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Culture and Embodied Cognition: Moral Discourses in Internet Support Groups for Overeaters

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This article argues that a modified version of Bourdieu's *habitus* concept can generate insights into moral culture and the ways people use culture to make changes in their lives. If revised in light of recent findings from cognitive neuroscience, the habitus allows for the analysis of culture as embodied cognitive structures linking individuals to primary-group discourses. To demonstrate the utility of this conception, I examine the unique abstract language and embodied metaphors used by members of religious and secular overeaters' internet support groups. The religious group used far more *cleanliness* metaphors, and members who made frequent use of such metaphors remained with the group longer and posted more messages. This effect was not found for either group's abstract language or for the secular group's embodied metaphors. The findings suggest that a cultural influence on social bonding can be shown when culture is operationalized in terms of embodied cognitive schemas that operate within both the habitus and group discourses. Also, traditionally religious moral culture may be more strongly associated with cultural coherence and social bonding than is modernist culture.

This article argues that Pierre Bourdieu's concept of the habitus, though familiar to sociologists, is an underutilized tool for cultural analysis. While the habitus is useful for its incorporation of the body, cognition and social position into one theoretical framework, Bourdieu's approach is limited by his elision of the normative dimensions of the habitus, and by some of the concept's psychological presuppositions. Findings from cognitive neuroscience suggest that culture's effects on social life can be more readily identified if cognitive schemas, which Bourdieu treats as part of the habitus, are understood to be embodied and when discourses are seen as containing bodily information that interacts with the habitus. To demonstrate the analytic utility of a revised habitus, I examine the discourses of two internet support groups for compulsive overeaters, one self-identified as religious and the other secular. While members of both groups used similar metaphorical language, the religious group used far more metaphors of cleanliness and purity. Members of the religious group who used such metaphors more frequently remained with

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the group longer and contributed more intensely. These effects were not found for either group's unique abstract language or for bodily metaphors used by the secular group. Also, turnover was much lower for the religious group than for the secular group. Taken together, the findings suggest that orthodox, traditionally religious moral culture may be associated with heightened cultural coherence and *Gemeinschaft* social bonding, while modernist, secular moral culture can be more appropriately modeled as fragmented and individualistic. Differences between the results for abstract and embodied language, and between the two groups, suggest that culture's effects on social action can be more clearly seen when cognitive schemas are understood to be embodied, and culture as revealed in the interactions of the individual and group discourses.

Rethinking the Habitus

Pierre Bourdieu is widely regarded as one of the most important sociologists of the late 20th century, and his impact on American sociology is steadily growing (Sallaz and Zavisca 2007). Because Bourdieu has been read in the United States mainly in terms of his macro-sociological theoretical framework, including notions of power field and forms of capital, his sociology is generally seen as deterministic and materialist. Bourdieu frequently wrote of individuals much as rational-choice economists do (Smith 2003), in terms of a universal logic of competitive individualism and social ambition. These elements of Bourdieu's thought—his determinism, individualism and universalism—have been played up in the United States, and his work is argued to be incompatible with antireductionist cultural arguments (see Alexander 1995). And yet, in much of his work but particularly in his concept of the habitus, Bourdieu's thought is neither individualistic nor reductionist. The habitus is, along with the ideas of social field and forms of capital, one of Bourdieu's most important theoretical devices (see Jenkins 2002[1992]), but it is also perhaps the most vaguely defined. In one of many definitions, Bourdieu (1990:53) wrote that it is composed of:

“... systems of durable, transposable dispositions, *structured structures* predisposed to function as *structuring structures*, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the *operations* necessary in order to attain them.”

The opacity with which Bourdieu discusses the habitus, in this passage from *The Logic of Practice* and elsewhere, has led to charges that the habitus operates as a theoretical “black box” able to do all sorts of conceptual and theoretical work (Boudon 1998:175). Evaluations of the habitus often revolve around its connec-

tion to the social field—i.e., the way social position affects demeanor, posture and aesthetic preferences, and vice-versa. More recently, scholars have turned to both the normative and psychological dimensions of the habitus, and have argued that the concept has roots in Bourdieu's reading of Wittgenstein (Frère 2004), in Freudian psychoanalytic theory (DuBois 2000; Fourny 2000), and in Piaget's psychological genetic structuralism (Lizardo 2004). In these recent interpretations, the habitus is seen as a psychologically durable part of the person, the bodily and cognitive imprint of the social environment that informs all social evaluations and interactions.

In his development of the habitus concept, Bourdieu almost never explicitly addressed ethical matters, except for a passing reference to ethical dispositions in *Practical Reason* (Bourdieu 1998). In a discussion of the domestic family, Bourdieu wrote of forces of "dilapidation and dispersion" threatening the family, and of "the ethical dispositions that incline its members to identify the particular interests of individuals with the collective interests of the family (Bourdieu 1998:70). Bourdieu's discussion of "ethical dispositions" largely ends here. Lamont (1992) and more recently Sayer (2005) have criticized Bourdieu for neglecting the ways in which people routinely judge other people and their actions in terms of right and wrong, ethical and unethical. Lamont argues that Bourdieu saw proximate structural factors, namely an actor's position in a "power field," as determining social attitudes, and suggests that Bourdieu's theoretical position led him to downplay the role of moral criteria in social judgments (Lamont 1992). She has suggested that Bourdieu's neglect of the normative dimensions of social evaluations is due largely to his work's orientation toward secular Parisian intellectual and cultural elites. For Lamont, people's drawing of economic, cultural and moral boundaries between themselves and others is not reducible to social positions within nations, or to a zero-sum competition for desired positions and resources. Rather, macro-structural determinants such as the level of geographical mobility within a nation, and distinctive national cultural repertoires, shape social judgments in ways that are irreducible to class position or self-interest. Lamont (1992:184) argues that Bourdieu "allows no autonomy to moral discourse, which he implicitly conceives as necessarily subordinated to other principles of hierarchalization." Bourdieu "vastly underestimates the importance of moral signals," (181) which can, she argues, constitute a crucial resource that is valued in and of itself. Lay morality is thus "one of the blind spots of Bourdieu's theory." (184)

