This material was originally published in *Advances in culture and psychology (vol 8)* edited by M. Gelfand, C. -Y, Chiu, & Y. Y-Y. Hong (2021), (pp.195–243), reproduced by permission of Oxford University Press. https://www.oxfordhandbooks.com/

On dynamic contexts and unstable categories: Steps towards a cultural-clinical psychology

Andrew G. Ryder[1,2], Marina M. Doucerain[3], Biru Zhou[4], Jessica Dere[5], Tomas Jurcik[6], and Xialu Zhou[7]
[1]Concordia University
[2]Jewish General Hospital
[3]Université Du Québec à Montréal
[4] McGill University
[5]University of Toronto Scarborough
[6] National Research University—Higher School of Economics
[7] Shanghai Normal University

This chapter discusses the lead author's research program at the intersection of cultural psychology and clinical psychology from 1997 to 2017, emphasizing work conducted with one or more of the co-authors—former graduate students who are now independent researchers. After a brief consideration of formative research experiences, the chapter begins with research on the *dynamic contexts* of migrants undergoing acculturation. Much of this work challenges essentialized cultural groups, although it also tends to rely on standard measures of psychosocial adjustment. In contrast, the next part of the chapter covers research on the *unstable categories* of psychopathology observed when cultural variation is taken seriously. Much of this work challenges essentialized diagnostic categories, although it also tends to rely on standard group comparisons. The chapter's final major section describes the development of *cultural-clinical psychology*, proposing a research agenda that would combine dynamic views of culture and psychopathology with implications for clinical practice.

cultural identity, social networks, identity integration, social capital, immigrants

I. Introduction

In early 1996, I[1] visited the volunteer office at what was then the Clarke Institute of Psychiatry in downtown Toronto, Canada. I was an undergraduate psychology student at the University of Toronto, interested in clinical psychology and the study of psychopathology. My department had no clinical program, however, and I was looking for opportunities to learn more about mental health research. After I answered a few questions, the volunteer coordinator opened a box of what looked like recipe cards. She pulled out the first card, asked about my GPA, then asked whether I was, "interested in culture." I shrugged, nodded, and was given a number to call. Years passed before I realized that this random card draw launched my career.

For the next 6 months, I helped a social work researcher conduct literature reviews on culture and posttraumatic stress, and I took notes during interviews with victims of torture. Searching for a potential undergraduate thesis supervisor, I happened upon a social psychologist—Ken Dion—who listed "culture" as one of his interests. Given my clinical interests, we decided to explore whether a collaboration might be possible. Another researcher working in the same group offered us an archival dataset on family coping with first-episode psychosis, which included a sufficient number of both Euro- and Chinese Canadian families to permit cross-group comparison. Eight months later, I presented a thesis showing much longer delays in treatment-seeking among the Chinese Canadian families and a much higher degree of stigma and burden.

Several years later, when I realized that I would be focusing my research on culture and mental health, I revisited this project and wrote it up for publication (Ryder, Bean, & Dion, 2000). As an undergraduate, however, I still saw this project as a way of studying clinical issues in a department lacking a clinical program. Certainly, I found the cultural issues fascinating and I read as much as I could find on culture and mental health. Much of this work was situated in the

[1]Who do I mean by "I," and whom do we mean by "we"? I—the first author—have co-written this chapter with the core group of former graduate students who have since moved on to their research careers. I will tend to use "I" when describing my early research before founding the Culture, Health, and Personality Lab at Concordia University in 2005, and again later on when I look toward the future of this research program. The bulk of the research, however, has been shaped collectively, with my co-authors playing an essential role. The specific studies belong to their individual authors, but the larger cross-cutting themes emerge from a collective effort.

interdisciplinary field of "cultural psychiatry," which looked quite different from the scientific psychology to which I had grown accustomed. Indeed, I remember having the sense at the time that the contributions of psychology were modest at best; moreover, I had essentially no exposure at that time to cultural psychology. I was unaware that one could pursue graduate studies in this area, let alone combine it with clinical interests.

The cascading effect of that lucky draw went beyond finding a good topic for an undergraduate thesis. I applied to the clinical psychology graduate program at the University of British Columbia in Vancouver with no expectation that I would be doing any more cultural research. Indeed, I was accepted into a research group that had not previously conducted cultural research—but I was accepted precisely because I had some experience in this area. The demographics of the university and the larger community were such that most human research included sizeable numbers of Chinese-origin participants. I completed a master's thesis on Chinese acculturation and adjustment before switching to work on Chinese somatization of depression for my dissertation. Indeed, each of these efforts marked the origin of the two main axes of the research conducted in my lab: one on acculturation and the measurement of dynamic contexts; the other on shifting diagnoses of emotional disorders across cultural groups. The next two major sections of this chapter consider our group's contributions to these two topics in detail before turning to the third and final section on the cultural-clinical psychology perspective and its implications for future research. First, however, I will briefly discuss these initial graduate school studies, starting with work on acculturation.

I.A Unidimensional Versus Bidimensional Acculturation

My interest in acculturation was instrumental at first, literally: I needed a decent, short instrument for a planned project on the mental health of migrants to Vancouver. Reading the literature, I was confronted with unidimensional measures that pitted heritage and mainstream cultural orientations against one another and bidimensional measures that posited these orientations as more-or-less independent of one another. Although there were many examples of studies following each of these approaches, I found no evidence that the two underlying models had ever been directly compared. Papers taking a bidimensional approach generally offered theoretical arguments against the unidimensional approach; papers taking a unidimensional approach often failed even to allude to a bidimensional alternative.

Along with my mentors at the time, Lynn Alden and Del Paulhus at the University of British Columbia, I designed a series of studies to directly compare the unidimensional and bidimensional models of acculturation (Ryder, Alden, & Paulhus, 2000). At the same time, we developed the Vancouver Index of Acculturation, improving it across three studies and contrasting it with the Suinn-Lew Asian Self-Identity Acculturation scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). We argued that to justify the extra time required to assess acculturation, either the SL-ASIA or the VIA would need to offer an advantage beyond asking simple demographic questions (e.g., years since migration, generational status). Moreover, acculturation measures would need to predict adjustment over and above the contributions of neuroticism and extraversion. Finally, the more complex bidimensional measure would need to yield the two independent dimensions required by the model, and these dimensions would need to offer an explanatory advantage greater than that offered by unidimensional measures.

We contrasted unidimensional and bidimensional measurement of acculturation in two studies of Chinese Canadian first- and second-generation immigrant samples and in one study of Chinese Canadian, East Asian Canadian, and heterogeneous first- and second-generation immigrant samples. Across these studies, we predicted and found that heritage (i.e., Chinese) acculturation was associated with interdependent self-construal and that mainstream (i.e., Canadian) acculturation was associated with independent self-construal and psychosocial adjustment, even when controlling for demographics. The relation between acculturation and adjustment also remained after controlling for neuroticism and extraversion. Finally, heritage and mainstream dimensions of acculturation were largely orthogonal and correlated with other variables of interest in noninverse, nonredundant ways, consistent with the bidimensional model.

We published a further study investigating the relation of acculturation and interpersonal adjustment in two samples of Chinese-origin first- and second-generation immigrants in Canada (Ryder, Alden, Paulhus, & Dere, 2013). Both samples were collected in 1999–2000 and used circumplex versions of the Inventory of Interpersonal Problems (Alden, Wiggins, & Pincus, 1990). For the second sample, however, the instrument was modified so that the respondent could specify whether the problem was experienced with members of the heritage cultural group or with members of the mainstream cultural group. The pattern of results in the second sample demonstrated that a higher degree of engagement with a given cultural group–either heritage (i.e., Chinese) or mainstream (i.e., Euro-Canadian)–was associated with fewer problems of introversion (e.g., shyness) and more problems of extraversion (e.g., overintrusiveness) with people from that group.

We have also conducted a series of three psychometric evaluations of the VIA that are not yet published. The first study confirmed the reliability and factorial validity of the measure in seven first- and second-generation immigrant samples in Canada, according to their origins: European, Chinese, Japanese, Korean, Pacific Islander, Southeast

Asian, and South Asian. The second study demonstrated that the VIA dimensions correlate in expected ways with Ward and Rana-Deuba's (1999) Acculturation Index and with the four subscales of a measure based on Berry's (1997) acculturation framework. Finally, the third study further validated the VIA by showing not only that self- and peer-rated versions are intercorrelated in expected ways, but also that the peer-rated version could itself be validated against standard demographics. The latter two studies were conducted using Chinese-origin first- and second-generation immigrants in Canada.

Why has this research been slow to reach publication? First, I shifted my research focus during my doctorate to questions about the cultural shaping of depression. I briefly describe that work in the next section. More fundamentally, however, I had increasing doubts about how best to measure acculturation–a concern to which we shall return shortly.

I.B Culture, Depression, and Somatization

In the summer of 1999, between attaining my master's and doctoral degrees, I returned to the Clarke Institute of Psychiatry in Toronto—now renamed the Centre for Addiction and Mental Health—to complete a summer practicum in assessment. I worked under the clinical supervision of Mike Bagby, and we also collaborated on some noncultural research. More importantly to the development of my research program, space limitations meant that I needed to share an office with a newly arrived postdoctoral fellow from China: Jian Yang. These connections proved serendipitous. More than a year later, as Dr. Yang planned a data collection trip back to China, he got in touch to ask me whether I had any research ideas that might benefit from a Chinese psychiatric sample.

At this point, I had dedicated 4 years to various research projects relevant to mental health in Chinese samples but imagined it would be a long time before I would ever conduct research with patients. I had also become interested in the literature on "Chinese somatization," or the tendency of Chinese people suffering from depression to emphasize somatic symptoms (e.g., fatigue, headache) rather than psychological symptoms (e.g., sadness, low self-esteem). We decided this opportunity was too good to ignore: I worked closely with Dr. Yang developing a study to be conducted in Changsha, China, and then Dr. Bagby agreed that I could collect a Euro-Canadian outpatient comparison sample in Toronto. The Chinese sample would not have been possible had it not been for Dr. Yang and a team of psychiatrists and clinical psychologists that I continue to work with today: Shuqiao Yao, Xiongzhao Zhu, and Jinyao Yi at the Second Xiangya Hospital of Central South University. The resulting study was the central piece of my dissertation.

In the end, I was able to collect more than 200 outpatients in Changsha and almost 150 in Toronto. One major challenge in this study was choosing the inclusion criteria for who would count as "depressed." As diagnostic systems are themselves cultural products, it seemed imprudent to compare groups based on formal diagnoses made on the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), especially in light of Kleinman's (1988) observation that tight diagnostic criteria can potentially efface important cultural variation. At the same time, simply comparing all outpatients at the two clinics would have led to serious equivalence problems. Whereas in Changsha, I was collecting data at a "Neurosis Clinic," which included anxiety, personality, and somatoform disorders along with depression, in Toronto, I was collecting data at a specialized depression clinic. To deal with this problem as best I could, I chose to use liberal inclusion criteria at each clinic, merging "Western" and Chinese diagnostic systems. Specifically, participants were included if they met criteria for one of the cardinal symptoms of Major Depressive Disorder as defined either by DSM-IV or by the Chinese *Classification of Mental Disorders, Second Edition, Revised* (CCMD-2-R; Chinese Medical Association & Nanjing University, 1995). In practice, this meant that any outpatient with depressed mood *or* loss of interest/pleasure *or* fatigue was included.

All participants underwent a three-step assessment procedure that I have since used in other cross-cultural studies of psychopathology. First, they were given a brief open-ended interview about their reasons for presenting to the clinic. Interviewers were trained not to ask leading questions and to write down each complaint mentioned, verbatim (i.e., spontaneous problem report). Then, participants were administered a structured interview to assess depression and also *neurasthenia*—a Chinese diagnosis that resembles mild depression, but with a strong emphasis on somatic symptoms. Finally, participants completed a questionnaire that included a set of symptom measures, some originally developed in the United States or United Kingdom, and some originally developed in China. For both the structured interview and the questionnaire, the goal was to include constructs and measures developed in *both* cultural contexts under study. Participants also completed a number of additional self-report demographic and individual difference measures included to help "unpack" expected cultural variation.

The Han Chinese outpatients were more likely than their Euro-Canadian counterparts to report somatic symptoms on the spontaneous problem report and structured clinical interview and less likely to report psychological symptoms on the spontaneous problem report, structured clinical interview, and self-report questionnaire. Notably, cultural group differences were particularly pronounced for psychological symptoms, somewhat surprising given that most of the literature to that point had emphasized somatic symptoms. A measure of externally oriented thinking emphasizing attention away from internal psychological states showed an in-

direct effect with the potential to help explain the relation between cultural group and somatic symptom presentation. My co-authors and I concluded by suggesting that "Western psychologization" might in fact be the better candidate for a culture-bound mode of presentation (Ryder et al., 2008).

I.C The Culture, Health, and Personality Lab

In 2003–2004, I completed a predoctoral clinical internship at the Montefiore Medical Center in Bronx, New York, and applied for academic positions. I was offered and accepted a position in the Department of Psychology at Concordia University in Montreal, and I began in January of 2005. The location in Montreal has shaped my research in important ways. Intellectually, the proximity to McGill University's interdisciplinary Division of Social and Transcultural Psychiatry and ongoing collaborations with Laurence Kirmayer and Eric Jarvis in that program have meant sustained participation in an interdisciplinary academic community working at the intersection of culture and mental health. These contacts have stimulated many developments in my research on culture and psychopathology, as well as my thinking on the place of psychology in a landscape traditionally dominated by psychiatry and anthropology. We will pick up both of these themes later in this chapter. More immediately, Montreal's French-language majority and high degree of multicultural diversity required considerable adjustments as I could no longer compare an Anglophone majority to a single large minority group. These demographic realities had a major impact on the development of the first of my two main research axes, on acculturation.

II. Acculturation

My first acculturation study was published in 2000; the second one was not published until 2013 and used decade-old data. Why the long pause? In part, I had simply turned my attention to research on culture and psychopathology, to which we will return in the next section. The main issue, however, was that I had grown increasingly dissatisfied with a seeming disconnect between the complexity of acculturation in theory and the ways in which the research was typically carried out in practice. New methods were required, but I did not know how to proceed.

A decade ago, I was asked to contribute to a critical acculturation symposium at a meeting of the International Association for Cross-Cultural Psychology (Ryder, 2008). I was sure by then that I would have to offer a critique that included my own prior research. In brief, I argued that my studies had been designed in such a way as to minimize context and dynamic change. Measures like the VIA were constructed on the implicit assumption that acculturation was akin to a dimensional trait, or a small set of such traits, rather to than a contextually situated set of changes, across a number of psychological domains, and unfolding over time. While some theoretical work on acculturation was conceptually sophisticated, research to capture these nuances was compromised by the choice of methods.

