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# Social psychology of climate change in the Asian context: Introduction to special issue

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Climate change is one of the biggest challenges facing many countries in the Asia Pacific. Asia as a whole is a primary contributor to carbon emissions. According to the BP Statistical Review of World Energy 2020, the Asia Pacific region alone accounts for more than half of the world's total greenhouse gas emissions. This represents an increase in consumption of oil, gas, and coal in Asia Pacific from 44.5% in 2009 to 50.5% in 2019. According to the review, compared to the rest of the world, Asia Pacific had the highest growth rate (2.7%) of carbon emissions between 2008 and 2018 (North America: −0.8%, South and Central America: 1.1%, Europe: −1.5%, Commonwealth of Independent States (CIS): 0.5%, Middle East: 2.6%, Africa: 2.0%). Based on multiple data sources (CAIT Climate Data Explorer by World Resources Institute, 2020), 4 of the top-10 countries with the most greenhouse gas emissions are Asian, which include China (1st), India (3rd), Indonesia (5th), and Japan (7th). In view of the impending threat of anthropogenic climate change in the Asian regions, the role of Asian social psychology in offering insights on the reactions to and impacts of climate change cannot be understated. The current special issue represents one important attempt to bring together research that sets out to enrich the social psychological understanding of climate change.

The profound impacts on climate change posed by many Asian countries can be traced back to their rapid population and economic growth in the past decades. Of the top-10 most populous countries, 5 of them are in Asia (China, India, Indonesia, Pakistan, and Bangladesh) (U.S. Census Bureau, 2020). Research has shown that growth in consumer products and the consumption of these products as a result of population growth and urbanisation has driven an increase in greenhouse gas emissions (Satterthwaite, 2009). Therefore, it is evident that the fast population growth in Asian countries has important implications on the volume of carbon emissions.

Considering global economic growth, GDP of China and that of Japan have contributed the most to the world's economic pie after the United States in 2019 (World Bank, 2020). Whereas economic globalisation promotes trade liberation, market integration, and efficient transport and communication costs, the intensive economic activities also result in irreversible environmental impacts (Donaghy, 2012; Ehrenfeld, 2005; Mani & Wheeler, 1998). Researchers have examined the double exposure to the impacts of economic globalisation and climate change (O'Brien & Leichenko, 2000). A relevant example is the Belt and Road Initiative (BRI) led by China since 2013. The initiative is a global infrastructure development project supported by long-term strategies to boost regional connectivity and international trade. However, the many projects and investments under the BRI have raised concerns about potentially accelerating threats to the environment (Ascensão et al., 2018). The environmental community has warned that there may be permanent environmental degradation brought about by BRI's large-scale infrastructure development and resource extraction. The cascading environmental impacts on water and land use, wildlife habitat, deforestation, global warming, and greenhouse gas emissions are believed to be tremendous.

Indeed, some of the adverse environmental impacts recently have become apparent in Asian countries. According to the Global Climate Risk Index 2020, many Asian countries are highly vulnerable to climate risks (Eckstein et al., 2019). Among the 10 countries most affected by extreme weather events (e.g., hurricane, cyclone, typhoon, drought, heatwaves, flood) in the past 2 decades, 7 were Asian countries: Myanmar, Philippines, Pakistan, Vietnam, Bangladesh, Thailand, and Nepal. Extreme climate-related hazards have threatened human lives and led to substantial economic loss. For example, Southeast India has recorded a historical high of 51 °C in May 2016 due to persistent heatwaves in South Asia, causing nearly 2,000 people to die of hyperthermia or dehydration. Taipei experienced six strong typhoons in 2016, bringing severe agricultural loss and landslide hazards. In

2018, Japan was hit by three extreme weather events, including torrential rainfalls in early July, severe heatwaves in mid-July to the end of August, and a tropical cyclone in September.

According to the Intergovernmental Panel on Climate Change, human activities have warmed the world since pre-industrial times. In response to imminent climate challenges, 195 nations have joined forces to endorse the Paris Agreement that charts economic and social transformations to limit global temperature rise to 1.5 °C. To stabilise global temperature, "net" carbon emissions have to be lowered to zero. Substantial reductions in carbon emissions can only occur if governments introduce effective policies (Baranzini et al., 2017). Unfortunately, even with the Paris Agreement in place, existing initiatives and policies by most governments are still largely insufficient (Climate Action Tracker, 2020). Additionally, at the individual level, people have not adequately taken protective measures from the dire impacts of climate-related hazards or engaged in actions to mitigate or adapt to climate change (Basolo et al., 2008). For example, one study found that in the United Kingdom, about half of the households that face significant risk of flooding have not taken flood safety measures to protect themselves and their property from flood hazards (Bichard & Kazmierczak, 2012). In light of these challenges posed by climate change, we called for this special issue to better understand climate change from a sociocultural psychological lens.

Articles in the Special Issue

To the credit of scholars in the field, a number of works have already demonstrated the timeliness and relevance of applying social psychological concepts and theories to understanding climate change. These works include, but are not limited to, the APA task force led by Janet Swim in the American Psychologist in 2011, the works by Susan Clayton in Nature Climate Change and the American Psychologist in 2015, and the special issue on social psychology and climate change in the European Journal of Social Psychology in 2014. However, in general, Asian populations and societies are largely underrepresented in related works (see the review by Tam et al., 2021; Tam & Milfont, 2020).