Sayer (2005) argues that struggles in the social field cannot be understood purely in terms of a Hobbesian pursuit of economic, cultural and social capital (Bourdieu 1984). Although achieving these goods may bring recognition and security, actors may pursue them for their own value, too. Struggles over capital are not merely for power and status, but are "about how to live." (Sayer 2006:96) Sayer argues that people experience social class partly via "moral and immoral sentiments" such as benevolence, respect, compassion, pride, envy, contempt

and shame. Such emotions are not counterposed to reason, but are “embodied evaluative judgments of matters influencing people’s well-being and that of others.” (3) Bourdieu’s analyses of the struggles of the social field pay little attention to the moral aspects of these struggles. While Bourdieu did recognize the “deeply evaluative character of social behavior in terms of how people judge themselves and members of other groups, and the practices and objects associated with them,” his interests in social evaluation “lay primarily in the valuation of these things in strategic, functional and aesthetic terms.” (Sayer 2005:42) Nevertheless, an ethical dimension is implicit in such struggles, and of course it is the ethical, more than the aesthetic, aspects of inequalities which matter to individuals because they have more bearing on whether they can live with self-respect, feel valued by others and engage in a worthwhile life. This is evident in the accounts of interviewees presented in *The Weight of the World*, the major study of social suffering in France carried out in the 1990s by Bourdieu and associates; these do not merely tell of material hardship and insecurity but emphasize lack of respect and self-esteem (Sayer 2005).

One weakness of Bourdieu’s treatment of the habitus is his neglect of its ethical dimensions. I would argue that a second weakness lies in the specifics of how Bourdieu understands the mind-body connection. Bourdieu views social knowledge as embodied, and the body as a “living memory pad” on which a “whole cosmology” is written during childhood socialization (Bourdieu 1990:68). But the way he conceptualizes embodiment oversimplifies how emotions and motivations inform action. His actors have gut reactions, but Bourdieu pays little attention to how much they care about what they are observing and doing. While at times he is vague on the place of emotion within the habitus, elsewhere he seems almost dismissive of emotions:

“Emotion... is a (hallucinatory) “presenting” of the impending future, which, as bodily reactions identical to those of the real situation bear witness, leads a person to live a still suspended future as already present, or even already past, and therefore necessary and inevitable—“I’m a dead man, I’m done for.” (Bourdieu 1990:292)

In this depiction of the “rather dour state of the habitus” (Probyn 2004:230), emotions shade the process by which aspirations are adjusted to social reality. Emotions guide the body in its adjustment to “the present of the presumed world, the only one it can ever know.” (Bourdieu 1990:65) This seems to rule out the possibility that emotions might be associated with social change, although it is obviously the case that they are (see Goodwin, Jasper and Polletta 2001; Jasper 1997). Emotions not only function to preserve the habitus, but they can overwhelm the habitus, as when the body “outruns the cognitive capture of the habitus” (Probyn

2004:232) in moments of grief and joy. Emotions also provide the “hooks” with which discourses can engage (Sayer 2005:38).

Bourdieu (1990:68-69) was ahead of his time in his emphasis on the body, writing that “practical belief” is less a “state of mind” than a “state of the body.”

“Every social order systematically takes advantage of the disposition of the body and language to function as depositories of deferred thoughts that can be triggered off at a distance in space and time by the simple effect of replacing the body in an overall posture which recalls the associated thoughts and feelings, in one of the inductive states of the body which, as actors know, give rise to states of mind.”

While Bourdieu sees bodily postures as capable of triggering cognition, elsewhere in *The Logic of Practice* he states that cognitive schemas are stored in memory without any bodily or emotional content at all. The “countless practical metaphors” that are the basis of practical sense are “probably as devoid of perception and feeling as the algebraist’s dull thoughts.” (Bourdieu 1990:68-69) Although Bourdieu proclaimed in many of his works his desire to transcend Cartesian mind-body dualism, the psychological assumptions of the habitus remain dualistic. For Bourdieu (1977), social reality leaves its imprint on *both* a person’s mental structures *and* her bodily bearing and tastes. Conceived in this way, the habitus comprises a large number of bodily phenomena, including the actor’s posture and bearing, demeanor, accent, eating conventions and aesthetic preferences (Bourdieu 1984). The habitus also includes cognitive schemas, which Bourdieu conceives as independent of, if at times directed by, the body. Research from cognitive neuroscience and psychology shows that while Bourdieu was correct to argue that changes in bodily states can activate cognitive schemas, he was mistaken to treat the cognitive and somatic components of the habitus as strictly separable (Ignatow 2008). Cognition is not only cued by bodily responses, it is itself fundamentally embodied. Cognition, according to a growing number of cognitive scientists, is inherently perceptual, sharing systems with perception at both the cognitive and neural levels. Like many social scientists of his generation who were influenced by 1960s’ and 1970s’ cognitive science (Strauss and Quinn 1997), Bourdieu assumed that cognition was inherently non-bodily, distinct from sensory or perceptual systems like those for touch, taste, smell, vision, hearing and emotions (Ignatow 2007). In contrast, recent research on “embodied cognition” has shown that bodily and emotional states become active as people experience a situation. Representations of situations are captured as conceptual-perceptual representations, and perceptions, sensations, and bodily and emotional states are disassociated from mental representations only later,

as a secondary process of abstraction. In this way, cognition is fundamentally embodied (see Barsalou 2005; Gallagher 2005; Gibbs 2005).