Students often enter my lab with a primary interest in acculturation research, so we spent a considerable amount of time deciding how best to proceed. But the concerns lingered and were galvanized by our experience reviewing the first edition of the *Cambridge Handbook of Acculturation*. In brief, we noted two ironic absences: a lack of "culture" and a lack of "-ation" (i.e., process) in most of the empirical studies reviewed in the book (Ryder & Dere, 2010a). Questions about what culture is or about what is actually changing were rarely addressed, and the studies largely minimized contextual details in favor of generalizing interpretations. Moreover, the research literature was largely cross-sectional despite the very word "acculturation" describing a temporal process. These objections mirrored concerns I had with my own research.

We also had a more practical issue that pushed us to consider new measurement approaches. Conducting acculturation research in Montreal raised a number of issues with the use of traditional acculturation instruments (Arias-Valenzuela, Amiot, & Ryder, 2016). For example, the VIA consists of two subscales, one assessing people's orientation toward the mainstream cultural group and the other one assessing people's orientation toward their heritage cultural group. But what constitutes the mainstream group in Montreal? "Québécois" is one answer, but in the larger national context, "English Canadians" is also valid. We solved the issue temporarily by creating a tridimensional Quebec version of the VIA, splitting mainstream acculturation into Québécois and English Canadian dimensions. For many participants, however, identifying a single heritage group was similarly problematic—we would be asked, "which one?" Picture a second-generation Jewish immigrant with a mother from Ukraine who identifies as a Russian Jew and a father from Israel, but originally born in Morocco, and the difficulty becomes obvious. These kinds of issues are increasingly common in cities such as Montreal: researchers have coined terms such as "hyper-diversity" (Kirmayer, 2013) or "super-diversity" (Vertovec, 2007) to describe these culturally complex settings.

As a corollary, hyper-diverse settings mean that acculturating people typically need to navigate multiple cultural worlds on a daily basis, each with its own characteristics and norms, and therefore they need to adjust their behaviors and ways of being. To us, this observation underscored the fundamental importance of context in acculturation, echoing research showing that cultural identities are situated (Clément & Noels, 1992) and that cultural orientations are context-dependent (Arends-Tóth & van de Vijver, 2004). Rather than continually adding subscales to the VIA to assess orientations toward all relevant cultural groups, it seemed more

fruitful to investigate directly how acculturative processes are shaped by contextual influences.

II.A Acculturation as a Contextual Phenomenon

My earlier study showing that interpersonal problems can shift depending both on acculturation status and the cultural identity of the other person opened the door for us to consider the role of context in acculturation. Our contextual perspective cuts across multiple levels of analysis, resonating with proposals that acculturation is not only embodied (Tardif-Williams & Fisher, 2009) but also profoundly influenced by the sociopolitical context (Bourhis, Moïse, Perreault, & Senécal, 1997) within which it takes place. The trajectory of a person acculturating to a new cultural environment is shaped by a continuum of contextual influences. We present here a series of studies, starting within the body and then moving outward through social networks to neighborhood characteristics.

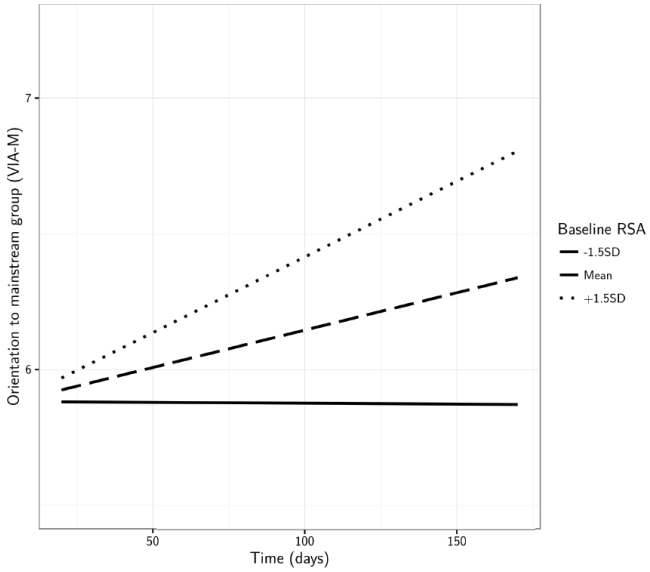
II.A.1 Embodied Acculturation

We begin with the idea that aspects of the acculturation process may have biological substrates. In recent years, cultural neuroscientists have started incorporating biological perspective and methods into research on the cultural shaping of mind. Research on biological processes implicated in acculturation is scant, however. To start addressing this gap, we began collaborating with our departmental colleague Jean-Philippe Gouin to examine the role of respiratory sinus arrhythmia (RSA) in predicting changes in migrants' cultural orientation toward the mainstream cultural group. RSA is the naturally occurring variation in heart rate during the breathing cycle and is sometimes known as *heart rate variability* or *vagal tone*. Low RSA is associated with poor stress response and difficulties in emotional regulation, with implications for interpersonal communication. We selected RSA because it can be understood as an index of individual differences in social engagement capacities (Porges, 2007).

Acculturation is in part a dynamic intergroup process that hinges on social engagement with the new cultural context. Therefore, we expected that social engagement capacity, indexed by resting RSA, could substantially influence the acculturation process. We hypothesized that greater resting RSA shortly after arrival would be prospectively associated with greater increases in mainstream, but not heritage, cultural orientation over time. International students were assessed at three time points: 3 weeks, 3 months, and 5 months post-arrival (Doucerain, Deschênes, Aubé, Ryder, & Gouin, 2016). The results, derived using multilevel modeling, supported our hypotheses. Mainstream acculturation scores increased over time, indicating that, as time passed in Montreal, participants felt more positively toward the mainstream cultural group. Also supporting our hypotheses, the interaction between time and baseline resting RSA predicted mainstream acculturation scores over time, such that participants with higher baseline RSA reported a greater increase in mainstream cultural orientation (see Figure 5.1). These results highlight the importance of investigating how theoretically relevant biological substrates may shape people's acculturation trajectories. Higher initial resting RSA is unlikely to directly cause a more positive mainstream cultural orientation, but it is part of a biological system that increases the likelihood that a more positive orientation will develop.

Figure 5. 1

Changes in mainstream cultural orientation (VIA-M) over time (days in Canada) as a function of resting RSA.



II.A.2 Second-Language Social Networks

Our perspective on acculturation as an intergroup phenomenon prompted us to examine aspects of intercultural communication, which takes place in a second language (L2) for many migrants. We were particularly interested in communication-related acculturative stress, or subjective stress in response to chronic difficulties in L2 communication. This stress is central to adjustment in a linguistically different society (Benet-Martínez & Haritatos, 2005) and impacts willingness to socially engage (MacIntyre, Dörnyei, Clément, & Noels, 1998). Acculturation research typically considers the association between personal characteristics and outcomes of interest; social network theory, however, underscores that people are embedded in webs of social relations (Borgatti, Mehra, Brass, & Labianca, 2009), which in turn influence and constrain the people within them. We therefore anticipated that the structure of migrants' social network would influence their acculturation process. In the present case, we expected that the interconnectedness of a person's L2 social network would be associated with his

or her level of communication-related acculturative stress (Doucerain, Varnaamkhaasti, Segalowitz, & Ryder, 2015).

Multicultural students who were born outside of Canada and did not report English as their native language nominated up to 15 native English-speaking friends with whom they typically interact in English, rated the intimacy level of each friendship, and reported on the social links between these friends. Using an egocentric network analysis, we derived L2 network size, L2 network inclusiveness, and average L2 network intimacy. *Inclusiveness* is defined in this approach as the proportion of network members who know at least one other person in the network. Higher inclusiveness was associated with lower communication-related acculturative stress, indicating that participants whose L2 social networks are more tightly interwoven experience less stress from chronic difficulties in communicating in English. These results provide support for the idea that the structure of L2 social networks matters. Although widely accepted in the social network literature (Borgatti et al., 2009), this idea has received little empirical attention in research on acculturation. These results also illustrate one way in which contextual variables at the level of migrants' social relationships can shape acculturative processes. As migrants recreate a social fabric, the weaving of this fabric both enables and constrains further acculturative changes.

II.A.3 Neighborhood Ethnic Density

Although most psychologists would readily agree that psychological acculturation occurs in a social context, they often leave this contextual work to sociologists, anthropologists, political scientists, and epidemiologists. Not surprisingly, the field has been critiqued for conducting "decontextualized" research (Trickett, Persky, & Espino, 2009). We thus began a line of research to study the links between acculturation and neighborhood ethnic density, a contextual variable studied by psychiatric epidemiologists but only rarely by psychologists. We anticipated that positive benefits of ethnic density might be mediated by increased social support and decreased discrimination—a "psychic shelter" (Whitley, Prince, McKenzie, & Stewart, 2006). Based on previous work, we proposed hypotheses grounded in person–environment fit, in which the best outcomes occur when a high degree of orientation to the heritage cultural group coincides with a high density of that group in the local area, and vice versa. Specifically, ethnic density may shape the relation between heritage acculturation and adjustment, thus clarifying some of the inconsistent findings in the acculturation literature (Jurcik et al., 2014).

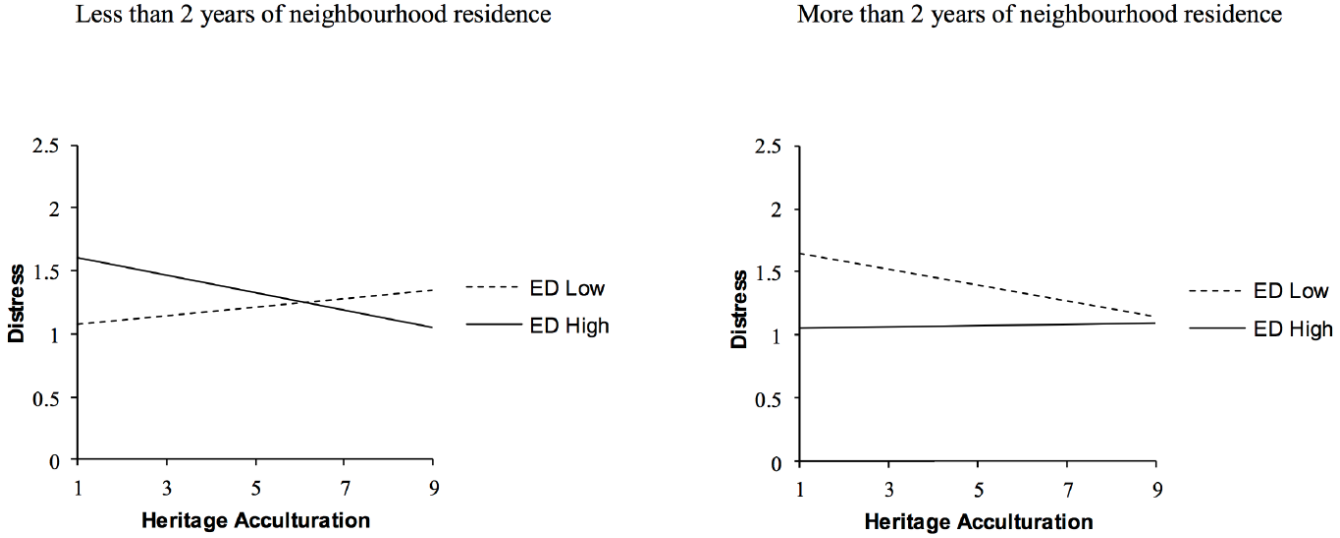
We recruited two samples in Montreal for an online survey: the first was a heterogeneous group of university student immigrants (Jurcik, Ahmed, Yakobov, Solopieva-Jurcikova, & Ryder, 2013); the second was a community sample involving Russian-speaking immigrants from the former Soviet Union (Jurcik et al., 2015; for more about this cultural context, see Jurcik, Chentsova-Dutton, Solopievieva-Jurcikova, & Ryder, 2013). In the culturally heterogeneous student sample we found a negative relation between perceived ethnic density and depression. This effect was mediated by reduced perceived discrimination, but ethnic density was unrelated to perceived social support. In other words, people who saw themselves as living in more ethnically dense areas reported less depression, and this was partly attributable to perceptions of less discrimination in those neighborhoods (Jurcik, Ahmed, et al., 2013). In the sample of Russian-speakers from the former Soviet Union, we found a multivariate protective effect of perceived ethnic density on distress and social support. We found that the relation between perceived ethnic density and lower distress was mediated by improved social support but *not* perceived discrimination.

To test interaction effects, we classified participants into either high or low perceived ethnic density. In the student sample, we found that the relation between heritage acculturation and self-reported depressive symptoms was moderated by ethnic density with a nearly symmetrical crossover interaction. This finding is consistent with an acculturation–ecology match model: living in a high ethnic density context is protective *if* one identifies with the heritage culture of the neighborhood in which one resides. In the Russian-speaking sample, we extended our analyses by attempting to replicate the two-way interaction in study 1: 1. although the two-way interaction was not statistically significant, we also contextualized the interaction with time lived in the neighborhood, yielding a three-way interaction. Thus, for people who had lived in their neighborhood for less than 2 years, results replicated the student sample. For longer term residents, a different pattern emerged: those living in neighborhoods lower in ethnic density reported more symptoms but also benefitted from the buffering effect of heritage acculturation (see Figure 5.2).

These studies were among the first to unpack the perceived ethnic density effect, indicating that protective mechanisms may vary between migrant groups. Moreover, these findings illustrate the benefits that social ecology perspectives can bring to acculturation research, helping researchers to develop more comprehensive models of the acculturation process. Given the instability in estimates of interaction effects, these specific findings should be understood as suggestive until they are successfully replicated. That said, the pattern of results is consistent with the growing evidence that successful acculturation does not simply involve a universal "strategy" or formula that can be applied in all contexts. Rather, one benefits from finding a beneficial strategy for a given local context or even from finding a context that fits one's acculturative style.

Figure 5. 2

Relation between distress and heritage acculturation: Interaction with ethnic density (ED) and years of neighborhood residence



II.B Acculturation as a Dynamic Phenomenon

The past 10 years have helped lessen concerns that acculturation research lacks "-ation" by exhibiting with a steadily increasing number of longitudinal acculturation studies (Doucerain, Segalowitz, & Ryder, 2016). We have observed that most of these studies did not select a specific time point after migration for their initial assessment, meaning participants vary widely in the number of years lived in the "new" society. Some researchers have noted, however, that pre-migration and initial post-arrival conditions are particularly important in terms of how acculturation trajectories unfold (Mähönen & Jasinskaja-Lahti, 2013; Tartakovsky, 2009). We therefore designed a longitudinal study, in collaboration with Catherine Amiot at the Université du Québec à Montréal, with the first time point as shortly after migrants' arrival as possible. We recruited newly arrived (up to 90 days post-migration) international students at one francophone and one anglophone university in Montreal, gathering data at four time points during the course of their first academic year.

II.B.1 Cultural Orientation and Social Participation

Our first exploration of these longitudinal data (Doucerain, Deschênes, Gouin, Amiot, & Ryder, 2017) was premised on Boski's (2008) observation that "preferences are not competences" (p. 144) and that the relation between acculturation scores and specific cultural meanings and practices is unclear (Brown & Zagefka, 2011). We hypothesized that a more positive initial orientation toward the mainstream cultural group would prospectively predict more social ties in the mainstream cultural group over time. We focused on participants' friendships in the mainstream cultural group, found to be beneficial for the adjustment of international students (e.g., Hendrickson, Rosen, & Aune, 2011). To test our hypothesis, we selected participants whose native language was different from the mainstream language of their university, and then we asked them to report on the number of friendships involving that mainstream language.

