

No Boundary for Authentic Learning through Everyday Creativity

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Some university students who initially were not interested in creating things in their daily lives nor in contributing to society changed their attitudes in a simple activity in which they created what they needed at home using trash found in their homes. Through this activity, we observed that not only many of the students enjoyed creating things but also discovered their connections to society. Through surveys and interviews, we could understand the process of these changes as blurring of boundaries created in minds separating themselves from society. We summarize our model of human history in which boundaries have been created in our minds along with social modules. We propose an LDP model in which our creativity suppressed in the GDP society can be regained through creating what we need by hand, which by blurring our boundaries allows us to re-discover our connection to society.

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Stories about everyday creativity, boundaries, and society

We will tell four stories to shed some light on what is happening to our creativity in everyday lives (Miyata & Suzuki, 2022) as well as our motivation to contribute to our society, and how these two are related to each other. The first story is about our disappointing finding that many of the students in our classes did not feel that they could contribute to society. We were also surprised that even among the engineering students in our classes, few created anything in their daily lives. The second story is about some very simple but interesting activity we tried in our classes in response to these results. This activity seemed to have awakened their suppressed creativity, and not only reminded them of the joy of creating something by their hands, but also broadened their scope of actions that they were capable of and made many of them feel connected to society. The third story in a much longer scale is a history of boundaries we have been creating in our minds through the history of humankind, especially during the last ten thousand or so years. Based on this story (or history), the final story tries to understand why the activity in the class in the second story helped the students to regain their creative joy and feel connected to society.

Story 1. “Daily Creativity and Society”

Recently, we were shocked by our students’ answers to a survey we did in our class in which we asked them how often they make what they need for their daily lives by their hands. We included many different areas in the survey: cooking, clothing, stationery/accessories, furniture, music/art, computer system/devices, and others. Most of the students were freshmen, and it was during their very first classes in the university. We had expected that a freshman in our school of engineering would have interest in making something at least in some areas. On the contrary, to our surprise, most of them answered that they made virtually nothing, with a small number of exceptions in cooking. We asked the reasons why they buy commercial products when they need something, instead of making it by hand. Out of the 59 students, 39 students answered that they thought making it by hand would take too much time and energy, 27 students said they did not expect to be able to make anything useful, and 12 students said making is not fun. We also found that even though many of these students feel that the SDGs are important, much fewer students feel they can contribute to the goals. On average, 60% of the students agreed that each of the goals in SDGs is important, while only 20 % of them on average thought they were responsible for contributing to the goals.

These two disappointing results made us start wondering whether the students’ lack of interest in making things, and their lack of motivation to contribute to society might be related to each other. In our modern society, especially in large cities, our connection to society is mostly limited to information through digital media like SNS or mass-media like TV. There are few physical connection channels through which we can connect to society. Our lives are physically supported by foods and drinks we eat and drink daily, the clothes we wear, the furniture, stationary, etc. we use in our daily lives. Yet, we don’t have to be aware of, and usually are not aware of how, when and by whom these products are designed, produced, transported and stored before they are sold to us. We hypothesized that this lack of awareness to the physical processes that support our lives might be responsible for the lack of interest in the connection to society.

Story 2. “Creation from Trash”

Based on this hypothesis, we designed a simple activity of creating what they needed in their daily lives by hand using trash found in their homes. The activity followed the following steps:

1. The students found some trash, like plastic bottles, cardboards, plastic containers, etc., found in their homes, and shared photos of them online.
2. They brainstormed ideas about what they could create using these materials.
3. Everyone created what she/he wanted using her/his materials.
4. We invited a student group from Kansai who is active in promoting SDGs to join the class online. After they shared their activities with the students, the students shared their works to the guests and exchanged questions and comments. (Figure 1)
5. Everyone documented the process of creation in a Google Presentation to reflect on the experience of creating it and shared it in an SNS in an online diary style.
6. We invited to the class a group from the city office who are members of a section responsible for promoting “Circular Economy Society” who explained to the students about their “3R project” in which they try to promote “reduce”, “reuse” and “recycle” of wastes in the city. After a question and answer time, the students showed what they created to the guests from the city office and they discussed the meaning of creating what they need by hand using trash.



