Chapter 9

Linking Framing to Actions for Sustainability

Takashi Mino and Shogo Kudo

Abstract This chapter first introduces the aim of this book and explains the book structure that provides chapters on theoretical discussions and practical applications of different framing in specific cases. Secondly, the chapter provides summaries of all previous chapters. Thirdly, the chapter describes that sustainability science has two main roles based on a premise that sustainable development as a trajectory-based concept, that are (i) examining the past patterns of trajectories that have brought societies to their present state, and (ii) designing the future based on the actions of the current generation. Reflecting these roles, the authors argue that sustainability science examines the intended and unintended consequences of actions taken by various actors. Lastly, the authors remark that an attitude to be flexible and accepting to other's framings is extremely important in order to have collaborative actions for sustainability.

Keywords Framing · Sustainability science · Intended consequence · Unintended consequence · Collaboration

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9.1 Chapter Summaries

This book aims at examining the applied framing in sustainability research. The editors try to achieve this goal in the first three chapters by focusing on the theoretical discussions on framing itself, and in the subsequent five chapters introducing different types of practical framing on specific topics or empirical cases. The present volume does not allow a full coverage of all types of sustainability issues; however, the editors believe the book serves as an initial step for reviewing different types of framing applied in sustainability research and actions.

Chapter 1 by Mino and Kudo describes what framing is in general and why discussing framing in sustainability science is essential when addressing sustainability issues. Framing explains how people perceive, understand, and interpret a particular topic or event based on the assumptions, social norms, and values that people have in their daily lives. Framing defines what situations are relevant to people, who should be responsible for them, and who should take measures to improve the situation or avoid possible undesirable situations. Sustainability is essentially a normative concept and it requires people to frame what to sustain in society. In reality, when addressing a sustainability issue, multiple framings by different actors always exist and often conflict to one another. Hence, acknowledging the multiplicity in framing is critically important in sustainability research. Sustainability experts are expected to facilitate the communication among multiple framings posed by different groups of people and lead the discussion that results in concrete actions for sustainability. In this chapter, Mino and Kudo propose a conceptual framework that suggests key elements to be examined when addressing sustainability issues. The framework combines holistic treatment and trans-boundary thinking to incorporate multiple framings when understanding the complexity of a sustainability issue. The proposed framework also contributes to verifying whether the proposed actions reflect both global sustainability manifestation and unique values based on individual, case-specific contexts.

Chapter 2 by Jerneck and Olsson discusses pluralism and unification in sustainability research. They argue that pluralism allows collaborations among scholars and social actors for sustainability, and that it also ensures a more theoretically informed understanding of society. Pluralism is a better way to share understanding about the complex sustainability challenges from the points of various social actors, hence it helps addressing complex sustainability challenges compared to conventional views such as environmental determinism, functionalism, and rational choice theory to be tackled. The authors suggest ‘social fields and natural systems’ as a new framing concept that integrates social science theory and a systems science perspective. This framing aims to bridge ontological barriers between natural science and social science, and avoids three common weaknesses of knowledge integration—namely, the use of environmental determinism, functionalism, and rational choice theory—to explain social changes. Additionally, a new theoretical typology was suggested to show how sustainability visions and pathways are linked with

particular theoretical and methodological perspectives. The presented typology serves as a thinking tool for framing and reframing sustainability research.

Chapter 3 by Ness introduces four general approaches to frame sustainability challenges, which are DPSIR, causal loop diagrams, multi-scale and multi-level perspective in transitions, and socio-ecological system framework. The chapter describes how these frameworks are taught at the international master's program in sustainability at Lund University (LUMES). The chapter provides reflections from teaching various framework approaches in sustainability science. The author suggests that multiple occasions to learn the approaches to frame complex sustainability challenges must be provided both within and outside of an educational program for students in order to obtain the key competencies required for becoming sustainability experts.

Chapter 4 by, Yokohari, Murakami, and Terada, introduces mixed patterns of land use by a case study of Tokyo. The authors argue that this mixed land use enhances the quality of living environment as well as resilience of cities by contributing to food security, especially at the time of natural disasters such as earthquakes. 'Value of grey' is the concept they use to describe such mixed pattern of land use in urban planning developed in Japan. Such strategy in land use has been developed in Japan in order to incorporate the particular condition of the country: frequent occurrence of natural disasters. This chapter argues that basic theories of modern urban planning initiated in Western Europe, where almost no threat of natural disasters is predicted, are not always applicable to Asian cities where natural disasters such as earthquakes, tsunamis, and tropical typhoon disasters often cause serious damages.

Chapter 5 by Kudo discusses the meaning of rural sustainability in an aging and shrinking society. The chapter firstly reviews literature on past transition patterns of rural regions based on the multifunctionality discourse in rural studies. Then, the concept of placemaking, accompanied by a case study of *Monogatari* workshop conducted by the author, is introduced. This case study provides community-based perspectives about how a group of local youths collectively envision the future of their town. The chapter serves as an empirical study of framing at the communal scale. One framing tool that applies a retrospective view when envisioning the future state based on the present and the past of the town is introduced.

