## 7712 / A case for constructivist perspectives on 'wickedness': problem structure as essential characteristic versus political tool

panel: Problem structures and the policy process

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## **ABSTRACT**

In this paper, we engage with the question whether problem structure, particularly 'wickedness', should be approached as something that is inherent in the problem as an essential characteristic versus something that is constructed in practice, as a result of how a problem is approached (presented or experienced). We do so by drawing on (1) a review of literature on wicked problems (WP) and (2) empirical research on engineering students' approaches to WP in the context of sustainability education.

The term WP is today widely used in policy research, but also in many other disciplines, such as sustainability and sustainability education research. However, there is no consensus on the term's theoretical underpinnings nor on its utility for research. Since Rittel and Webber's (1973) seminal paper, the number of research publications in which the term is used has grown exponentially (Head 2019), but the research community remains divided with regard to its definition and value. Some researchers argue that WP is a useful concept since it can be used to highlight limitations of reductionistic approaches for addressing complex societal and environmental problems (Xiang 2013; Lönngren 2017). Others argue that the term is ambiguous and often used rhetorically rather than analytically (Noordegraaf et al. 2019; Peters and Tarpey 2019; Termeer et al. 2019; Turnbull and Hoppe 2019). These debates inspired a review of WP literature (Lönngren & Van Poeck 2020), in which we found that the concept can be used to perform two overarching rhetorical functions: 1. challenging existing, dominant approaches to addressing wicked problems, and 2. supporting alternative approaches. These findings indicate that problem structure should not only be viewed in essentialist terms, as inherent characteristics of problems; it should also be explored from constructivist perspectives since problems can be described as "wicked" to achieve certain political goals.

In another study, , Lönngren et al. (2016) explored how engineering students approach a sustainability problem which the researchers had constructed as wicked. They identified four qualitatively different approaches: A. Simplify and avoid, B. Divide and control, C. Isolate and succumb, and D. Integrate and balance. Notably, approaches A through C involve "taming" the problem, i.e. constructing it as well-structured rather than wicked. These findings suggest that problem structure may be constantly contested in sustainability education that aims to prepare students for addressing wicked problems. The findings also highlight the close connection between problem construction and ways of approaching a problem: when problems are constructed as not wicked, more reductionistic approaches are often used. This phenomenon has also been described in the leadership (Grint, 2005) and environmental policy (Ison, Collins, & Wallis, 2015) literature.

Based on the findings from the above described studies, we argue that problem structure should not only be understood as a characteristic of policy problems. It should also be explored as a political tool that can serve rhetorical functions and influence how policy problems are approached in practice.