



# Complexity in Environmental Sustainability Policy from a Semiotic Cultural Political Psychology Perspective

Glen D. Rutherford<sup>1</sup>

Accepted: 13 May 2023 / Published online: 20 May 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

## Abstract

From a cultural political psychology perspective, Carriere (2022) emphasises the role of the individual and their meaning-making processes in the psychology of policy and politics (including the role of values and power dynamics). I propose a ‘complex’ *semiotic cultural political psychology (SCPP) framework* that reflects on and extends Carriere (2022). My complexity perspective involves ‘self-organising’ relations *within* persons (a sense of ‘I’) and *within* cultures (a sense of ‘We’) and ‘socio-culturally organising’ relations *between* persons (a sense of ‘Me’) and *between* cultures (a sense of ‘Us’). I apply the SCPP framework to the issue of environmental sustainability policy. I contend there are intra- and inter-personal and intra-and inter-cultural *values* on the issue/s of environmental sustainability policy. International research supports Carriere’s focus on personal (‘I am’ versus ‘We are’) values in environmental policy but this effect may be most prevalent in the US context. On social *power* in personal and cultural sustainability, empirical research points to ‘power struggles’ and ‘vested interests’ as the main problems for people. Also, from research it is deduced that (complex) environmental sustainability policy and governance need to empower people (individuals and groups) and avert unintended power dynamics, appreciating the co-occurring cultural nuances at work. It is concluded that my semiotic cultural political psychology reflections on Carriere introduces a potentially integrative ‘complexity’ perspective to psychological and behavioural science.

**Keywords** Complexity · Sustainability policy · Semiotic cultural political psychology (SCPP)

---

✉ Glen D. Rutherford  
glenrutherford10@yahoo.com.au; glen.rutherford@utas.edu.au

<sup>1</sup> School of Geography, Planning and Spatial Sciences, University of Tasmania, Hobart, Tasmania, Australia

## Introduction

This short article comments and reflects on Carriere's (2022) book *Psychology in Policy: Redefining Politics Through The Individual*. Carriere connects cultural psychology, political psychology, and public policy in a 'cultural political psychology' that values individuals over institutions, stories over statistics, and process over final outcomes. He defines 'political psychology' as the psychological study of the intersections of competing values, policy, and power dynamics (Carriere, 2022, p.5). It is asserted that the main reason for adding a cultural psychological framework lens to political psychology is to focus the study on the individual and their meaning-making processes (Carriere, 2022, p.5).

Moreover, Carriere asserts that approaching political psychology through the cultural psychological lens suggests three main areas of inquiry: imagination, power of inaction, and normativity and norms. Imagination considers not just the action of imagination, but the process and purpose of imagination. In particular, the issue is whether (or not) the imaginative processes transform over time through political upheaval, crises, and social change. On the power of inaction, choosing not to vote is action, and with action, comes power. On 'normativity', Kofod and Brinkmann (2017) views grief, like other mental phenomena, as 'normative' because it is 'done' (performed or enacted) by people, relative to cultural norms and moral worlds. Moreover, mental life (reasons for doing, thinking, and feeling) is constituted by normative rather than causal connections because it is lived in social practices (Brinkmann, 2009). It is claimed that considering 'political' imagination, inaction, and norms is relevant because they have a role in political meaning-making, including political discourse or story telling about how people can sustain the natural and human environment/s.

Of relevance to my 'complexity' perspective relating to sustaining the environment, Carriere's cultural political psychology emphasises the individual's values, power, and role in policymaking. Carriere (2022) seems to consider the 'co-constructive' relations of 'I' and 'Me' and infers the co-constructive relations of 'cultural' senses of 'We' and 'Us'. Of note, Valsiner (1999) identifies the role of 'I' and 'You' in the construction of the 'We'. Inferentially, 'Me' and 'Them' could play a role in the construction of 'Us'. I claim that the semiotic cultural psychology relations within, between, and among the personal ('I' and 'Me') and cultural ('We' and 'Us') senses as outlined in Rutherford (2022) are underdeveloped by Carriere (2022). This work aims to address this gap with a semiotic cultural *political* psychological perspective.

