

## ***Interactive comment on “Conceptualizing community resilience to natural hazards — the emBRACE framework” by Sylvia Kruse et al.***

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Reply to interactive comment by I. Kelman: We appreciate the in most parts positive evaluation of the proposed framework for characterizing community resilience. We understand the comment of I. Kelman as encouragement of being clearer about what the proposed framework does and does not do. We will build on challenges of community resilience and will add a description of the elements of these challenges the model addresses plus differentiating what is still open to resolve. The aim of this is to offer a structured drawing of the research frontier and a drawing of some empirical work that builds upon this frontier. Much more work and thinking will be needed, beyond the scope of the research presented in this paper. Needs for further elaboration: 1. Include more of the critical discussions of the concepts “community” and “resilience”

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as well as the rich history in many disciplines We agree that we need to include more explicitly the historical references of the mentioned disciplines that conceptualized resilience and community in the past as well as discuss the critical discussions of the recent past. However, it would clearly be beyond the scope of the paper to unravel the various (critical) historical strands underlying, for instance, the resilience concept. We therefore point out to some key papers, such as: Alexander, D. E. (2013). Resilience and disaster risk reduction: an etymological journey. *Nat. Hazards Earth Syst. Sci.*, 13(11), 2707-2716. doi: 10.5194/nhess-13-2707-2013 Brand, F. S., & Jax, K. (2007). Focusing the meaning(s) of resilience: resilience as a descriptive concept and a boundary object. *Ecology and Society*, 12(1), online. Cannon, T., & Müller-Mahn, D. (2010). Vulnerability, resilience and development discourses in context of climate change. *Natural Hazards*, 55(3), 621-635. doi: 10.1007/s11069-010-9499-4 Cote, M., & Nightingale, A. J. (2012). Resilience thinking meets social theory. *Progress in Human Geography*, 36(4), 475-489. doi: doi:10.1177/0309132511425708 Pelling, M. (2010). *Adaptation to climate change: from resilience to transformation*. London/New York: Routledge. Weichselgartner, J., & Kelman, I. (2014). Geographies of resilience: Challenges and opportunities of a descriptive concept. *Progress in Human Geography*. doi: 10.1177/0309132513518834 Welsh, M. (2014). Resilience and responsibility: governing uncertainty in a complex world. *The Geographical Journal*, 180(1), 15-26. doi: 10.1111/geoj.12012

2. Select references more carefully and build on the rich history of the discussion This is of course challenging as we already cite references from various disciplines that the current community resilience discourse builds upon; nevertheless we will more explicitly reference the historical origins as well as selecting more carefully those recent references that critically add upon the discussion. Also see comment by Fünfgeld and Stephan on the same issue.

Reply to interactive comment by H. Fünfgeld: Again, we appreciate the in most parts positive evaluation of the proposed framework for characterizing community resilience.

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Needs for further elaboration: 1. Discuss the intrinsic challenge that is connected with the transposition of ideas that originate in natural sciences into the human social realm (C2) We will add a discussion on these challenges that arise especially in the historical origins of the concepts of “resilience”, “disturbances” and “transformation”. Also see comment by Kelman C4 and C5. 2. Make explicit and reflect ontological and epistemological challenges inherent in the proposed framework, including a stronger and more critical review of existing interpretations of the term “community”. We agree that we need to be clearer on the ontological and epistemological frames that are inherent to our proposed framework and to define more clearly the concept of community. See also comment by Kelman on including the recent critical debates on “community” and “resilience” 3. Provide more conceptual guidance on how to examine power issues inherent in local resilience processes This is a relevant point that we have not made explicit enough in the description of the conceptual framework. We will add upon this by building on the differentiation of power over, power with and power through. 4. Specific comments Will be addressed when revising the text.

Reply to interactive comment by C. Stephan: We are grateful the in most parts positive evaluation of the proposed framework for characterizing community resilience and valuable suggestions. Needs for further elaboration: 1. Make the challenges the proposed approach carries along sufficiently transparent We agree that we need to be clearer on the challenges that the approach carries along, e.g. the combination of a deductive theory driven conceptualization with an inductive empirical perspective. 2. Put the open questions that arise from the framework at the center. We agree to be more explicit about the open questions that arise from the framework when it is applied to assess community resilience in different contexts 3. Discuss a critical perspective towards the use of the term “community”. See comment by H. Fünfgeld on the same issue. 4. Make use of the current developments in social practice theory and social change theory e.g. for enlarging the understanding of learning and knowledge or for reaching more conceptual depth when discussing the influence of contextual factors. We will consider social theory can further inform the proposed framework e.g. in the

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dimension of learning processes and the contextual factors. Specifically we will critically reflect how far the proposed framework enables to assess community resilience understood as social interaction.

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