevertheless, in order to obtain a rough idea of how the measures of cultural consonance are performing, we can examine these correlations as preliminary estimates of the construct validity of the cultural consonance measures. But it must be kept in mind that results may change as additional data become available.

Table 7 presents unadjusted bivariate linear correlations between the cultural consonance variables and the psychological constructs. Cultural consonance in the domains of lifestyle,

<table>
<thead>
<tr>
<th></th>
<th>LOC</th>
<th>CES-D</th>
<th>PSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCLS</td>
<td>.39**</td>
<td>-.14</td>
<td>-.05</td>
</tr>
<tr>
<td>CCFL</td>
<td>.26**</td>
<td>-.17*</td>
<td>-.17*</td>
</tr>
<tr>
<td>CCSS</td>
<td>.16*</td>
<td>-.10</td>
<td>.06</td>
</tr>
<tr>
<td>CCNC</td>
<td>-.05</td>
<td>.06</td>
<td>.07</td>
</tr>
</tbody>
</table>

*p<.05  **p<.01 (2-tailed tests)
family life and social support are all associated with a stronger internal locus of control. Then, there are small correlations of cultural consonance in family life with depressive symptoms and perceived stress, in the predicted direction.

Again, it is important to be cautious about over-analyzing partial data, but there is probably more going on here than meets the eye. What suggested this to me was the pattern of generally lower reliabilities of the psychological constructs in the lower class sample. This pattern of lower reliabilities could suggest that the items are being interpreted differently in the lower class sample, and could in turn suggest that the associations between the cultural consonance variables and the psychological constructs may be different in that sample. Of course, the bivariate correlations are bound to be attenuated due to the lower reliabilities; at the same time, this may be an indicator of something else going on.

One way to approach this issue is to simply start dredging the data to see what pops out. This, unfortunately, sets you at risk of stumbling onto small but ultimately statistically unreliable associations. What is needed is some omnibus test of the likelihood that there are significant differences among the neighborhoods in the patterns of association, which in turn can lead to confidence that precise patterns of association are indeed different. This is precisely the strategy of data analysis that Cohen and Cohen (1975) recommend in their book on multiple regression analysis. You can, for example, form a set of all of the two-way interaction effects between cultural consonance and neighborhood in relationship to the psychological constructs and test the increase in the variance explained by that entire set of interactions. You can then have greater confidence in examining the specific cultural consonance-neighborhood interactions that appear important. You have been “protected” by the omnibus test from fastening your attention on seemingly interesting, but likely unreliable, associations.

There is one slight complication. As we have pointed out elsewhere (Dressler and Bindon 2000), the cultural consonance hypothesis shares an affinity with French’s notions of “person-environment fit” (French, et al. 1974). French argued that the better the fit of the person to the environment, the better the psychological adjustment and health of that person. What French lacked, however, was a theory of what that “environment” actually consisted of. The cultural consonance model is explicit in defining the environment as an environment of meaning, or a space of cultural meaning to borrow Bourdieu’s phrase. But one insight from French that is important is the idea that the fit of the person to the environment is not likely to be linear, but rather curvilinear. Put simply, it is unlikely that getting closer and closer to some shared, prototypical model of behavior is going to contribute to better health status equally across all levels of that consonance. Rather, health status is likely to level off asymptotically as the individual approximates more closely the cultural model.

What this means here is that we have to include a set of terms that can test to see if there is a nonlinear component to the associations between cultural consonance and psychological constructs, as well as to see if those associations differ by neighborhood. We have to, in other words, partition the total covariation between cultural consonance and psychological constructs into three components: one due to the simple linear associations; one due to the nonlinear associations; and, one due to the differences in the associations between neighborhoods. For each set of variables (not for each individual variable) we can determine if the variance associated with that component is statistically reliable. I have used this approach in the past to model contextual effects on depressive symptoms in the African American community (Dressler 1991; 1992) and to examine social class differences in the effects of sociocultural stressors on blood pressure in Jamaica (Dressler, et al. 1995). It is a little tricky, especially because with lots
of variables and lots of interactions you can get yourself into collinearity problems; however, it is much easier to detect those problems these days, so the risk of getting into these problems is not that great.

So, I ran these analyses with these data, including also a set of covariates (age, sex and educational level). For locus of control, the set of interactions between cultural consonance and neighborhood were significant ($R^2$ change = .092; $F = 4.2; df = 4, 125; p = .003$). For depression, the set of interactions between cultural consonance and neighborhood were significant ($R^2$ change = .069; $F = 2.6; df = 4, 125; p = .041$), as was the set of nonlinear effects ($R^2$ change = .067; $F = 2.6; df = 4, 121; p = .038$). For perceived stress, the set of nonlinear effects was significant ($R^2$ change = .067; $F = 2.5; df = 4, 121; p = .049$). In none of these analyses was there any indication that collinearity was a problem (all of the tolerance values for the variables were acceptable). So, these analyses suggest that the bivariate correlations presented in Table 7 fail to demonstrate very clearly what is actually going on in the data.

To show better what is actually going on in the data, we can comfortably explore the associations within these omnibus tests that appear to be contributing most to the pattern of associations. For locus of control, what is most important is the way that the associations of cultural consonance in lifestyle and cultural consonance in family life with that psychological construct differ across neighborhoods. Figs. 5 and 6 present these associations. For cultural consonance in lifestyle, the association with locus of control is severely attenuated for lower class women (it is essentially zero). The association is relatively modest, though still significant, for lower class men, and then moderate to strong for middle class persons.

This same pattern of associations is even more clearly evident for locus of control and cultural consonance in family life. For all persons sampled with the exception of lower class women, there is a strong correlation between cultural consonance in family life and locus of control. For
lower class women, however, there is a small inverse association. In other words, for most people, perceiving your family as having more of the characteristics of the prototypical model of Brazilian family life is associated with having a sense of having more control of what happens in your life, especially with respect to health. For lower class women, on the other hand, perceiving your family in those terms is actually associated with feeling that you have less control over your life.

The other way in which the associations observed here departed from simple linear associations was in the relationship of cultural consonance in family life with both depressive symptoms and perceived stress. In the omnibus tests, there was evidence both of nonlinearity and non-additivity (i.e. interaction) in these relationships. As with locus of control, the major effect with respect to interaction was the difference in the pattern of relationships between cultural consonance and affect for lower class women versus all others in the sample. Therefore, in Figs. 7 and 8 I will present the associations for two groups (middle class men and women and lower class men versus lower class women).

The patterns of association are clear. For the middle class (so designated for ease of labeling, but remember that it includes lower class men as well), increasing cultural consonance in family life is associated with decreasing depressive symptoms and perceived stress. For lower class women, the relationship tends to be linear and direct, i.e. increasing cultural consonance in family life is associated with somewhat higher depressive symptoms and perceived stress.

It would be premature, especially given my caveats about the dangers of peeking at one’s data, to try to interpret these results too completely. At the very least, we can say that these

* Careful inspection of Figs. 7 and 8 will indicate that there are three influential cases in the middle class subgroup: one with a large leverage value and two with large studentized deleted residuals. Deletion of these three cases reduces the magnitude of the multiple R slightly, in the case of depressive symptoms from .38 to .34.
approaches to the measurement of cultural consonance appear to be working pretty well. Both cultural consonance in lifestyle and cultural consonance in family life have statistically reliable

Fig. 7: Linear and curvilinear associations of depressive symptoms and CCFL by sex/neighborhood

![Depressive symptoms vs CCFL](image1)

Cultural consonance in family life

Fig. 8: Linear and curvilinear associations of perceived stress and CCFL by sex/neighborhood

![Perceived stress vs CCFL](image2)

Cultural consonance in family life
associations with variables that measure psychological factors that should be associated with cultural consonance. Additionally, cultural consonance in family life has a curvilinear association with depressive symptoms and perceived stress that is consistent with theory. At this point in time I am not too concerned about the results for cultural consonance in social support and cultural consonance in national characteristics. With respect to social support, it is unclear theoretically whether or not the effect of social support should be a direct effect, or if should be an interactive or “buffering” effect. Neither theory in stress and social support, nor a theory of cultural consonance, is sufficiently well-developed that such a prediction could be made. Therefore, in subsequent analyses with complete data, it may be either that power will increase sufficiently to detect a direct effect, or that the effect will turn out to be a buffering effect.