Using multilevel modeling, we found that participants' initial mainstream cultural orientation related to their social participation in the mainstream cultural group over time, controlling for self-reported mainstream language proficiency, shyness, and heritage cultural orientation. The reverse pattern did not hold: initial friendships in the mainstream language were not associated with mainstream cultural orientations scores over time. These results support a prospective relation between mainstream cultural orientation and the formation of social ties in the new cultural community. As such, they establish a link between an attitudinal acculturation construct, cultural orientations, and a behavioral cornerstone of acculturation, intergroup contact.

II.B.2 Cultural Orientations and Adjustment: Which Comes First?

Many studies have documented associations between acculturation and psychosocial adjustment. Indeed, a recent meta-analysis (Nguyen & Benet-Martínez, 2013) showed that people who report more positive orientations toward both mainstream and heritage cultural groups also report greater sociocultural adjustment, greater psychological adjustment, and less acculturative stress. The temporal sequence, however, has rarely if ever been studied. Does feeling more positively toward one's cultural groups lead to

greater well-being, or do better adjusted people end up developing more positive orientations? We tested the assumption that cultural orientations *predict* later adjustment with our longitudinal data using a cross-lagged panel model (Ryder, Doucerain, Jurcik, & Amiot, 2020).

Among the findings, we observed that greater initial adjustment was associated with more positive mainstream and heritage cultural orientations at time 2. As well, poorer adjustment at time 3 was associated with a more positive orientation toward the heritage cultural group at time 4. This unexpected finding may reflect reassurance-seeking from a more familiar cultural context during times of adversity. It is noteworthy that here, too, the directionality of effects favors adjustment as an antecedent. In short, our results do not support the implicit assumption that more positive orientations lead to better adjustment over time. Rather, we found evidence that people who are better adjusted upon arrival in the new country go on to develop more positive cultural orientations. Of course, the directionality of effects might shift over time, yielding different results in longer term migrants. Regardless, longitudinal designs are necessary in order to answer such questions.

II.B.3 Moment-to-Moment Shifts in Cultural Orientation

The two questions we examined in our longitudinal project dealt with "developmental" changes (i.e., those taking place over the course of several months or years). This timescale is fairly typical of models of change in social and cultural psychology. However, from a micro-developmental perspective, these changes emerge from variation occurring during much shorter time spans (Granott & Parziale, 2002). In other words, in the case of acculturation, long-term changes in relatively stable dispositions such as cultural orientations or cultural identity could be traced back to moment-to-moment variation in these constructs. This idea resonates with proposals that acculturation is malleable (Lechuga, 2008) and contextual (Arends-Tóth & van de Vijver, 2004), and it fits with self-categorization and situated identity research in social psychology (Clément & Noels, 1992). We therefore explored this micro-level facet of acculturation dynamics by focusing on moment-to-moment variations in migrants' subjective sense of cultural affiliation (Doucerain, Dere, & Ryder, 2013).

To do so, we adapted Kahneman and colleagues' Day Reconstruction Method (DRM; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004), a daily diary method that has primarily been used for research on well-being. In the DRM, participants divide their previous day into a series of episodes, where each episode roughly corresponds to a scene in a film of their day. Next, participants answer a series of questions on each episode. Our main innovation was to add questions about the primary cultural affiliation that participants experienced during an episode. We administered this modified version of the DRM to multicultural students attending Concordia University in Montreal. We expected that cultural affiliation would be predicted by contextual characteristics of the situation, such as people's location of language used in the moment, as well as by more stable dispositions, namely, participants' cultural orientations.

The results, derived from multilevel analyses, supported this expectation. How people affiliated in the moment was tied to the type of activity, location, and language of an episode, as well as to the cultural background of any interlocutors. In parallel, participants who reported a more positive orientation toward the mainstream cultural group overall were more likely to affiliate with the mainstream group in the moment. Thus, both contextual characteristics and more stable individual differences in cultural orientations contributed to predict whether participants felt, for example, Canadian or Chinese in the moment. Along with previous longitudinal results, these findings support the idea that acculturative changes operate at different timescales, from micro-developmental variation to macro-developmental shifts. Understanding the temporal dynamics of acculturation requires considering patterns of change at these different levels as well as the interdependencies between them.

II.C New Methods, New Directions (1)

Throughout the years, thinking about and testing methods that go beyond traditional attitudinal acculturation scales has been central to our acculturation work. Theories and methods are often considered separately, but we believe that there is a synergistic relation between these two aspects of research and that this synergy can be generative (Greenwald, 2012). New ideas call for and shape the development of new methods, but similarly, new methods inspire new ideas. Indeed, ideas and methods have worked hand in hand in shaping our research on acculturation. For example, we were struck by the limitations of traditional acculturation measures, and so we looked for promising alternatives. Encountering and trying out the DRM led us to think more about micro-developmental aspects of acculturation and of the importance of context. Similarly, our developing culture-mind-brain framework—described later in this chapter—prompted us to look at biological markers and at social network characteristics jointly with cultural orientations, a typical dispositional acculturation variable.

In short, we have grown increasingly convinced that a sophisticated set of methods is necessary to adequately capture the complex and multifaceted nature of acculturation. We believe, in other words, that it is important to assemble a "toolkit" with flexible and complementary methods instead of relying on short self-report acculturation scales as a single tool (Doucerain et al., 2016). We note, however, that although many of our studies have potential clinical relevance, we have generally relied on straightforward self-report mea-

sures of adjustment: we have kept it simple when it comes to these outcome measures, even as we have designed increasingly complex acculturation tools. Several of us are clinical psychologists as well and have been particularly motivated by the potential to apply these findings to—and eventually use these tools in—clinical settings. But first, we are confronted with the complex ways in which culture shapes psychopathology.

III. Culture and Psychopathology

If the acculturation literature can be characterized in part by the kinds of mistakes to which psychology is sometimes prone, the culture and psychopathology literature can often appear entirely unfamiliar to traditional experimental psychologists. The research methods draw on a number of disciplines, ranging from anthropology to epidemiology, and, as a graduate student, it took me a long time to get oriented to these different ways of doing research. Especially in the former case, the difficulty was not simply that of learning a different set of statistical tools but rather of understanding a completely different way of thinking about what the researcher ought to be doing.

The effort paid off, however. My dissertation would not have been possible without the specific hypotheses suggested by decades of published fieldwork combined with large international studies of depression's incidence and prevalence. In particular, the pioneering work of Kleinman (1977, 1982, 1988) was critical to establishing "Chinese somatization" within the field of culture and psychopathology; a "paradigmatic example," as I called it in an early review (Ryder, Yang, & Heine, 2002). His research included a lot of careful ethnography and clinical observation, which coincidentally (and conveniently) took place a quarter-century earlier at the same psychiatric facility in China as my own studies. Moreover, it provided a way of thinking about how one ought to pursue the study of culture and psychopathology more generally.

This groundwork has made it feasible to pursue the kinds of research that I believe psychologists are in a particularly good position to conduct: namely, quantitative cross-cultural comparisons followed by "unpacking" the underlying mechanisms that help explain any group differences. We have conducted a number of additional studies in this vein in an attempt to better understand both the reasons for and limits of Chinese somatization. For example, does the phenomenon generalize to all somatic symptoms, or to anxiety disorders? Does it generalize to other cultural groups, such as Koreans? Has it remained constant across time? We will look first at this set of studies, noting the central importance of understanding the social context in which symptoms are experienced. As this perspective has also led us to consider some new research questions, we will then turn to our work on the cultural shaping of social anxiety and social support.

III.A Chinese Somatization, "Western" Psychologization

My dissertation project joined a small set of studies demonstrating that Chinese patients, relative to "Western" patients, are more likely to emphasize somatic symptoms of depression. Empirical inquiry into reasons underlying this group difference is scant, however. In developing our own explanatory hypotheses, we noticed that many of the most commonly discussed possibilities tacitly assume that Chinese patients somatize distress in general. We thus returned to our archival data to address questions of whether somatization is symptom- and/or disorder-specific or a more general way of expressing distress. As well, we followed up on the original finding that cultural group differences in somatic symptom reporting might be at least partially explained by *externally oriented thinking*. Finally, we have begun to investigate the fundamental question of what somatization is, exactly: a strategic choice to talk about some symptoms and not others, a particular way that these symptoms are actually experienced, or some combination of these possibilities?

III.A.1 Unpacking Somatization

To explore the specificity of Chinese somatization to specific symptoms and syndromes, we reanalyzed my original dissertation dataset using a differential item functioning approach. Specifically, we assessed the extent to which a given symptom's pattern of variation between the Changsha and Toronto samples differs from the aggregated sets of somatic and psychological symptoms (Dere, Sun, et al., 2013). We found that depressed mood and suppressed emotions were endorsed far more frequently in Changsha than would be expected by the overall findings from the set of psychological symptoms. Unlike the original study, we also separated out the reversed symptoms and considered whether their pattern of cross-group variation paralleled that of the typical symptoms. Instead, we found strikingly low rates in Changsha compared to Toronto for weight gain, appetite gain, and hypersomnia. These reversed symptoms are all part of the atypical subtype of depressive episode. Not surprisingly, of the subset of participants who met formal criteria for a major depressive episode, this episode was classified as atypical much less frequently in Changsha compared with Toronto.

Although the original study focused solely on depression symptoms, my colleagues and I had also assessed anxiety. The lack of previous research on somatization versus psychologization in anxiety symptoms, however, made it difficult to propose specific hypotheses. Instead, we considered two competing options (Zhou et al., 2011). One might expect similarity between cultural patterns for anxiety and depression, perhaps reflecting a common cultural script for distress. Alternatively, anxiety and depression may convey different meanings within a given cultural context. Chinese cultural contexts foster a strong prevention focus, a tendency

to avoid negative outcomes tied to social obligations and anxiety-related emotions (e.g., Lee et al., 2000). Anxiety may therefore be more acceptable than depression in Chinese contexts and perhaps even more acceptable than anxiety is in North American contexts, thus leading to more endorsement of psychological symptoms.

We decided to compare these predictions in a subset of patients from my original dissertation sample (i.e., Ryder et al., 2008), selecting participants who reported at least one anxiety concern. Participants in the Changsha sample reported significantly higher levels of worry and obsessions, and those in the Toronto sample reported significantly higher levels of panic attacks and social anxiety. Note that, conceptually, panic attacks are defined by a large number of somatic symptoms, whereas worries and obsessions are cognitive. Turning to self-reported symptoms, we found that the somatic tendency in depression was, as expected, stronger in Changsha than Toronto, but also that somatic tendency in anxiety was stronger in Toronto than Changsha. Although these findings await replication, they serve to highlight the problems with simply assuming that Chinese somatization is a general phenomenon. Combined with mounting evidence that a somatic symptom emphasis is usually not observed in Chinese student or community samples (e.g., Yen, Robins, & Lin, 1999), the tendency also appears quite specific to particular presentations of depression.

There seems to be something about these presentations that separate them even from their near neighbors, the anxiety disorders. Moreover, somatization is not merely denial of depression: the symptom of depressed mood bucked the general trend for psychological symptoms. We have speculated that certain psychological symptoms of depression and anxiety may be carriers of content, such as worry about friends or obsessive thinking about family safety (Zhou et al., 2011). This content may be reported on—and even experienced—more readily when it is socially acceptable rather than stigmatized. Thus, the psychological symptoms of anxiety may serve to communicate sensitivity to social cues in Chinese contexts, whereas they demonstrate a failure to pursue the more appropriate promotion goals in North American contexts. Psychological symptoms of depression in promotion-focused contexts, by contrast, represent failures in the pursuit of culturally appropriate goals. In China, at least until recently, the very pursuit of promotion-focused goals was inappropriate. These speculations await future research.

III.A.2 Cultural Values and Externally Oriented Thinking

The findings from my dissertation study also contributed to a fairly small literature empirically examining alexithymia from a cultural or cross-cultural perspective. *Alexithymia*—from Greek roots meaning "no words for feelings"—was first used by Sifneos (1973) to describe patients who appeared to lack insight into their own emotional experiences. Descriptions of alexithymia typically highlight four components: (1) difficulty identifying feelings, (2) difficulty describing feelings, (3) an externally oriented thinking style (i.e., focused on concrete, practical matters rather than emotions), and (4) constricted imaginal capacity. Over the past quarter-century, researchers have documented positive associations between alexithymia and a diverse range of mental and physical health conditions.

A persistent issue, however, is the extent to which alexithymia reflects contemporary Western assumptions about proper emotional expression, particularly among mental health professionals who might be particularly frustrated by patients seemingly unable or unwilling to engage with their own emotional experiences. Kirmayer (1987) presented a critical analysis of the sociocultural particularities of alexithymia, including cultural understandings of the self and personhood, of the role of language in emotion, and the nature of psychiatric treatment. Such an analysis raises the question of whether alexithymia should even be studied in cultural contexts far removed from where the construct originated. We have had to consider carefully the potential that uncritical acceptance of the alexithymia construct might pathologize emotional response patterns that differ from Western norms. Our overall hypothesis, therefore, was that externally oriented thinking is strongly shaped by cultural values compared with difficulties in identifying or describing feelings.

Indeed, externally oriented thinking in particular stands out from the two other deficit-based components of alexithymia, difficulty identifying feelings and difficulty describing feelings. Items measuring externally oriented thinking often show poor internal reliability, particularly in samples where English is not the primary language (Taylor, Bagby, & Parker, 2003). Furthermore, this component is generally less associated with pathology compared with the other two (see review by Dere, Falk, & Ryder, 2012). With these findings in mind, we first examined the extent to which cultural values shape externally oriented thinking among Euro-Canadian and Chinese Canadian undergraduates from two Canadian universities (Dere et al., 2012) and then followed up in a separate study of Chinese outpatients from three hospital-based psychology clinics in Hunan Province, China (Dere, Tang, et al., 2013). Cultural group comparisons in our first study allowed us to examine whether higher levels of alexithymia in Chinese heritage samples are specifically driven by higher levels of externally oriented thinking, as found previously (Ryder et al., 2008). We confirmed that Chinese Canadian students reported significantly higher levels of externally oriented thinking than the Euro-Canadian group, and there were no significant group differences on either difficulty identifying or difficulty describing feelings.

Seeking to extend this result, we examined the hypotheses that only externally oriented thinking would be associated with cultural values and that there would be an indirect effect of these values on the relation between group membership and externally oriented thinking (see Figure 5.3 for the two specific models tested). Our results largely supported this pattern. In both Euro-Canadian and Chinese Canadian groups, modernization and Euro-American values (but not Asian values) negatively predicted externally oriented thinking. For both Euro- and Chinese Canadians, none of the cultural values measures was a significant predictor of either difficulty identifying or difficulty describing feelings. Furthermore, we found indirect effects through modernization values and also through Euro-American and Asian values, offering a potential explanation for the relation between group membership and externally oriented thinking, including age and sex as covariates. In our second study, we wanted to replicate our core finding regarding the specific association between cultural values and externally oriented thinking in a new Chinese clinical sample (Dere, Tang, et al., 2013) collected by our colleagues in Changsha (now expanded to include Qiuping Tang and Cai Lin). Once again, we found that externally oriented thinking was negatively predicted by modernization and Euro-American values, but not Asian values.