Figure 1 Sharing students' creations online

We analyzed their reflection on their experiences (A) from her/his personal perspective and (B) from the perspective of the impact they could make on society by creating it. Many students mentioned that they enjoyed the experiences of creating something by hand. They mentioned that (the numbers are out of 40 students who responded to our further queries):

- They enjoyed creating things by hand, especially: connecting the materials and what they wanted to make (13); the process of trials and errors (12); and coming up with new ideas (12).
- They discovered that: their desires to create more things (22); the potentials of various materials (12); possibilities to use many other materials (7).

We analyzed these reflections to find out how their mindsets changed and found that (numbers are out of 40 students):

- 26 students mentioned that before the activity they had thought that trash could only be thrown away, but after the activity they began to try to find their use before throwing them away.
- Many mentioned that they became aware of the potential of their own actions to make trash into useful things. They seem to have discovered new values of the materials as well as the values of their own actions acting on the materials.
- 29 students mentioned that they have become more aware than before of the impact of their actions on society and environment.
- Many of them mentioned specific actions they have started to do, such as reducing trash by thinking twice before buying products, carrying own bottles/chopsticks, not using plastic bags/containers/straws in

shops/restaurants/cafes, trying to reuse home trash, recycling plastic bottles, steel cans and papers/cupboards, refraining from using air-conditioning, using stairs instead of elevators, riding bicycles or walking instead of driving, paying more attention to news related to social issues and SDGs.

Story 3. “Blurring Boundaries”

We then interviewed many of the students to find out how their mindsets changed. The results could be understood with the concept of **Boundary** by Wilber (2001) which we used in our analyses presented in ICoME 2021 (Suzuki, 2021). A boundary is defined as what we create in our minds between what we believe to be a part of or related to ourselves and what we believe to be unrelated to ourselves. The changes in their mindsets described above could be interpreted to have happened as some boundaries in their minds that were blurred or disappeared in the process of creating what they needed using trash. For example, some students had a boundary between the usables and unusables but it was blurred or disappeared in the activity.

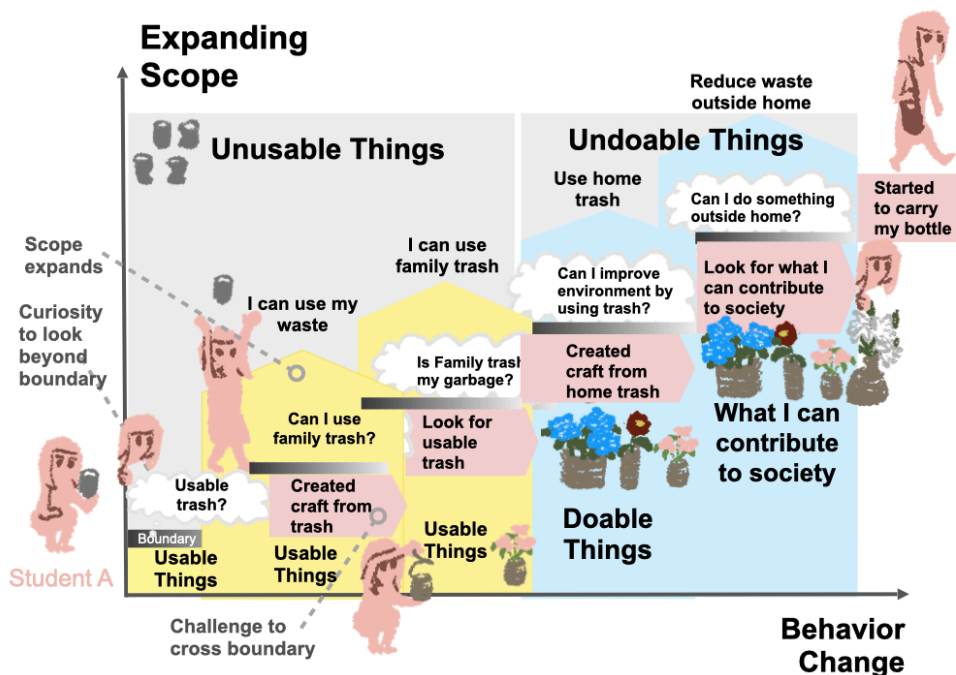


Figure 2 Blurring boundaries and scope and behavior changes in a student

Figure 2 illustrates how one student, A, changed her boundaries, scope and behavior. Initially, A had a boundary between usable and unusable things. She had never imagined using her home trash: they were unusable things only to be thrown away. But in the activity in the class, she looked beyond this boundary, which made her curious. After many trials and errors, she created a flower vase from a beer can, which gave her a feeling of challenge to act across the boundary. This experience that she could use her trash blurred the boundary she had between usable and unusable things and expanded the scope of usable things. Then, she reflected on her experience and realized that she could reduce her trash, and that because she did not have to buy mass-produced products, she actually saved energy and reduced CO₂ emissions, too. This again blurred her boundary and expanded her scope of doable things to include contribution to society. Reflecting on these experiences, she now realized there is no boundary for her creativity and ability to contribute to society. As the figure illustrates, this story had many steps in which curiosity to look beyond boundaries and challenge to act across boundaries were repeated many times, each time a small boundary is blurred one by one, to expand the scope until her daily life is connected to society. Then she discovered that she could contribute to society.

