Agency, Cultural Consonance and Depressive Symptoms: A Brazilian Example

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Abstract Cultural consonance, or individual enactment of cultural models, is associated with lower depressive symptoms. This article incorporates individual agency into the cultural consonance model. Data were collected using mixed methods in Ribeirão Preto, Brazil. Brazil is a unique setting for this research, given that personal agency is institutionalized in the practice of *o jeitinho* (a distinctively Brazilian way of circumventing rules). Cultural consonance was measured relative to cultural models of life goals. A measure of a sense of personal agency combined scales of locus of control and frustration tolerance. Cultural consonance had a stronger association with depressive symptoms than individual agency. These results are also consistent with cultural consonance as a mediator of the association of agency and depressive symptoms. The implications for the conceptualization of culture and its role in mental health, and for the influence of psychological factors on culture, are discussed. [Brazil, agency, cultural consonance, depression]

Culture is generally regarded as an important influence on mental health, but specifying the details of the process has proven difficult. A theory linking culture to the individual, along with a measurement model for its operationalization, have proven elusive. Dressler and colleagues (Dressler 2018a; Dressler, Balieiro, and dos Santos 2017) developed a theory of cultural consonance to describe with operational precision how culture as a property of social aggregates gets translated into individual belief and behavior, which in turn can influence health outcomes. Higher cultural consonance is associated with lower depressive symptoms, lower blood pressure, better immune function, and other health outcomes (Dressler 2018b).

The measurement of cultural consonance provides an opportunity to gauge the influence of culture relative to other factors, offering the potential to test complex hypotheses regarding how these factors intersect. A central question in psychological anthropology involves the exercise of personal agency in the context of the directive influence of culture (Holland, Price, and Westermeyer 2018). Since cultural consonance identifies persons who more completely adopt cultural models, how might individual agency affect the association of cultural consonance and health? Can we specify a model of the combined influences of cultural consonance and agency on mental health?

The aim of this article is to examine this question with data collected in a mixed-methods study of depressive symptoms in an urban center in the south of Brazil. In this study, along

with measures of cultural consonance, we developed an individual difference measure of one's "sense of personal agency;" that is, to what extent does an individual see him- or herself as able to effect change in the world, in keeping with his or her own personal aims? How is this associated with cultural consonance, and how do these factors combine to influence depressive symptoms?

Culture, Agency, and Health

Agency, or an individual's socioculturally mediated capacity to act (Ahearn 1999), has come to be an important focus in anthropology (Holland et al. 1998; Holland et al. 2018; Ortner 2005). Agency is sometimes opposed to structure, whether structure be thought of as social structure or as the cultural structuring of goals and sentiments. Somehow individuals, as active agents, are still able to pursue their own goals in the presence of these constraining influences (Sewell 1992). While agency is often thought of solely in these terms, there is no reason that individuals could not harness their own sense of self-efficacy and control in the world to pursue culturally constructed goals (Ahearn 1999; Campbell 2009; Ortner 1984).

For Ortner (2006, 134–37), agency is defined by the following elements. First, agency describes the subject acting intentionally. There is a goal, and the subject seeks to achieve it. Second, our capacity for agency is a human universal, although, like most things human, agency itself is culturally constructed. Third, agency cannot be divorced from power. Put simply, everyone has agency, but some people have more of it than others as a function of the differential distribution of power.

Holland and her colleagues (2018; see also Holland et al. 1998) have expanded upon this understanding of agency by showing how individual agents draw extensively on cultural resources to position themselves relative to a novel set of goals. For Holland and associates, this especially involves a shift in identity as individuals incorporate new conceptions of the self to facilitate their action in a particular social field (Holland et al. 2018).

In the anthropological literature, a sense of one's self as agent tends not to be conceptualized as a psychological disposition. Ortner (1984, 2006), for example, resists such thinking for reasons that are not entirely clear, except that she is uncomfortable with having to deal with too much "psychological plumbing" (her words) in her subjects. The psychologist Albert Bandura (2001), on the other hand, devoted his career to precisely this issue, arguing that there are four core components to agency in humans. The first is intentionality: to have agency is to intend to do something. The second is forethought. The active agent has a set of expectations for what action is intended and likely to produce. The third is self-reactiveness; we actively engage in strategies intended to achieve the ends sought, and we monitor ourselves and our success along the way. The fourth core component of agency is self-reflection; the agent is aware of his or her negotiating potential constraints. To measure agency from this perspective, scales of perceived self-efficacy and internal locus of control have been relied upon (Bandura 2001).

The relationship of agency in this sense to personality is somewhat unclear. While some researchers see it as a personality trait (e.g., Vallacher and Wegner 1989), Bandura (2001) never defines it as such. Personality traits such as openness to experience, conscientiousness, and extraversion may contribute to a higher sense of one's agency, although the psychological disposition itself may not be an enduring part of personality (Triandis and Suh 2002).

Whatever the precise status of the concept, the relevance of agency to understanding health is clear. As Thoits (2006) argues, a sense of agency could underlie the act of coping in the stress process. When confronted with either acute or chronic stressors, the individual with a stronger sense of personal agency should be better able to initiate coping strategies, including seeking support from others, given their greater sense of self-efficacy and control. Furthermore, given their reflexivity, they should also be able to more effectively cope with those stressors not amenable to change through direct action.

Our perspective is that a sense of personal agency can be regarded as a psychological disposition. This facilitates the empirical examination of questions regarding agency, culture, and mental health. With the concept of cultural consonance to operationalize culture, the relative influences of culture and agency on mental health can be examined.

