Chapter 21
Framing Creative Problems

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ABSTRACT

Problems are a type of situations that are mentally and socially framed to direct efforts and resources with the aim to change them into desired future situations. The definition of what constitutes a problem, and particularly one worth solving creatively is often left implicit in research studies and professional practice. This chapter presents “Creative Problem Framing” (CPF) as a strategic part of the creative endeavor. It does so by analyzing a collection of projects that the authors have supervised in recent years in academia, start-ups, and industry in four countries. An analysis of these cases provides an initial set of dimensions of creative problem framing. The chapter ends with guidelines for higher education to promote creative problem framing, and to design studio-based experiences that enable learners to practice CPF in meaningful ways.

INTRODUCTION

There is a big problem with the word “problem” in the context of creativity. The word “problem” is used in everyday conversations, the media, and in academic and professional settings. A thesaurus lists the following related terms: complication, dilemma, dispute, headache, issue, obstacle, question, trouble, disagreement, doubt, and predicament. All these words carry a negative tone, signaling adverse situations which call for attention in order to imagine more desirable future states. This is in fact an influential definition of the concept of “design” in the academic literature (Simon, 1996), i.e., the course of action aimed at transforming undesirable existing situations into preferred future situations. One of the first difficulties arising from this definition is how may a problem-solver start to define what makes a situation undesirable. Inasmuch as design is a servicing activity, existing situations are characterized by/with
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others within their particular contexts—in other words, problems exist when they are identified as such by someone. This is substantively different from a commonplace understanding of problems existing “out there”, as if they were objective constructs waiting for people to spot them as such. This is a key distinction because creative problem-solvers learn to approach situations in radically different ways as they understand that their creative efforts start, and are fundamentally determined, by framing problems.

The practice and research of creativity has heavily relied on the study of how different people generate ideas to solve a given problem. This constitutes a significant weakness in the pursuit of defining and evaluating creativity, since giving people a pre-defined problem inevitably leads to the enforcement of such particular framing in the problem-solving phase. After all, the comparison of ideas provided by different individuals or teams is only feasible when they tackle the same problem, and this problem remains unchanged in the solving process. However, highly creative solutions often transform the ways in which the problem are viewed—i.e., patent claims must demonstrate non-obviousness or being different from “an obvious extension or adaptation” of current practice (Simonton, 2012). This approach is equally prevalent in professional practice, where problem solving starts by the fairly reasonable step of “defining the problem”. The authors have observed over the years a natural tendency of students, entrepreneurs, practitioners, and government officials to view problems as well-established constructs, i.e., the parking problem, the obesity problem, etc. In the rare cases when the problem-solver does acknowledge that problems are identified, framed, and defined by someone, this is accompanied by a belief that such framing process is not their responsibility. For example, designers often ascribe the role of problem framing to the marketing department, to higher management, or to the client.

Viewing problems as undesirable situations entails that they are mental and social constructs (Volkema, 1983). Hence, defining a problem means defining what makes a situation undesirable and what are its causes and consequences as viewed by the problem-solver as an individual and as a member of her sociocultural context. Such definition shapes the problem and directs problem-solving to focus on factors deemed as relevant and to ignore those viewed as ancillary. In a way, our world is in fact organized in a largely arbitrary (and heavily influenced by past realities) organization of reality into problems. The futility of such structural divisions becomes clearer when so-called “big problems” such as Climate Change are considered: whose problem are such complex and high-priority problems? But even in more concrete, tangible, and everyday situations, such as transportation or housing, it is worth questioning who owns the problem, as ownership carries the responsibility of framing the problem. Experts are habitually granted ownership based on their disciplinary or professional ascription, but there is no natural, objective, or definite way to bind a problem to an area of expertise. People who are directly and indirectly affected by these situations clearly own the problem too, and the main challenge is that in such multitude of stakeholders, each of them brings different and often incompatible needs and desires to the way a situation is characterized. Consequently, problems are shaped by a vast number of formulations of reality—an array of situations deemed as undesirable by many people, and not necessarily for the same reasons.

Furthermore, in a dynamic world, conditions are constantly evolving and so situations mutate over time, a simple truism that most people neglect, as eminently pointed by George Bernard Shaw: “the only man I know who behaves sensibly is my tailor; he takes my measurements anew each time he sees me. The rest go on with their old measurements and expect me to fit them.”

This chapter re-examines conventional views of problems in the context of creativity, and the misleading notion that problems can be “solved” creatively. It is argued here that problem-finding and problem-framing are more appropriate and relevant issues to focus in the study, practice, and teaching of creativity. The chapter continues with a review in Section 2 of key ideas from the literature. In Section 3
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