

# Universal and culture-specific patterns of tightness-looseness across the 31 Chinese provinces

Michele J. Gelfand<sup>a,1</sup>

Psychology of late is witnessing a cultural revolution. Once a science that was criticized as largely culture blind (research being devoid of any focus on culture) and culture bound (testing the majority of theories on Western, educated, industrialized, rich, and democratic, or WEIRD, samples) (1), culture is now becoming central in diverse areas, including neuroscience, cognitive science, clinical and developmental psychology, social and organizational behavior, and related disciplines (2). Increasingly, research has also begun to move beyond merely accounting for variation across national cultures to understanding cultural variation within nations (3, 4). An exciting question is whether we can find any homology of cultural processes across these levels of analyses while also illuminating distinct patterns that arise in different cultural contexts (5). The study in PNAS by Chua et al. (6) represents a massive effort toward these important scientific goals in the unique context of China.

With its 1.4 billion people—one-fifth of the world's population—spread across 9.6 million square kilometers, 56 groups, and 31 provinces (7), China is a fascinating context to examine culture theories that have been developed in the West. China is undergoing rapid cultural change and is already an economic superpower that will shape global trade and issues of war and peace for years to come. However, while there are many economic, political, and technological

analyses of the country, with some exceptions (e.g., ref. 8), there has been little attention given to emerging cultural dynamics within China, an important void that Chua et al. (6) begin to fill.

The study by Chua et al. (6) is the first of its kind to investigate cultural variation in the strength of social norms, or tightness-looseness (TL), across the 31 Chinese provinces. Research has illuminated important differences in cultures that are tight (i.e., those that have strict rules and punishments for deviance) from cultures that are loose (i.e., those that have weaker rules and are more permissive). Of particular interest are the factors that cause the evolution of tightness and its multilevel consequences. One such framework is shown in Fig. 1 (9), which illustrates how the strength of social norms is adaptive to different ecological, historical, and political conditions, which in turn, affects the psychological processes that are adaptive in such contexts.

As illustrated in Fig. 1, differences in TL are theorized to reflect varying degrees of historical and ecological threat. Groups with more natural disasters, higher disease prevalence, fewer natural resources, and greater numbers of territorial invasions develop stronger norms and sanctions to coordinate to survive such threats. By contrast, groups that have fewer ecological and human-made threats can afford to have weaker norms and permissiveness, given that they have less need for coordinated social action. Fig. 1 also shows that the strength of norms is further reflected and promoted through broad versus narrow socialization in societal institutions—including the government, legal system, media, schools, and religion (10), as well as in everyday situations (11)—that dictate the range of tolerable behavior. In turn, at the individual level, people exposed to strong norms have higher felt accountability (12) (i.e., they feel compelled to obey and conform to normative expectations lest they face punishment) and, accordingly, tend to have greater self-monitoring and conscientiousness, lower openness, stronger self-regulation, and higher need for structure, all of which are adaptive to contexts of higher threat.

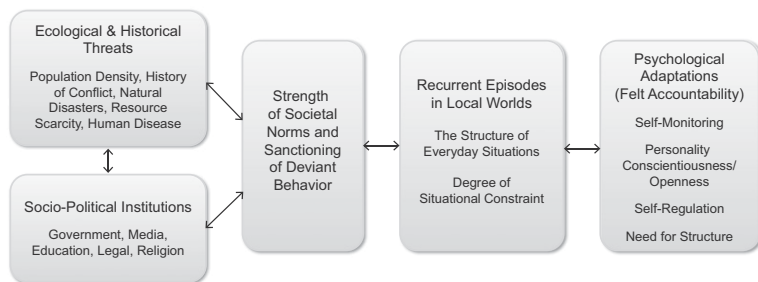


Fig. 1. Multilevel theory of TL. Reprinted from ref. 9 with permission from AAAS.

<sup>a</sup>Department of Psychology, University of Maryland, College Park, MD 20742

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<sup>1</sup>Email: mjgelfand@gmail.com.

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This framework was first shown to explain national variation in TL (9) and, later, to account for differences within the US states and social classes (5). Similar to the national level, state-level tightness in the United States is positively related to greater ecological and historical threat (4). Tight states have higher death rates due to natural disasters, greater food insecurity, and more disease prevalence. Tight states have more law enforcement per capita, desire greater media restriction and endorse the use of any force necessary to maintain law and order, and display a more black-and-white sense of morality. Tight states have higher conscientiousness (a personality trait that has been associated with greater impulse control, cautiousness, self-discipline, and desire for orderliness). Looser states, in contrast, have higher openness (a personality trait associated with nontraditional values and beliefs, breadth of experience, tolerance of other cultures, and a preference for originality). Tight states have greater social organization (e.g., lower mobility, less divorce) and greater self-control (e.g., less drug and alcohol abuse), while loose states have less discrimination and higher creativity (e.g., more utility patents and artists per capita).