Cultural Consonance

Cultural consonance is the degree to which individuals approximate, in their own beliefs and behaviors, the prototypes for belief and behavior encoded in cultural models (Dressler 2018a, 2018b). A cognitive theory of culture provides the broader conceptual context for the construct (D'Andrade 1995), beginning with Goodenough's (1956) definition of culture as that which one needs to know to function in a given social system. Culture is thus knowledge made cultural because it is shared and learned in social interaction. It enables us to more-or-less accurately interpret others' behaviors and to initiate behavior that is in turn intelligible to others (Dressler 2018a, 2018b).

Culture is encoded in shared mental models of salient cultural domains. The elements of a cultural domain are defined and organized by these cultural models in terms of the semantic, functional, and causal associations understood to link them. Cultural models are stripped-down, schematic representations of a cultural domain, containing one or more prototypes or best exemplars of the domain (Bennardo and de Munck 2013; D'Andrade 1995; Holland and Quinn 1987; Strauss and Quinn 1997). For example, a cultural model of family life in Brazil includes, along with an understanding of what persons are included under the heading of "the family," the characteristics that are understood to define a family as a social unit, and how those characteristics interact. These are described in the cultural model by prototypical representations of families that either do, or do not, exhibit those features (Dressler 2018b).

Cultural models are shared and distributed. The distribution of cultural models can take several forms. They may be widely shared, with diversity coming in the form of individual differences in the degree of sharing (Gatewood 2012). Cultural models can also be contested,

in the sense that the broad outlines of a model might be shared, yet specific groups within a population privilege certain features of the model over others (Dressler, Balieiro, and Santos 2015). Finally, there may be competing cultural models within a society (Caulkins and Hyatt 1999). A cognitive theory of culture comfortably incorporates these and other empirical possibilities.

The study of cultural models was facilitated by the development of cultural consensus analysis (Romney, Weller, and Batchelder 1986). Cultural consensus analysis (CCA) is a formal statistical model that enables the analyst to make a reasonable inference regarding the sharing of a cultural model within a specific group of respondents. They are asked a series of questions regarding knowledge within a given cultural domain. If respondents answer those questions in ways that are similar—that is, if there is an overall consensus—it suggests that they are drawing on a common pool of knowledge. If this is the case, the degree to which individual respondents share in that knowledge (referred to as "cultural competence" in CCA) can also be estimated. Finally, the content of that knowledge (referred to as the "cultural answer key" in CCA) can be estimated, giving higher weight to those respondents who share more knowledge with others. This is a "cultural best estimate" of how a reasonably knowledgeable member of that group would respond to those questions if asked. Finally, when coupled with innovations in the analysis of residual agreement (Dressler et al. 2015; Hruschka and Maupin 2013), intracultural diversity of several types can be precisely described.

The focus of cultural models theory and CCA is on knowledge and its distribution. The concept and measurement of cultural consonance traces that shared and distributed knowledge to belief and behavior at the level of the individual. Cultural consonance is measured by asking individuals if they do or believe what is entailed in the cultural model in a particular domain, based on the results of CCA. In our own work in Brazil, we have found higher cultural consonance to be associated with lower blood pressure, lower body mass, better immune system function, and fewer reported depressive symptoms, and we have replicated these results in multiple studies over a 25-year period (reviewed in Dressler 2018b). Furthermore, these findings have been replicated and extended by other investigators (Dengah 2014; Reyes-Garcia et al. 2010; Snodgrass et al. 2011).

A general psychosocial stress hypothesis has been proposed to account for the results. There is ample research on social comparison processes suggesting that individuals who see themselves as failing to achieve levels of success comparable to their peers experience a sense of relative deprivation; that is, they experience a sense of loss and social marginalization, of being left behind within their own society (Wilkinson and Pickett 2007). Cultural consonance is measured in cultural domains that organize salient and valued goals within a particular social setting. Our research in Brazil has shown that the cultural domains in which we measure cultural consonance are considered to be central life goals, shared across socioeconomic groupings (Dressler, Balieiro, and Santos 2017). Persons with low cultural consonance therefore see themselves, and are seen by others, as not meeting these broad social expectations for how life is to be lived, encoded in cultural models. To be seen by others as achieving widely shared expectations is, we think, a particularly important part of

the process. In mundane social interaction, one's cultural consonance is an essential feature of what Goffman (1959) referred to as "the presentation of self in everyday life." By the way individuals dress, the way they carry themselves, and especially the manner in which they converse over everyday topics in mundane social interaction, they project a sense of their position in a space of culture defined by the expectations encoded in shared cultural models, and higher status is accorded to those seen to be achieving higher cultural consonance. To the extent to which individuals fail to receive confirmation of their (hoped for) status is a stressful experience that in turn is associated with adverse health outcomes (Dressler 2018b, 184–87).

Maltseva (2014, 2015) has critically reviewed the cultural consonance literature. She finds the approach to be robust and useful, and, at the same time, she suggests that there are gaps with respect to testing the model. Foremost among these is the need to include psycho-logical variables in analyses that may be relevant and overlap empirically with the construct of consonance. She notes: "limitations of the approach include its potentially confounded associations with psychological phenomena" (2015, 30). Examining the association of cul-tural consonance with depressive symptoms, and including a sense of personal agency in the model, would help to address this critique.