Insofar as perceptual approaches to knowledge and research on embodied cognition are more accurate than disembodied theories of knowledge, Bourdieu's implicit separation of the bodily and cognitive dimensions of the habitus becomes problematic. In spite of this weakness, I would argue that the habitus concept is sufficiently flexible and open to incorporate more up-to-date ideas about how bodies, cognitive schemas and social contexts interact. The notion that cognition is inherently embodied is one such idea. Another involves the way embodied cognitive schemas structure metaphors. Piaget, an early theorist of body-cognition interaction, proposed that infants' bodily operations, such as movement backwards and forwards, and experiences of in-and-out and near-and-far, are generalized to durable cognitive schemas, and that these schemas constitute a foundation for advanced thought and language (see Lizardo 2004 on Piaget's influence on Bourdieu). Cognitive linguists similarly argue that thought is fundamentally structured by cognitive schemas, and that these schemas are in turn structured by bodily processes (Lakoff and Johnson 1980). Verbal signs depend on nonverbal experience, on bodily experiences and "prediscursive competencies." (Wacquant 2003) Embodied cognitive schemas find expression through metaphors, which are often generalized from bodily experiences such as pushing, pulling, supporting, balance, straight-curved, near-far, front-back and high-low (Boroditsky 2000; Lakoff 1987). Such embodied metaphors have been shown to characterize both moralistic political discourses (Lakoff 1996, 2006) and the moral cultures of occupational groups (Ignatow 2003, 2004).

The Habitus and Moral Culture

Giddens' writings on individualization and modernity provide a useful framework for analyzing variation in moral cultures within modern societies (Giddens 1991). Giddens counterposes *traditional* and *post-traditional modern* societies: while traditional societies are characterized by strong familial and communal bonds and clearly defined social roles and identities, modernity overwhelms the individual with choices and possibilities for self-creation (see Berger, Berger and Kellner 1973). Control of the self is a project internal to the person rather than imposed by others, and modern persons actively define themselves through lifestyle choices, rather than being passively defined by their membership in traditional groups and moral orders. Within American political sociology, Bellah and his colleagues (1985) have identified three modes of American civic participation that correspond roughly to Giddens' categories. These modes include *civic republicanism*, the *Biblical tradition* and *individualism*. Parallels between both civic republicanism and the Biblical tradition and Giddens' traditional societies seem fairly clear. Though Giddens' view of modern individualism is generally optimistic, while Bellah is wary of American hyper-individualism (Tucker 1998), the authors' ren-

derings of individualism are conceptually similar. In a study of American moral cultures influenced by the work of the Bellah group, Hunter has distinguished between a religiously *orthodox* theological stance which regards God as the arbiter of good and evil and sacred texts as inerrant and timeless, and sees God as taking an active role in people's everyday lives, and a *modernist* theological stance that regards individuals as the ultimate moral arbiters of right and wrong, views individuals as responsible for their own fates, and sees religious texts and teachings as human creations (Hunter 1991; Davis and Robinson 1996, 1999, 2006).

A number of empirical studies have shown how modernist and orthodox moral culture can influence social attitudes and behavior. Davis and Robinson (2006) and Ryle and Robinson (2006) have deployed a *modernist vs. orthodox* typology to predict social attitudes in many domains. These authors have found that people with a modernist (secular and individualistic) worldview are less likely to support communitarian economic policies (Davis and Robinson 2006), or to derive a sense of community from their relations with others (Ryle and Robinson 2006). From findings such as these (as well as from the writings of classical sociologists such as Toennies and Simmel: see Cerulo 2002a) we can anticipate that modernist moral culture will be characterized by cultural fragmentation and weak social bonding, while orthodox moral culture will be associated with cultural coherence and *Gemeinschaft* social bonding.

Analytic Strategy and Predictions

In recent years, sociologists and cognitive anthropologists have developed ingenious methods for modeling the cultural schemas that individuals invoke in interpretation and meaning making (see DiMaggio 1997, 2002). Within sociology, "structuralist" approaches to cultural meaning search for meanings embedded in discourses, and in the interrelations of actors and practices, generally by way of quantitative or mixed-method content analysis (e.g., Carley 1991, 1994; Cerulo 2002b; Franzosi 2004; Mohr and DuQuenne 1997). Scholars working in this area are "laying the methodological foundation for a cumulative research enterprise," for a structuralist cultural analysis requiring several steps (Mohr 1998). In the first step, basic elements within a cultural system are identified. Second, the pattern of relations between these elements is recorded. Third, a structural organization is identified by applying a pattern-preserving set of reductive principles to the system of relations. Fourth, the resulting structure, which now can be used as a representation for the *meaning* embedded in the cultural system, can be reconnected to the institutional context that is being investigated (Mohr 1998). Initial decisions regarding what will count as the cultural elements whose relational arrangement will be analyzed are critical in determining the significance of the meaning structures that can be uncovered. Every such structural analysis must begin with the identification of a relevant set of cultural items, and these items are never simply available in an immediate fashion. A theory of knowledge is needed in order for

analysts to be able to make relevant distinctions between constituent elements. This is where modern cognitive neuroscience can point to how cultural elements are likely to be structured, based on the nature of cognition, the interactions of cognitive and bodily modalities, and how embodied cognitive schemas are formed through bodily and social experience.

In this research I employ a combination of methodological strategies within the structuralist cultural analytic framework outlined by Mohr (1998). The cultural elements of interest here are the embodied metaphors and abstract language used by members of internet support groups for overeaters in on-line discussions about their struggles to lose weight. I identify each group's pattern for use of these discursive elements and use semantic analysis software to identify the structures of relations between elements. Finally, I explore how these discursive structures are associated with social bonding within each group.

The theory and research leads to several general predictions. First, we would expect to find systematic differences in secular and religious group members' use of embodied metaphors and abstract language. Second, we posit that embodied metaphors are not used haphazardly or randomly by members (at least not entirely). Rather, patterns of metaphor use would be expected to be systematically related to embodied cognitive structures that are part of groups' moral cultures. Third, people will tend to join and participate in groups when a group's unique and frequently used discursive elements are also habitually used by the individual because the semantic structures of the group's discourse and the individual's habitus are isomorphic. Fourth, this social bonding effect will occur for embodied metaphors, but is less likely for abstract language, because abstract language is not structured as directly by embodied cognitive schemas. Finally, combining the habitus as revised above and the orthodox/modern dichotomy, we can predict that embodied metaphors will be more strongly associated with social bonding in orthodox groups than in modernist ones.