With respect to cultural consonance in national characteristics, the use of the variable is very much exploratory. If with additional power it turns out to have an effect, that will be interesting; if, with additional power it turns out not to have an effect, that will be interesting, too.

In the final analysis, we can conclude that these measures of cultural consonance are both reliable and have a degree of construct validity. There is, however, more work to be done in examining the measurement model for cultural consonance. What I have presented here is a particular approach, using the consensus ratings of items as weights, so that the higher a cultural consonance score, the closer that individual’s behavior or perception is to that defined by the consensus model. The one exception to this was the measurement of cultural consonance in social support, in which the profile similarity of the consensus model and the individual self-report was used. The fundamental difference between these approaches is that using the consensus ratings as weights places greater emphasis on a quantitative difference between individuals in the way they respond to questions. Using the profile similarity approach de-emphasizes quantity or size and emphasizes instead pattern differences. This latter approach could be applied equally well to the scales of cultural consonance for lifestyle, family life and national characteristics. In the latter case, individuals wouldn’t receive higher scores no matter which culturally salient items they endorse. Rather, they would receive higher scores only if they report behaviors or perception in the same pattern as that defined by the consensus model.

This latter approach to measurement has much to recommend it, in that it would be a somewhat more stringent measure of a pure cultural consonance. In the approach that emphasizes the quantity of cultural behavior (so to speak) one can appear to be highly consonant without necessarily living the same pattern of life as that described by the model. To be sure, one cannot deviate far from that pattern and still receive higher consonance scores, but nevertheless, more frequent behaviors in some areas can compensate for deviation from the pattern. But, it may be that adhering to the pattern is important. In subsequent analyses, these additional approaches to measurement will be examined.

III. The Collection and Analysis of Data Using Qualitative Methods

Overview

One explicit methodological assumption in this research is that multiple methods, or the triangulation of research results, increases the likelihood that inferences will be valid. Furthermore, we see different methods as complementary, as opposed to providing parallel tests of hypotheses. Data collected by one method will help to illuminate findings from other methods. Here I am really referring to the integration of qualitative and quantitative methods.
(Pelto and Pelto 1978). There is a general commitment in this research to on-going participant-observation. Being in Brazil and interacting with colleagues and people in the course of everyday life is a rich source of insight for me into the problems and concerns of Brazilians. At the same time, there is a commitment to the use of more formal methods of data collection, methods that can provide possibilities for inference regarding some processes that are missing from other methods.

As described in the first Research Report (Dressler 2001) and reiterated above, initially we used techniques from cognitive anthropology to elicit elements of and explore the structure of five major cognitive domains relevant to this research. The results of that research provided us with a good idea of the structure of meaning within these domains, and enabled us to construct an interview schedule for the survey component of the research that would be maximally sensitive to that structure of meaning; however, as noted above, these techniques provide little opportunity (not no opportunity, but little opportunity) to observe these cultural models at work. That is, how do people use cultural models to reason through real dilemmas and make real decisions about a course of action?

Qualitative methods seem ideal to address this question. There is a whole range of qualitative methods from which we could choose: more structured participant-observation; informal interviews; structured individual interviews; and, various kinds of group interviews. For this segment of the research, we chose both the focused group interview, or, as it is more commonly known, the focus group, and the traditional, semi-structured, open-ended individual interview.

A focus group is different from other sorts of group interviews (including Delphi groups or the nominal group process) in that an explicit aim of the focus group is to encourage interaction among members of the group (Morgan 1996: Maynard-Tucker 2000). The real data for the focus group comes from this interaction, as group members agree, disagree, challenge one another and, in general, explicate their reasons for thinking and believing as they do. If the interaction in a focus group was to be replicated in an individual interview, it could seem almost as if the interviewer were bullying the respondent, given that part of the give-and-take of a group discussion lies in the way in which group members are free to disagree with and challenge the ideas of other members.

This process seemed ideal for our research aims. We want (indeed, we need) to see how people actually use cultural models in everyday life. Asking an individual to reflect on his or her reasoning process is one way to do this (and we also used this technique in traditional one-on-one interviews, although these are unavailable for analysis at this time). But given that in a group discussion the necessity to explicate a position is virtually a given, principally because other perspectives are being represented, the technique seemed optimal for our aims.

We decided to develop focus groups for each of the four neighborhoods being sampled, and to invite individuals from the survey sample to participate in the group. Schensul (1999) describes a variety of ways to select participants in a focus group. One of these is to invite participants already known to the investigators. Although a survey interview may not be a way to know someone very well, the interviews did provide the research assistants an opportunity to observe the degree to which the respondents engaged with the questions and their willingness to expand on their responses. These two criteria became those by which we defined good focus group members. The two survey interviewers (C.D.B and D.C.F.) were asked to come up with a rough ranking of the people they interviewed along these two dimensions, and to work through the list of respondents starting with the highest ranked persons and inviting their participation first. Some readers might object that choosing participants from the survey biases the focus
group; however, given that a minimum of six months has elapsed since the survey of that neighborhood was completed (and for some respondents this means more on the order of ten months since they were interviewed), it seems unlikely that the experience of the survey would have contaminated their responses.

A second issue with respect to a focus group is when it can be held. Given the experiences of the survey, Saturday afternoon seemed the best time. The neighborhood from which the focus group members are being selected is a solidly middle (to, perhaps, lower-middle) class neighborhood in which the majority of the men (and a significant proportion of the women) work. Saturday afternoon is the one time at which persons can put together the two hour time commitment necessary for the focus group.

Estimates of the optimal number of participants for a focus group range from a low of 5-6 to a high of about 12. One stereotype of Brazilians that we believe is that they like to talk, and they like to talk in groups. Therefore, we thought that to enable participation of all members of the group in the group discussion, it would be better to limit somewhat the number of participants. We therefore invited 10 persons to participate, with the belief that if as many as 4 of the participants failed to arrive (something we did not anticipate, but rather planned for), there would still be a sufficient number for the group. And if all the participants arrived, there would still be a small enough number to facilitate participation by all.

For a variety of reasons, including logistics, interests of research team members, and wanting to start with a subject that would facilitate discussion, we chose to begin with the cultural domain of family life for the first focus group. One thing that separates a focus group from other kinds of qualitative data collection is precisely the notion of “focus.” Group participants have experience in some common issue and the discussion revolves around that issue. Since everyone is, in one way or another, a member of a family, and since the family is a cultural domain of considerable salience to Brazilians, we began with this domain. This influenced our decisions regarding whom to invite. There was some sentiment in the research team to limit participants to married couples. From a logistical standpoint this would have facilitated participation; however, there is more to a family than the classic “head of household and spouse.” Even individuals who live alone are members of a family or are contemplating beginning a family (or, perhaps, live alone as the result of a family breakup). Therefore, we ended up inviting a combination of married couples, married persons individually, and single people to participate in the focus group.

