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The Dynamic Mechanism of Co-Creation: Application to Relationship Design and Management

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In the past few decades, increased global mobility led by remarkable developments and the extension of public infrastructure has brought about not only the possibility of further conventional static design management, but the importance of dynamic design management as well. Every type of organization— regardless of industrial sector, size, or profit status— is faced with the need to manage a newly dynamic environment based on an understanding of the context and factors of co-creation as well as the need to engage in its process. The importance of co-creation has been recognized for decades, but at the same time, the difficulties in its implementation have also been recognized. Simply gathering people from various organizations in one place and letting them introduce themselves is not enough to form a basis for sustainable collaborative innovation: developing methodology to flexibly design, implement, and manage the relationships that structure a society has become a broader need.

While the term co-creation has become widely used, it has not been clearly defined, nor has a common understanding of it yet been reached. As a result, it is natural that it is often confused with “collaboration” or “co-operation.” Furthermore, studies on co-creation tend to take static approaches focusing on its partial and external aspects, referring to studies on collaboration (Taura et al., 2012); a focus on the challenge in capturing its particular nature as an integrated dynamic system is necessary in developing a practical methodology for co-creative relationship design and management. In addition, studies on co-creation have mainly focused on the usefulness of co-created values or on efficient collaborative processes creating these values. Few studies exist that take into consideration the fragile and dynamic nature of forming and sustaining co-creation subjectivity among individuals (Leigh Star, 2010).

In this regard, studies focused not only on co-created value but also on the subjectivity of co-creation are essential, particularly on their inner aspects. Studies on collaboration need to pay sufficient attention to distinguishing the fundamental differences between collaboration based on individual creativity and co-creation. Therefore, this study aims to elucidate co-creation mechanisms among individuals as dynamic systems by focusing on their fundamental factors and how the design process affects the formation of co-creative subjectivity and co-creativity among the individuals involved.

For this purpose, we have defined *co-creation* and proposed methodologies to evaluate these fundamental factors; *intersubjectivity* for a subjectivity of co-creation, *context* for a process of co-creation, and *co-creativity* for a consequence of co-creation. To examine them, an experimental study was then conducted concerning the types of collaborative design process: co-creative collaboration and co-operative collaboration. Theoretical and practical implications are discussed based on the knowledges obtained from the experiment in order to apply it to a design and management methodology for relationships that is deployable in an innovation ecosystem. Finally, the dynamic mechanism of co-creation is modeled as Inverted Vortex Model, an integrated dynamic system representing the results of experiments with a fluid dynamics analogy. The IVM is applied to case studies in the context of generating an innovation ecosystem, in which the establishment of new relationships throughout the co-creation process was recognized.

This study takes on the challenge of elucidating a dynamic mechanism of co-creation related to the formation process of co-creation subjectivity in its gestation phase (Reynolds & Miller, 1992) and of contributing to the methodology for the design and management of flexible relationships facilitating autonomous and horizontal collaborations not only within but also among organizations. Changing the emphasized aspect of co-creation phenomena from the co-created knowledge to the subjectivities of co-creation, its human-centric system is given an opportunity to be focused as the other hidden side of a knowledge creating system. A shift on what is focused can lead the shift of both measurements and principle for optimization from productivity to well-being.

Keywords: Co-Creation, Intersubjectivity, Dynamic Modelling, Relationship Design and Management, Well-Being