Before proceeding, several terms require clarification. As used in this work, the terms 'approach', 'framework', 'perspective' and 'model' involve mental systems regarding cultural-psychological realities. An 'approach' is a mental way of construing ideas about a certain reality. A framework is a way of organising the approach. A perspective is a certain conceptual point of view. A model is a way of schematising the approach, framework, and/or perspective.

## A Complexity Framework

Augmenting Rutherford's (2022) semiotic cultural psychology theory analysis, I propose a *semiotic cultural political psychology (SCPP) framework* that reflects on Carriere's (2022) cultural political psychology approach in *Psychology in Policy*. Upfront, I assert that a *complexity* framework is a complex system entailing and expressing part-whole mutuality.

Hence, it is construed that my SCPP approach can be viewed as a *complexity* frame of reference. Further, the approach can be applied to framing political narrative (e.g., stories) on how a person or a people behave to sustain the natural environment. Therefore, the SCPP frame could be used as a theoretical lens to better understand complex dynamics from a psychological cultural perspective. The frame may be used to better understand meaning-making processes in the politics of environmental sustainability because it considers the role of semiotic signs such as 'We', 'Us', 'I' and 'Me' as phenomena in the cultural-psychological context of the co-construction and conduct of sustainability policy. For example, biospheric values on caring for nature and ecosystems may be drawn on by political actors to encourage environmentally sustainable behaviour by individuals, organizations, communities, and cultures. I now seek to outline the SCPP frame.

The field of 'complexity science' generally construes self-organization as 'spontaneous order', that is, a process whereby overall order emerges or arises from the local interactions between parts or components of an initially 'disordered' system (e.g., Mitchell 2009). In human society, Luhmann's (1995) concept of self-referentiality argues that a social system can reproduce itself while there is dynamic communication and Krugman (1995) has developed a view that in economic systems the market economy is 'self-organizing'.

However, I take a different approach to complexity, construing self-organization as a *within systems* property and phenomenon that may be spontaneous (without intent) but also is 'guided' (Valsiner, 1998) (and 'with intent'). I argue that my complexity approach is potentially *integrative* in the psychological and behavioural sciences (e.g., behavioural complexity in management and in economic systems – Elliott & Kiel 2021; Byrne & Callaghan, 2013; Rutherford et al., 2023) because the view of complex dissipative systems seems to connect or interrelate (integrate) concepts and approaches across psychological and behavioural science.

As George Herbert Mead (1912) observed: "*Inner consciousness is socially organized by the importation of the social organization of the outer world.*" (p.406). Furthermore, to paraphrase Mead (1913, p.377): "[the] response to the social conduct of the self [group] may be in the role of another [self/group] ... we play the roles of all our group[s] ... the inner response to our reaction to others is therefore as varied as is our social environment." In this way, I assert that the sense of 'We' (involving multiple and variable 'I's') and sense of 'Us' (involving many and variable 'Me's') of consciousness are organized by the mechanism of 'perspective' and 'gesture' taking and coordination of the sociocultural self. A 'perspective' may be a physical, conceptual, or social point of view. A 'gesture' may be a bodily and/or vocal expression of meaning. Both perspective and gesture entail sociality and social relations (e.g., of 'self' and 'society' relations in the consciousness of selves and worlds).

From my complexity studies perspective, “self-organization” is experienced *within* a ‘person’ (in the sense of “I”) and is experienced *within* a ‘culture’ (in the sense of “We”). For instance, from a semiotic cultural political psychology approach, the ‘I’ involves the individual policymaker and their individual political narrative as ‘signifiers’, while it involves the individual political policy and individual political constituent as referents. Also, the ‘We’ involves a collective (partisan) policymaker and the collective (partisan) political narrative as signifiers, while it involves one’s own party-political policies and collective party-political constituents as referents.

To clarify, following Rutherford (2022), ‘signifiers’ are defined as the ‘words’ (narrative) signified and the ‘person’ signifying and ‘referents’ are defined as the ‘concept/construct’ and ‘audience’ referred to.