Focus groups are usually conducted by a moderator or leader, with an observer present who can note various things happening that are not apparent from the taped transcript (see below). We used this structure here (with C.D.B. as moderator and M.C.B. as observer). The function of the moderator is to facilitate discussion, but with as little interference as possible. The moderator may have to intervene to bring discussion back onto the topic, or to deal with problematic group members (e.g. someone who talks too much or tries in other ways to dominate the discussion). But the ideal is to have as little moderator participation as possible. The moderator does, however, work from an interview guide that provides the focus for the focus group. Schensul (1999) recommend an interview guide of 5-7 open-ended questions for an average focus group of about 90 minutes.

The focus groups were held in the office of one of the project directors for the research (M.C.B.), who is also a practicing psychologist. The office, while outside of the neighborhood in which we started the focus groups, is conveniently reached via public transportation. It is also located close to the center of the city, which is a common destination for many people on a Saturday
afternoon. Also, there is nothing remarkable about the office that would identify it as anything other than an office (i.e. there is no sign identifying it as a psychologist’s office, etc.). As Schensul (1999) notes, there should not be anything about the location that would prove threatening or in any way disagreeable to the participants. The office we used was not problematic in any way, and it provided a good site with respect to the comfort of the participants and the tape-recording of the interaction.

Literature on focus groups recommends the use of 6-10 open-ended questions to guide discussion. Because of our interest in observing reasoning in mundane situations, we also included a number of hypothetical situations for each focus group, posing the question of what the protagonist in the story should do in that specific situation.

The focus groups were tape-recorded using two tape recorders (in the event that one failed) and the recordings were transcribed verbatim. NUD*IST, Version 4.0 was used to analyze the transcripts.

Following the focus group on family life, we held an additional 4 focus groups, on consecutive Saturday afternoons, covering each of the cultural domains of interest in the research (lifestyles, social support, national characteristics and food). There was a core of common participants in these groups, although not everyone participated in all of the groups.

In this research report, I will report only our analysis of the transcript of the first focus group dealing with family life. The primary reason that I am reporting only the analysis of the first focus group is time—not enough of it to do justice to the analysis of the other focus groups. Therefore, the analysis of this focus group transcript is intended to be illustrative of the approach we will take when all of the focus group data is available. As I noted above, we do not regard the focus group data as standing alone. Rather, we want to integrate the focus group data with the cultural model data that we collected in 2001 and on which we reported in the Research Report I. The question here is: to what extent do the focus group data and the cultural modeling data converge? Where do they differ? How does the focus group data help us to understand how people are applying the structure of their shared understandings to talk about a problem at hand? The remainder is intended to illustrate how we will go about integrating these techniques in the final analysis.

The Domain of Family Life

We developed an interview guide that started with and included various open-ended questions, but that also included hypothetical situations posed to the group. The focus group for family life started with an open-ended question regarding ways in which families may or may not be changing. Hypothetical situations included: a woman dealing with a problematic son who may be abusing alcohol; a hard-working father who may not have the energy to engage with his daughter in a school activity; a daughter living at home who becomes pregnant and who is not married; and, a family dealing with issues of pooling economic resources. These situations were developed by the research group based on two sources of information. First, two of the members of the research group are also practicing psychotherapists, and these dilemmas are dilemmas that they see in their practice with families (although we have omitted some of the more problematic details to make the dilemmas more generally applicable). Second, we drew on our experience from the phase of eliciting and examining the structure of the cultural models, in the sense that these family dilemmas were the sorts of things that people might spontaneously talk about when explaining why one or another family characteristic is important.
The analysis of the family life focus group transcript began with unstructured development of categories. One interest in the coding of the interviews was to determine whether or not the same concepts and categories that were elicited in Year 01 of the research, in which techniques from cognitive anthropology were used, would be encountered again, but with a completely different research technique. To be sure, I was “primed,” as it were, to see a particular structure in the data. At the same time, the flexibility in coding that NUD*IST provides helps not to restrict one’s approach to the data.

Results of the Focus Group Interview: Family Life - In reading through the transcript initially, I generated 14 categories in which to code the dialogue. After completing this development of codes, I combined the 14 categories into five more general categories, the result of which was the following taxonomic structure:

- **Structure and organization (.37)**
  - Structure (.23)
  - Gender roles (.13)
  - Work ethic (.01)
- **Affective dimensions of family life (.27)**
  - Understanding (.10)
  - Love (.09)
  - Union (.04)
  - Respect (.03)
  - Dialogue (.01)
- **Social support (.19)**
  - Outside the family (.10)
  - Within the family (.08)
- **Socialization (.13)**
  - Education (.09)
  - Religion (.05)
- **Other (.04)**
  - Social change (.03)
  - Lifestyle (.01)

The numbers in parentheses indicate the relative proportion of coded text units receiving that particular code. A note about how NUD*IST handles units of observation in text may be in order here. In the program, I imported a text file containing the focus group interview transcript (i.e. one that has an .txt extension) because these can be coded more easily. In this form of text, hard returns are retained, and NUD*IST assumes that whatever is in between hard returns is a “text unit.” In the case of the focus group transcripts, this means that a statement by each person represents a text unit that can be coded. The total number of text units for the family life focus group was about 1,000 (in 36 pages of transcript, single-spaced—the group lasted ninety minutes). This number is, of course, misleading, because the interjection of one person saying the Brazilian equivalent of “That’s right!” represents a text unit in this scheme. Also, the person who transcribed the interviews was punctilious in her work, so every verbalization (e.g. “Uh-huh”) was in there. Therefore, using the total number of text units to calculate proportions of coded text would be seriously misleading. Therefore, the proportions shown above represent proportions of the coded text units (not all of the text units). In the initial pass through the data, I coded a total of 77 text units. I purposefully applied a light touch to the coding, because I was less interested in marking specific text than I was in marking points in the text to which I could return to examine more closely the dialogue.
Perhaps the best way to present the results of the focus group is to start with the most frequently-coded categories. Discussion of family ‘structure’ was prominent in the group. The issue of ‘structure’ appeared early in the discussion, in response to a question about how the family is changing in Brazil (note that in order to disguise the identity of group participants, I am providing pseudonyms in English):

Cathy: But the majority of [young people] today are not in a real marriage, you know? They are living together and forming a family…
Martha: That’s right.
Tammy: Without responsibility…without thinking about responsibility at all.
Cathy: And now they don’t have those values that you have in the family, you know? The family structure with a mother and family has passed away. That valued this, the marriage and the family. That valued the family. So, if you create a family without a marriage, without responsibility, at times this will work, you know? To live together without getting married. At times it works, at times it doesn’t. But you don’t have…I don’t know, it doesn’t seem as if you pass on to the children those moral values that they have to have, you know, in a family.

The following summary by Sr. Allen elaborates the implicit sense of ‘structure’ the group was using. This followed a longer discussion of affect versus structure and was linked both to a discussion of gender roles and of changing lifestyles (see below). But I present this here because it summarizes well the sense in which the ‘structure’ of the family is discussed. The main stimulus for his statement was a discussion of mothers and fathers both working outside of the home.

Allen: From the question of finances, right? To receive the financial part. It is to have this life that they are trying to have, financially, right? It begins by leaving the baby with an older child, or with the mother or mother-in-law. And the customs that the parents have, versus their mothers and fathers, older, are different. This ends up generating conflict within families. Then you have the family that is well structured, that is well planned, that is a marriage well-made. These begin with dating, to begin to know…because you have to know one another first. And then when you are going to marry, you need to prepare to marry. “Do you already know this girl? Are you resolved? Are we going to marry? Let’s!” Then you get married. What is it that you need to do to get married? The best way is this. You have to have instruction in marriage, in order for you to learn a lot that you don’t know, that people don’t know. Then you go ahead and marry. Ah, and here comes religion again! People go to the church to get married, but they don’t know what it is they need to know.