Culture and Agency in Brazil

The research described here was carried out in the city of Ribeirão Preto (population approximately 600,000) in the north of the state of São Paulo. The city (described in detail in various articles, including Dressler, Balieiro, and Santos 2017) is located in one of the richest agricultural regions of the nation and provides the basis for its reputation for affluence, although at the same time it is sometimes regarded in other parts of the country as a somewhat *caipira* ("hick") community. While founded on agriculture, the city has developed as a regional center in manufacturing, finance, and education. Despite the relative affluence of the city, it exhibits the same degree of social inequality as Brazil as a whole.

The discourse on personal agency is a complex one in Brazil. Especially of late, given the po-litical turbulence there, a narrative of corruption and graft dominates everyday conversation regarding political life, which in turn spills over into considerations of mundane social life. One gets the impression in such conversations that life is a continuing struggle against larger structural forces arrayed against the individual. There is, in fact, a relatively long tradition of this way of thinking that is encapsulated in the Brazilian institution of "*o jeitinho.*" The term *jeito* literally translates as a "talent" or "skill," or even a "knack" for doing something. But *o jeitinho* (the diminutive of *jeito*) refers to a way of getting around, if not exactly breaking, formal rules in a given situation. The process is initiated by the question, "*me dá um jeitinho?*" which almost literally means "could you give me a break?" but is often translated "can we find a way here?" (Barbosa 1992).

We conducted a focus group with nine participants (four women and five men) from a middle-class neighborhood. All participants were in their 40s or early 50s. The topic was Brazilian

national identity, beginning with the question, "What makes Brazilians, Brazilian?" Barely a minute had elapsed when a woman said "Ah, I think the principal thing is the Brazilian jeitinho, right? A Brazilian wants to use o jeitinho for everything, you know? This is a true characteristic of the Brazilian." She went on to describe the following case:

> OK, I'm going to tell you a story. My friend, João, has worked at the municipal court for a long time and one day an old friend of his showed up asking him to change the order of cases. There were a bunch of cases ahead of his, but he asked his old friend to change the order. He asked for o jeitinho. And what happened? The order of cases got changed.

Another participant then interjected: "*O jeitinho Brasileiro!*"

Another participant related a slightly different story, in which he arrived at a local neighborhood health clinic the day after a big soccer game. Of course, he said, no one had gone to the clinic the day before (all were home watching the game), so it was very crowded. He described how one woman, asking for o jeitinho, was seen ahead of people who were both sicker and had been there longer. One of the men in the group challenged the story, saying, "Don't other countries have this habit of people getting ahead in the line?" to which another replied: "Sure they do, but Brazilians want to use o jeitinho for everything, that's the difference."

O jeitinho is thus seen as a distinctive Brazilian institution. Furthermore, while generally acknowledged as something that occurs or even is necessary in everyday life, o jeitinho is culturally contested. There are some who take pride in it, seeing it as a part of an inherent flexibility and adaptability that enables Brazilians to survive both as individuals and as a society in a complex world. Others see o jeitinho as an extension of the corruption in politics and society into individual character. Such persons might speak disdainfully of others always using o jeitinho when they should really just do the right thing. But even these persons will ruefully admit that sometimes, in some situations, there is just no option but to employ this strategy. (It is this moral ambiguity in deploying o jeitinho that precludes simply asking about it as a component of a sense of personal agency. Those who are actually well-positioned to deploy o jeitinho can also be those who readily decry its use.)

O jeitinho expresses in cultural and not simply psychological terms the capacity for individual agency in mass society. It is not, however, an agency of the rugged individualist type. O jeitinho must be deployed strategically, at the right moment, which may entail delay and the tolerance of a certain ambiguity or even frustration. Furthermore, it is also a social endeavor, in that it involves the participation of another individual.

Questions regarding a sense of personal agency and cultural consonance inevitably implicate issues of socioeconomic status. As Ortner (2006) pointed out, agency cannot be divorced from power, and a fundamental component of social power involves one's ability to mobilize economic resources. Similarly, in virtually any cultural domain, the capacity to translate

cultural competence into cultural consonance will involve access to economic resources (Dressler et al. 2015).

Social inequality in Ribeirão Preto is represented in residence patterns and education. In the collection of data on cultural models, requiring multiple and intensive interviews, we selected respondents varying in educational attainment, and in the collection of social survey data to assess cultural consonance, we focused on four very different neighborhoods.

These neighborhoods have been described in detail elsewhere (Dressler 2018b; Dressler et al. 2017). Briefly, they include a former *favela* (or "squatter settlement," "former" because the population was moved to a municipal housing project); a working-class neighborhood; an old, traditional middle-class community; and, a relatively new, gated, upper-middle-class subdivision. The differences between the neighborhoods in income are stark: in 1991 the correlation (assessed as η or the correlation ratio) of neighborhood and family income was $\eta = .69$ ($p < .001$); in 2001 that correlation was $\eta = .59$ ($p < .001$); and, in 2011 that correlation was $\eta = .64$ ($p < .001$) (see Dressler [2018b] for a detailed discussion of the three studies). The corresponding correlations for completed education and income range from $\eta = .55$ to $\eta = .59$ ($p < .001$).

These socioeconomic differences are of obvious importance in examining cultural models. Originally we examined cultural models in the domains of lifestyle and social support because of the theoretical relevance of these domains to health (Dressler, Balieiro, and Santos 1997, 1998). In later work, we added the cultural domains of family life and national identity (Dressler et al. 2005), and then occupational and educational aspirations (Dressler et al. 2017). In focus groups and subsequent CCA, we found that our Brazilian respondents culturally integrated these models into a kind of "superdomain" that they referred to as *metas na vida* ("goals in life") and *realizações* ("realizations"). In that superdomain, the achievement of these goals in life revolves around concepts of "respect" and "recognition" in social interaction. To achieve cultural consonance across these domains is to demonstrate to the world that you are, indeed, successful in life as a person. Conversely, not achieving cultural consonance in those domains entails the risk of losing the esteem of others in mundane social interaction (Dressler et al. 2017).