Chua et al. (6) build on this research and present the first exploration of TL variation within China. Their research is notable for a number of reasons. First, the study is extremely ambitious in terms of its scope, including over 11,000 individuals across 31 provinces, with variables that span multiple levels of analysis. The authors also expand the theory of TL in novel directions. For example, they test the link between TL and incremental or radical innovation, both at the province level and individual level, and explore how the unique geographical and political context of China relates to TL differences across the provinces (e.g., distance of Beijing to the province, length of visits from China's president, historic occupation by the Japanese). Moreover, they seek to replicate results across different time frames and attend to numerous methodological concerns in cross-cultural research (e.g., issues of aggregation, reliability, translation, and back translation).

The results are fascinating. Despite vast differences in the history, ecology, culture, language, and government across the United States and China, Chua et al. (6) find some notable similarities in patterns of TL variation. Provincial-level tightness is associated with numerous measures of threat, including the extent to which a province was destroyed and occupied by the Japanese during World War II, whether a province is located on a national border, number of environmental emergencies, incidence of communicable diseases, and amount of pollution. As in Fig. 1, socio-political variables predict provincial tightness, including stronger governmental controls (government employees per capita and local laws) and religious presence—both of which restrict the range of behavior. Estimates also show that surveillance is rampant in many of the tight provinces, including Guangdong, Zhejiang, Shandong, Shanghai, and Beijing (13, 14), which tend to have many migrants. Being monitored—by god, government, or people—makes individuals more rule abiding (15). Provincial tightness is also related to behavioral constraints in everyday situations (9) and to personality differences, including self-monitoring, conscientiousness, and openness (4, 9). Extending previous research (4, 16), loose provinces have higher rates of radical innovation, whereas tight provinces have higher rates of incremental innovation. The focus on incremental innovation in tight cultures echoes the Chinese philosophy, advocated decades ago by Deng Xiaoping, that one must “cross the river by feeling the stones”; in other words, be cautious when testing out new ideas (17).

Chua et al. (6) also present findings on TL variation based on the unique Chinese context. For example, they find that population density

is related to provincial tightness, consistent with national-level research on TL (9). In contrast, population density in the 50 US states is unrelated to tightness, which may reflect a restriction of range of density in this context. While urbanization predicts tightness in China, the percentage of rural areas predicts tightness in the United States (4). Differences in monitoring may partially explain these different patterns. In the United States, rural areas have more informal monitoring, whereas cities have more anonymity and latitude. By contrast, Chinese urban areas have high levels of monitoring, whereas looser provinces tend to be less densely populated and are geographically far from the “eyes” of the central government. More generally, these findings suggest that there is no “universal” culture developing as countries urbanize. Effects, as we have seen, are unique to particular national contexts.

### The study by Chua et al. is the first of its kind to investigate cultural variation in the strength of social norms, or tightness-looseness (TL), across the 31 Chinese provinces.

Intriguingly, Chua et al. (6) find that tight provinces have higher happiness and economic growth. Research has indeed shown that tight cultures, such as Singapore and Japan, can be both wealthy and happy (18). This may reflect a “cultural match,” wherein people are happier when they conform to the dominant cultural views. Since China is generally tight, tight provinces may be happier. Since America is loose, loose states may be happier. However, other unique dynamics may be at work in China. The government appears to be loosening economic norms in the highly densely populated urbanized coastal areas and special economic zones—giving businesses unprecedented freedom from the central government—while simultaneously tightening social controls in these very areas, ostensibly to keep order where there could be chaos. This tight-loose combination of high constraint and monitoring, yet also high levels of economic freedom, is a unique cultural pattern that may contribute in part to higher levels of well-being in the tight Chinese provinces.

Of course, many questions about TL variation in China await future research, and caution should be used when interpreting some results. For example, the effects of TL across China are comparatively small, with TL only explaining 4% of the variance across provinces. Although China is large and diverse, the top-down control of the government and strong Confucian culture may restrict the range of cultural differences. More complex path modeling linking threat, urbanization, provincial-level gross domestic product, government controls, and TL would be useful, as would more attention to the longitudinal structure of the data. Additional indicators of tolerance (e.g., measures of cultural superiority, attitudes toward foreigners and stigmatized groups) are needed to see if the lesbian, gay, bisexual, and transgender findings generalize, particularly given that tight provinces have lower personality openness. And while the happiness findings are intriguing, they should be placed in the broader context that China ranks as one of the lowest countries worldwide in happiness and that even relatively higher ratings may be heavily influenced by government narratives on what constitutes happiness—namely, loyalty to the “great family of the Chinese nation” (19).

More generally, Chua et al. (6) illustrate the importance of looking for universal patterns in the antecedents and consequences of TL while also paying attention to unique patterns that arise in different national contexts. The work also highlights the need to understand the different mechanisms of TL across cultures. TL is arguably more top-down in autocratic contexts, which enforces monitoring and control, yet more bottom-up in democratic contexts, in which founding

conditions (e.g., the types of people who settled in certain areas) play an important role in differences in the strength of social norms (see ref. 15). It also invites research that looks at how TL is manifest in

different domains of life (e.g., economic, social, political). And as China continues to undergo rapid cultural change and urbanization, it will be fascinating to look at TL dynamics in the coming decades.

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