The sense of ‘structure’ that emerges here is the sense in which there are a well-established set of rules, in this case governing the sequence of things that lead to marriage, and these rules are followed. When the rules are properly followed, when the appropriate ‘structure’ exists, then family life operates smoothly and correctly.

One aspect of the discussion that was prominent, especially in the discussion of ‘structure,’ was what can be termed a “declensionist meta-narrative,” i.e. everything used to be good in some by-gone day, and everything is terrible now, although several participants were careful to place

* Throughout this presentation, I am going to put translations of actual terms used by participants in single quotes.
their comments in a slightly more nuanced context. The following discussion illustrates this clearly.

Kelvin: So, this is the context in which all of you spoke well. This is a summary. Returning to the basic question of the family, I believe that the family is being transformed, and suffering as a result, of the changes in our times. Changes that are necessary, probably. And I'm not going to say that the family in the past was a perfect family, because it wasn't. There was much missing, much that was false, much hypocrisy. Nor am I going to say that this is not occurring today.

Tammy: Everyone suffers.

Kelvin: But we could make a parameter, because perhaps we are thinking of the family in 1980, or 1940, that it was a sea of roses, and it wasn't.

Alvin: No, it wasn't.

Kelvin: It wasn't perfect. So, I'm thinking now, what happened to the family? As I've said, the family was caught by surprise. It couldn't keep up with the evolution of the world. I think that the family has to have a structure in order to follow. Today, the family has to be like students in a school. We need to learn always more about dealing with drugs, about dealing with alcoholism, smoking, finding ways to orient our children. And we orient ourselves as well. Because I think that the mother and father, at times, lose a lot because they don't know what to say. “And now? What can I do?” You come to a point when your child presents a situation that he, at times, is going to present for the mother and father. But no. He knows, many times, that you will remain silent.

Gender roles were an aspect of family structure that was discussed at length in the group. And very much in the context of the declensionist meta-narrative. The following is a sampling of statements from the group, all of which appeared in the first few minutes in response to the questions about how the family is changing. All of the speakers are women.

Martha: Ah it's changing, it's changing, yes, you know? It's changing for the worse. The change in the family that you are having isn't...for example, mother and child. Mothers today in order to educate their children correctly, they need to be with them, to take the child with them. To give a good example, you know? Today, mothers, not all but most, don't have a religion. They don't take children with them into a religion, to learn something good. Children don't have work today. Without work, what are they going to do? They stay in the street. And if the mother finds them something else to do, they are not going to be in the street learning there what they don't need to know. So, the family is in error.

Lana: Today the majority of women work outside the home, you know? They end up leaving their kids in some school close by, or they pay somebody to watch them, or they just leave them by themselves. So they are not really with them...with the growth and the development of things. It's the majority, you know? So, at times the kids get left behind. Beyond this, there are the dissolutions of marriage, you know? I think that one day there will be more divorces than marriages, you know?

Tammy: But the values of society are changing, you know? Women are beginning to work outside the home and girls are not prepared for marriage. They don't know what is a marriage. They think that they are going to marry and that things are going to be rosy. In my generation it was the same. It's hard for a girl to marry thinking that...it's not only to eat a sack of sugar, no. You have to eat a sack of salt with it, too. And girls are not prepared for this, and not to educate their children.
And for a male perspective:

**Allen:** Women today have changed a bit. Not a bit, the concept has changed a lot relative to earlier days. Today they travel parallel to men, you know? Women are representatives, senators. They are standing for president. When did you see this before? Never...the man used to dominate, thinking that he had to take the reins. Today that idea has changed somewhat. Today a wife is not going to accept the idea that she stays home alone while the husband goes to the bar or goes to play soccer or goes to drink with his friends. The wife does not accept this today. The majority don’t accept it.

The final theme that was coded under structure and organization referred to the value placed on work in the community. This statement came in response to a discussion of how household finances are handled.

**Phil:** In a family there is a father, a mother and three kids, and there is one working and two are unemployed. One works and the other is unemployed and...it is this that generates a lot of confusion. Fights. “You don’t work. You’re a vagabond.”

Clearly, the importance of ‘structure’ in the family is linked to other themes, and this can be seen most clearly in the link of gender roles and the next major category of themes in the interview, or the affective dimensions of family life. Because of the importance of ‘understanding’ (compreensão in Portuguese), I will begin there. The first text unit coded under ‘understanding’ appeared in an exchange early in the interview between two participants debating the relative importance of structure and organization within the family versus love and understanding. **Dona Tammy** was complaining about the influence of the thinking of academic psychology on family life (much to the delight of our two academic psychologists conducting the focus group). She related a story about a neighbor who would not discipline her child, and hence the child would not behave properly, especially in public. In **Dona Tammy’s** thinking, assiduously applied corporal punishment would be good, but this was forbidden by contemporary psychological thinking, to the detriment of the education of the child. This discourse prompted the following reply from **Dona Martha**:

**Tammy:** If you don’t take the reins of a child...
**Martha:** But you know why this is happening?
**Tammy:** Why?
**Martha:** Because you can’t approach it in this way. It’s the same thing with my little dog, my baby, my puppy. He was born, and I raised him with a bottle. And he is going to obey me if I raise him with love from the beginning. From the beginning. If I say “lie down,” he does it. If I say “Don’t pee there,” he doesn’t pee. And I can tell you that I have two dogs at home who obey me completely, and don’t obey him [indicating her husband], but obey me. To pee, they obey me. To eat, they obey me. You can ask him [indicating her husband]. Because I raised them from babies, at the bottle
**Tammy:** So...
**Martha:** Now, if you leave a child to grow up a little bit, if you don’t begin to communicate with her when she can begin to understand, this doesn’t work.
**John:** This is because...
**Martha:** It is a stupid thing to beat. Never beat.
**John:** ...a blow...
Tammy: No, I'm not saying to beat. But we need to know the implications of things. Everything that is excessive. Sometimes it doesn't work just to talk and talk and talk. One day I remained quiet and the child did not obey...you need to spank him, or things don't progress.

John: When the time is right.

Tammy: She has to have respect for her parents.

Another aspect of 'understanding' is captured in the theme of 'dialog,' or patterns of communication within the family. Dona Martha made the following observations in response to a hypothetical situation of a young, unmarried daughter living at home becoming pregnant. The group discussion had turned from the issue of what to do to the issue of how the problem might have been avoided in the first place.

Dona Martha: Mothers communicate with their daughters. Because I participate a lot in the family, I see mothers and daughters together openly. If a daughter comes home with a sad face or crying or whatever, a mother should go to her, ask her what's wrong, talk to her. A mother explains things. If she is going out and has a boyfriend, she can take a prophylactic or use the pill. The mother must orient the daughter so that she doesn't get pregnant because...afterward, because of the pregnancy, from the lack of orientation of the mother, you have a child suffering. A big part of being a mother is teaching, yes.

The following exchange further illustrates the importance given to affective dimensions of family life, and it illustrates the linkage of two important concepts, 'love' and 'union.'

Allen: I think this is really important, too. I'm going to comment on what we are talking about here. When a family is united, after children marry, it is important to continue with everyone united. This is really important.

Lucy: It really is.

Allen: It is really important that everyone is united. This is important because it provides a continuity in families.

Moderator: To have a connection?

Allen: That's it.

George: I think that this transmits...that when a person is in a certain place that the family is united, that you have love in the family, you feel it.

Lucy: That's really it.

George: You feel it.

And finally, within this general category of affective dimensions, there is the theme of 'respect.' Sr. John spoke of this in relation to his own family of orientation.

John: My mother was an alcoholic. She drank, and I had to go out searching for her. I endured this. But you can't abandon her. I was very small. It was a long time ago, you know? I had to respect her. She wasn't worthless. A mother cannot be worthless.