Compulsive Overeaters' Internet Support Groups

To explore the social effects of embodied cognition and the idea that culture may operate differently for groups with different moral cosmologies, I chose to examine internet self-help groups. These are email-based on-line groups in which people discuss topics of shared interest, and provide mutual support and encouragement (see Lee 2005; Pitts 2004; Williams 2005). The groups are created by a person, who generally goes on to serve as the moderator. These groups are free of charge and voluntary, and many members, known as "lurkers," prefer to read the posted email messages without posting messages themselves. I chose to analyze internet support groups for compulsive overeaters mainly because there are many such groups with large memberships, and because both religious and secular overeaters' support groups have been formed. This is not the case for other recovery and self-help groups.

Table 1: Predictions of Social Bonding through Group-Specific Language

	Modernist Worldview	Orthodox Worldview
Group-specific abstract language	0	+
Group-specific bodily metaphors	+	++

0 = prediction of weak effect of shared language; + = moderate effect; ++ = strong effect

Obesity is rapidly becoming a pandemic in postindustrial societies (Critser 2003; Spurlock 2005). Despite broad and growing popular concern about overeating and obesity, there is relatively little sociological research on the topic (see Sobal and Maurer 1999; Stinson 2001). And although there is a large social science literature on addiction, compulsive behaviors and the recovery process, the cultural side of addiction and recovery, and questions of the meaning of addiction and recovery to addicts and people suffering from compulsive behaviors, are only beginning to be studied (see Granfield and Cloud 1996; Hanninen and Koski-Jannes 1999; Lester 1999; Peele 1998; Ronel and Libman 2003; Weinberg 2002). Thus while the present study mainly addresses theoretical questions within cultural sociology, it may also contribute to the sociological literatures on addiction, recovery and compulsive overeating.

Data

Data for this study are from *Yahoo! Groups*, one of the largest websites for internet social groups, including thousands of self-help, hobby and other social and professional groups. The postings of on-line groups such as these have been used as data by sociologists for nearly a decade, most notably in studies of on-line support groups by sociologists of health and illness (e.g., Cummings, Sproull and Kiesler 2002; Rier 2007; Seale, Ziebland and Charteris-Black 2006) and in studies of occupational groups (e.g., Stewart 2005).

Within *Yahoo! Groups* the two largest groups in the compulsive overeating self-help category are *Overeaters Support Group* and *Food Addicts Full of Faith*. The former group has no religious identity or affiliation, while the latter was created by the founder of a “Christian 12-step recovery group.” These two groups have similar numbers of members and were created only 18 months apart (Table 2). However, members’ level of participation in Food Addicts Full of Faith is much higher than for Overeaters Support Group (Table 2). Therefore, in order to create roughly equivalent data sets, I selected samples from each group’s archived messages beginning with each group’s first message. For the sake of narrative continuity, it would be inappropriate to select random samples of messages. So for OSG I selected the period of March-May, for six years (2001-2006), and for FAFF I chose September 2002-2005. This yielded similar overall numbers of messages for each group (Table 2).

Table 2: Overeaters Support Group and Food Addicts Full of Faith

	Overeaters Support Group	Food Addicts Full of Faith
Founded	March 3, 2001	September 5, 2002
Sampled periods	March-May 2001	September 2002
	March-May 2002	September 2003
	March-May 2003	September 2004
	March-May 2004	September 2005
	March-May 2005	
	March-May 2006	
Messages (total)	14,791	32,678
Messages in sample*	2,022	2,473
Total members*	400	337
Number of messages/ member*	37	97

*From each group's founding date until May 31, 2006

Messages from the archives of Overeaters Support Group and Food Addicts Full of Faith were downloaded to a word processor file. This file was cleaned, so that quoted emails, pasted-in recipes and advertisements were eliminated. This yielded two data files containing records of more than 2,000 emails for each group. Each message included a header with the message number, the user name and email address of the sender, and the date and time the message was sent.

Qualitative Analysis

For the preliminary qualitative analysis, I read the first several years' worth of emails for each support group. Both groups appear to be made up of mostly middle- and working-class Americans, along with a small number of Canadians and Britons. New members of both groups generally introduced themselves with an email describing themselves and their struggles with compulsive overeating and dieting. For example, two members of Food Addicts Full of Faith introduced themselves with the following emails (members' names for both groups have been changed to protect anonymity).

My name is Dahlia and I am a food addict. I have been guided by Phylis my blessed friend to go on this loop. She has been introducing me to some new time with the Lord. I was so dry and out of relationship with the Lord. I am still working on rearranging my morning to make time for Him but I am in great need to be with my Father and get to know Him and He me. Today I was reading in John 15 and I wrote to Him about it. It brought many tears and I so wanted to hear Him speak to me. While sitting crying I can only say that what came to my mind was "Let all who have ears hear."

Hi all. I'm Alison, food addict and a new member to this group... I'm really struggling with a deep depression these past few weeks. Mostly grief regarding my daughter. She's 18 and not doing well. She is "out in the world," has a serious history of depression, alcohol and drug addiction, suicide attempts. She doesn't know Jesus, YET... This is a time, hormonally as well as emotionally, when I eat, or I should say, over-eat... I am not doing a specific diet, I never truly have, but I'm wanting to make better choices and get back to my exercise routine. I do love to walk but I've not been well physically for over 4 weeks (another reason to be down in the dumps) and I'm unable to exercise right now... Amen and thanks for listening.

New members of Overeaters Support Group introduced themselves to the group in a similar fashion minus the religious language.