Second, from a so-called “sociocultural organization” perspective (e.g., Allman 2022 on ‘socioculturalism’), there are encounters *between* ‘persons’ (in the sense of “Me”) and encounters *between* ‘cultures’ (in the sense of “Us”). For example, from a semiotic cultural political psychology approach, the ‘Me’ involves the socially (inter-personally) co-constructed policymaker and their mutual (interpersonal) political narratives as signifiers, while it involves socially co-constructed policies and their interpersonal political constituents as referents. As well, the ‘Us’ involves an intercultural policymaker and their inter-collective narratives as signifiers, while it involves interrelated (e.g., adversarial) party-political policies and inter-collective constituents as referents.

The concept of *sociocultural organization* covered in this paper is built around sociocultural theory (Vygotsky & Cole, 1978; Allman, 2022; Valsiner & Rosa, 2007). Vygotsky’s sociocultural theory portrays human development as a socially (and semiotically – Wertsch 1983) mediated process whereby the child (person) acquires cultural values, beliefs, and problem-solving approaches through collaborative dialogues with more knowledgeable (or ‘significant’) members of society. Vygotskian or neo-Vygotskian theory is important in this work because it has contributed to the writer’s development of the idea of *within* (intra-psychological) and *between* or *among* (inter-psychological) conceptual relations and practical human relationships and their complex ‘organization’.

According to Allman (2022), there are three fundamental concepts that define sociocultural theory: (1) social interaction plays an important role in learning, (2) language is an essential tool in the learning process, and (3) learning occurs within the Zone of Proximal Development (ZPD). The ZPD is the distance between actual and potential (psychological) development – a gap that can be bridged under adult (overarching) guidance or in collaboration with more able peers (cf., Vygotsky & Cole 1978). A neo-Vygotskian perspective means that, in a semiotic cultural (political) psychology approach, the ‘environment’, ‘culture’, ‘society’ and ‘person’ are interrelated. Also, in SCPP there is self-organization and/or sociocultural organization in the *within*, *between*, and *among* relationships of I, Me, We, and Us senses.

Of course, intra- and inter-relationships of persons and of cultures assume there are ‘person-in-cultures’, ‘cultures-in-persons’, ‘persons-between-cultures’ (e.g., John Berry’s four *acculturation* strategies, that is, integration, assimilation, separation, and marginalisation – Berry & Sam 2006), and ‘cultures-between-persons’ (e.g., two-way

*enculturation* and two-way *socialisation* of norms and values promote social bonds in a culture and/or a society).

In summary, I contend that conceptual *relations within and between* semiotic cultural psychological systems are the bases of my complexity perspective, that is, concepts of self-organization & sociocultural organization respectively. The complexity perspective is outlined with respect to the intra- and inter-personal ('I' and 'Me') and intra- and inter-cultural ('We' and 'Us') semiotic cultural *political* psychological (SCPP) senses (political signifiers & referents). I argue that my 'relational' complexity thinking approach may provide an 'integrative' perspective for psychological and behavioural science. Hence, the present work is an extension of Rutherford's (2022) semiotic cultural psychological theory analysis, adapting it to the dynamics of political policy makers, stated political narratives, guiding political policies/principles and political constituencies or audiences.

## Applying the Complexity Frame to Environmental Sustainability Policy

The complexity frame can be applied to the topic of environmental sustainability policy from the SCPP perspective.

By way of definition, *environmental sustainability* is the shared human responsibility to behave in ways that conserve natural resources, support biodiversity or life, and protect global ecosystems for the health and well-being of all species, now and into the future. It is one of the three pillars of sustainability, alongside 'economic' and 'social' pillars (Purvis et al., 2019). In turn, *environmental sustainability policy* is in a human entity's (individual's or group's) stated commitment to, and 'business' strategy for, the responsible management of the planet's natural resources and ecosystems. For example, there may be policies for climate action to mitigate global warming (limiting carbon pollution) and policies for protecting life below water (by restricting use of plastic bags) and protecting life on the land (by planting more trees).