It is in this context that we edited the current special issue on the social psychology of climate change in Asia. There are in total eight articles in this special issue. We envision this special issue to achieve three goals. First, we seek to stimulate interest among social psychologists and other social scientists in climate change-related phenomena, particularly in the Asian context. Second, we hope that the selected empirical articles in this special issue will enrich understanding of climate change by illustrating the relevance and timeliness of concepts and theories in social psychology and also cultural psychology. Third, we set out to introduce to the global audience the scholarly contributions by Asian social psychologists in adding new knowledge to understanding climate change and how to better motivate mitigative and adaptive behaviours.

The special issue begins with a systematic review by Tam et al. (2021). Based on a sample of 130 studies on climate change or global warming published in social psychological journals, these authors observe that although social psychologists have produced an impressive canon of research on the topic, the gaps in this literature should not be overlooked. These gaps mainly concern weak presence of authors and data from non-Western, developing, and nondemocratic societies, lack of cross-cultural comparisons, reliance on young and Amazon MTurk samples, lack of attention to some crucial outcome variables (e.g., adaptation behaviour), and overemphasis on intrapersonal and intrapsychic processes. Tam et al. (2021) offer some recommendations as to how these gaps can be bridged.

People's reactions to climate change should involve important social psychological processes at both the intrapersonal and interpersonal levels. To understand the psychological functions of morality within individuals, Leviston and Walker (2021) sampled Australian residents in two nationally representative surveys. Their findings showed that moral disengagement is able to explain why skepticism about climate change, denial of personal efficacy, and perceived lack of responsibility reduces engagement in pro-environmental behaviours. Importantly, moral disengagement is also

associated with less guilt responses toward climate change. Another relevant intrapersonal variable that drives environmental concerns is educational attainment (Olivos et al., 2021). Based on nationally representative interview data of household members in China, it is evident that educational attainment can robustly cause higher environmental concerns in the country.

Utilising national surveys on Australian respondents, Kashima et al. (2021) examined another intrapersonal psychological process—individuals' environmental identity—that motivates their personal striving toward Low carbon readiness (LCR); that is, the willingness to reduce carbon emissions and to lead a low carbon lifestyle. Specifically, the research enriched the study of people's low carbon identity by studying how LCR is embedded in social situations. Supporting a nested structure of social contexts, findings suggest that social environments can trickle down their impact on encouraging LCR from the macro society level via exerting societal influence or norms, to the meso community level via offering social capital to the micro household level via behavioural monitoring.

Echoing the important role of social contexts, Chan and Tam (2021) employed a person–context interaction approach to interpret the relationship between individuals' climate change concern and mitigative behaviours. Analysing data from two large-scale international surveys, results showed support for the hypothesised self-expression effect, with the climate change concern–mitigative behaviour relationship being strengthened in societies with higher levels of self-expression affordance. Therefore, sociocultural milieus that encourage agentic self-expression, such as those characterised by weaker disease threat, higher economic growth, higher governance quality, and stronger individualism, are more likely to also afford opportunities for people to express their climate change concern through engagement in mitigative behaviours.

Beyond studying intrapersonal processes and recognising the contextual influence on these intrapersonal processes, interpersonal and social structural processes also play an important role in further understanding reactions to climate change and engagement in climate actions. Earlier research has found that people's position toward supporting group-based social hierarchies and dominance negatively predicts pro-environmental attitude and behaviours (Milfont et al., 2013, 2018). In a cross-cultural analysis comparing Hong Kong, New Zealand, and Swedish participants, Jylhä et al. (2021) found interesting cultural differences in the way social dominance orientation and acceptance of human dominance over nature and animals predict climate change denial.

Understanding climate change inevitably concerns understanding the human–nature relationship. Applying a qualitative approach based on 34 interviews with residents in rural villages of Southern Bihar, India, Kumar et al.'s (2021) in-depth investigation discovered that the changing climate led to solastalgia, a lived experience of psychological distress, discomfort, and disconnectedness as a result of environmental transformations, among the rural residents. The uncertainties and stress that arise from forced discontinuation of farming activities, cultural practices, and religious customs have brought about downstream adverse impacts on the residents' psychological well-being and mental health.

People's view of their connection to humanity also has important implications for how they interpret the human–nature relationship. By recruiting an American sample, Pong (2021) studied the environmental benefit of assuming a superordinate social identity—Identification with All Humanity (IWAH), an identity orientation to see all members of the human family as one's ingroup and embrace humanity with genuine care and concern. Findings confirmed that participants with higher levels of IWAH showed higher behavioural intentions to mitigate the impacts of food waste whereas delivering a message aiming to raise food waste awareness either with a local or global frame did not interact with IWAH.

Concluding Remarks

The eight articles in this special issue present an important stride toward incorporating social psychology to enrich understanding of climate change in the Asian Pacific context. The perspectives illustrated in the articles are diverse in scope and focus, ranging from intrapersonal processes to interpersonal and group-based dynamics. Of import, the research demonstrates the profound role played by sociocultural context and its interaction with individuals within the context in impacting perceptions of and reactions toward climate change. Utilising diverse research designs, such as national representative surveys, interviews, and experimental studies, the research benefits from the rich methodological toolkit in social psychology to understand climate-related phenomena in different Asian Pacific societies (e.g., Australia, China, Hong Kong, India) as well as beyond Asia (over 60 countries from international surveys in Chan & Tam, 2021). We have high hopes that this special issue will serve as an idea exchange platform to stimulate further discussion and research on the social psychological science of climate change in Asian societies and beyond.

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