

Title	共創の動的メカニズム 関係性のデザイン・マネジメントへの適用を視野に
Author(s)	松前, あかね
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Description	Supervisor:永井 由佳里, 知識科学研究科, 博士

氏名	松前 あかね		
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論文審査委員	主査	永井 由佳里	北陸先端科学技術大学院大学 教授
		神田 陽治	同 教授
		山本 外茂男	同 教授
		由井 蘭 隆也	同 准教授
		兼松 泰男	大阪大学 教授

論文の内容の要旨

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

論文審査の結果の要旨

「共創」は、知識科学において最も重要とされる概念のひとつであるとともに、実社会で求められる人々の知識創造活動としてさまざまな場面で注目されている。本論文は、人間の創造的活動の諸相に焦点をあて、その段階として協働と共創を区別する必要性を主張し、後者がどのようにモチベーションと関係しているか、また、そのメカニズムをどのように顕在化できるかを検討し、共創プロセスの本質的構造に挑戦した研究である。相互主観形成プロセスに着目した新規手法を考案し、実験を通じて測定方法を提示するとともに、動的な共創プロセスをモデル化している。モデル化において、先行する知識科学の知見に基づきながら、流体力学を参照することで、独創性の高い提案を行った。

また、実験においては、グループワークにおける感情の同調、会話内容の収束傾向、成果物となる構成案に対する意識の形成過程をとらえており、一般に複雑で把握することが困難だと考えられている共創プロセスについて、その構造変化を抽出するに至っている点で、学術的な価値が示されており、知識科学への貢献が認められる。

今日、実社会の様々な場面で重視されている共創プロセスを、一体どのようにマネジメントすればより創造的なプロセスとなるのかは常に問われており、本研究の成果から示唆される測定方法や支援方策に対する期待は大きく、研究で得られた知見の有用性は高い。将来的に当該分野を発展させる重要な基礎研究として位置づけられる。

さらに、組織マネジメントとしての実践から得られた経験に基づく検討が重ねられており、共創プロセスにおけるファシリテーションの課題、初期段階のマインドセットやプロセスの質を変えるバウンダリーオブジェクトがどのように見出されるかなど、本研究で提案されたモデルを適応することで多角的な議論が可能であることを示し、社会実装研究としての有効性が認められる。

今後、本研究を基盤とした発展としては、さらなる実験を通じた議論の積み重ねや、提案されたモデルを手掛かりとしたメカニズムの検討、実社会での共創プロセスとの対照など、学術的側面及び社会的側面の双方で、将来的な展開が見込まれる。

以上、本論文は、共創プロセスの構造について議論したものであり、実験による本質追及とその支援方策は学術的に貢献するところが大きい。よって博士（知識科学）の学位論文として十分価値あるものと認めた。