The sense of "I" introduces personal values and personal power in sustainability. The sense of "Me" introduces interpersonal values and interpersonal power. The sense of "We" contemplates cultural values and cultural power. The sense of "Us" contemplates inter-cultural values and inter-cultural power.

In order to consider the complex psychological and behavioural 'organisation' of the thoughts, feelings and actions in environmentally sustainable responsible conduct, guiding questions are: (i) how do I feel about sustainability, what do I mean by sustainability and in what ways do I act?; (ii) how does sustainability feel like to Me, what does sustainability mean to Me, and what are the shared actions; (iii) how does sustainability feel like to Us, what does it mean to Us and what are our combined actions; and (iv) how do We feel about sustainability, what do We mean by it and in what ways do We act?.

## Values and Environmental Sustainability Policy

There are intra- and inter-personal and intra-and inter-cultural values on the issue/s of environmental sustainability policy.

On values and sustainability, Horlings (2015) identifies personal and cultural values. Personal values include motivational and symbolic values and (collective) cultural values include values as mediator and value systems.

Wang et al. (2021) note that it has been theorised that pro-environmental behaviour is based in ‘biospheric values’, that is, those values pertaining to the significance people place in caring for nature and the environment. Thus far, research has focused on the role of personal (‘I am’) values rather than group (‘We are’) values on pro-environmental behaviour. Wang et al. (2021) test the relevance and robustness of personal and group pathways in predicting pro-environmental behaviour in an individualistic country (the Netherlands) and a collectivistic country (China). It is my view that individualistic cultures (countries) favour individual agency and that collectivist cultures (countries) favour collective agency.

While there are also altruistic, egoistic, and hedonic values, Wang et al. focus on biospheric values as strong and robust predictors of pro-environmental attitudes, intentions, and behaviour. It is observed that the stronger one’s ‘environmental self-identity’ the greater the likelihood of a person engaging in pro-environmental behaviour, to act in accord with how they see themselves. In my view, biospheric values on caring for our common planetary home are ‘value settings’ negotiated and exchanged within and without, and as such, may be construed as part of a person’s environmental self-identity, such as seeing oneself as an environmentally sustainable actor. However, the role of group values and environmental group identity are less studied. Wang et al. (2021) propose that the extent individuals think about group values on the environment may promote pro-environmental behaviour among group members through strengthening an ‘environmental group identity’. Wang et al. (2021) suggest that perceived *group* biospheric values may relate to pro-environmental behaviour in persons in senses like the way *personal* biospheric values have been shown to promote pro-environmental behaviour in persons. Thus, there may be an individual focused value-identity-behaviour pathway and/or a group focused value-identity-behaviour pathway.

Wang et al. hypothesise: (1) at the personal level, personal biospheric values influence environmental self-identity; (2) environmental self-identity influences pro-environmental behaviour in both individualistic and collectivist cultures; (3) at the group level, group biospheric values influence environmental group identity; and (4) environmental group identity will influence pro-environmental behaviour in both individualistic and collectivistic cultures. In addition, the researchers explore whether the personal (individual) pathway may more strongly relate to pro-environmental behaviour in individualistic than collectivistic cultures, while the group pathway may more strongly relate to pro-environmental behaviour in collectivistic than individualistic cultures. I claim that people in collectivist cultures are more concerned about collective agency and rely on group values about environmental sustainability, while persons in individualist cultures are more driven by individual agency and rely on personal values on sustainability.

To test the hypotheses, the measures collected were ‘personal biospheric values’, ‘group biospheric values’, ‘environmental self-identity’, ‘environmental group identity’, and ‘pro-environmental behaviour’ (Wang et al., 2021). Of note, it is my interpretation of Wang et al. (2021) that pro-environmental behaviour could be driven by environmental self-identity, as found in research in individualist cultures/countries (where persons value individual agency or ‘I am’ perspectives) or pro-environmental behaviour could be driven by environmental group-identity as possible in collectivist cultures/countries (where people may value collective agency or ‘We are’ perspectives).