Not surprisingly, higher socioeconomic status is strongly associated with high cultural consonance (correlations vary from .45 to .50, $p < .001$, depending on the cultural domain). Somewhat surprisingly, however, we find relatively little evidence of socioeconomic differences in cultural models. In each domain, we first did free-list interviews to discover how the domain was structured. For lifestyle, respondents listed both material goods and leisure time activities as being important for having a good life. The domain of social support was structured in terms of common problems for which people need help and what kinds of persons are appropriate in response to specific problems. Respondents listed characteristics in the domain of family life that both created the prototypical Brazilian family (including both elements of structure and organization and elements of emotional attachment), as well as characteristics that threatened the family (such as egoism and disrespect). The domain of

national identity was somewhat complicated and included qualities of Brazilians that were admired and characteristics that were considered unflattering. Finally, occupational and educational aspirations emphasized primarily opportunities for study and satisfying work. These elements of the cultural domain analyses were elicited from persons at all socioeconomic levels. The number of items retained for further analysis varied from about 20 to about 35 (see Dressler et al. 2005).

In each domain, the relative importance of items for that domain (e.g., for having a good family, or what best represents Brazilian identity) were rated on 4-point scales. There was cultural consensus in each of the domains among respondents drawn from different neighborhoods and differing levels of completed education, and, with the exception of a relatively modest consensus in national identity, consensus was quite strong.[1] Detailed analyses demonstrated that there was a small but systematic association of cultural competence in the domain of lifestyle with education—the agreement about what constituted a valued lifestyle was stronger among persons with less education. But this variation was not sufficient to suggest that persons with higher education held a different model; rather, they simply did not agree as strongly among themselves. Similarly, there was systematic variation by education in residual agreement in the domain of family life. In the presence of a strong overall agreement with respect to important elements of family life, respondents with less education tended to emphasize more the importance of structure and organization for having a family, while respondents with more education placed somewhat greater emphasis on affect and emotion. Again, however, the relative contested nature of these themes did not negate the strong overall consensus regarding their importance for having a family.

There is thus a fundamental contradiction in terms of economic inequality and culture. Across the socioeconomic gradient, there is broad agreement or cultural consensus on salient life goals; however, the ability to achieve those goals—or cultural consonance—is severely constrained by the inequitable distribution of economic resources (Dressler et al. 2015).

There is a complex intersection of widely shared cultural models of goals in life, entrenched differences in socioeconomic status, and a sense of personal agency at work here. How these factors intersect in accounting for depressive symptoms will be examined next.

Methods

The research reported here, carried out between 2011 and 2014, builds on previous studies (described in Dressler 2018b). The cultural domain analyses in the domains of lifestyle, social support, family life, and national identity were originally carried out in 2001 (Dressler et al. 2005). In 2011, these were replicated to verify both that there was still cultural consensus and that the configuration of the cultural models had not substantially changed (Dressler et al. 2015). The integration of these domains into a larger cultural configuration of life goals was also verified, and the domain of occupational and educational aspirations was added (Dressler et al. 2017).

Sampling

Survey data were collected in face-to-face interviews conducted in the home. A stratified random sample was selected, with the neighborhoods described above serving as sampling strata. Maps identifying households were produced for each neighborhood. For each block in each neighborhood, households selected randomly were visited by interviewers (graduate-level Brazilian psychology students, trained by the authors). A single adult over the age of 18 was randomly selected from each household. Households were dropped from the sample if three visits produced no contact. The final sample of 477 persons represents a response rate of 40%.

Measurements

The Center for Epidemiological Studies Depression Scale (CES-D) was the dependent variable. This is a 20-item scale of common symptoms of depression. Respondents report the frequency of the experience of each symptom during the previous two weeks on a 4-point scale. This scale was translated and validated independently by Brazilian researchers (da Silveira et al. 2000). In the current sample, the reliability is satisfactory ($\alpha = .91$).

Covariates include age (in years), gender (women $= 0$, men $= 1$), and socioeconomic status (a principal components score combining family income, respondent's completed educational level, and respondent's occupational prestige score[2]).

All measurements of cultural consonance have been described in detail elsewhere (Dressler 2018b; Dressler et al. 2005). The following briefly summarizes each measure.

To measure cultural consonance in lifestyle, respondents reported whether or not they owned culturally salient material goods (14 items) and if they engaged in culturally salient leisure activities (seven items) that had been rated as at least "important" for having a good life in the cultural consensus analysis. Cultural consonance was calculated by counting the number of items owned by the individual and the number of frequent leisure behaviors reported by the individual, then dividing by the total number of items.

To measure cultural consonance in social support, respondents ranked seven potential supporters (family, friend, colleague, church member, health professional, a specialist in the area, other person) in the order in which they would seek support from them for each of nine problems (needing a ride, losing your job, relationship problems, problems with your children, problems at your job, needing money, illness, depression, unemployment). Cultural consonance was measured by the correlation between individual rankings and the cultural consensus rankings.