The next major category of themes in the interview is what I have termed issues of socialization of the child, and includes themes related to 'education' and 'religion.' These themes tended to closely linked in the discussion. It is important also for the reader in American English to remember that 'education' is a term encompassing much more than schooling in Brazilian Portuguese; indeed, if rarely even refers to schooling except tangentially. It is used more in the sense of the cultivation of positive character traits and behaviors, and it is often used as
synonymous with the belletristic sense of the term “culture.” The following exchange illustrates the integration of ‘education’ and family life.

Cathy: Education must begin with the family, forming….right?
Allen: Parents are responsible.
Tammy: I agree with you.
Cathy: The government…a child’s formation has to begin with the family. Afterwards they go to school. The government doesn’t have the responsibility to instruct that child. The mother and father have to educate.
Larry: I think so too.
Cathy: Whoever provides education begins the formation of this child.
Larry: People pass the problem to the school and to the government.
Cathy: That’s right. People pass. People say, “Oh, it’s the school. It is the government that has to provide this.” And our part?
Allen: They criticize the teachers because the teachers don’t teach right. But the child responds to the teacher. The teacher should not have to try to hold his attention.
Tammy: But if the child responds to the teacher, it is probably because he responded to his parents at home. If he responds to his parents, he is going to respond to his teacher. This is what I am saying. The mother and the father need to begin the education of the child.
Cathy: It has to be in the family, the beginning.
Allen: And what is really important in the family is a religion, whatever that might be.
That everyone might have a religion.
Martha: Religion is the center of the family.
Allen: It doesn’t seem to be the case now. Religion doesn’t teach you to drink, it doesn’t teach you to smoke. It doesn’t teach you to use drugs. It doesn’t teach you any of these things.
Martha: It is the center of the family.

Later in the discussion, Sr. Allen expanded on the issue of early formation of the child.

Allen: The behavior of the family, of the mother and father, it is education that they have to provide. I learned this after I was 50. It’s all about the development of your children. How it is when they are 5. How they are coming along. Then you move to another stage in the next 4 or 5 years. Then there is 10-14 years old that is another part. After 14 begins the opening up of their character, of their personality, right? I didn’t understand this. So it is really important that couples who marry today understand how it is that children develop. How it is that they receive and process information at the various stages. For whom you are a father: the child, the little child, the man who is at your side at a certain age. You are psychologists, you understand this, right? And then you have the kids going alongside one another, right? This is all really important in their formation, until they are 18 years old.

The next theme in the discussion revolved around mutual help and ‘support’ within the family, and how that sense of ‘support’ within the family could be extended to others outside of the family. Dona Tammy contextualized family support in the following statement.

Tammy: Understand? My youngest cousin was only a year old and she was seeing my uncle falling down drunk in the street. Imagine a child thinking, seeing this, growing up seeing this. This is a big psychological problem for a child. For her older sister it really was. My uncle drank and blamed her for everything. She was a child and was cursed
by him for everything. He threatened to beat her, you know? You don’t know what to do in this situation. You feel completely out of it, without knowing what to do. You don’t know what to do, much less the family. But, you have to begin to look for help first within the family. The family has to see. When you are having a problem like this, you don’t realize that 300 other people have the same problem. You think that it’s only you.

Later, Sr. John talked about ‘support’ in combination with ‘union.’

Moderator: And how about the family? You think that the people in the family are helping? The people in the family help?
Allen. For sure.
John: You have families that are more united. You have families that...at home we were seven brothers, you know? When we are together, at times it’s a big fight, but you can’t divide us. We might not see each other, but when we do see each other, we are glued together. We are united.

Dona Martha extended the concept of ‘support’ within the family to relationships outside of the family as well.

Martha: Because a friend, you consider a friend to be a friend of the family, you know? Friends give their time to us in the same way. A friend within the home. Because the friends that I have are these kinds of friend, you know? In your hour of need, they are at your side. This is your friend. I have these friends. I consider them my family today.
Lucy: Yes, this is really good, you know?
Martha: They are part of my family. They are not blood, but they are part of my life.
Lucy: They are family.
Moderator: They are family?
Martha: Because perhaps your own family won’t help.
Lucy: Yes, this happens.
Martha: And it’s not the family that is going to give you help. So you consider them to still be family, but you consider that friend as being part of your family.
Lucy: That’s true.

A final theme worth noting here is linked to the more general theme of “social change” and its effects on families that has already been discussed. A major dimension of the theme of social change involves changing sex roles, as I have already discussed. But at one point, Sr. Allen summarized the basis for these changing sex roles in terms of changing familial aspirations with respect to styles of life. This summary is worth noting.

Allen: Yes, families, they develop a skill. The world is changing, you know? So families develop a skill. This sustains values. Now, today, the concept has changed among people. It has changed a lot. Young people, like Cathy was saying, they want to experience living together. Many young people, not all, you know? They have a system. A good number of young guys want to live with a girl, to love her, to have a relationship, everything, in order to see if it will work out. Afterwards they get married. What happens? Then comes the consumer mentality. They want more money to have a nicer house, to have a really comfortable house. To have a car for him. To have a car for her. So it begins. They both start to work. The two of them go out to work. Now I’m not just generalizing, a good part of it is like this. So, then the two of them start to work. Then what happens? They decide to have a kid. And at times they don’t plan it. Plan.
Plan? They have it anyway. They end up having a kid. What happens? The two of them are working, and nobody wants to stop.

Sr. Allen then goes on to link these changing aspirations in lifestyle to changing sex roles, and the lack of proper ‘education’ of children within families, because the parents (but especially the mother) are not there to provide it.

Discussion – One of the most important issues to be examined here involves the convergence of these data from the focus group with the data collected last year using cognitive techniques. The elicitation and other interview techniques in cognitive anthropology provide one way of investigating the emergent properties of some cognitive domain, i.e. the principles of the use of terms that emerges from the way people talk about that domain. Traditional qualitative techniques, like the focused group interview, represent another means toward that end. The question is, do the two techniques return similar results?

The answer to this question is clearly “yes.” In the open-ended discussion in the focus group, the same set of terms for talking about family life elicited by cognitive techniques appears in the discourse. In general, these terms cluster into two general categories: structure and organization, and affective dimensions of family life. This clustering of terms appears using both techniques.

Furthermore, a closer analysis of the variation in cultural competence in the consensus data collected last year converges with variation observed in the focus group interview. This variation can be observed principally in two areas. The first of these is in the relative importance given to structure and organization in the family versus love and union in the family. Differences in emphasis given these two dimensions of family life appeared early in the focus group, in the exchange between Dona Martha and Dona Tammy. Dona Tammy suggested that there had to be rules in a family and that these had to be reinforced by force, if necessary, while Dona Martha argued that love and understanding would preclude the need for enforcing rules. To draw attention to these two aspects of family life is not to say that these are polar opposites; rather, these are two aspects of the cultural model of family life that can be privileged by different individuals who generally share the same model.

This was apparent from our cognitive data collected last year. The domain of family life had the highest overall consensus (with a mean competence of .82 and a standard deviation of .09). At the same time, when the first dimension of consensus was plotted against the second (which can be thought of as a measure of deviation from consensus), it was apparent that within the overall high consensus, there was still some substantial variation (see Research Report I, Fig. 7). When the rankings of the family characteristics are examined for individuals at the extremes of this deviation from consensus, it becomes apparent that there are two kinds of people in the world. One person ranks affective dimensions of family life somewhat higher, and one ranks structure somewhat higher, although both dimensions are given high rankings. The exchange presented above is an example of different individuals, who probably have differential competence in the model of family life, applying these principles differently to reason through issues of family life. In the case of love versus structure, there is a clear and compelling convergence between the results of the focus group interview and the results of cognitive elicitation techniques.