Notably, whereas externally oriented thinking had shown moderate to poor internal consistency in the samples in our first study, it showed extremely low internal consistency in this sample. We therefore followed up with structural equation modeling, which takes measurement error into account. Using parceling to create three measured variables for each of our four constructs of interest—externally oriented thinking and the three cultural values measures—we examined two models, one to test the relation between externally oriented thinking and modernization and the other to examine externally oriented thinking with Euro-American and Asian values. The proposed models showed acceptable to good fit and replicated the findings from our multiple regression analyses. Once again, modernization and Euro-American values showed significant associations with externally oriented thinking, whereas Asian values did not.

These findings have implications for the conceptualization and study of alexithymia while also speaking to broader issues regarding the interplay among cultural context, attentional processes, and emotion experience. We believe our findings raise the possibility that high levels of externally oriented thinking may be the result of different factors or processes depending on cultural context. It may be the case that individuals with a high degree of difficulty identifying and/or describing feelings have high levels of externally oriented thinking across various contexts since emotional deficits may foster a tendency to focus outward rather than inward. However, in contexts that promote attention away from internal emotional experiences, externally oriented thinking may reflect healthy adherence to cultural norms (Dere, Tang, et al., 2013).

III.A.3 Somatization as Experience, Somatization as Strategy

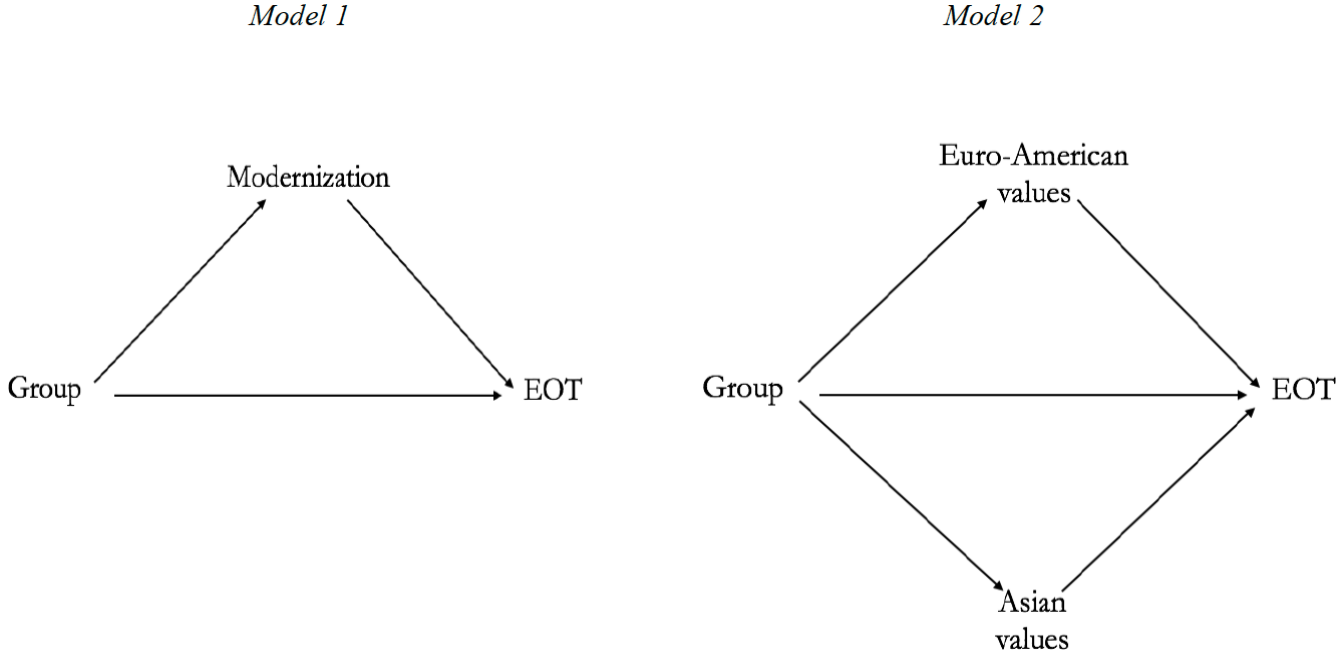
In a theoretical paper co-written with Yulia Chentsova at Georgetown University, I argued that Chinese somatization can be understood as a cultural script for depression (Ryder & Chentsova-Dutton, 2012). We observed that most explanations in the literature posit either (a) variation in the actual experience and expression of distress or (b) variation in norms of how to conceptualize and communicate distress. Earlier explanations of Chinese somatization tended to emphasize the experience and expression of distress and assumed that the phenomenon reflected bodily experience. Indeed, "somatization" implies that something is being converted into a somatic experience. Conceptualization- and communication-based explanations, by contrast, propose that Chinese somatization involves a set of beliefs about how somatic and psychological symptoms are best understood. These beliefs then lead to communication strategies designed to pursue or avoid particular outcomes. In this research, we tested the hypothesis that Chinese somatization might be understood as a cultural script that combines these two ideas (Ryder & Chentsova-Dutton, 2012; Zhou et al., 2016).

Experience- and expression-based explanations of Chinese somatization generally assume that somatic symptoms dominate the subjective phenomenology of depression in Chinese patients. Conceptualization- and communication-based explanations of Chinese somatization, by contrast, tend to assume that patients experience a range of symptoms and then consciously elect to emphasize the somatic ones when speaking with others. We argued that this distinction is more artificial than real (Ryder & Chentsova-Dutton, 2012). While there may be instances when people in specific circumstances make a deliberate choice to disclose or not disclose a given experience, the social world can also shape experience. For example, Kleinman and Kleinman's (1995) description of how the Cultural Revolution in China deeply shaped the emotional life of the Chinese at that time implies a felt bodily experience that is strategic without necessarily being consciously strategic. Indeed, the idea that symptoms might be simultaneously somatic and social is present within Traditional Chinese Medicine (e.g., Lv & Wang, 2012).

Expanding on this theoretical work, we argued first that Chinese cultural contexts emphasize a traditional worldview in which somatic symptoms are understood as much less socially problematic than psychological symptoms. This understanding is in turn associated with a communication strategy in which open acknowledgment of psychosocial distress is discouraged, especially outside the family. Then we proposed that the second aspect of this cultural script involves

Figure 5. 3

Two tested indirect effects models: Cultural group membership on externally-oriented thinking through modernization (model 1) or cultural values (model 2)



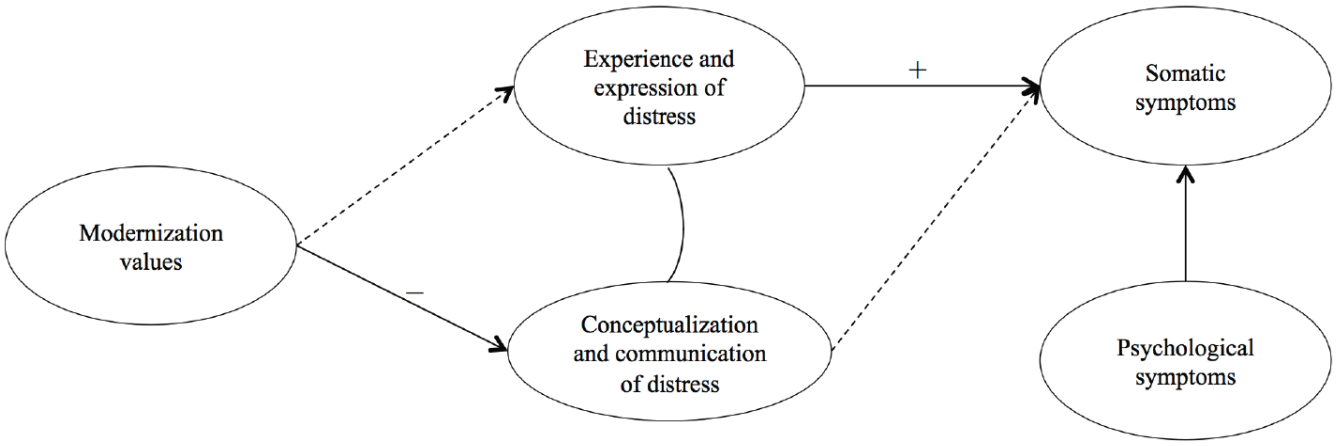
direct reports of bodily experiences: namely, specific somatic reports in response to specific psychosocial stressors. We believe this response style in particular predicts a higher likelihood of reporting somatic symptoms even when accounting for the effects of psychological symptoms (see Figure 5.4 for the hypothesized model).

We tested this model in a Chinese study that included both student and clinical samples (Zhou et al., 2016). Students were collected from psychology and education classes at Hunan Normal University in Changhsa, Hunan, in collaboration with Yunshi Peng; patients were collected from the Second and Third Xiangya Hospitals in Changsha, and from a smaller hospital in Huaihua, Hunan. We also tested the generalizability of this model to South Korean cultural contexts in a follow-up study of depressed Korean outpatients (Zhou et al., 2015) conducted in collaboration with Seongho Min, Se Joo Kim, and Joung-sook Ahn at Yonsei University in South Korea, and Sam Noh at the Centre for Addiction and Mental Health in Toronto. Korean and Chinese contexts share a long and sustained history of common influences, including Confucian-influenced values and broadly similar models of the self, but they diverge sharply in terms of language structure, recent history, and prevalent economic and political models. This study used a single clinical sample collected from two sites: Yonsei University Severance Hospital, located in the metropolitan area of Seoul, and Yonsei Wonju College of Medicine, located in Wonju.

To begin, a published set of items specifically designed to assess somatization tendency in East Asian cultural contexts were subdivided into two hypothesized factors on theoretical grounds: one emphasizing the experience and expression of distress, and one emphasizing the conceptualization and communication of distress. This division was validated with confirmatory factor analysis. Then, the proposed model for somatization was tested with across the three samples and consistently showed good fit. As hypothesized (a) East Asian experience and expression of distress was correlated with East Asian conceptualization and communication of distress, (b) East Asian experience and expression of distress was positively associated with somatic symptoms after controlling for psychological symptoms, (c) and East Asian conceptualization and communication of distress was negatively associated with modernization values. Taken together, these findings suggest that East Asian cultural scripts for depression include distinct components. Whereas cultural values play a stronger role in shaping how distress is conceptualized and communicated to others, beliefs about how distress is experienced and expressed are more closely related to symptom presentation.

These results confirmed our hypothesis that a prominent East Asian cultural script for distress can be understood as involving two interrelated aspects, consistent with our efforts to break down the distinction between the "actual" expression of somatic symptoms and "strategic choices" about how to talk about symptoms with others (Ryder & Chentsova-Dutton, 2012). In the latter case, decisions about how to

Figure 5. 4
Hypothesized model for two aspects of somatization in China and Korea



describe distress or how to seek help are not necessarily consciously adopted strategies, although in some cases they may be. Rather, social processes actually play a role in shaping what experiences warrant attention and thus what symptoms emerge (Kleinman, 1986; Ryder & Chentsova-Dutton, 2015).

III.B The Social Context of Psychopathology

Our research on somatization and psychologization, especially in recent years, has repeatedly brought us back to the social context in which symptoms are experienced. Ongoing transactions with others provide the forum in which people learn to attend to certain experiences and pass by other ones. Finding that anxiety disorders appear to function differently than depression when it comes to somatic symptom presentations led us to the rich cross-cultural literature on social anxiety, where the social context is an obvious part of the disorder. As well, some of our findings pertain to whether one should communicate or conceal somatic or psychological symptoms from close others, drawing our attention to the literature on culture and social support. Our encounters with both of these literatures have in turn led us to conduct some new studies in these areas.

III.B.1 *Taijin Kyofusho*/Anthropophobia

There is a steadily growing literature investigating how culture shapes social anxiety, particularly in East Asian cultural contexts. Social anxiety disorder is marked by persistent fear of social or performance situations in which embarrassment may occur. The underlying fear is that one will be negatively evaluated by others, leading to embarrassment for the self. In Japan and China, however, social anxiety is viewed differently. For example, *taijin kyofusho* is loosely translated as "anthropophobia" or "phobia of interpersonal relations" (Ono et al., 2001). Patients report a variety of symptoms, such as fear of eye-to-eye contact, blushing, displaying improper facial expressions, looking at others, or body odor being noticed (e.g., Takahashi, 1989). Here, the underlying fear is disrupting social harmony by causing distress or offense to other people.

Motivated by finding higher rates of social anxiety concerns in my original dissertation data (Zhou et al., 2011), one of our Chinese collaborators wondered whether a different understanding of social anxiety might hold in China. Looking again at our data, we found that Social Anxiety-Distress to Others (Rector, Kocovski, & Ryder, 2006) was distinct from standard measures of social anxiety. Moreover, Chinese patients had higher rates social anxiety concerns revolving around the fear of causing distress to others (Zhu et al., 2014). This finding spurred us on to investigate possible explanations for social anxiety symptoms drawing on both North American and East Asian conceptions, especially *taijin kyofusho* (Zhou et al., 2014). With this project, we decided to extend our data collection to Japan and therefore started an ongoing collaboration with Jun Sasaki at Osaka University.

Study 1 compared Euro-Canadian and Chinese-born Canadian university students and found no statistically significant group differences on social anxiety. Group differences on offensive *taijin kyofusho* via the influence of intolerance of uncertainty indicated that Chinese migrants reported higher levels of the latter compared with Euro-Canadians, and these higher levels were then associated with higher levels of offensive *taijin kyofusho*. Consistent with previous research, Chinese migrants reported lower independent self-construal compared with Euro-Canadians and, through this indirect effect, reported higher levels of social anxiety. For offensive *taijin kyofusho*, however, neither type of self-construal contributed to the group differences observed in Study 1. Indeed, the influence of self-construal diminished when intolerance of uncertainty was in the model predict-

ing offensive *taijin kyofusho*. These results suggest that both "self-oriented" and the "other-oriented" fears are susceptible to intolerance of uncertainty and that this intolerance is more salient among Chinese migrants than Euro-Canadians. In the multicultural Canadian social context, Chinese migrants may face many challenges during daily social interactions with people from different cultural backgrounds.

Study 2 compared Euro-Canadian, Chinese, and Japanese university students and found that Euro-Canadians reported more social anxiety compared with Chinese, but lower scores compared with Japanese. None of the tested indirect effects was confirmed for the comparison of Euro-Canadian and Chinese participants. For the comparison of Euro-Canadian and Japanese participants, there was an indirect effect through intolerance of uncertainty: social anxiety and intolerance of uncertainty were positively associated in the Japanese sample. Also in Study 2, there were no group differences on offensive *taijin kyofusho*; there were, nonetheless, some indirect effects. Chinese participants rated themselves higher on interdependent and lower on independent self-construal than did Euro-Canadians, and both types of self-construal were in turn related to offensive *taijin kyofusho*. Japanese participants rated lower levels of independent self-construal and higher levels of intolerance of uncertainty, which both predicted higher levels of offensive *taijin kyofusho*.