Cultural consonance in family life was measured with an 18-item, Likert-response scale created from the results of the cultural domain analysis, with each item weighted by its salience in the consensus analysis. Sample items include the following: (1) "Sometimes I wish my family were more organized" (reverse coded to assess family structure and organization);

(2) "In my family we feel close to one another" (to assess emotional climate); and, (3) "When I do something, I don't think about my family" (to assess threats to the family). The scale has high internal consistency reliability ($\alpha = .91$).

Cultural consonance in the domain of national identity was assessed with an eight-item, Likert-response scale. As described elsewhere (Dressler et al. 2005; Dressler et al. 2007), the survey items with the highest internal consistency were those that described negative social characteristics of Brazilians (e.g., "Many people are just too lazy to get ahead in life"). This scale has acceptable internal consistency reliability ($\alpha = .60$) and represents "cultural cynicism." Those individuals who endorse more of the items have a more cynical view of Brazilians and Brazilian life, but it is a distinctly culturally constructed cynicism (see DaMatta 1985).

Cultural consonance in occupation and education was measured with a 13-item scale in which respondents rated, on a 4-point scale, their agreement or disagreement with statements regarding their satisfaction with their opportunities. Sample items include: "I feel satisfied with the professional opportunities I have had"; "In my life, to improve my knowledge is a very important goal"; and, "I feel that I have achieved success in my life." The scale has acceptable internal consistency reliability ($\alpha = .81$).

All items were originally written in Portuguese. These five measures of cultural consonance load a single principal component, and a principal component score,[3] referred to as "cultural consonance in life goals," assesses each individual's overall level of cultural consonance across the five domains (Dressler et al. 2017).

A measure of a sense of personal agency was developed specifically for this study, emphasizing the dimensions of intentionality and self-reflection outlined by Bandura (2001). This measure combines two scales. The first is locus of control, assessing the degree to which individuals feel that they are in control regarding events and circumstances in their lives. We have used Coreil and Marshall's (1982) 14-item locus of control in health scale. Items include "There is nothing I can do to change things in my life" (reverse coded to indicate internal locus of control), and "When I have a problem, I do something to resolve it." This scale was translated into Portuguese in 1991 and used in previous studies (Dressler et al. 2007); it has acceptable internal consistency across several samples ($\alpha > .75$). A 21-item scale of frustration tolerance was adapted (Harrington 2005). This measures the degree of frustration that individuals report in response to everyday complications. Items include "I can't stand to do things that are really difficult," and "I can't stand to wait for things I would like to have now" (both reverse coded to indicate tolerance of frustration). The scale was translated, modified, and back-translated by the authors and has acceptable internal consistency reliability ($\alpha = .92$). The locus of control and frustration tolerance scales are correlated ($r = .44, p < .001$); those persons with a greater internal locus of control also have a higher tolerance for frustration. The scales were standardized and summed to form a measure of a sense of personal agency.

Data were analyzed using ordinary least-squares (OLS) multiple regression analysis.

Table 1. Descriptive Statistics for the Sample as a Whole and for Lower and Higher Income Neighborhoods

Variables	Total Sample ($n = 477$)	Lower Income Neighborhoods	Higher Income Neighborhoods
Depressive symptoms[*]	18.78 (±13.5)	21.45 (±13.9)	16.05 (±12.5)
Age[*]	48.17 (±14.6)	45.77 (±13.8)	50.61 (±15.1)
Sex (% men)	34.0	31.0	36.0
Socioeconomic status[*]	0.00 (±1.0)	− 0.44 (±1.0)	0.45 (±1.0)
Cultural Consonance[*]	0.00 (±1.0)	− 0.33 (±1.0)	0.34 (±1.0)
Personal Agency[*]	0.00 (±1.0)	− 0.24 (±1.0)	0.22 (±1.0)

Note. [*]$p < .001$ for differences between neighborhoods.

Table 2. Correlation Matrix of All Variables

	Depressive Symptoms	Age	Sex	Socioeconomic status	Cultural Consonance	Personal Agency
Depressive symptoms	–					
Age	− .135[**]	–				
Sex	− .170[**]	− .001	–			
Socioeconomic status	− .193[**]	− .125[**]	.110[*]	–		
Cultural Consonance	− .567[**]	.062	.110[*]	.562[**]	–	
Personal Agency	− .462[**]	− .124[**]	.111[*]	.429[**]	.627[**]	–

Note. [*]$p < .01$, [**]$p < .001$.

Results

Descriptive statistics are shown in Table 1, for the sample as a whole and broken down by the two lower income neighborhoods and the two higher income neighborhoods. All variables, with the exception of gender, differ between neighborhoods.

Table 2 presents a correlation matrix of all variables. There is a gender difference in depressive symptoms, and socioeconomic status, cultural consonance, and personal agency all have inverse correlations with depressive symptoms. Also, cultural consonance and personal agency have a large positive correlation: the higher one's sense of personal agency, the higher one's cultural consonance.

Table 3 presents the OLS regression of depressive symptoms on covariates, cultural consonance, and personal agency (standardized regression coefficients). In the first model, only age, gender, and socioeconomic status are entered. In parentheses, the standardized regression coefficients for cultural consonance and personal agency are given. These are the associations that each variable would have *if* it was entered into the regression by itself. In the second model, both variables are actually entered. The substantial association of personal agency with depressive symptoms is reduced considerably when it is entered with cultural consonance, and the association of cultural consonance and depressive symptoms is only modestly reduced when personal agency is controlled for.