Based on the concept of boundaries we introduce a simple model to explain how the students in the first two stories changed their mindsets and behavior. The upper half of Figure 2 illustrates our model of how a boundary is created and their minds are separated from society. Because many products are readily available in our modern society, there is no need to create what we need in our daily lives. We do not have to know about nor care how and by whom the products are produced. This allows many of us to make a boundary to separate ourselves from the society so that we do not have to be concerned and make our lives more efficient. Products we buy and use make our connection to the

society invisible, and we are not motivated to contribute. This can be the mindset most of the students had when the class started.

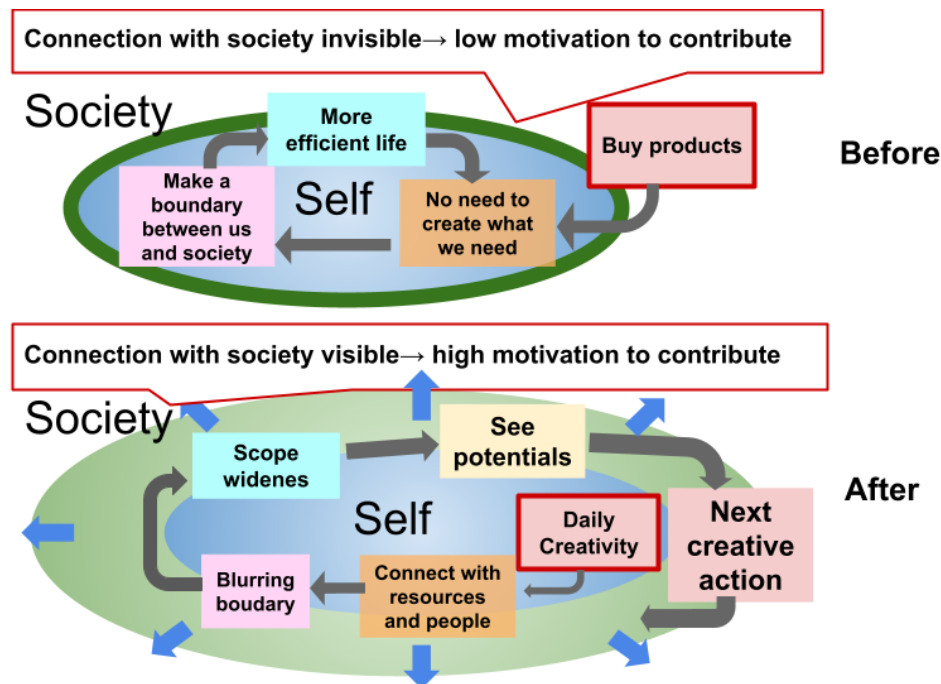


Figure 3 Boundary model of self-society relation

The lower half of Figure 2 illustrates our model of how the boundary is blurred and their minds are connected to society. In the class activity they created something they needed in their daily lives. In their reflection on the process of creation, many students mentioned experience of interacting with the concrete materials, such as cutting plastic bottles, containers, bags, cans, and cardboards. They also mentioned making relations through their creations with friends and families. These interactions with the materials and people seem to have blurred their boundaries and expanded their scope of the doable and motivated them for more creative actions. It showed them the connection they had with society. They now feel connected to the society and motivated to contribute.

Story 4. “Boundaries in Human History”

In the final story, we try to understand the origins of the boundaries and why it has suppressed our creativity and motivation to contribute to society. The story is in a much bigger scale of the hundreds of thousands of years of the story of Homo Sapiens. We look into this story to find out how we created boundaries in our minds. In this story, the creation of mental boundaries are related to the creation of modules in society. Of course, we will have to make a very complex story very simple in this short paper. More detailed analyses and discussion are in Miyata & Ho (2017), Miyata et al. (2019) and Miyata (2021).