A second area of convergence between the two sets of data involves the issue of gender roles within the family. At one level, the cognitive techniques used last year did not detect the importance of gender roles, in the sense that no specific term appeared in the elicitation of
elements of the cultural model of family life that corresponded to “gender roles.” On the other hand, when the relationship between background characteristics of respondents and levels of cultural competence was examined, women had significantly higher competence in the cultural model of family life than did men (Research Report I, p. 22). I suggested in that report that the family was seen as the domain of women, and hence women probably exchanged more concepts of family life in mundane interactions, resulting in higher consensus on the terms used and on the importance of those terms. The results of the focus group interview strongly support the general observation, and provide a more of normative context for gender differences. That is, women are not simply seen as more involved in family life, women should be more involved in family life. The family is the domain of the woman, so much so that the decline of the quality of family life in Brazil is blamed directly on changing gender roles that take women out of the family. The cognitive data collected last year could not suggest this specific cultural logic, although it did suggest that gender was an important source of intra-cultural variation in thinking about the family.

Another area in which the focus group data provided considerable elaboration of the cognitive data involves the concepts of education and religion. In the cognitive data, specifically in the unconstrained pile sort data, the concept of religion (specifically *uma familia religiosa* or ‘a religious family’) was in close proximity to affective terms, including love, comprehension, union and others. We did not use the concept of ‘education’ in the pile sort data, but rather its opposite ‘mal-educada,’ which can best be thought of as ‘uncultivated’ or ‘ill-mannered’ or even ‘rude.’ This term was included in a cluster of terms that were negative aspects of family life, such as egoism or disrespect, but were not as serious as addictions or violence.

In the focus group data these terms appear to play a linking, or perhaps even causal, role in the cultural logic of the family. That is, it is the education of the child in the family that is seen to lead to positive character traits and the smooth functioning of the family. But it is important to realize that this does not refer to mere instruction of the child, but rather cultivation of the child. And this cultivation will take place effectively primarily (or perhaps even exclusively) in the context of religion in the family. There does not appear to be much emphasis on the direct instruction of children in one religion or another; rather, religion provides this kind of medium for the proper growth and development of the child that, when the mother is present in the home, with her comprehension, understanding and ability to communicate, results in the proper education (or cultivation) of the child. All of this, in turn, is reinforced by and results in a family that is well-structured and well-organized.

One concern that I had in the first year of the research involving the cultural modeling data, specifically for the family, was that the way we had asked the original free-list question biased the responses in such a way that too sharp a dichotomy was drawn between “good” families and “bad” families. Put differently, I was concerned that perhaps we had engaged too strongly the evaluative dimension of the cultural model of the family. After analyzing the focus group data, however, this concern receded. It appears that the principal question regarding families for Brazilians is: how does a family go from being a good family to being a bad family, or, how can a bad family right itself? Virtually all of the focus group discussion revolved around this issue in one way or another.

To draw the connection more explicitly between the cognitive data and the focus group data, it may be useful to experiment with a graphical representation of the results in the same space. Of course, one clear advantage of the cognitive data is that it truly does provide a roadmap of semantic space for a cultural domain. You can actually see how terms line up relative to one another. To try to fit the focus group themes or codes into this space, I took the
multidimensional scaling map of the pile sort data for the domain of family life, and I arrayed the focus group codes around that map, using lines to illustrate the culturally modeled causal connections that were discussed. Again, these causal connections emerged from the focus group discussions and center primarily on how families go bad, or on how bad families recover. Additionally, with respect to the cultural causal logic here, I have highlighted in red, and drawn red connecting arrows, between the factors that have the strongest causal influence in the model. This exercise is shown in Fig. 9.

This provides, I think, a fair summary of my preceding analysis of the focus group, and represents both how our Brazilian informants understood the similarities and differences in the meaning of the terms used to characterize families (the MDS plot) and how they defined principal causal connections that can alter how a family functions. It also illustrates what I think will prove to be a productive way of linking the cultural models and focus group data.

IV. Initial analyses comparing 1991 and 2001

This section is devoted to a comparison of data between the study that we conducted in 1991 in these same neighborhoods and the preliminary results available in the current study. There are a variety of reasons for engaging in this exercise. First, as noted in the original proposal to the National Science Foundation that funded this research (Dressler 2000), the ten years separating the two studies has been a complicated one for Brazil. At the initiation of the 1991 study, inflation rates in Brazil were running at 20-30% per month. A major aim of the government then, and especially the government that would be elected during the research, was taming this rampant inflation. It was, in fact, tamed by the introduction of the real plan, a new currency that replaced the cuzeiro/cruzado and that used the U.S. dollar as a benchmark.

* Results of this research are reported in Dressler, et al. (1997; 1998), and Dressler and Santos (2000; 2001). The 1991 research was also supported by the National Science Foundation (BNS-9020786).
for its value. These changes, coupled with some of the standard liberal market reforms currently being enforced around the world by the World Bank and the International Monetary Fund, were successful in reducing inflation and in increasing access to foreign imports by Brazilian consumers. Everything seemed rosy for awhile, leading to stories in popular magazines about the new standard of living being achieved in Brazil.

Now, some of the consequences of this free market “discipline” are becoming apparent, not the least of which is the toll that reductions in government spending have taken on income growth in the middle class. It appears that middle class incomes are declining in Brazil. This has again led to stories in the popular press worrying over the “fall of the middle class.”

So, it is in the context of these macro-social changes that our study is being conducted. Although this is not a true prospective study, so that we cannot gauge the impact of some of these changes directly on the individuals in our sample, we can treat our data longitudinally, because we are sampling the same neighborhoods. In the parlance of data analysis, with the current data available we can treat this as a 2 (neighborhoods) x 2 (time periods) analysis of covariance (controlling for background variables like age and sex). We can see how some basic sociodemographic variables and the health outcomes have changed over time in each of the two neighborhoods.

We are somewhat limited in the choice of variables, because in the current study the goal of improving the measurement of cultural consonance was more important than the goal of having comparable data across time periods. Nevertheless, there are a number of variables that can be directly compared, and there are a number of other variables that share enough items in common between the two time periods that we can construct special-purpose measures that are comparable (even though these may not be measures that would be used within either time period alone).

The main point, however, is that this set of analyses will help us to understand better the sociocultural context within which the data we are currently collecting has been generated.

Sociodemographic variables

Figs. 10 – 22 present results on the distribution of sociodemographic variables between 1991 and 2001 (of course, the earlier study was carried out between 1991 and 1993, and the current study began in 2001 and will be completed in 2003). Results for categorical variables are unadjusted; for continuous variables, age has been controlled for in all comparisons. Fig. 10 presents the distribution of men and women by neighborhood and time period (‘lower’ refers to the lower class neighborhood; ‘middle’ refers to the middle class neighborhood). The distribution is roughly similar, although there are fewer lower class men and more middle class men represented in the 2001 sample.

Figs. 11 and 12 present age distributions by neighborhood and time period for women and men respectively. For each neighborhood and for both sexes, there is an increase in the proportions of persons in older age groups. This is particularly striking in terms of the increase in the proportion of 30-39 year olds in the lower class neighborhood.

Figs. 13 and 14 present changes in the distribution by education. There has been a striking increase in educational levels in both neighborhoods over this ten-year period. In the lower class neighborhood, this is represented by the increase in persons with at least some secondary
school education, and in the middle class neighborhood this is represented by the increase in persons with some advanced level of education.