Table 3. Ordinary Least Squares Regression of Depressive Symptoms on Covariates, Socioeconomic Status, Cultural Consonance, and Personal Agency

Variables:	Model 1	Model 2
Age	$-.115^*$	$-.061$
Sex	$-.167^*$	$-.130^*$
SES	$-.220^{**}$	$.155^*$
Cultural Cons.	$[-.628^{**}]$	$-.510^{**}$
Personal Agency	$[-.447^{**}]$	$-.200^{**}$
R	$.302^{**}$	$.613^{**}$
R^2	.091	.376

Note. In Model 1, age, sex, and SES were forced into the equation; the coefficients in brackets for cultural consonance and personal agency are the coefficients that would represent the effects of those variables *if* each had been entered by itself with the covariates. In Model 2, all variables have been entered simultaneously. $^*p < .01$ $^{**}p < .001$.

Table 4. Ordinary Least Squares Regression of Cultural Consonance on Covariates, Socioeconomic Status, and Personal Agency

Variables:	Model 1	Model 3
Age	.062	$.168^{**}$
Sex	$.110^*$	.015
Socioeconomic status	$[.574^{**}]$	$.374^{**}$
Personal Agency	$[.640^{**}]$	$.486^{**}$
R	$.126^*$	$.726^{**}$
R^2	.016	.527

Note. $p < .01$, $^*p < .001$.

The results from this first regression analysis are consistent with a model in which cultural consonance is the proximate variable in a causal pathway. Therefore, a second analysis was carried out to test the statistical significance of the mediating effect of cultural consonance, using the method of Baron and Kenny (1986). These analyses also provided estimates for a simple path model estimating the size of the mediating effect of cultural consonance. Estimating the mediating effect links the results of the first regression model with a second model in which cultural consonance in life goals was the dependent variable, with age, gender, socioeconomic status, and sense of personal agency as independent variables.

Table 4 presents the regression of cultural consonance on age, gender, socioeconomic status, and personal agency. In Model 1, the covariates have been forced into the equation, and the coefficients in parentheses are the standardized regression coefficients each variable would have *if* it were entered into the equation by itself. In Model 2, all variables have been entered into the analysis simultaneously. Both socioeconomic status and personal agency have large, positive associations with cultural consonance. These results, coupled with those presented in Table 3, are consistent with a mediating effect of cultural consonance ($p < .001$), using the method of Baron and Kenny (1986). In other words, most of the association of personal agency with depressive symptoms is a function of the association of personal agency with cultural consonance.
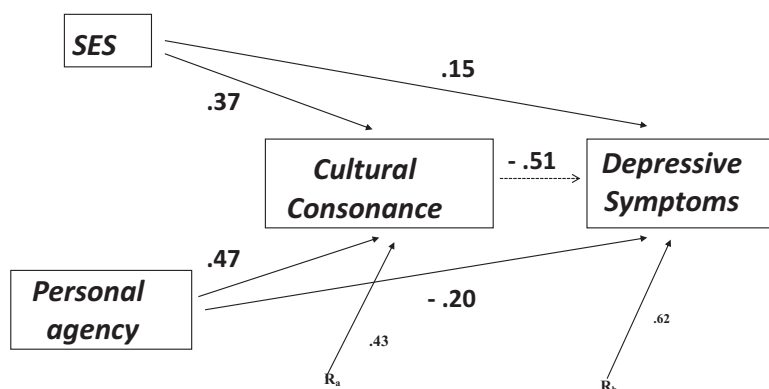
Figure 1. Path analysis

Finally, Figure 1 presents a simple path diagram with effect sizes inserted. The coefficients can be read as standardized regression coefficients. The indirect effect of a variable operating through a mediator can be estimated as the product of two coefficients. For example, the indirect effect of personal agency on depressive symptoms operating through cultural consonance is [.47 × −.51] or −.24 (after rounding). That makes the total effect −.44 (as seen in Model 1 in Table 3), with about half of it operating as a direct effect and about half of it operating as an indirect effect through cultural consonance. Most of the influence of socioeconomic status operates through cultural consonance (see Hadden and DeWalt [1974] for a lucid discussion of the use of path analysis in anthropology). These results are consistent with a model in which the associations of socioeconomic status and personal agency with depressive symptoms are mediated by cultural consonance.

Discussion

The aim of this article was to examine the association of cultural consonance with depressive symptoms while including in the analysis a psychological variable that might overlap with consonance, as recommended by Maltseva (2015). The variable included was a sense of personal agency, which extends anthropological research on agency (Holland, Price, and Westermeyer 2018) by conceptualizing it as an individual difference variable. The results are consistent with a model in which socioeconomic status and a sense of personal agency are associated with higher cultural consonance, which in turn is associated with lower depressive symptoms.

Before moving to a discussion of agency and cultural consonance, it is hardly surprising that higher socioeconomic status is associated, quite strongly, with higher cultural consonance. As we have shown consistently, in this social context and examining these cultural domains pertaining to life-span developmental goals, there is very little variation in cultural consensus across social class. Given the high degree of social inequality in Brazil, however, people in lower-income neighborhoods with less education are severely constrained with respect to the

economic resources needed to achieve higher cultural consonance (Dressler et al. 2015). The individual with lower socioeconomic status is therefore caught in a dilemma of understanding societal expectations surrounding life goals, yet lacking the economic resources that are virtually required for reaching those goals. Theories of cognitive dissonance predict that an individual would seek dissonance reduction by altering his or her value structure to reject the broadly shared cultural models (Festinger 1957); this, of course, is easier said than done. Experimental studies of dissonance reduction rarely include in the protocol the need to reject strongly salient cultural consensus models in order to reduce value conflicts. Furthermore, the person rejecting cultural models of life goals would, in essence, have to invent a new life for him- or herself, or at least find nonnormative pathways to achieve those goals (as described many years ago by Merton 1957). We are not saying this is impossible, since change in cultural models must underlie revolutionary social movements; we are simply saying it is hard at the individual level and that this dilemma can certainly be depressing (Dressler 2018b, 177–81).