Hi there Sharon, Thank you for putting yourself out there. It is a very brave and courageous thing to do. I found this group on yahoo because I am feeling very out of control of the way I'm eating. I've always used food to numb myself. I don't want to be this way anymore, I don't know if I want to be anymore at all. Thanks for putting out your story. I appreciate it. J

Hello, I have been in recovery for codependency for over 4 years now. Just recently my eating habits are coming into view. I am 50 pounds over my ideal weight. I, like you, Sharon, hide food from my family, binge but do not purge. Last week I decided that I had to lose some weight (for health reasons) and joined Weight Watchers. As soon as I got home I was WAY out of control, wolfing down two donuts to start and then on and on from there. I have been worse since starting W.W. if you can believe it! It has just brought it all to the forefront. I am looking for a place where I can share these thoughts with others and get ideas as to how to deal with this.

I have just read your emails, it's wonderful to know that I am not the only one out there with the same problems! I too came across this board while looking up information on overeating but as I'm new to the computer wasn't sure

how to use the groups. I've always had a problem with weight, for a few years after I was married I was able to keep it under control but have been spiralling downwards the last 5 years. I need to lose at least 75 pounds to be my ideal weight. I have never been in a recovery group I lack the courage to face people.

Similar themes and concerns were expressed frequently by members of both groups, including the difficulties involved in losing weight, the mystery of why members could not control their appetites and lose weight while their friends and family members seemed able to eat whatever they wanted without gaining weight, and new scientific studies on diet and nutrition.

Members of both groups used a rich variety of metaphors to depict their efforts to lose weight and stop binge eating. As Table 4 shows, members of both groups used *battle* metaphors when discussing their efforts to lose weight, although the metaphors used by FAFF members often contained a religious element. For example, FAFF members wrote of going into battle against overeating with the "armour of the Lord."

Good for you for walking. I wish you all the best in this 'battle.' I know you can do it!

Yes, one actually CAN get an aquired taste for plain-Jane yogurt. MANY people have struggled with this one... and I have seen MANY people win the battle. As their bodies "cleaned up", so did their tastes for foods. I have been in a battle with overweight, depression and being overpowered by sugar/carb cravings and so sick of it.

Members of Overeaters Support Group used similar battle metaphors.

As we all know it is an uphill battle and the feeling that we are not struggling alone is such a comfort. And then we're back... struggling. It's truly, much like alcoholism, a daily struggle to fight this battle. And we all feel hopelessly alone... like no one else could possibly understand the struggle we deal with. I am going through a battlefield of issues right now and being pretty successful at controlling my indulgences.

Metaphors of *overeating as disease* were extremely common for both groups, suggesting that even for members of the religious group, compulsive overeating

was medicalized (Foucault 2003[1963]) to some degree. Compulsive overeating was commonly interpreted as a medical disorder, rather than mainly a matter of moral weakness or a sign of a lack of personal discipline.

My food plan is like medicine for any other sickness (FAFF member).

The disease of the self runs through my blood. It's a cancer fatal to my soul. Every attempt on my behalf has failed to bring the sickness under control. I want to be in the Light, As you are in the light (FAFF member).

We have a disease... food addiction is a physical, emotional and spiritual sickness (FAFF member).

I wish you'll find the required support in the group, if not for a complete cure (I'm quite skeptical about this; I think we can just "manage" or "control" the disease), for a certain improvement (OSG member).

I also haven't binged in a very long time. I rarely sneak food anymore... there is real freedom from this disease. For me, I've found that freedom with non-dieting/normal eating. Others have found their freedom in other ways. (OSG member)

Both groups used metaphors of forward and backward movement, mostly of the form *recovery as journey*. Here are some examples from FAFF members.

My personal walk in recovery (one day at a time) is learning how to break free of the strongholds in my life.

I hope that I will continue to be safe and when the Lord convicts me that it is time to take the next step in my journey of progression that I will be just as successful because of the non-judgmental support that I am receiving here.

Thank you for your constant love and encouragement. We are all on this journey together. Let's hold hands and walk to higher ground!

Also common to both groups were metaphors of *overeating as degradation, recovery as elevation*. The following examples are from FAFF members.

One day at a time we can lift up and encourage our friends and help them to stand on solid ground.

It amazes me sometimes when I think about how HE has lifted me up out of the pit of despair and HE placed me on the solid rock... firm and secure in His love.

Help us to lift our armor around all on this loop that when one is weak, though prayer she will be strengthened.

I will be lifting you up in prayer for the changes going on with you.

He lifted me out of my pit of self-destruction and despair and placed my feet on the solid rock of His ways.

Maybe we can help lift each other up during this process.

Members of both groups used metaphors based on forward and backward movement, and elevation and degradation. However, the two groups' discourses differed in several ways. First, members of Overeaters Support Group frequently referred to the *self*.

Like you, I feel like my true self can't come out when it's under so much weight.

A final word: I know that self-loathing paralyzes me from taking any action at all. God don't make junk. I am as humanly beautiful as every one of my fellows, no better and no worse.

As you act in line with your favored way of being, you reinforce a new idea: "I am worthwhile." With each self-affirming choice, you feel better.

Self esteem comes from within and I have to put good things into my mind. What we plant is what we grow.

Overeaters Support Group members also often wrote about feeling *disgusted*, mostly with *themselves*.

I have been so disgusted since my last fiasco with trying to diet that I decided that something else is the answer... not another diet.

As soon as I realized this addiction, and told everyone about it—suddenly I became disgusted with the dip! I felt betrayed by it! It lost its magic!!

I ate a reasonable amount, and craved no more! It no longer controlled me—because I was angry and disgusted that the company had put that addictive additive in it!!!

By the time I fell into bed disgusted with myself my belly hurt so much I couldn't move and I had to fight to keep it all down. I can't keep doing this anymore. I need to eat healthy and feel healthy.

It's one thing to see your fat head-first, mid-thigh up. But to view it full-on, back-side-front-other side. It was sobering, mortifying, disgusting, but also mildly (very, very mildly) inspiring.

I'm disgusted with myself. I don't know what to do, I need some support, I need someone to talk to, someone who understands where I'm going, where I've been, and what's happening now.