The findings from Study 2 are somewhat more difficult to interpret and, at first glance, appear inconsistent with Study 1. It is important to remember, however, that we would expect the local social world of the Chinese migrants in the first study to be very different from the majority-culture experience of the Chinese participants in Study 2. Specific cultural contexts have their own specific social meanings and practices reflecting different ecologies and different histories (Plaut, Markus, Treadway, & Fu, 2012). Nonetheless, intolerance of uncertainty does appear to be a much more important contributor to variation between Euro-Canadian and Japanese contexts than between Euro-Canadian and Chinese contexts on both social anxiety and offensive *taijin kyofusho*. The centrality of intolerance of uncertainty is striking in Japanese cultural contexts, where appropriate behaviors are embedded in elaborate rules governing daily social interactions (Sugimoto, 2009), creating many opportunities to be negatively evaluated for disrupting social harmony.

III.B.2 Social Support in the Lab

The literature on East Asian somatization includes much discussion of how the social context can encourage and reinforce somatic talk (e.g., Tsai, Simeonova, & Watanabe, 2004) so that it becomes an effective means of obtaining social support. Indeed, our colleagues have recently demonstrated in a pair of studies that use of somatic words is much more effective in eliciting sympathy in Korean versus American cultural contexts (Choi, Chentsova-Dutton, & Parrott, 2016). Our more recent research on social anxiety has also fueled an emerging interest in how people in different cultural contexts succeed and fail in eliciting social support. In particular, we have focused on the distinction between two support seeking strategies: direct versus indirect support seeking (Barbee & Cunningham, 1995). Whereas direct support seeking includes overt and explicit behaviors containing necessary information to allow successful support transactions to occur, indirect support seeking is much more subtle and passive, vaguely signaling that help is needed without clearly specifying what is required. The former strategy is generally shown to be more functional than the latter, but there are questions about whether these findings hold in cultural contexts that foster an interdependent self-construal, where much more attention is devoted to social subtleties (Kim, Sherman, & Taylor, 2008). We therefore started investigating these issues in a lab-based social support study that allowed us to observe support behaviors among pairs of friends (Zhou et al., 2017).

Euro-Canadian and Chinese-Canadian university student participants were asked to bring a same-sex nonromantic friend of a similar cultural background to participate in this study with them. Participants in each dyad were randomly assigned either to the role of the target or the role of the friend. Participants independently completed questionnaires online, and then members of each dyad were scheduled to visit the lab together. First, during the "Etch-A-Sketch task," the target was instructed to copy a picture depicting downtown Boston using an Etch-A-Sketch board in 10 minutes. The friend was instructed to help if he or she wanted, but told that he or she could not do the task for the target (Zhou et al., 2017). Then, the target and his or her friend were introduced to the "Webcam task" (first proposed by Pontari, 2009). Targets were instructed to make a 10-minute prerecorded introduction of themselves to a same-sex peer who was from the same cultural background. The targets were told that they could act as if they were trying to make friends with this peer and talk about whatever they wished. The friend was again instructed to help the target during the introduction if he or she wanted to but not to do the task for the target.

Relationship quality was assessed using self-report, and event sampling was used to code social support behaviors during each of the two tasks. Frequency of social support seeking behaviors was coded using the combination of the Social Support Elicitation Behaviour Code (SSEBC; Cutrona, Suhr, & MacFarlane, 1990) which focuses on verbal support seeking, and the nonverbal support seeking behaviors coding system developed by Kim, Shin, and Cai (1998). The frequency of social support provision behaviors was coded using the Social Support Behaviour Code (SSBC; Suhr, Cutrona, Krebs, & Jensen, 2004). As interpersonal relationships involve mutual influence by each

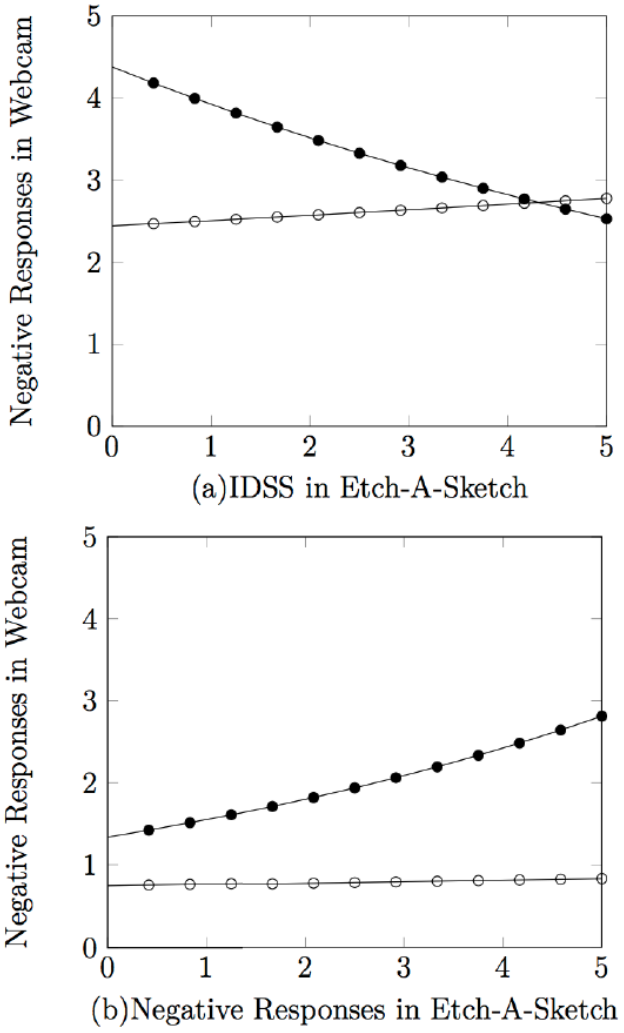
person on the other's thoughts, emotions, and behaviors, we used the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) to account for the statistical non-independence between the support seeker and support provider.

No cultural variations were found in the analyses for direct support seeking. In fact, the frequency of direct support seeking was higher for Chinese participants than for Euro-Canadian participants, in contrast to prior research (e.g., Mojaverian & Kim, 2013). In both tasks, however, targets and friends were informed about the purpose of the tasks together. It may be that Chinese participants no longer hesitated to ask for help directly because the friend's helping role had been clearly defined and the need for help was justified by the context. We had more success identifying cultural variation in indirect support seeking by looking at the mutual influence of target and friend. Partner effects played a crucial role in predicting cultural variations in support seeking behaviors. For example, in the Etch-A-Sketch task, negative interactions rated by the friend were associated with more use of indirect support seeking among Chinese targets but less use of this approach among Euro-Canadian targets. When negative interactions were taken into account among same-sex peers, Chinese participants favored indirect support seeking, consistent with the literature.

This idea was also supported by unpublished cross-task analyses that allowed us to evaluate the impact that behavior on the first task had on the second task. In keeping with the other findings, indirect support seeking by targets in the Etch-A-Sketch task was related to more negative behaviors by friends in the later Webcam task for Euro-Canadians, but vice versa for Chinese participants. Indirect support seeking appears to negatively impact Euro-Canadian participants, perhaps because it is culturally less familiar or conveys a different and more negative meaning in this cultural context. Chinese participants, in contrast, appeared to be more sensitive to explicit negative behaviors shown by their partners on the previous task (see Figure 5.5).

Figure 5. 5

Negative responses on the webcam task (task 2) as a function of indirect support seeking (IDSS) and negative responses on the etch-a-sketch task (task 1)



III.C New Methods, New Directions (2)

As with our research on acculturation, working on questions of culture and mental health has pushed us toward new methodologies, albeit not with the same sense of urgency. For example, the literature on Chinese somatization catalogues how perspectives on somatic versus psychological symptoms of distress have shifted historically, both in the West and in China. Both cultural contexts have evolved dramatically during this time, and there is evidence that rapid sociocultural change in China over the past three decades may be changing the meaning and experience of depression (Sun & Ryder, 2016). Given that we now have clinical data collected in Changsha between 2002 and 2015, we have started to use cohort and symptom network analyses to investigate whether symptom presentation in depression has changed in this relatively short time. Our clinical colleagues in China believe that it has; these methods will allow us to test this possibility.

Other research questions relating to culture and symptom presentation have pushed us closer to the lab. We have proposed that symptoms are generated in part by culturally shaped tendencies to attend to different phenomena both within and outside the person. It may be possible to experimentally manipulate attention in laboratory settings, directing participants toward or away from particular kinds of experiences. One could similarly manipulate the social demands of a given situation in the lab, changing the demand characteristics in ways that could parallel what might be hap-

pening in clinical settings. The consequences of these kinds of manipulations could then be assessed in terms of symptoms or symptom-like experiences reported by participants or evident through such nonverbal channels as facial behavior or psychophysiological response. Initial pilot data support the potential utility of this approach (Chentsova-Dutton, Gold, Gomes, & Ryder, 2016).

The lab-based dyadic approach that we have started using in recent years points the way to some exciting future directions for mental health research as well. First, suffering people in the community most often turn first to friends and family members for informal support, and there is a lot we do not know about how that happens. Second, certain forms of psychopathology, such as social anxiety or personality disorder, might actively interfere with a person's ability to effectively solicit support from others, leading to worsening spirals of distress. These patterns may play out very differently depending on cultural context. Finally, and perhaps most obviously, the majority of psychological treatment encounters are dyadic, with one person clearly in the help-seeking role and the other just as clearly in the help-providing role. One could study moment-to-moment bids for different kinds of support by patients, sense of therapeutic alliance based on experience in previous sessions, and cultural context of patient and therapist, potentially including cultural mismatches.

This last possibility opens up a more general question: What about the clinic itself as a research site? Not merely a place where participants are interviewed or handed some questionnaires, but one where culturally sensitive assessment and treatment approaches are developed, refined, and evaluated. Research presentations on Chinese somatization, for example, inevitably lead to clinical questions: Does every Chinese person do this, or at least every Chinese patient? (Answer: no) In that case, how do I identify a somatic presentation? How do I go about understanding what such a presentation means for the patient and for his or her local sociocultural world? And then, what do I actually do to help? There is much potential here for careful research not only to evaluate specific interventions, but also to study culturally sensitive therapeutic interactions in real time, to better learn what works and why it works. As I write, we are starting to take some first steps in this direction. Before describing these potential future projects, however, let us first summarize the emerging theoretical perspective that underlies them.

IV. Cultural-Clinical Psychology

As a dual-trained cultural psychologist and clinical psychologist, I have given much thought over the years to how these two fields ought to fit together. Despite clinical psychology's rapidly increasing concern for sociocultural diversity, much of the research has not engaged closely with cultural psychology. Rather, cultural categories—often, American ethno-racial categories such as "Asian" or "Latino"—are studied as entities that differ from the European American norm in some particular way. Often, the differences are understood as technical obstacles: these people have different beliefs about a certain diagnostic category; those people require use of different test norms to avoid ethnocentric bias. Only rarely is the cultural psychology literature invoked, most often by using a well-known concept such as "collectivism" to offer a post hoc interpretation. We have documented this issue in several reviews (Ryder, Dere, Sun, & Chentsova-Dutton, 2014; Ryder, Dere, Yang, & Fung, 2012; Ryder, Sun, Dere, & Fung, 2014; Ryder, Sunohara, & Kirmayer, 2015).

At the same time, cultural and cross-cultural psychologists have traditionally not devoted particular attention to clinical issues. A review of submissions to the *Journal of Cross-Cultural Psychology* conducted at the turn of the century showed that clinical submissions had the lowest success rate (Smith, Harb, Lonner, & van de Vijver, 2001). The authors suggested that a lack of theoretical sophistication might be to blame. A robust interdisciplinary literature on culture and mental health can be found in cultural psychiatry—but here the clinical content has largely been provided by psychiatry and the theoretical and cultural content by anthropology. Psychology has the potential to comment on both clinical and cultural aspects but has done so infrequently (Ryder & Dere, 2010b).

Several years ago, I had the good fortune to have several conversations addressing this exact question with Yulia Chentsova on the outskirts of a conference. We had been pleased to see some presentations by psychologists on culture and mental health topics but had a sense of nagging dissatisfaction with the results. Moreover, it was clear to us that there has been a small but consistent literature of high-quality contributions to this field by psychologists, but not one that had cohered into a domain of study. At the same time, I had agreed to write a review paper on culture and mental health for *Social and Personality Psychology Compass* but had been at quite a loss as to how to proceed. I solved that problem by inviting her to join me as a co-author.

Together with Lauren Ban, my postdoctoral fellow at the time, we took some first steps toward imagining cultural-clinical psychology (Ryder, Ban, & Chentsova-Dutton, 2011). As part of this project, we were also asked to generate a "teaching and learning guide" consisting of an annotated reading list and other teaching resources (Ryder & Chentsova-Dutton, 2014a). The guide, along with an enhanced and updated set of resources for research and teaching, can be found online.[2]

We will briefly review this perspective by considering two core ideas that we believe are central to cultural-clinical psy-

[2]See http://culturalclinicalpsych.org; a hyperlinked version of the guide can be found at http://culturalclinicalpsych.org/teaching/guide.

chology: (1) that culture, mind, and brain should be understood as a single system with three mutually constitutive levels and (2) that many mental disorders can be understood as looping patterns across these levels (Chentsova-Dutton & Ryder, 2019; Ryder et al., 2011). As much of our research preceded the formal development of this perspective, these two ideas are only implicit in the empirical work we have discussed so far. We will therefore conclude this section with a look ahead to the research opportunities and challenges that may follow from sustained engagement with these ideas.

IV.A Culture-Mind-Brain

Cultural-clinical psychology brings together cultural psychology and clinical psychology: the former centered on the mutual constitution of culture and mind and the latter increasingly placed at the intersection of mind and brain. In light of this background, we begin with a brief consideration of the two constituent disciplines, cultural psychology and clinical psychology. Then, we will turn to the argument for considering culture-mind-brain as a single multilevel system.

IV.A.1 Cultural Psychology (Culture-Mind)

Cultural psychology is grounded in the idea of mutual constitution, that human culture and human psychology "make each other up" (Shweder, 1991). There is an important distinction to be made here between culture and "cultural group." Part of taking seriously the person-in-context, rather than reducing the person to a set of identity labels, is that people can be described as adhering to a given cultural meaning or practice to varying degrees, including outright rejection (Atran, 2001; Sperber & Hirschfield, 2004). Meanings and practices are distributed so that different people within a cultural context can think and act in different, even contradictory, ways that are equally culturally meaningful (Ryder et al., 2011).