During the Hunter-Gatherer Societies (Figure 4, top), which continued through more than 95% of our history, everyone was a producer and consumer. To survive you must learn to create and use tools collaboratively. Living was a creative collaboration for survival. To survive you must be efficient. To be efficient you must be creative.

When Farming Societies started around 11,000 years ago (Figure 4, middle), the society was divided into the consumer module and the producer module. A small number of people became consumers who did not produce food. Most people were in the producer module who continued to live creatively and collaboratively. Also, some communities grew larger and became nations and religious groups. Communication became difficult between big modules like nations and religions, causing many social issues from slavery and colonialization to destruction of other modules and the ecosystem.

Here we live in an Industrial Society (Figure 4, bottom), in which most of the population has become consumers and workers who rely on products produced by a small number of professional producers in the producer module. You no longer need creative collaboration for survival because you can choose from so many mass-produced products. Being efficient no longer requires being creative.

In industrial societies, life is divided into working and learning. Workplaces are modularized, like factories, offices, and stores. We create many boundaries to make our work more efficient. When products are transferred between modules, they are evaluated with their prices. We may feel that the prices are the values of the products, but the prices do not show the values of the works that went into producing them.

We can see a similar pattern in learning in school education which started in industrial societies to educate workers for efficient production. Education is modularized into schools, classes, and subjects. Again, we have created many boundaries to make our learning more efficient. Students have become consumers of knowledge produced by professional scientists and taught by professional teachers and creating knowledge themselves has now gone outside their boundary. Students have become the products of schools which are evaluated efficiently with their scores. It is more efficient for the students to learn how to get better scores than to learn the knowledge. Creative learning went outside their boundary.

Local Domestic Products Approach

How can we regain our creativity suppressed by so many boundaries we have created in our minds? These stories suggest that we don't need to set big goals and try to achieve them. We don't have to fight with our boundaries in our minds because there is no boundary to start with. I think we just need to remember that living is an activity of connecting with people, tools and the ecosystem around us. We proposed Local Domestic Products, LDP for short, an approach in which we try to create things we need locally using whatever resources we find locally. A graceful shift from GDP to LDP will reconnect ourselves across boundaries created in the GDP society.

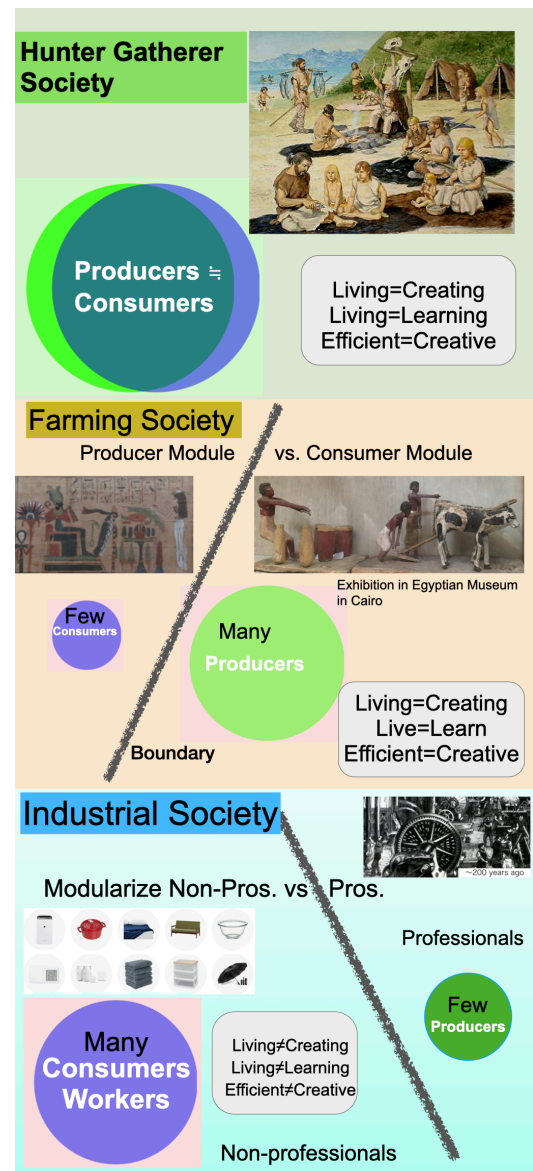


Figure 4 Modules and boundaries in human history: Hunter-Gatherer (top), Farming (middle), and Industrial (bottom)

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