Food Addicts Full of Faith members seldom discussed the self in this way, or feelings of disgust or self-loathing. Rather, they frequently referred to God and God's role in their lives, and often used *cleanliness*, *purity* and *abstinence* metaphors.

I've abstained from overeating for several days now and that has helped me a lot.

I have to abstain from the s/w/f and fatted foods.

God is really taking care of my abstinence, now I need to trust Him with my job.

I realize that my form of abstinence is somewhat more loose than what abstinence is for some others. I have allowed sweetener, in my personal program.

used the words “God” and “Lord” more frequently than did Overeaters Support Group members, perhaps their use of these terms was routine and not especially meaningful. With this possibility in mind, I analyzed the groups’ discourses using TextAnalyst, a program that allows for the visual representation of semantic networks found within texts. This program allows researchers to systematically observe emergent thematic structures and the interrelations between terms within texts by generating weighted coefficients indicating the relative strength of individual terms and themes (for an application see, e.g., Adams and Roscigno.2005).

TextAnalyst processes textual data through what is termed “natural language text analysis.” Based on either a standard or user-defined dictionary, the program automatically creates semantic networks representing the semantic centrality of terms and the strength of their relations to other terms. The program uses linguistic rules and “artificial neural network technology” to mimic human cognitive processes. It begins by processing each text as a sequence of symbols, creating a hierarchical semantic network structure based on the frequency of terms and the relationships between them. Each term within the network is assigned an individual statistical weight between 0 and 100 based on its importance within the entire text. Additionally, relationships between all terms are assigned statistical weights representing the strength of semantic associations. These “semantic weights” can be arranged into a semantic network.

One dictionary was created and used for analysis of both groups’ postings (see Table 4). This dictionary included (1. the metaphors discussed in the qualitative analysis (Table 3), (2. “self” language, including the terms *self* and *control*, as per Giddens’ (1991) discussion of post-traditional morality and (3. God language, as per the sociological studies of modern and orthodox worldviews (e.g., Davis and Robinson 1996).

Figures 1 and 2 present simplified diagrams of TextAnalyst’s semantic networks for both groups. These diagrams only include those terms that have semantic weights above 40 (out of 100).

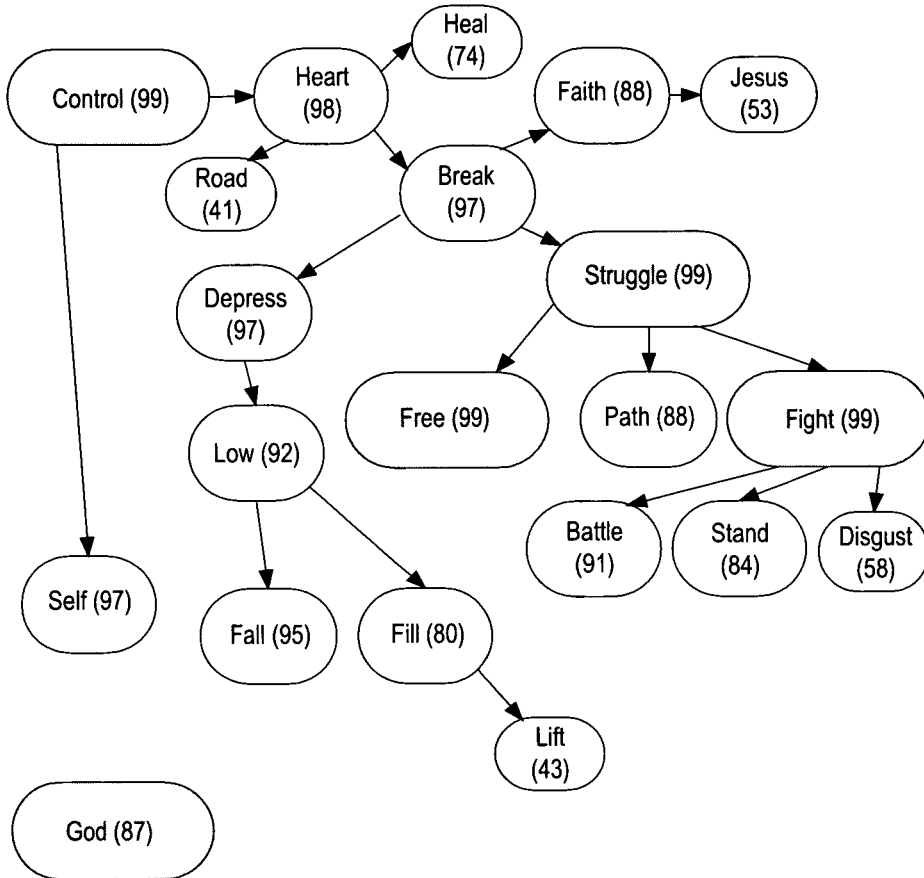
There are several points to note about these diagrams. First, they are different. For Overeaters Support Group, *control* was the most central term, and it was most closely associated with *heart* and, perhaps more interesting, *self*. For example, OSG members wrote:

That fat may just keep you safe and keep your life in *control* and maybe that is a lot more comfortable than liberating your best and truest *self*. (all italics are added)

Body Image and *Self Control* just about kill me!

Using food to fill a void	Getting clean off food
Fill that empty hole	Clear and clean with the food
Filling me up to the brim	
Clean heart	
Empty/ Full	Cleanliness

Figure 1. Semantic Network: Overeaters Support Group



Note: Numbers in parentheses represent the semantic weights of their respective terms within the sample of OSG emails.