Chapter 6 by Onuki presents a case of Minamata disease, one of the most serious water-related pollution diseases that Japanese society has ever experienced. Because of its seriousness and its scientific as well as social complexity, multiple explanations on the cause of the incident were proposed by experts in environment-related disciplines. Unfortunately, it was these very multiple framings to the issue themselves that prevented prompt reactions to the possible causes of the disease and hindered relief measures to the affected people in the area. The case of Minamata disease provides an important lesson on the balance between the actions to the ongoing problems and the degree of emphasis on scientific investigation on the problems.

Chapter 7 by Esteban and colleagues presents two different types of coastal issues—namely tsunamis and sea level rise—seeking to examine the vulnerability and resilience of human life and society in the face of natural hazards through the reduction and management of risks. Their case studies examine the reconstruction of Otsuchi town in northeast Japan after the 2011 Tohoku Earthquake tsunami and small islands of the coast of Bohol following the 2013 Bohol Earthquake in the Philippines. Based on these cases, the chapter discusses how the time-scale through which a problem is scrutinized influences the framing of disaster risk reduction, and thus disaster preparedness and management.

Chapter 8 by Matsuda and co-authors elaborates on the current problems of food security as one of the most important development strategies to alleviate poverty. Relevant policies on food security and different ways to frame these policies are discussed. The unchanged frame of enhancing market economy is considered to be the main cause of decoupling of agricultural policies and nutrition policies. The consequence of such failure in the integration of market-based policies and the actual situation of agriculture on the ground has manifested itself in serious environmental degradation and poor health conditions.

9.2 Sustainability Science Examines Intended and Unintended Consequences of Framing

As summarized above, the chapters in this book provide various perspectives to elucidate sustainability issues such as contextual, spatial, and temporal, perspectives. By incorporating these, sustainability science raises scientific inquiries to explore sustainable pathways for societies. One premise in this approach is that society evolves in a path-dependent ways; hence, sustainability can be viewed as a trajectory-based concept. This perspective implies two main roles of sustainability science: (i) examining the past patterns of trajectories that have brought societies to their present state, and (ii) designing the future based on the actions of the current generation. In other words, the first role is providing a structural understanding on how the human society of today has ended up being faced with a wide range of sustainability issues; and the second role is advocating sustainability as the guiding principle to design future societies through collaborations among various actors. Framing, the primary focus of this volume, affects both these roles of sustainability science significantly on how the present state is being interpreted and how the future directions are envisioned.

Reflecting these two main roles, sustainability science plays a key role in examining the intended and unintended consequences of framing. Various measures to achieve sustainability are undertaken based on the visions of ideal or preferred conditions of society. When those originally envisioned conditions are realized, the outcomes are considered as intended consequences. However, unintended consequences also appear because of the specifying nature and unexpected effects of

framing. Framing specifies what to be addressed and naturally prioritizes some issues over others. At the same time, framing may even slow down or prevent the envisioned conditions from being achieved because verifying what one framing brings is hardly possible prior to its application; hence, unintended consequences are often observed.

The Sustainable Development Goals (SDGs) scheme by the United Nations is one example of framing that is likely to have both intended and unintended consequences. SDGs consist of 17 goals with 169 targets covering a wide range of sustainability issues. These goals are to be achieved by 2030 under the slogan of “no one left behind.” Since their introduction in 2015, countries in both developed and developing regions have adopted the scheme and are now conducting local initiatives to achieve the goals. Examining unintended consequences is equally important to all efforts made to achieve SDGs. For example, one potential unintended consequence of setting the 17 goals is the fragmentation of individual goals despite the fact that many of them are interlinked in reality. For instance, Goal 1, “No Poverty”, is a comprehensive goal that must include hunger, education, access to clean water, and many other dimensions of sustainable development. In fact, all other 16 goals of SDGs are either directly and indirectly related to Goal 1.

Additionally, issues not included in the 17 goals may seem less important despite the fact that they have equal or even greater impacts on human society such as aging, mental health, and regional focus on rural areas. Because the topics related to the goals are highlighted by policies at all levels, insufficient consideration to other sustainability issues may be observed as one unintended consequence.

By presenting 17 goals clearly, the SDG scheme assumes that sustainable development can be achieved by filling these pieces of the Sustainable Development picture. Such perspective stands on a premise that the whole can be understood and fulfilled by understanding and integrating the parts. However, in reality, how the whole works cannot be understood merely by a compilation of understanding how parts function. This is because the interactions among the parts create generic functions that contribute to the capacity of the whole. One unintended consequence of setting individual goals in the SDGs scheme is the missing discussion on the interlinkages among the thematic goals. A holistic approach in sustainability science should be reflexive to the intended and unintended consequences of various efforts for sustainable development; this will be an important process when linking framing to actions for sustainability.

9.3 Concluding Remarks

The readers hopefully have learned from this volume what framing is theoretically, why it is relevant to sustainability, and how framing practically influences the actual implementation of countermeasures in overcoming the complex sustainability challenges. Framing is strongly influenced by past experiences, expertise and knowledge, social norms and values, and many other factors. Therefore, a difficulty in

understanding different perspectives often rises when collaborating with actors from various fields even though such collaborations across different academic disciplines and sectors are often described as an essential approach when addressing sustainability issues. An attitude to be flexible and accepting to others' framings is extremely important to make collaborative actions successful especially in the context of sustainability. In any case, the collaboration of experts may provide opportunities to expose themselves to a wide range of new framings, improve their ability to understand the complexity of sustainability issues, and identify diverse approaches through policies, measures, and actions that can guide society towards more sustainable direction.

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