Perhaps more surprising than the association of socioeconomic status and cultural consonance is the strength of association of a sense of personal agency with cultural consonance and that this association exceeds the socioeconomic status-cultural consonance correlation. It is true that in some cultural domains, such as family life, the emphasis in the cultural model is on the importance of rules, structure, and a particular socioemotional tone for having a family. That being the case, economic resources do not necessarily enter into cultural consonance, which in this domain involves seeing one's own family as meeting the Brazilian prototype, hence one's personal agency may be of greater importance in achieving the model. This stands in most obvious distinction to cultural consonance in lifestyle, where achieving cultural consonance is very much dependent on having economic resources. Nevertheless, the bivariate correlations of personal agency with the five measures of cultural consonance range from $r = .3$ to $r = .5$, including cultural consonance in lifestyle ($r = .42$), where the impact of economic resources is most acute.

These findings suggest that cultural consonance in any domain is partially a function of an individual's sense of his or her own efficacy and potency in social life. Individual motivation is likely to be important here; agency is nothing if not intention. Agency is often presented as an alternative to the constraining and conforming influences of social and cultural structure, as some have pointed out (Campbell 2009; Ortner 1984); however, there is no reason that individuals may not invest their volition in mastering the goals and objectives encoded in widely shared cultural models. The results presented here are consistent with this observation. Furthermore, there is a beneficial effect of investing one's personal agency in this way, in the form of lower depressive symptoms.

The way in which we have operationalized a sense of personal agency here is relevant to these findings. While there is a broad emphasis on self-efficacy and an internal locus of control in the concept of agency, we have also included frustration tolerance as a part of the measure, following Bandura's (2001) stress on self-reflection as a component of the construct. More recently, Bandura (2018) introduced self-regulation as an additional component of agency,

which further supports the inclusion of frustration tolerance in a measure of personal agency. The importance of both a dimension of self-efficacy (locus of control) and a dimension of self-regulation (frustration tolerance) in a measure of personal agency is clear: in lieu of a reflexive awareness of the limits of one's own efficacy, the concept of agency would devolve into mere megalomania. As Freud observed, tolerance of frustration is an essential step for the developing infant, as he or she (sometimes painfully) learns that the mother object cannot be entirely controlled and that wants or needs cannot be immediately satisfied. This would seem to be a highly adaptive trait across the life-span, in that building a satisfactory life in the context of inevitable obstacles and wrong turns would be facilitated by the capacity to abide temporarily such setbacks. This would be particularly true with achieving cultural consonance in life goals in that these goals cut across a number of cultural domains, all of which are challenging with respect to meeting shared expectations. A personality disposition combining motivation, a sense of efficacy, and a tolerance for frustration would be helpful.

It is also helpful that, in Brazil, the potential for the exercise of agency is culturally constructed as o jeitinho. O jeitinho might be considered a cultural prototype for agency in Brazilian social life, emphasizing as it does the strategic flexibility for achieving one's goals. Those goals may be purely idiosyncratic, or they may be culturally defined goals. The prototype for action seems indifferent to the source of motivation. The point is being able to move forward, regardless of the constraints or obstacles one encounters.

There are some somewhat broader implications of these findings for culture theory. There has been considerable debate around the locus of culture, whether behavior is or is not to be considered in the definition of culture, and the influence of factors such as personality on culture (see Dressler 2018b). The approach adopted here decomposes culture into three distinct, but related, constructs. First, there is cultural consensus, which refers to a social aggregate. As noted elsewhere (Dressler 2018b), cultural consensus represents a true integral aggregate variable in that the estimate of cultural knowledge provided by consensus analysis is not a mere average of individual knowledge, but rather takes into account how that knowledge is distributed. Second, there is cultural competence, which locates culture in individuals in the sense that each person has his or her own representation of a cultural domain, informed in part by the degree to which he or she shares the cultural consensus. Third, there is cultural consonance, which operationalizes with some specificity the broader notion of social practice, or how culture is reproduced in what people actually do.

Personal agency, as conceptualized here as an individual-difference variable, is unlikely to be associated with cultural consensus, the referent of which is a social aggregate. With respect to agency and cultural competence, we do not have measures of cultural competence in the specific data-set employed here; however, we did do a small ($n = 64$) follow-up study of this sample specifically to obtain cultural competence measures. There are small ($r < .3$) associations of personal agency and cultural competence only in the domains of social support and occupational and educational aspirations, indicating that there is likely little influence of this personality disposition on learning a cultural model. This makes sense, especially with respect to these cultural models associated with major life goals in Brazilian

society. The cultural models are so widely shared that it seems unlikely that any individual-difference variable would have a major impact on an individual attaining at least a modicum of competence in the model.

When it comes to putting the cultural model into practice, however, personal agency has a major impact. It is at this level of culture, where it is reproduced in individual belief and behavior, that a sense of agency is most obvious. The intentionality and reflexivity entailed in agency would appear to facilitate the individual taking his or her cultural competence and translating that into practice. Practice theorists also argue that culture is transformed by social practice (Bourdieu 1990; Holland et al. 2018). It may be that persons with a higher sense of agency, with their higher cultural consonance, are in a position of social influence with respect to changing cultural models. This is a hypothesis worth pursuing in future research.