Figs. 15 and 16 present changes in household income, expressed as household means in \textit{reais}. At the time of this writing, 1 \textit{real} equals about US$0.33. To achieve comparability, incomes have been standardized to 2001 \textit{reais}. Over this ten-year period, mean incomes have risen in

Fig. 10: Distribution by gender, 1991-2001

![Graph showing distribution by gender, 1991-2001]

Fig. 11: Age distribution, 1991-2001 - women

![Graph showing age distribution, 1991-2001]
Fig. 12: Age distribution, 1991-2001 - men

Fig. 13: Educational attainment for women 1991-2001
the lower class neighborhood for women but not so much for men, while these incomes have declined in the middle class neighborhood, for both men and women. (For women, there is an interaction effect between neighborhood and time (p<.01), while for men there is a main effect of neighborhood).

Fig. 14: Educational attainment for men 1991-2001

Fig. 15: Mean household income, 1991-2001 - women (2001 reais)
Another way of expressing the difference in incomes is to choose a cut-off point that defines 'middle-class' incomes. There are several such cut-offs used in Brazil, and here, for the sake of simplicity, we adopt that used by O Departamento de Direitos Humanos do Estado de Rio de Janeiro (The Department of Human Rights of the State of Rio de Janeiro). Anyone with a monthly income greater than R$1,000/month would be considered middle class. As shown in Fig. 17, in the lower class neighborhood, the proportion of women reporting household middle class incomes, 1991-2001 - women
class incomes has risen, while the proportion of middle class neighborhood households reporting middle class incomes has declined. For men, the proportion of households in the lower class neighborhood reporting middle class incomes has remained constant, while the proportion of households in the middle class neighborhood reporting middle class incomes has declined.

Fig. 18: Proportion of respondents with middle class incomes, 1991-2001 - men

Figs. 19 and 20 show a slightly different picture. These graphs present differences by neighborhood and time period for a lifestyle index. The theoretical meaning of this variable was discussed in length in Research Report I (Dressler 2001). There were 15 items for lifestyle common to 1991 and 2001 and these included both material goods and related (principally leisure time) behaviors. A simple sum of these 15 items was used to create this index. For both men and women, this index increased from 1991 to 2001, although it increased more strongly for lower class than for middle class respondents. (For both men and women, there is a significant interaction between neighborhood and time period, p<.001).

Figs. 21 and 22 examine this relationship in a slightly different way. Here, I calculated the median lifestyle index in 1991 for the neighborhood that was next higher in socioeconomic status for the lower class neighborhood and the middle class neighborhood, respectively. Then, I calculated the proportion of households in 1991 that were achieving the same lifestyle level as the next higher SES neighborhood in 1991, and I calculated the proportion of households in 2001 that were achieving the same lifestyle level as the next higher SES neighborhood had in 1991. This is a relatively liberal definition of upward mobility in lifestyle, i.e. achieving what could be regarded as the relevant point of social comparison had ten years previously. These results indicate that, while both neighborhoods experienced substantial upward lifestyle mobility, those results were quite remarkable for the lower class neighborhood.

Discussion: Sociodemographic trends – Clearly, the most striking results to come out of the analysis of these sociodemographic trends is the competing and conflicting way in which
Fig. 19: Mean lifestyle index, 1991-2001 - women

Fig. 20: Mean lifestyle index, 1991-2001 - men
Socioeconomic changes are depicted. On the one hand, there is clear evidence of declining incomes in the middle class neighborhood, a trend that we can quite remarkably document here, despite the tiny sample sizes. At the same time, in the lower class neighborhood, incomes are either stable or, for women respondents, increasing (remember also the rather dramatic increase in educational levels for women; this could account in part for the differences between men and women). On the other hand, levels of consumption are increasing. These
levels are increasing more in the lower class neighborhood, but there may be two reasons for this. First, given the relatively restricted range offered by the 15-item lifestyle index constructed for this comparison, the lower class neighborhood had more room to rise than does the middle class neighborhood. Second, the relative income increase in the lower class neighborhood offers greater opportunity for consumption to increase. These trends in Brazilian society which, as I noted above are the subject of continuing commentary in the Brazilian press, must be profound indeed to be apparent in this small sample.

Health and Health Outcome Data

Figs. 23 to 38 present comparisons between 1991 and 2001 in health outcome data. For all data the comparisons are again presented separately for men and women. For data on cardiovascular disease risk factors (blood pressure, serum lipids and triglycerides) the results have been adjusted for age and the body mass index (BMI).

Figs. 23 and 24 present difference by neighborhood and time period for BMI. For women there are no significant differences by time period or neighborhood. For men, on the other hand, there is a substantial neighborhood-by-time period interaction effect (p<.001); BMI’s for lower class men are increasing substantially, and BMI’s for middle class men are decreasing substantially.

Figs. 25 and 26 present the results for total serum cholesterol. For both men and women there are significant neighborhood-by-time period interactions (p<.05). Total serum cholesterol for lower class men and women have increased substantially. Total serum cholesterol for middle class men and women have decreased just as substantially.

Fig. 23: Mean BMI, 1991-2001- women
Fig. 24: Mean BMI, 1991-2001 - men

Fig. 25: Mean total serum cholesterol, 1991-2001 - women
The pattern for the high density lipoprotein fraction of cholesterol (HDL) is slightly different. For women of both the lower class and the middle class this fraction has also increased substantially, although it has increased more for lower class women than for middle class women (there is a significant interaction of neighborhood and time, $p<.02$). For men there is a small increase with time in HDL for the middle class, and essentially no difference for the lower class neighborhood (the effect of neighborhood is significant at $p<.10$).
Fig. 28: Mean HDL cholesterol, 1991-2001 - men

Figs. 29 and 30 present the results for systolic blood pressure, and Figs. 31 and 32 present the results for diastolic blood pressure. For systolic BP, there is a decline over time for women (p<.01), although lower class women tend to have higher systolic pressures (p<.01). For men, systolic pressures have declined with time (p<.01) but do not differ by class.

Fig. 29: Mean systolic blood pressure, 1991-2001 - women
With respect to diastolic blood pressure, for women and men, the decline with time is significant (p<.01) but there is no class difference.

Fig. 30: Mean systolic blood pressure, 1991-2001 - men

Fig. 31: Mean diastolic blood pressure, 1991-2001 - women
Fig. 32: Mean diastolic blood pressure, 1991-2001- men

Results for serum triglycerides are shown in Fig. 33 and Fig. 34. There are no significant differences by neighborhood or time period for men or for women.

Fig. 33: Mean triglycerides, 1991-2001- women
Finally, Figs. 35 to 38 present results for two variables related to stress and coping: locus of control and perceived stress. As I noted earlier in this research report, the response pattern for the items measuring locus of control was changed for the 2001 study. In 1991 these items were simple dichotomies, while in 2001 we used a 4-point Likert scale of “strongly disagree” to “strongly agree.” In order to make these data comparable, I collapsed the 2001 data to simply “disagree-agree.” This makes the items comparable, although we cannot be sure that the responses from 2001 were not influenced by the greater range of item response categories. But, with this caveat in mind, we can examine changes in locus of control (keeping in mind that higher scores are indicative of a greater internal locus of control). For women, there is a significant interaction effect between neighborhood and time period (p<.01). Locus of control scores are changing in the direction of greater sense of internal locus of control for both neighborhoods, but that change is stronger for lower class women. The same is true of men. There is an increase in a sense of internal locus of control for both neighborhoods over time, but that change is stronger for lower class men (p<.001).

Figs. 37 and 38 present the same results for the measure of perceived stress, the items of which were precisely the same in the two time periods. There is a strong interaction effect (p<.001) between neighborhood and time period. Perceptions of stress have changed little for middle class women, and have dropped dramatically for lower class women. For men the relationship is much the same, although the perceptions of stress have not dropped as dramatically for men in the lower class, and they have increased somewhat for middle class men (the interaction is significant, p<.02).