In this view, culture cannot be reduced to mind—people do not simply carry cognitive replicas of their cultural context around in their heads. As with many debates in the human sciences, discussions as to whether culture takes place "in the head" or "in the world" are moot: culture is at once internal and external, in here and out there. On the one hand, a given behavioral pattern is framed in terms of the cultural meaning system, both for the person and for any observers; on the other hand, the very fact that a given behavioral pattern has taken place contributes to shaping this system. As such, culture is enduring and general and also context-specific and situated: particular meaning-making actions in specific situations generate patterns of meaning interpretable as an enduring system (Kashima, 2000).

IV.A.2 Clinical Psychology (Mind-Brain)

As an empirical discipline, clinical psychology conducts basic and applied research on mental health at the level of mind and, increasingly, at the interface of mind and brain. Yet there is a tendency to equate mind with brain, accompanied by a tendency to see the mind as locked in the head with the brain. The alternatives seem to commit Descartes's error all over again, positing a ghost in the machine. Can mind be understood as a level of analysis in its own right, distinct from brain in nontrivial, but also non-spooky, ways?

First, as levels of analysis, mind and brain are not redundant. There are many functions of the brain that are best understood at that level, without any discussion of mind. While there may be specific instances where another level of analysis can help us to understand what is happening—for example, deliberately thinking about food to promote salivation—most of the explanatory weight is provided at the brain level. Nothing happens in the mind that is not reflected in brain activity, yet there are limits to the brain's explanatory power. The most obvious limit relates to complexity, as relatively simple ideas at the mind level may be extremely difficult to describe as neural patterns. The same argument applies within the brain itself: it is not always better, or even possible, to describe a complex brain circuit at the level of the neuron, let alone the axon, molecule, or atom.

The tricky part, however, is to argue that there are also aspects of mind that are not covered by its identity with an individual brain and to do so without resorting to dualism. In a now-classic paper in philosophy of mind, Clark and Chalmers (1993) argue there is little practical difference between a cognitive module and a physical tool for problem-solving. In their example, a person who uses their memory to walk to a desired location has the same outcome as a person with a memory problem who uses detailed written directions to walk to the same desired location. Especially when tools are habitually used, we can talk about the extended mind as incorporating these tools. A similar idea can be found in the work of Russian psychologist Lev Vygotsky, whose writings on "cultural-historical psychology" have been picked up only intermittently by cultural and developmental psychologists in the West (Vygotsky, 1978). An important contribution here is the inclusion of close others as potential tools. Just as written directions can become part of the mind's direction-finding system, so can a dependably supportive friend become part of the mind's emotion regulation system.

IV.A.3 Mutual Constitution

Treating culture-mind-brain as a single system with multiple levels has implications that include but go beyond the traditional tripartite division of the biopsychosocial model. To begin with, we cannot easily compartmentalize even specific claims about a given disorder to a single level. Personality

disorders used to be seen as untreatable by pharmacotherapy due to their status as mind disorders; schizophrenia, as a brain disorder, could *only* be treated by pharmacotherapy. The underlying assumption was that brain problems need brain solutions, and mind problems need mind solutions (Ryder & Chentsova-Dutton, 2015). But there is now considerable evidence that psychotherapy changes the brain and that pharmacotherapy can affect self-concept, personality, and interpersonal relationships. Similarly, culturally normative beliefs about the effects of treatments can influence effectiveness of the treatment itself, impacting everything from therapeutic alliance to manifestation of medication side effects (including side effects from chemically inert placebo interventions; Barsky, Saintfort, Rogers, & Borus, 2002). Meanwhile, the advent of a seemingly successful new treatment can shape culture by shifting beliefs about viable options in the face of mental disorder (Pescosolido et al., 2010).

Indeed, a psychology that maintained a holistic vision of culture, mind, and brain and that contributed especially to research linking these levels would no longer require the designation "cultural." Cultural-clinical psychology would then have a simple and familiar name: "clinical psychology." As this goal is at best a long way off, we have chosen to emphasize the cultural and contextual aspects of clinical psychology as a corrective to the increasingly neurobiological leanings of contemporary psychology. That said, our critique of neurobiological reductionism is not an argument for an antibiological alternative but rather a call for thoughtful and sustained integration.

IV.B Looping Effects and the Emergence of Mental Disorder

Let us turn now to the second core idea of cultural-clinical psychology. We have described culture-mind-brain as a single, complex, and multilevel system that connects the individual human with the human-constructed environment. How then to understand the emergence, maintenance, and—one hopes—successful treatment of mental disorders? We contend that many of the psychological categories we often take for granted, such as "personality" or "resilience," can be usefully described as system properties of culture-mind-brain, encompassing all levels (Ryder & Chentsova-Dutton, 2015). Mental disorders can be similarly described. To summarize this position, we review eight claims that build on one another to lead us to this conclusion.

IV.B.1 Our Universes Are Complex

We begin with the psychological observation that the universe potentially accessible to our perceptions is so complex that we require radically simplified models in order to organize our experiences. Rather than being composed of simple objects, simply perceived, we are instead confronted with a world that can be understood in a bewildering number of different ways. As goal-directed creatures, we selectively attend to objects and experiences that move us toward desired ends and away from undesired ends (Peterson, 1999). A given "object" cannot be understood separately from its constituent parts, its potential uses, and the situation in which it is encountered, not because objects lack structure but because that structure can be multiply construed (Hacking, 1999). The pursuit of water when thirsty, for example, is an evolved universal that nonetheless can be temporarily overridden by the culturally shaped requirements of a religious fast.

IV.B.2 Cultural Models Guide Us Through This Complexity

Mapping the complex universe in a useful way is not a task faced by each person alone. Rather, humans are socialized into cultural contexts that profoundly shape goals and the ways in which they can be pursued. Humans can enter new environments and encounter new situations armed with a detailed, if not a strictly accurate, map of what to anticipate (Peterson, 1999). Such schemas can profoundly shape how self, others, and the environment are perceived and require substantial amounts of important new information to change. Whereas most schemas are primarily described as in-the-head, scripts involve sequences of action that can be enacted and observed by others in-the-world. In the original narrower view, *scripts* refer to declarative knowledge structures that organize stereotypical events (e.g., Schank & Abelson, 1977). The notion of scripts has been subsequently adopted and broadened by linguists interested in cultural models of behavior and cognition (e.g., Goddard & Wierzbicka, 2004) as well as cognitive anthropologists and sociologists (e.g., D'Andrade, 1981; DiMaggio, 1997). Taken together, the collection of schemas and scripts pertaining to a particular domain (e.g., emotional disorder) can be described as a *cultural model*.

IV.B.3 Phenomenological "Background Noise" Includes Potentially Symptomatizable Experiences

We argue that the building blocks of many psychological disorders are derived from a pool of potential symptom constituents. This pool consists of experiences grounded in our physical and existential reality that could, in some contexts, be experienced and expressed as symptoms. The majority of these experiences pass by unnoticed, others are noticed momentarily but are not flagged as worthy of sustained attention, others still might be flagged as strange or annoying without being unduly alarming. This background noise fluctuates for all kinds of reasons, which become part of the proximate cause of a particular symptom. There are also individual differences in the likelihood of having particular experiences. For example, high trait neuroticism increases

the likelihood that a person will have the kinds of experiences that can be elaborated into full-blown symptoms: examples range from heart rate increases to ambiguous social exchanges (Lahey, 2009; Ryder & Chentsova-Dutton, 2015). Individual differences also emerge through variations in personal biography: different people have lived different experiences. For example, the vigilance with which one attends to chest pain is affected not only by anxiety sensitivity but also by past history of heart attack.

IV.B.4 Cultural Models Direct Attention to Certain Symptom Constituents

Beyond momentary fluctuations and individual differences, however, certain experiences within this chaotic and shifting background noise are identified as worthy of sustained attention. Cultural models of self, emotion, the body, and so on are implicated in this process by drawing attention to certain symptom constituents, coloring them with significance. Most cultural models are normative, shaping how people normally think, feel, and act, and, intersubjectively, how people *ought to* think, feel, and act. Certain experiences are identified as deviating sufficiently from these norms that they are seen not as merely different, but as pathological (Haslam, Ban, & Kaufmann, 2007). Cultural scripts *for* particular symptoms help sufferers make at least partial sense of their suffering (Chentsova-Dutton, Ryder, & Tsai, 2014). Many patients report a sense of relief that comes with learning that their chaotic and frightening experiences are a known entity, with expected symptoms, explanations, and prognosis. On the other hand, there is evidence that the application of a label, and hence priming the implied scripts for how one is supposed to think, feel, and act, can imprison a patient's responses within the expectations that come with the label (Link & Phelan, 1999).

IV.B.5 Attention to Potentially Symptomatizable Experiences Contributes to Their Emergence as Symptoms

Not only do cultural models (schemas and scripts) guide people to attend to particular experiences when they occur, but attentional processes also actually contribute to the emergence of these experiences *as symptoms*. If a person enters a place of worship with a deep concern about having even fleeting blasphemous thoughts, self-monitoring for such thoughts will greatly increase their likelihood. The genesis of a panic attack for a particular person might be a combination of caffeine, a fight with a friend on an overcrowded bus, and a cultural framework in which racing heart is readily understood as potentially catastrophic. It is in such combinations that *symptoms* themselves occur—specific experiences, suffered by a specific person, in a specific context (Ryder & Chentsova-Dutton, 2015). Symptoms are both somatically embodied and contextually embedded (Ryder & Chentsova-Dutton, 2012) experiences, labeled as pathological, that can be thought about, talked about, sought help for, and so on. These symptoms are in turn organized into syndromes, with their own overarching cultural models.

IV.B.6 Symptoms Emerge and Are Maintained Through Looping Effects

Pathology emerges as the consequence of looping effects, where the response to a particular experience further exacerbates it. We believe that although these looping patterns may be culturally universal, the details depend on the local cultural context. For example, a person might notice their heart beating faster than usual and have the fleeting thought that they have heart trouble. The thought increases their anxiety, further increasing their heart rate, further worsening the interpretation: *I might be having a heart attack!* (Clark, 1986). Now it may seem self-evident that an increased heart rate deserves more attention than neck pain. If this person were from Cambodia, however, they would inhabit a cultural context in which neck pain is potentially catastrophic—and one where neck-focused panic attacks have been extensively documented. Hinton and colleagues (2006) have described a network of Cambodian associations with neck pain involving traumatic memories, ethnophysiological beliefs, and somatic metaphors. During Pol Pot's regime in the late 1970s, forced labor placed considerable strain on the neck and punishments typically involved blows to the back of the head. Traditional Cambodian beliefs include concern about blood and "wind" suddenly rushing upward, potentially bursting blood vessels in the neck. Finally, the Khmer language includes many idioms of distress involving the neck.

IV.B.7 These Loops Play Out Within and Between Levels of Culture-Mind-Brain

In sum, we can describe two kinds of loops. *Acute loops* play out over relatively short time spans and contribute to the emergence of symptoms from the background noise of symptomatizable experiences. *Chronic loops* play out over much longer time spans and contribute to the maintenance and exacerbation of these symptoms. Rather than emphasizing a particular level of analysis from where we can observe these loops emerging, we prefer to understand them as instantiated throughout culture-mind-brain, ranging from specific brain circuits to social institutions and linking different levels. We believe that in many if not most examples of psychopathology, the problems exist in large part because of these loops (Kirmayer & Sartorius, 2007; Ryder & Chentsova-Dutton, 2015). Indeed, the potential for looping effects may be central to why transient symptoms can become more chronic syndromes, rather than just isolated (albeit unpleasant) incidents. Symptoms that frequently get pulled into these kinds of chronic loops within a given cultural context are increasingly likely to be identified as important and problematic.

This process is itself a loop, one that contributes to the maintenance of available cultural scripts for pathological symptoms.

IV.B.8 Effective Clinical Work Uncovers and Untangles These Loops

If we cannot rely either on universal diagnostic categories or on clearly bounded cultural categories, the task of assessment gets much more complicated. We have therefore advocated assessment methods that explore the patient's clinical phenomenology and local social world in a structured yet open-ended way (Ryder & Chentsova-Dutton, 2015, 2019). Such methods can help uncover problematic loops that are generating or exacerbating problems and guide clinicians in better understanding how these loops function. In turn, this information points to interventions designed to unravel these loops—to replace vicious cycles with virtuous ones. Arguably, this is how cognitive-behavioral therapies are already designed to work. Many protocols provide a model of a given disorder that involves one or more loops that serve to generate or exacerbate the problem. Treatment then proceeds by disrupting these loops: conditioning a new response that leads to better consequences, challenging a belief that is generating negative affect, and so on. We can extend this reasoning to other interventions as well. For example, one might reduce disorder-perpetuating stigma through a medication that reduces visible side effects or through a societal-level public mental health campaign.

IV.C A Research Agenda

One important question remains, one that at present is largely untested: Can psychologists actually conduct research within this framework? Although we are confident that our core claims are plausible given the available evidence, ultimately, the approach will be evaluated by its generativity. What new studies might be conducted in light of the mutual constitution of culture, mind, and brain, or the perspective that mental disorders can be understood as looping effects? We conclude now with a brief look ahead to potential new avenues for research on culture and mental health. Doubtless, the need is there. Internationally, efforts to disseminate evidence-based psychological treatments in low- and middle-income countries are growing rapidly, but little is known about how these treatments actually work—or fail to work—in these cultural contexts. In North American and other migrant-receiving countries, psychologists are increasingly called on to offer clinical services to people who have been raised in culturally unfamiliar settings (Jurcik, Chentsova-Dutton et al., 2013; Kirmayer et al., 2011; Ryder & Chentsova-Dutton, 2014). Moreover, there is growing awareness that even members of long-standing ethnocultural minority groups can inhabit very different local sociocultural worlds.

Some of the clinical issues generated by local hyperdiversity are quite practical. In collaboration with Norman Segalowitz at Concordia University and a growing team of international collaborators, we have begun conducting research on language barriers in healthcare access (e.g., Meuter, Gallois, Segalowitz, Ryder, & Hocking, 2015; Segalowitz et al., 2016). Given the gap between need and knowledge among clinicians, moreover, we have grown increasingly interested in training; for example, through clinical or research workshops (e.g., Ryder & Chentsova-Dutton, 2017; Ryder & Dere, 2017). At the international level, we share the concern of researchers in the rapidly emerging field of global mental health: how to disseminate knowledge of effective treatments and skill in delivering them (Patel & Prince, 2010). But, that said, we also share the reservations of many cultural psychiatrists, agreeing that it is critically important not to assume that a treatment effective in one context is easily transferred to another (Summerfield, 2012; Swartz, 2012). The sociocultural context does not simply tweak the final form of mental disorders. Rather, it is an essential level of the system that is disturbed by these disorders, and treatments are positive interventions in this system. A mental disorder in a different context is at least in part a different disorder, precisely because the context is woven into the system manifesting the disorder. We believe this idea holds real-world implications. The term "mental disorders" has captured the attention of clinicians for more than a century, and the inadequacy of this approach is part of the growing enthusiasm for an alternative grounded in the biological sciences (Insel & Quirion, 2005). We would also favor ultimately retiring "mental disorders," but not in favor of "brain disorders." Rather, we need a label that captures a set of tightly looped disorders in culture-mind-brain—"looping disorders", as it were. Simply understanding "disorder" in this way could change how we proceed with our treatments. Of course, developing effective interventions across culture-mind-brain will require special attention for the relatively neglected sociocultural level, but the goal here is not to replace psychological and neuroscientific research with cultural research. Rather, we join with a number of scholars across several disciplines calling for the full integration of the sociocultural level of analysis in mental health research. Although a single research program—let alone a single study—cannot possibly do simultaneous justice to the levels of culture-mind-brain, we can at least understand each study we conduct as part of learning more about this complex system.