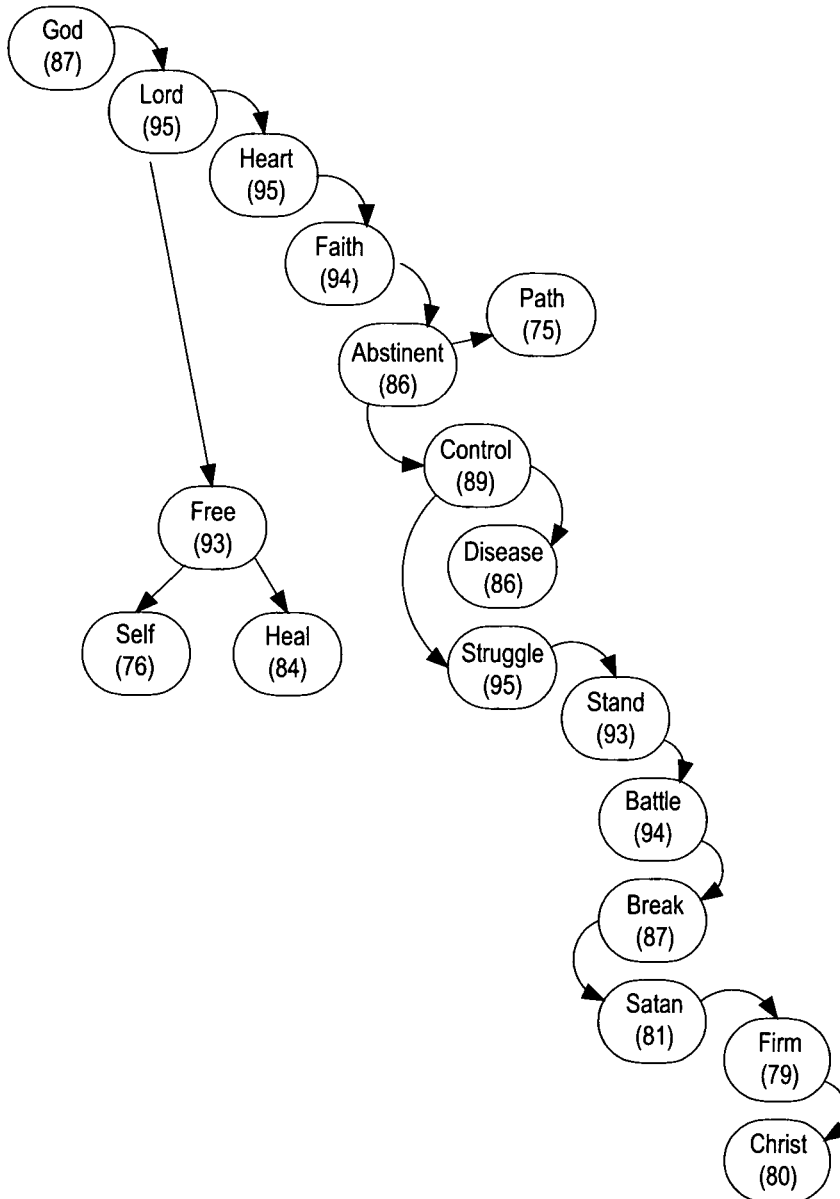
This kind of language, of self-control, is used only once in more than 2,000 FAFF emails. Instead, FAFF members often wrote of giving over control to a higher power.

God's the gardener who is able to grow healthy souls, so submit to his will, and let Christ take *control*!

...something else has more *control* and is more important in my life.

I have to say whether I'm into the food or not I do have a lot of faith, and I know if I would just stop trying to take back the *control* I would be a lot better off.

Figure 2. Semantic Network: Food Addicts Full of Faith



Note: Numbers in parentheses represent the semantic weights of their respective terms within the sample of FAFF emails.

That's when the temptation to *control* kicks in...

...when people were willing to let go of *control* of their food and program, they got abstinence.

For the Overeaters Support Group sample, *God* has a high semantic weight, due to the word's relatively frequent use in the sample of emails. However, *God* is not connected to other metaphorical or abstract terms related to trying to lose weight. In this context, *God* is not especially meaningful. This is in contrast to the semantic networks for the Food Addicts Full of Faith sample. Unsurprisingly perhaps, for this group *God* and *Lord* have heavy weights and are the most central terms. As is shown in Figure 2, *God* and *Lord* were connected to a branch of *free*, *self* and *heal*. For example FAFF members wrote:

I prayed that God would touch you & *heal* you with his loving, *healing* Hands.

God help me listen to my higher *self* as You and I make the changes in my life that will allow me to live a *free*, useful and happy life.

...remembering to keep *free* from *self*-pity, dishonest and selfishness is key to standing firmly in peace.

The terms *self* (semantic weight of 97) and *control* (99) are more central to OSG discourse than they are to FAFF discourse (where they have weights of 76 and 87 respectively). *Disgust* is also more central to the OSG semantic network (its semantic weight is 58) than it is to the FAFF network (where its semantic weight is 5). For example, an OSG member wrote that "By the time I fell into bed *disgusted* with myself my belly hurt so much I couldn't move." Another member wrote, "I was so *disgusted* with myself I headed to the kitchen." OSG members used *disgust* in a similar way 32 times. FAFF members never once used *disgust* this way. These findings, for the use of *self*, *control*, *disgust*, *God*, *Lord* and so on, are consistent with the theory and research on moral cultures by Giddens, Bellah, Hunter and others and with this study's argument for the structuring role of embodied cognitive schemas in the habitus and in discourses.

Table 4: Dictionary for Semantic Network Analysis.

Embodied Metaphors		Self Terms
Abstain	Laid	Self
Abstinent	Lift	Control
Battle	Low	
Bondage	Path	God Terms
Broken	Pig	Christ
Cleanse	Pit	Faith
Clear	Pure	God
Disease	Ride	Lord
Disgust	Road	Jesus
Empty	Shatter	Satan
Fall	Solid	
Fight	Stand	Other
Fill	Straight	Secure
Firm	Struggle	Free
Heal	Trip	
Heart	Void	
Hole	Wash away	
Journey	Weak	

In the next phase of the quantitative analysis, the social bonding effects of group discourses were explored by analyzing the abstract and metaphorical language of each group. While there were many abstract and metaphoric terms used by members of both groups, each group also had their favorites. Members of Food Addicts Full of Faith frequently discussed *God* and the *Lord* (coded as abstract), and used *cleanliness* and *purity* metaphors. Overeaters Support Group members almost never used these terms. Instead they discussed the *self* (abstract) and used *disgust* metaphors (Table 5). These sets of abstract terms (*God* and the *self*) and embodied metaphors (*cleanliness* and *disgust*) are the main objects of this portion of the quantitative analysis.