The results are also consistent with a particular causal ordering among the variables, in which socioeconomic status and personal agency lead to higher cultural consonance, which in turn is associated with lower depressive symptoms. At the outset, we should emphasize that no true causal ordering can be inferred from these cross-sectional data. At most, we can say whether or not the pattern of associations among the variables is, or is not, consistent with specifying a particular causal order. These associations do fit the hypothesized sequence. Furthermore, the data are inconsistent with a causal ordering the places agency as the more proximate variable. This leads to the suggestion that cultural consonance is actually the variable proximate to depressive symptoms in the causal ordering and that a sense of personal agency is distal in that ordering.

These are somewhat counterintuitive findings, but they are not unprecedented. We have in fact examined other mediation hypotheses. The first examined a general psychological stress hypothesis; that is, that cultural consonance led to higher psychological stress, which in turn led to more depressive symptoms. We tested this mediation hypothesis directly using a well-known measure of generalized psychological stress, Cohen's Perceived Stress Scale or PSS (Cohen, Karmack, and Mermelstein 1983), in a longitudinal research design. There was no mediation of the association of cultural consonance across multiple domains with depressive symptoms by perceived stress (Balieiro et al. 2011).

Cultural consonance also mediates the influence of other factors on health outcomes. Cultural consonance completely accounts for the association of socioeconomic status with psychological distress (Dressler et al. 2015). More recently, we examined the interaction between childhood adversity and a polymorphism in the gene for a serotonin receptor in the brain and found that the association of this gene-environment interaction with depressive symptoms was completely accounted for by cultural consonance in family life. Individuals with one variant of the polymorphism who had experienced significant childhood trauma in turn had lower cultural consonance in family life, which then was associated with higher depressive symptoms (Dressler et al. 2016). These results all suggest that cultural consonance may be proximate in the causal chain leading to adverse health outcomes, especially depression.

This is not to say, however, that causal arrows run in one direction alone. Linear models of the sort presented here effectively summarize associations and hence are good to think with; we should not, however, ignore the likelihood that the world is actually more complicated (Dressler 2015). It could well be that there are significant causal influences that run in the other direction (i.e., from right to left in Fig. 1). Specifically, a feedback loop from higher cultural consonance to a higher sense of agency is eminently plausible. This is also consistent with the most recent work in learned helplessness theory. Briefly, this theory posits that individuals faced with repeated situations in which their behavior has no influence over the outcome of those situations would develop an enduring sense of a lack of control in life and, in essence, become incapable of responding to virtually any circumstance, which in turn would lead to little positive reinforcement in their lives and, ultimately, depression. Recent works suggests that learning agency is perhaps more important in the process than learning helplessness. That is, individuals' success in the world leads them to estimate more highly their own efficacy, which in turn can lead to more positive outcomes in many (although not all, hence the importance of frustration tolerance) circumstances (Maier and Seligman 2016; Moscarello and Hartley 2017). At the same time, the presence of such a feedback loop in the process does not change the position of cultural consonance as more proximate in the hypothesized causal sequence.

Generally in the social sciences, culture is regarded as distal in the causal sequence, if it is regarded as causal at all. Culture is usually conceptualized as a broad contextual factor, within which more specific, individual-difference variables such as psychological dispositions are regarded as more closely associated with outcomes like depressive symptoms (although there were some exceptions, e.g., Harrington and Whiting 1972). Thinking of culture purely as context may be less incorrect than incomplete, stemming from the difficulty in anthropological theory of breaking culture down into specific components, such as cultural competence and cultural consonance. Sapir (1934) in fact suggested that this could lead to new insights, and the proximate role of culture in a causal sequence may be one of those. How this would work was alluded to earlier in this article. Cultural consonance serves as a kind of bridging mechanism in mundane social interaction. It shapes an individual's presentation of self and enables others' to interpret the larger significance of the interaction. The way in which that social interaction is shaped, based on the participants' understanding, can in turn have further implications, for a sense of subjective well-being, for example.

The results presented here may thus lead to a reconsideration of the influence of personality on culture. The relationship between personality and culture generated considerable debate in psychological anthropology in the past, although it seems not to be a subject of that much interest today. Nevertheless, defining agency in terms of a psychological disposition, and distinguishing culture at the levels of collective representation, individual representation, and social practice, suggests a reconsideration of personality and culture. In the approach taken here, culture shapes agency as a psychological disposition, which in turn influences cultural consonance, which ultimately influences health outcomes. This process seems worth exploring further.

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Endnotes

1. Cultural consensus results for each cultural domain for the sample as a whole are as follows: lifestyle (eigenvalue ratio = 6.72; mean competence = .70 ± .11); social support (eigenvalue ratio = 5.57; mean competence = .66 ± 15); family life (eigenvalue ratio = 8.49; mean competence = .83 ± .09); national identity (eigenvalue ratio = 3.77; mean competence = .58 ± .18); and, occupational and educational pursuits (eigenvalue ratio = 4.7; mean competence = .59 ± .17) (Dressler et al. 2015).

2. A principal components analysis returned a single factor with an eigenvalue of 2.06, accounting for 68.8% of the variance shared among the three variables.

3. A principal components analysis of the five cultural consonance variables returns a single principal component with an eigenvalue of 2.18, accounting for 43.7% of the variance.

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