Moreover, we ought to encourage research that cuts across these levels. Doing so requires us to not only do this kind of research ourselves, but also to encourage it in others, teach the best examples of these studies in our courses, and understand the publication and funding obstacles sometimes faced by researchers pursuing truly interdisciplinary work.

In conducting a study on acculturation and respiratory sinus arrhythmia or integrating a historical change perspective into our somatization research, we are joining other researchers who have conducted research at these intersections. Many of them have pushed much further than we have so far. Take, for example, Heejung Kim's inclusion of genetics to study emotional support seeking among Koreans (Kim et al., 2010); Vinai Norasakkunkit's inclusion of sociology to study *hikikomori* (social isolation syndrome) among Japanese (Norasakkunkit & Uchida, 2014); or Brandon Kohrt's inclusion of ethnography, psychiatric interviewing, and general medicine to study *jhum-jhum* (subjective numbness or tingling) and depression among Nepalese (Kohrt, 2005). These are a few of the growing number of studies that are pushing our understanding of not only what we know about culture, mind, and brain, but also how we come to know it.

These multilevel studies also do a particularly good job of "unpacking culture." Indeed, one suspects that the reason these researchers have used such a broad array of different research techniques is because they were motivated by the aim of understanding, not simply identifying, cultural group differences. Beyond these ambitious efforts, there are many effective methods available to at least begin attempting to unpack culture, such as mediation or moderation analysis of variables based on self-report questionnaires. Even careful descriptive work makes important contributions, especially early on in the process of understanding a newly identified cultural variation. Nonetheless, the number of studies that simply catalogue group differences dwarfs the number that attempt to unpack cultural variation in psychopathology, let alone treatment. We were motivated to develop cultural-clinical psychology not as something new, but as a unifying banner to promote psychological scientists already doing the kind of integrative work that we believe needs to be done (Ryder & Chentsova-Dutton, 2014b).

A recurring theme in our research and theoretical work, and in that of our like-minded colleagues and collaborators, is the effort to bring our methods closer to the complexity of the phenomena we are studying. While working on this chapter, we noticed that our acculturation research has largely accomplished this through methodological innovation to better measure "culture"—not as "cultural group," but rather as a complex set of identities, meanings, and practices that change over situation and over time. The approach to mental health in this research, most often as "adjustment," has relied largely on simple self-report. Our research on culture and psychopathology, in contrast, does the opposite: adjustment becomes an interlocking set of culturally shaped symptoms and syndromes, assessed in multiple ways; cultural group becomes a simple proxy for culture. Holding one concept to a relatively simple assessment has likely freed us up to measure the other concept in a more careful, more elaborate, and we hope more innovative way. The challenge now will be to study these dynamic contexts and shifting diagnoses simultaneously.

The last time I paused to seriously consider my research trajectory was when I was preparing for my job talk at Concordia University in 2004. I presented acculturation first, followed by somatization versus psychologization, and did my best to integrate the two by promising future research on the mental health of immigrants in clinical settings. Perhaps I underestimated the difficulties in taking a complex approach to both culture and psychopathology. More than a decade later, I have adopted the same organizational structure, and it should now be clear that a confession is in order: the promised integrative research remains in the future. The difference is that the tools are now available. Figuring out how best to evaluate psychological treatments in context is an important task for cultural-clinical psychology in general—and for my research group in particular as I discuss plans for the upcoming years with my current graduate students.

Conclusion

A commissioned review in *The Lancet* concluded that, "the systematic neglect of culture in health [is] the single biggest barrier to advancement of the highest attainable standard of health worldwide" (Napier et al., 2014, p. 1608). This strong statement has served as a reminder of the importance of both knowledge and application in culture and mental health research. Identifying a particular cultural variation in psychopathology should, on the one hand, point to more refined studies to unpack this variation, to do more than simply catalogue it, to ask the crucial question of "why?" But, on the other hand, once we have reliably identified a cultural variation, we need to also start considering what we ought to do about it.

We have repeatedly confronted both issues: how best to explain and how best to intervene. In collaboration with many colleagues, and in conversation with an even greater number of fellow travelers, we have worked over the past several years to think about how these questions might best be addressed. Along the way we have found that many other people have had similar concerns about how this kind of research was often being done, and, in recent years, they have sought to ameliorate them. In acculturation research, psychometrics are much improved along with a proliferation of longitudinal and social-ecological studies ; in culture and mental health, disciplinary barriers are receding while truly integrative research steadily advances; and, in both cases, there is ever-growing appreciation of the importance of this kind of work, even as the neuroscience revolution proceeds apace. At the risk of overoptimism, there is a sense of riding a wave that is still only starting to build. Looking back over more than two decades, I now realize that the timing could not have been better for my volunteer coordinator to pull the culture card out of the box of opportunities.

References

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of circumplex scales for the Inventory of Interpersonal Problems. *Journal of Personality Assessment, 55*, 521–536.

Arends-Tóth, J., & van de Vijver, F. J. R. (2004). Domains and dimensions in acculturation: Implicit theories of Turkish–Dutch. *International Journal of Intercultural Relations, 28*, 19–35.

Arias-Valenzuela, M., Amiot, C. E., & Ryder, A. G. (2016). Which one to take on? International students' identity acquisition in the hyperdiversity of Montreal. *Canadian Ethnic Studies, 48*, 123–140.

Atran, S. (2001). The trouble with memes. *Human Nature, 12*, 351–381.

Barbee, A. P., & Cunningham, M. R. (1995). An experimental approach to social support communications: Interactive coping in close relationships. *Communication Yearbook, 18*, 381–413.

Barsky, A. J., Saintfort, R., Rogers, M. P., & Borus, J. F. (2002). Nonspecific medication side effects and the nocebo phenomenon. *Journal of the American Medical Association, 287*, 622–627.

Benet-Martínez, V., & Haritatos, J. (2005). Bicultural Identity Integration (BII): Components and psychosocial antecedents. *Journal of Personality, 73*, 1015–1050.

Berry, J. W. (1997). Immigration, acculturation and adaptation. *Applied Psychology: An International Review, 46*, 5–68.

Borgatti, S. P., Mehra, A., Brass, D. J., & Labianca, G. (2009). Network analysis in the social sciences. *Science, 323*, 892–895.

Boski, P. (2008). Five meanings of integration in acculturation research. *International Journal of Intercultural Relations, 32*, 142–153.

Bourhis, R. Y., Moïse, L. C., Perreault, S., & Senécal, S. (1997). Towards an interactive acculturation model: A social psychological approach. *International Journal of Psychology, 32*, 369–386.

Brown, R., & Zagefka, H. (2011). The dynamics of acculturation: An intergroup perspective. *Advances in Experimental Social Psychology, 44*, 129–184.

Chentsova-Dutton, Y. E., & Ryder, A. G. (2019). Cultural-clinical psychology. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (2nd ed.) (pp. 365-396). New York: Guilford.

Chentsova-Dutton, Y. E., Gold, A., Gomes, A., & Ryder, A. G. (2016). *Sadness and weakness in the knees: Examining cultural models of experiencing and reporting emotional distress*. Paper presented at the biennial congress of the International Association for Cross-Cultural Psychology, Nagoya, Japan.

Chentsova-Dutton, Y. E., Ryder, A. G., & Tsai, J. (2014). Understanding depression across cultural contexts. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (3rd ed., pp. 337–354). New York: Guilford.

Chinese Medical Association & Nanjing Medical University. (1995). *Chinese classification of mental disorders, second edition, revised (CCMD-2-R)*. Nanjing: Dong Nan University Press [in Chinese].

Choi, E., Chentsova-Dutton, Y. E., & Parrott, W. G. (2016). The effectiveness of somatization in communicating distress in Korean and American cultural contexts. *Frontiers in Psychology, 7*, 383.

Clark, D. M. (1986). A cognitive approach to panic. *Behaviour Research and Therapy, 24*, 461–470.

Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis, 58*, 7–19.

Clément, R., & Noels, K. A. (1992). Towards a situated approach to ethnolinguistic identity: The effects of status on individuals and groups. *Journal of Language and Social Psychology, 11*, 203–232.

Cutrona, C. E., Suhr, J. A., & MacFarlane, R. (1990). Interpersonal transactions and the psychological sense of support. In S. Duck (Ed.),*Personal relationships and social support* (pp. 30–45). London: Sage.

D'Andrade, R. G. (1981). The cultural part of cognition. *Cognitive Science, 5*, 179–195.

Dere, J., Falk, C. F., & Ryder, A. G. (2012). Unpacking cultural differences in alexithymia: The role of cultural values among Euro-Canadian and Chinese-Canadian students. *Journal of Cross-Cultural Psychology, 43*, 1297–1312.

Dere, J., Sun, J., Zhao, Y., Persson, T. J., Zhu, X., Yao, S., Bagby, R. M., & Ryder, A. G. (2013). Beyond "somatization" and "psychologization": Unpacking depressive presentations in Han Chinese and Euro-Canadian outpatients. *Frontiers in Psychology, 4*, 377–389.

Dere, J., Tang, Q., Zhu, X., Cai, L., Yao, S., & Ryder, A. G. (2013). The cultural shaping of alexithymia: Values and externally-oriented thinking in a Chinese clinical sample. *Comprehensive Psychiatry, 54*, 362–368.

DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology, 23*, 263–287.

Doucerain, M., Segalowitz, N., & Ryder, A. G. (2017). Acculturation measurement: From simple proxies to sophisticated toolkit. In S. Schwartz, & J. Unger (Eds.), *Oxford handbook of acculturation and health* (pp. 97-117). Oxford: Oxford University Press.

Doucerain, M. M., Dere, J., & Ryder, A. G. (2013). Travels in hyper-diversity: Multiculturalism and the contextual assessment of acculturation. *International Journal of Intercultural Relations, 37*, 686–699.

Doucerain, M. M., Deschênes, S. S., Aubé, K., Ryder, A. G., & Gouin, J.-P. (2016). Respiratory Sinus Arrhythmia is prospectively associated with early trajectories of acculturation

ation among new international students. *Journal of Cross-Cultural Psychology, 47*, 421–440.

Doucerain, M. M., Deschênes, S. S., Gouin, J.-P., Amiot, C. E., & Ryder, A. G. (2017). Initial mainstream cultural orientations predict early social participation in the mainstream cultural group. *Personality and Social Psychology Bulletin, 43*, 255–258. Published online ahead of print.

Doucerain, M. M., Shiri Varnaamkhaasti, R. S., Segalowitz, N. S., & Ryder, A. G. (2015). Second language social networks and communication-related acculturative stress: The role of interconnectedness. *Frontiers in Psychology, 6*, 1111.

Goddard, C., & Wierzbicka, A. (2004). Cultural scripts: What are they and what are they good for. *Intercultural Pragmatics, 1*, 153–166.

Granott, N., & Parziale, J. (2002). Microdevelopment: A process-oriented perspective for studying development and learning. In N. Granott & J. Parziale (Eds), *Microdevelopment: Transition processes in development and learning* (pp. 1–28). Cambridge, England: Cambridge University Press.

Greenwald, A. G. (2012). There is nothing so theoretical as a good method. *Perspectives on Psychological Science, 7*, 99–108.

Hacking, I. (1999). *The social construction of what?* Cambridge, MA: Harvard University Press.

Haslam, N., Ban, L., & Kaufmann, L. (2007). Lay conceptions of mental disorder: The folk psychiatry model. *Australian Psychologist, 42*, 129–137.

Hendrickson, B., Rosen, D., & Aune, R. K. (2011). An analysis of friendship networks, social connectedness, homesickness, and satisfaction levels of international students. *International Journal of Intercultural Relations, 35*, 281–295.

Hinton, D. E., Chhean, D., Pich, V., Um, K., Fama, J. M., & Pollack, M. H. (2006). Neck-focused panic attacks among Cambodian refugees: A logistic and linear regression analysis. *Journal of Anxiety Disorders, 20*, 119–138.

Insel, T. R., & Quirion, R. (2005). Psychiatry as a clinical neuroscience discipline. *Journal of the American Medical Association, 294*, 2221–2224.

Jurcik, T., Ahmed, R., Yakobov, E., Solopieva-Jurcikova, I., & Ryder, A. G. (2013). Understanding the role of the ethnic density effect: Issues of acculturation, discrimination and social support. *Journal of Community Psychology, 41*, 662–678.

Jurcik, T., Chentsova-Dutton, Y. E. Solopieieva-Jurcikova, I., & Ryder, A. G. (2013). Russians in treatment: The evidence base supporting cultural adaptations. *Journal of Clinical Psychology, 69*, 774–791.

Jurcik, T., Yakobov, E., Ahmed, R., Sopieieva-Jurcikova, I., Sunohara, M., & Ryder, A. G. (2014). Social ecology and the recontextualization of acculturation: Exploring the psychological role of ethnic density. In J. Merton (Ed.), *Acculturation: Psychology, processes, and global perspectives* (pp. 87–114). Hauppauge, NY: Nova Science.

Jurcik, T., Yakobov, E., Solopieieva-Jurcikova, I., Ahmed, R., Sunohara, M., & Ryder, A. G. (2015). Unraveling ethnic density effects, acculturation, and adjustment: The case of Russian-speaking immigrants from the former Soviet Union. *Journal of Community Psychology, 43*, 628–648.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The Day Reconstruction Method. *Science, 306*, 1776–1780.

Kashima, Y. (2000). Conceptions of culture and person for psychology. *Journal of Cross-Cultural Psychology, 31*, 14–32.

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford.

Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist, 63*, 518–526.

Kim, H. S., Sherman, D. K., Sasaki, J. Y., Xu, J., Chu, T. Q., Ryu, C., . . . Taylor, S. E. (2010). Culture, distress and oxytocin receptor polymorphism (OXTR) interact to influence emotional support seeking. *Proceedings of the National Academy of Sciences, 107*, 15717–15721.

Kim, M. S., Shin, H. C., & Cai, D. (1998). Cultural influences on the preferred forms of requesting and re-requesting. *Communications Monographs, 65*, 47–66.

Kirmayer, L. J. (1987). Languages of suffering and healing: Alexithymia as a social and cultural process. *Transcultural Psychiatric Research Review, 24*, 119–136.

Kirmayer, L. J. (2013). Embracing uncertainty as a path to competence: Cultural safety, empathy, and alterity in clinical training. *Culture, Medicine and Psychiatry, 37*, 365–372.

Kirmayer, L. J., Narasiyah, L., Munoz, M., Rashid, M., Ryder, A. G., Guzder, J., Hassan, G., Rousseau, C., & Pottie, K. (2011). Common mental health problems in immigrants and refugees: General approach to the patient in primary care. *Canadian Medical Association Journal, 183*, 959–967.