The first category of data used are counts of God references and cleanliness metaphors used by each of the first 20 members to join the religious group, and self references and disgust metaphors used by each of the first 20 members to join the secular group. The second category is the duration in months of participation in the group for each of these 40 members. The third is the total number of messages posted by each of these members.

Bivariate correlation coefficients were calculated for the relationship of members' use of (1. the group-specific abstract terms (God and self) and (2. the group-specific embodied metaphors (cleanliness and disgust) with (1. the volume and (2. the duration of their participation in the groups. These coefficients represent the degree to which the abstract and embodied language unique to each group was associated with social bonding. In other words, would members with an orthodox moral habitus, who frequently used God or cleanliness language, participate more actively in the orthodox group? Would modernists who used self or disgust language participate more in the secular group?

Table 5: Counts of Bodily Metaphors Used by Each Group

Bodily Operations	Metaphors	Overeaters' Support Group	Food Addicts Full of Faith
Forward Movement	Journey	36	14
	Road	20	48
	Path	20	47
	Forward	7	5
Elevation/ Degradation	Lift	19	24
	Stand	5	27
	Fall	30	33
	Bottom	8	13
Cleanliness and Purity	Clean	15	62
	Pure	2	8
	Abstain	56	1000+
Disease and Disgust	Sick	88	61
	Disease	49	94
	Poison	3	5
	Disgust	30	1
	Rotten	22	1
	Pig	4	0

The results in Table 6 confirm the predictions. Members' use of abstract language (mentions of *God* and *self*) did not predict their participation in either the religious or the secular group. Overeaters Support Group members' use of disgust metaphors did not predict their participation. But, as was predicted, Food Addicts Full of Faith members' use of *cleanliness* metaphors was indeed associated with posting more messages and remaining with the group for a longer period of time. This effect was found to be statistically significant.

In terms of the revised habitus concept developed in this paper, for the orthodox group, isomorphism between the habitus of group members and the group's discourse was positively associated with participation in the group. As predicted, this was not found to be the case for the modernist group, although the bivariate correlation coefficients were positive for this group as well. It should be noted that the pattern of correlations is consistent with the results presented in tables 2 and 7, which show that orthodox overeaters tended to post more messages overall than did modernists and to participate in the group longer.

Conclusions

This research argues that people's decisions to participate in social groups are partly a function of structural similarities between their habitus and the group's discourse, and that the culture structures that bind individuals to groups should be understood as embodied cognitive structures, rather than as abstract, disembodied mental structures. Further, based on studies of moral cosmologies and moral cultures, I predicted that the social bonding effect of isomorphic cultural structures would be stronger for traditionally religious groups than for secular groups.

Table 6: Correlation Coefficients of Use of Abstract and Bodily Language and Group Participation

	Overeaters' Support Group		Food Addicts Full of Faith	
	Self (rate)	Disgust Metaphors (rate) ²	God and Lord (rate)	Cleanliness Metaphors (rate) ¹
Duration of participation ³	-.04	.21	-.20	.41*
Number of postings	-.10	.09	.20	.64**

¹Rate of use of cleanliness metaphors = "clean" / total messages for each member

²Rate of use of disgust metaphors = ("disgust" + "rotten") / total messages for each member

³Measured in months

*significant at .05 1-tailed

**significant at .01 1-tailed

Table 7: Intensity of Members' Participation

	Overeaters' Support Group	Food Addicts Full of Faith
Mean number of postings for first 20 members*	12.4	129.2
Mean duration of participation for first 20 members (months)*	1.2	11.4

*Excluding the groups' founders

The findings generally supported these arguments and predictions. I found that members of a religious overeaters internet support group used far more embodied *cleanliness* metaphors than did members of a secular support group, and members who made frequent use of such metaphors remained with the group longer and posted more messages. This effect was not found for either group's abstract language or for the secular group's embodied metaphors.

This study's findings suggest that Bourdieu's habitus concept, or an extended and refined version of it based on a more up-to-date model of cognitive functioning, can play a productive role in cultural sociology. But the findings also speak to broader theoretical arguments. Sociologists have long debated whether culture exerts an independent influence on social, political and economic phenomena. There is little consensus among sociologists and social theorists as to how culture *per se* shapes motivation and social action (see Jepperson and Swidler 1994; Swidler 1986). At the same time, theorists do not agree on whether modern culture should be seen as fundamentally different from pre-modern cultures (e.g., Alexander 2003). The results of this study suggest that these two questions are intimately related, because social discourses may have very different social effects across cultures and sub-cultures. As classical sociologists observed, and empirical

studies have shown (e.g., Davis and Robinson 1996), modernist, secular culture may be less suited to strong social bonding than are older forms of moral culture. The findings from this study support this view, but imply that culture's effects on social bonding can be identified more readily when culture structures are conceived as embodied cognitive structures, rather than as purely mental or behavioral patterns, that operate both within the individual habitus and at the level of small-group discourse.

These findings should not be taken to imply that traditionally religious people do not use culture in an instrumental way or that secularists cannot participate in *Gemeinschaft* social relations and thick moral cultures. At a minimum, though, they do show how exploring the social dynamics of discourses within and across cultures can reveal something of culture's power in social life.

Notes

1. It should be noted that these categories are, in historical terms, vast oversimplifications, and may romanticize the past. For example, many historians argue that medieval European societies were, on the whole, quite secular, individualized and not especially family-oriented (e.g., Morris 2002). My thanks to one of the *Social Forces* reviewers for making this point.
2. It may be worth noting that neither group's discussion was dominated by a small number of members. While each group had its lurkers, hundreds of members of each posted messages.

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