Overall, Wang et al. found that stronger *personal* biospheric values were associated with a stronger environmental self-identity, and in turn, stronger environmental *self-identity* encouraged pro-environmental behaviour by a person. Of note, it was also found that stronger *group* biospheric values were associated with stronger environmental *group* identity, and a stronger group identity also encouraged pro-environmental behaviour by a person. However, when both pathways were tested together, only the personal pathway uniquely explained variance in pro-environmental behaviour while the group pathway did not. In addition, cultural differences were found in the strength that personal biospheric values were directly and indirectly associated with pro-environmental behaviour. Dutch students fully related biospheric values to pro-environmental behaviour via environmental self-identity. Chinese students, on the other hand, displayed a weaker association between biospheric values and environmental self-identity, relating personal biospheric values directly (not via environmental self-identity) to pro-environmental behaviour.

The results in Wang et al. (2021) generally support Carriere’s focus on personal (‘I am’ versus ‘We are’) values. However, the cultural nuances found by Wang et al. suggest that the ‘cultural’ in Carriere’s cultural political psychology may be most relevant to the United States. As applied to environmental sustainability policy, an implication of Wang et al. (2021) is that pro-environmental behaviours by persons should be encouraged for more effective environmental sustainability policy and policy making, and to support the spread of environmentally sustainable values, identity and conduct by persons.

## Social Power and Environmental Sustainability Policy

There is social power in personal and cultural environmental sustainability policy. This assumes co-construction of the policy creator and the policy created in the power dynamics (i.e., power is ‘social’ - whether experienced intra-and inter-personally or intra-and inter-culturally).

Reflecting on Sze (2018), environmental sustainability (policy and policy making) will only become more just if we ‘situate’ it in interdisciplinarity and politics. Environmental justice and social power are interlinked because environmental crises and social inequality evolve together in (complex) coexisting cultural, political, and economic system processes.

Avelino (2017) presents a new typology of ‘power in social transition/s’, that is, power that is ‘reinforcive’, ‘innovative’, and ‘transformative’. Reinforcive power is the ability of actors to reinforce and reproduce existing structures and institutions,



that is, it may resist system change. Innovative power is the ability of actors to create new resources, that is, it may adapt to and create some system change. Transformative power is the ability of actors to develop new structures and institutions, that is, it may act to embrace system-wide change.

From an environmental policy and governance perspective, Avelino (2017) notes his empirical research with Dutch transport professionals pointing to ‘power struggles’ and ‘vested interests’ as the main problem/s of (social) power. Three perceptions of power were (1) I/We do not have power; (2) They have (more) power [than Me and Us]; and (3) Power determines the way things go [for Me and Us] and is a main reason why things do not change.

At the behavioural (including psychological) level, the process of empowerment was identified as the way actors gain the capacity to mobilize resources and institutions to achieve a goal (Avelino, 2017). It is construed that to better understand and enable environmental sustainability (policy and governance) we need to empower people and be sensitive to unintended power dynamics.

## Conclusion

It is concluded that my semiotic cultural political psychology approach extends Carriere (2022) and introduces an integrative ‘complexity thinking’ perspective to psychological and behavioural science. Applying my approach, environmental sustainability policy research generally supports the role of the ‘personal’ in values and power (empowerment) but suggests that there are co-occurring cultural nuances at play.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s12124-023-09780-1>.

**Author Contributions** Glen Rutherford wrote and reviewed the manuscript.

## Declarations

**Conflicts of interest** The author has no relevant financial or non-financial conflicts of interest to disclose.

**Competing Interests** The authors declare no competing interests.

## References

- Allman, B. (2022). Socioculturalism. In R. Kimmons (Ed.), *Education Research*. BYU Open Textbook Network. [https://open.byu.edu/education\\_Research/socioculturalism](https://open.byu.edu/education_Research/socioculturalism)
- Avelino, F. (2017). Power in sustainability transitions: Analysing power and (dis) empowerment in transformative change towards sustainability. *Environmental Policy and Governance*, 27(6), 505–520. <https://doi.org/10.1002/eet.1777>
- Berry, J. W., & Sam, D. L. (Eds.). (2006). *The Cambridge handbook of acculturation psychology*. Cambridge University Press.