Kirmayer, L. J., & Sartorius, N. (2007). Cultural models and somatic syndromes. *Psychosomatic Medicine, 69*, 832–840.

Kleinman, A. (1977). Depression, somatization and the "new cross-cultural psychiatry." *Social Science & Medicine, 11*, 3–9.

Kleinman, A. (1982). Neurasthenia and depression: A study of somatization and culture in China. *Culture, Medicine and Psychiatry, 6*, 117–190.

Kleinman, A. (1986). *Social origins of distress and disease: Depression, neurasthenia, and pain in modern China*. New Haven, CT: Yale University Press.

Kleinman, A. (1988). *Rethinking psychiatry: From cultural category to personal experience*. New York: Basic Books.

Kleinman, A., & Kleinman, J. (1995). Remembering the

cultural revolution: Alienating pains and the pain of alienation/transformation. In T.-Y. Lin, W. S. Tseng, & E. K. Yeh (Eds.), *Chinese societies and mental health* (pp. 141–155). Hong Kong: Oxford University Press.

Kohrt, B. A. (2005). "Somatization" and "comorbidity": A study of jhum-jhum and depression in rural Nepal. *Ethos, 33*, 125–147.

Lahey, B. (2009). Public health significance of neuroticism. *American Psychologist, 64*, 241–256.

Lechuga, J. (2008). Is acculturation a dynamic construct? The influence of method of priming culture on acculturation. *Hispanic Journal of Behavioral Sciences, 30*, 324–339.

Lee, A. Y., Aaker, J. L., & Gardner, W. L. (2000). The pleasures and pains of distinct self-construals: the role of interdependence in regulatory focus. *Journal of Personality and Social Psychology, 78*, 1122–1134.

Link, B. G., & Phelan, J. C. (1999). The labeling theory of mental disorder (II): The consequences of labeling. In T. L. Scheid & T. N. Brown (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (pp. 361–376). Cambridge: Cambridge University Press.

Lv, X., & Wang, X. (2012). Image thinking: The cultural-psychological underpinning of Chinese patients' somatic propensity [in Chinese]. *Acta Psychologica Sinica, 44*, 276–284.

MacIntyre, P. D., Dörnyei, Z., Clément, R., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *Modern Language Journal, 82*, 545–562.

Mähönen, T. A., & Jasinskaja-Lahti, I. (2013). Acculturation expectations and experiences as predictors of ethnic migrants' psychological well-being. *Journal of Cross-Cultural Psychology, 44*, 786–806.

Meuter, R. F. I., Gallois, C., Segalowitz, N., Ryder, A. G., & Hocking, J. (2015). Overcoming language barriers in healthcare: A protocol for investigating safe and effective communication when patients or clinicians use a second language. *BMC Health Services Research, 15*, 371.

Mojaverian, T., & Kim, H. S. (2013). Interpreting a helping hand: Cultural variation in the effectiveness of solicited and unsolicited social support. *Personality and Social Psychology Bulletin, 39*, 88–99.

Napier, A. D., Ancarno, C., Butler, B., Calabrese, J., Chater, A., Chatterjee, H., . . . Woolf, K. (2014). Culture and health. *Lancet, 384*, 1607–1639.

Nguyen, A. M. D., & Benet-Martínez, V. (2013). Biculturalism and adjustment: A meta-analysis. *Journal of Cross-Cultural Psychology, 44*, 122–159.

Norasakkunkit, V., & Uchida, Y. (2014). To conform or to maintain self-consistency? Hikikomori risk in Japan and the deviation from seeking harmony. *Journal of Social and Clinical Psychology, 33*, 918–935.

Ono, Y., Yoshimura, K., Yamauchi, K., Asai, M., Young, J., Fujuhara, S., & Kitamura, T. (2001). Taijin kyofusho in a Japanese community population. *Transcultural Psychiatry, 38*, 506–514.

Patel, V., & Prince, M. (2010). Global mental health: A new global health field comes of age. *Journal of the American Medical Association, 303*, 1976–1977.

Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). "A disease like any other"? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *American Journal of Psychiatry, 167*, 1321–1330.

Peterson, J. B. (1999). *Maps of meaning: The architecture of belief*. New York: Psychology Press.

Plaut, V. C., Markus, H. R., Treadway, J. R., & Fu, A. S. (2012). The cultural construction of self and well-being: A tale of two cities. *Personality and Social Psychology Bulletin, 38*, 1644–1658.

Pontari, B. A. (2009). Appearing socially competent: The effects of a friend's presence on the socially anxious. *Personality and Social Psychology Bulletin, 35*, 283–294.

Porges, S. W. (2007). The polyvagal perspective. *Biological Psychology, 74*, 116–143.

Rector, N. A., Kocovski, N. L., & Ryder, A. G. (2006). Social anxiety and the fear of causing discomfort to others. *Cognitive Therapy and Research, 30*, 279–296.

Ryder, A. G. (2008). *The "trait-like" approach to acculturation measurement: A (self-) critique*. Paper presented at the 19th congress of the International Association for Cross-Cultural Psychology, Bremen, Germany.

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79*, 49–65.

Ryder, A. G., Alden, L. E., Paulhus, D. L., & Dere, J. (2013). Does acculturation predict interpersonal adjustment? It depends on who you talk to. *International Journal of Intercultural Relations, 37*, 502–506.

Ryder, A. G., Ban, L. M., & Chentsova-Dutton, Y. E. (2011). Towards a cultural-clinical psychology. *Social and Personality Psychology Compass, 5*, 960–975.

Ryder, A. G., Bean, G., & Dion, K. L. (2000). Caregiver responses to symptoms of first-onset psychosis: A comparative study of Chinese- and Euro-Canadian families. *Transcultural Psychiatry, 37*, 225–236.

Ryder, A. G., & Chentsova-Dutton, Y. E. (2012). Depression in cultural context: "Chinese somatization," revisited. *Psychiatric Clinics of North America, 35*, 15–36.

Ryder, A. G., & Chentsova-Dutton, Y. E. (2014a). Teaching and learning guide: Towards a cultural-clinical psychology. *Social and Personality Psychology Compass, 8*, 287–296.

Ryder, A. G., & Chentsova-Dutton, Y. E. (2014b).

Cultural-clinical psychology: Introduction to the special issue. *Journal of Social and Clinical Psychology, 33*, 847–852.

Ryder, A. G., & Chentsova-Dutton, Y. E. (2015). Cultural-clinical psychology: From cultural scripts to contextualized treatments. In L. J. Kirmayer, R. Lemelson, & C. A. Cummings (Eds.), *Revisioning psychiatry: Cultural phenomenology, critical neuroscience, and global mental health* (pp. 400–433). Cambridge: Cambridge University Press.

Ryder, A. G., & Chentsova-Dutton, Y. E. (2017). *From field to lab to clinic: Introduction to research and practice in cultural-clinical psychology*. Workshop delivered to the Department of Psychology, University of Zurich.

Ryder, A. G., & Dere, J. (2010a). Review: Cambridge handbook of acculturation psychology. *Journal of Cross-Cultural Psychology, 41*, 278–283.

Ryder, A. G., & Dere, J. (2010b). Canadian diversity and clinical psychology: Defining and transcending "cultural competence." *CAP Monitor, 35*, 1 & 6–13.

Ryder, A. G., & Dere, J. (2017). *Cultural-clinical psychology: Reconciling cultural competence with evidence-based practice*. Workshop delivered at the annual conference of the Canadian Association of Cognitive and Behavioural Therapies, Ottawa, ON.

Ryder, A. G., Dere, J., Sun, J., & Chentsova-Dutton, Y. E. (2014). The cultural shaping of personality disorder. In F. T. L. Leong, L. Comas-Diaz, G. C. N. Hall, V. McLloyd, & J. Trimble (Eds.), *APA handbook of multicultural psychology*. Washington, DC: American Psychological Association.

Ryder, A. G., Doucerain, M., Zhou, B., Jurcik, T., & Amiot, C. E. (2020). *What comes first, acculturation or adjustment?* A longitudinal investigation. Manuscript under review.

Ryder, A. G., Sun, J., Dere, J., & Fung, K. (2014). Personality disorders in Asians: Summary, and a call for cultural research. *Asian Journal of Psychiatry, 7*, 86–88.

Ryder, A. G., Sunohara, M., & Kirmayer, L. J. (2015). Culture and personality disorder: From a fragmented literature to a contextually-grounded alternative. *Current Opinion in Psychiatry, 28*, 40–45.

Ryder, A. G., Yang, J.Dere, J., DereYang, J., & Fung, K. (2012). Personality and personality disorders in Asia. In E. C. Chang (Ed.), *Handbook of adult psychopathology for Asian* (pp. 357–390). New York: Oxford University Press.

Ryder, A. G., Yang, J., & Heine, S. J. (2002). Somatization vs. psychologization of emotional distress: A paradigmatic example for cultural psychopathology. *Online Readings in Psychology and Culture, 10*, 2. doi:10.9707/2307-0919.1080.

Ryder, A. G., Yang, J., Zhu, X., Yao, S., Yi, J., Heine, S. J., & Bagby, R. M. (2008). The cultural shaping of depression: Somatic symptoms in China, psychological symptoms in North America? *Journal of Abnormal Psychology, 117*, 300–313.

Schank, R. C., & Abelson, R. P. (1977). *Scripts, plans, goals, and understanding: An inquiry into human knowledge structures*. Hillsdale, NJ: Lawrence Erlbaum.

Segalowitz, N. S., Doucerain, M. M., Meuter, R. F. I., Zhao, Y., Hocking, J., & Ryder, A. G. (2016). Comprehending adverbs of doubt and certainty in health communication: A multidimensional scaling approach. *Frontiers in Psychology, 7*, 558.

Shweder, R. A. (1991). *Thinking through cultures: Expeditions in cultural psychology*. Cambridge, MA: Harvard University Press.

Sifneos, P. E. (1973). The prevalence of "alexithymic" characteristics in psychosomatic patients. *Psychotherapy and Psychosomatics, 22*, 255–262.

Smith, P. B., Harb, C., Lonner, W. J., & van de Vijver, F. J. (2001). The journal of cross-cultural psychology between 1993 and 2000: Looking back and looking ahead. *Journal of Cross-Cultural Psychology, 32*, 9–17.

Sperber, D., & Hirschfeld, L. A. (2004). The cognitive foundations of cultural stability and diversity. *Trends in Cognitive Sciences, 8*, 40–46.

Sugimoto, Y. (2009). *The Cambridge companion to modern Japanese culture*. Cambridge: Cambridge University Press.

Suhr, J. A., Cutrona, C. E., Krebs, K. K., & Jensen, S. L. (2004). The social support behavior code. In P. K. Kerig & D. Baucom (Eds.), *Couple observational coding systems* (p. 311–318). Mahwah, NJ: Erlbaum.

Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An initial report. *Educational and psychological measurement, 47*, 401–407.

Summerfield, D. (2012). Afterward: Against "global mental health." *Transcultural Psychiatry, 49*, 519–530.

Sun, J., & Ryder, A. G. (2016). The Chinese experience of rapid modernization: Sociocultural changes, psychological consequences. *Frontiers in Psychology, 7*, 477.

Swartz, L. (2012). An unruly coming of age: The benefits of discomfort for global mental health. *Transcultural Psychiatry, 49*, 531–538.

Takahashi, T. (1989). Social phobia syndrome in Japan. *Comprehensive Psychiatry, 30*, 45–52.

Tardif-Williams, C. Y., & Fisher, L. (2009). Clarifying the link between acculturation experiences and parent-child relationships among families in cultural transition: The promise of contemporary critiques of acculturation psychology.*International Journal of Intercultural Relations, 33*, 150–161.

Tartakovsky, E. (2009). Cultural identities of adolescent immigrants: A three-year longitudinal study including the pre-migration period. *Journal of Youth and Adolescence, 38*, 654–671.

Taylor, G. J., Bagby, R. M., & Parker, J. D. (2003). The

20-Item Toronto Alexithymia Scale: IV. Reliability and factorial validity in different languages and cultures. *Journal of Psychosomatic Research, 55*, 277–283.

Tsai, J. L., Simeonova, D. I., & Watanabe, J. T. (2004). Somatic and social: Chinese Americans talk about emotion. *Personality and Social Psychology Bulletin, 30*, 1226–1238.

Trickett, E., Persky, I., & Espino, S. (2009). Acculturation research: Proxies as sources of concept obfuscation. In A. Gari & K. Mylonas (Eds), *Quod Erat Demostrandum: From Herodotus' ethnographic journeys to cross-cultural research* (pp. 267–277). Athens, Greece: International Association for Cross-Cultural Psychology.

Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and Racial Studies, 30*, 102–1054.

Vygotsky, L. (1978). *Mind in society: The development of higher mental processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of Cross-Cultural Psychology, 30*, 422–442.

Whitley, R., Prince, M., McKenzie, K., & Stewart, R. (2006). Exploring the ethnic density effect: A qualitative study of a London electoral ward. *International Journal of Social Psychiatry, 52*, 376–391.

Yen, S., Robins, C. J., & Lin, N. (2000). A cross-cultural comparison of depressive symptom manifestation: China and the United States. *Journal of Consulting and Clinical Psychology, 68*, 993–999.

Zhou, B., Heather, D., DiCesare, A., & Ryder, A. G. (2017). Ask and you might receive: The Actor-Partner Interdependence Model approach to estimating cultural and gender variations in social support. *European Journal of Social Psychology, 47*, 412–428.

Zhou, B., Lacroix, F., Sasaki, J., Peng, Y., Wang, X., & Ryder, A. G. (2014). Unpacking cultural variations in social anxiety and the offensive-type of Taijin Kyofusho through the indirect effects of intolerance of uncertainty and self-construals. *Journal of Cross-Cultural Psychology, 45*, 1561–1578.

Zhou, X., Dere, J., Zhu, X., Yao, S., Chentsova-Dutton, Y. E., & Ryder, A. G. (2011). Anxiety symptom presentations in Han Chinese and Euro-Canadian outpatients: Is distress always somatized in China? *Journal of Affective Disorders, 135*, 111–114.

Zhou, X., Min, S., Sun, J., Kim, S. J., Ahn, J.-S., Peng, Y., Noh, S., & Ryder, A. G. (2015). Extending a structural model of somatization to South Koreans: Cultural values, somatization tendency, and the presentation of depressive symptoms. *Journal of Affective Disorders, 176*, 151–154.

Zhou, X., Peng, Y., Zhu, X., Yao, S., Dere, J., Chentsova-Dutton, Y. E., & Ryder, A. G. (2016). From culture to symptom: Testing a structural model of "Chinese somatization." *Transcultural Psychiatry, 53*, 3–23.

Zhu, X., Yao, S., Dere, J., Zhou, B., Yang, J., & Ryder, A. G. (2014). The cultural shaping of social anxiety: Concerns about causing distress to others in Han Chinese and Euro-Canadian outpatients. *Journal of Social and Clinical Psychology, 33*, 906–917.