Discussion: Health and Health Outcomes – There is a mixed set of results here when it comes to health outcomes. In terms of blood pressure, for both the lower class and middle class sample there has been a substantial decline over time. This is beneficial with respect to cardiovascular disease risk. With respect to cholesterol, total cholesterol has increased...
Fig. 35: Mean locus of control, 1991-2001 - women

Fig. 36: Mean locus of control, 1991-2001 - men
substantially in the lower class, while declining in the middle class. While some of the increased risk associated with increased total cholesterol is compensated for by an associated increase in HDL, there is still probably an increase in LDL cholesterol that is problematic. Actually, this can be examined directly by calculating the ratio of total cholesterol to HDL and examining the change in that ratio over time. For women, there is a decline in both neighborhoods of the total cholesterol/HDL ratio. For men, this ratio declines in the middle class but increases in the lower
class, indicating that for lower class men, the increase in total cholesterol is probably a function of increasing LDL levels, which in turn is indicative of an increased risk of coronary artery disease. The other aspect of lipids examined here, triglycerides, has so much variability within neighborhoods and time periods that no trend is discernable.

With respect to the psychological variables examined, there is a clear increase across neighborhoods and time periods in the belief that one’s own actions are potent (i.e. an internal locus of control), with that increase being stronger in the lower class neighborhood. Still, this shift in beliefs about voluntary action must be viewed with a certain caution, since data from the second time period had to be re-coded in order for the time periods to be compared, and we cannot know clearly what effect this might have had on the way scores were distributed in the second time period.

The evidence from shifts in psychological stress support the data on locus of control, however, and there is no ambiguity in the way that scale was scored across time periods. Many of the items from the PSS refer to voluntary action. In many respects, “stress” in that scale is conceptualized as being blocked in one’s motives. In the lower class neighborhood, for both men and women, there has been a dramatic decrease in the level of perceived stress, while in the middle class neighborhood there has been little change (for women) or a slight increase (for men).

V. Discussion

The principal aim of this research report has, of course, been to demonstrate the progress made in the research thus far. The project is progressing in accordance with the timetable outlined in the original research proposal. As noted earlier, three of the four neighborhoods to be surveyed have been completed, with data from two of those neighborhoods available for preliminary analyses.

With respect to those preliminary analyses presented in this report, my aim has been primarily to illustrate the way in which the analysis of these data will proceed. All of the results presented in this research report can only be regarded as tentative, based as they are on a part of the data to be collected. Furthermore, for the cultural consonance variables, these preliminary analyses have been based on a single way of scaling the items. As I noted earlier, there are good reasons to consider other ways of scaling those items. Therefore, no firm conclusions should be drawn from these analyses; nevertheless, with these caveats in mind, the following points summarize what appears to be going on in these data:

- The standardized psychological scales show acceptable to good internal consistency reliability. At the same time, these reliabilities appear to be somewhat lower in the lower class neighborhood.
- The cultural consonance scales for which internal consistency is a relevant criterion show acceptable to good internal consistency reliability. All of the scales are symmetrically distributed and can be regarded as sufficiently approximating normal distributions.
- The correlations between the cultural consonance scales and the psychological variables support the validity of the cultural consonance measures. This is particularly true with respect to cultural consonance in lifestyle and cultural consonance in family life. The lack of association of cultural consonance in social support and cultural consonance in family characteristics with these psychological variables is not a particular cause for alarm at this point.
• The focus group technique appears to be quite useful to collect narrative data that complements and extends the data collected using cognitive techniques. The convergence of the results obtained in the focus group with those obtained by other methods is quite strong. Furthermore, the focus group technique, in conjunction with other results, appears to be achieving the goal of illuminating the pragmatic reasoning for which cultural models are used.

• Comparisons of data collected in 1991 and 2001 suggest that systematic sociocultural changes have occurred in Brazil in this ten-year period, and that these changes have influenced health status.

There are a couple of points that can be expanded upon here. First, with respect to the lower reliabilities of scales in the lower class neighborhood, this is something in need of further investigation. One advantage to the way in which we are carrying out this research is that we are discovering new and interesting things as the research is progressing. This apparent anomaly can be investigated with qualitative techniques as we continue the research. This is true also of the unanticipated, but very interesting, interaction effect between class/gender and cultural consonance in relation to psychological variables. Just why this is occurring is something that we can follow up on in the next few months.

Second, and actually quite closely related to the first point, is the realization that we are not simply examining the longitudinal change in these neighborhoods, but analyzing the way in which macro-social forces have altered the composition and sociocultural nature of those neighborhoods. I noted this in conjunction with my discussion of sampling (on p. 3), but the implications of this should have become increasingly clear as the report proceeded. The differing associations of cultural consonance and psychological variables points to this. And, the pattern of results from the longitudinal analyses point to some very different things going on in different segments of Brazilian society. It would appear that real incomes have increased in the lower class neighborhood, and that they have declined in the middle class neighborhood. Furthermore, the increase in the real incomes in the lower class community are primarily a function of women reporting higher household incomes, and this may be a function of changing educational levels for women. This in turn appears to have led to a remarkable increase in standards of living in the lower class neighborhood, with corresponding smaller increases in the middle class neighborhood (keeping in mind that a good estimate of the actual magnitude of these changes is limited by the lifestyle index). Ultimately, these socioeconomic changes may be contributing to the changes in health status in the neighborhoods, especially the quite remarkable increase in internal locus of control and decline in perceived stress in the lower class neighborhood. For our lower class respondents, it could be argued that the past ten years has been a period of marked improvement in their lives, with a corresponding improvement in health status. Middle class respondents have not seen their lives improve materially in the same way, although they have not suffered, as yet, any marked decline in health status.

This interpretation of the data would be one that would fit well with the social policy intentions that led to the construction of the lower class neighborhood in the first place and the enforced removal of favelados to that neighborhood. But a major caution that must be placed on this interpretation is that we simply do not know the extent to which the current population of the lower class neighborhood is actually the same as it was ten years ago. As I noted before, we have a lot of anecdotal evidence that many favelados left the neighborhood for other favelas in the city, because of their inability or unwillingness to deal with the economic demands of the new neighborhood. Therefore, what might be interpreted as a change in conditions of the lower class neighborhood and the life of its residents may in fact be a function of other persons replacing the original inhabitants of the neighborhood.
Actually, the data that are currently being entered will help us to unravel this a little. The data currently being entered come from a neighborhood intermediate between the lower class and middle class neighborhoods analyzed in this research report. If there is evidence of changes in that neighborhood like the changes in the lower class neighborhood, then this may indicate that broader structural forces are at work. If, on the other hand, there are, at best, modest changes in the variables considered in that intermediate neighborhood, more like that observed in the middle class neighborhood, then this may indicate that the dramatic changes occurring in the lower class neighborhood are more a function of population replacement rather than structural change.

A major implication of this really is that the longitudinal dimension to this research will provide us with much more contextual data for the current study than most anthropologists ever have. Typically, a study is carried out in a particular locale, and while ethnographic research demands that the investigator be cognizant of what sociocultural changes have been occurring in the recent past in that locale, real knowledge of that change is usually impressionistic. The longitudinal data that we have, as imperfect as it may be, provides us with a much stronger understanding of the context out of which our current observations have been generated.

Finally, I want to note again that this is a model for the analysis of our data, not the actual analysis. We will be collecting more data, and we have more data—especially in the area of nutrition and cultural models of food, and from the focus groups—than we have been able to work up for this report. The complete analysis of these data will be forthcoming.

VI. References