- Brinkmann, S. (2009). A normative sociocultural psychology?. Paper presented at Furor: Futures of Research, Neuchâtel, Switzerland.
- Byrne, D., & Callaghan, G. (2013). *Complexity theory and the social sciences: State of the art*. Routledge.
- Carriere, K. R. (2022). *Psychology in policy: Redefining Politics through the individual*. Springer Nature.
- Elliott, E. W., & Kiel, L. D. (2021). *Complex systems in the social and behavioral sciences: Theory, method, application*. University of Michigan Press.
- Horlings, L. G. (2015). The inner dimension of sustainability: Personal and cultural values. *Current Opinion in Environmental Sustainability*, 14, 163–169. <https://doi.org/10.1016/j.cosust.2015.06.006>
- Kofod, E. H., & Brinkmann, S. (2017). Grief as a normative phenomenon: The diffuse and ambivalent normativity of infant loss and parental grieving in contemporary western culture. *Culture & Psychology*, 23(4), 519–533. <https://doi.org/10.1177/1354067X17692294>
- Krugman, P. (1995). *The self-organizing economy*. Blackwell Publishers.
- Luhmann, N. (1995). *Social systems*. Stanford University Press.
- Mead, G. H. (1912). The mechanism of social consciousness. *The Journal of Philosophy Psychology and Scientific Methods*, 9(15), 401–406. <https://doi.org/10.2307/201643>
- Mead, G. H. (1913). The social self. *The Journal of Philosophy Psychology and Scientific Methods*, 10(14), 374–380. <https://doi.org/10.2307/2012910>
- Mitchell, M. (2009). *Complexity: A guided tour*. Oxford University Press.
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: In search of conceptual origins. *Sustainability Science*, 14, 681–695. <https://doi.org/10.1007/s11625-018-0627-5>
- Rutherford, G. (2022). A semiotic cultural psychology theory analysis of the signs ‘We’, ‘Us’, ‘I’, and ‘Me’. *Culture & Psychology*, 28(3), 273–288. <https://doi.org/10.1177/1354067X211066817>
- Rutherford, G., Kirkpatrick, J., & Davison, A. (2023). A relational model of economic organization: Relations within, between, and among economic scales. *Journal of Economic Issues*, 57(1), 301–318. <https://doi.org/10.1080/00213624.2023.2170145>
- Sze, J. (Ed.). (2018). *Sustainability: Approaches to Environmental Justice and Social Power*. NYU Press. <http://www.jstor.org/stable/j.ctv12pnp5c>
- Valsiner, J. (1998). *The guided mind: A sociogenetic approach to personality*. Harvard University Press.
- Valsiner, J. (1999). I create you to control me: A glimpse into basic processes of Semiotic Mediation. *Human Development*, 42(1), 26–30. <https://doi.org/10.1159/000022606>
- Valsiner, J., & Rosa, A. (Eds.). (2007). *The Cambridge handbook of sociocultural psychology*. Cambridge University Press.
- Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press.
- Wang, X., Van der Werff, E., Bouman, T., Harder, M. K., & Steg, L. (2021). I am vs. we are: How biospheric values and environmental identity of individuals and groups can influence pro-environmental behaviour. *Frontiers in psychology*, 12, <https://doi.org/10.3389/fpsyg.2021.618956>
- Wertsch, J. V. (1983). The Role of Semiosis in L. S. Vygotsky’s Theory of Human Cognition. In B. Bain. (eds). *The Sociogenesis of Language and Human Conduct* (pp. 17–31). Springer. [https://doi.org/10.1007/978-1-4899-1525-2\\_2](https://doi.org/10.1007/978-1-4899-1525-2_2)

**Publisher’s Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.

**Glen Rutherford** is a doctoral candidate in Environmental Studies at the University of Tasmania, Australia. He holds a first PhD in Psychology at University of Newcastle, NSW.