

R&D Item

## 1. Clarification of functional requirements and social acceptability of CCC

### Progress until FY2024

#### 1. Outline of the project

The aim of the R&D theme is to clarify the functional requirements for CCC as a complement to the traditional childcare system. It will contribute to the overall goals of the project, which are the promotion of a flexible and responsible "Our Child Care" with the involvement of diverse people throughout society. In order to achieve these goals, we are addressing two specific issues to address the challenge of clarifying specific methods and policies for society-wide engagement in childcare.

##### Task 1: Constructing requirements based on real-life parenting and expert perspectives

By interviewing diverse individuals and reviewing social systems, we'll assess pros and cons of involving third parties in childcare.

##### Task 2: Investigating family relationships based on CCC

We'll simulate a quasi-CCC with research group members, formulating hypotheses through role-playing and testing to analyze CCC's challenges and benefits.

#### 2. Outcome so far

##### Task 1a:

We examined the importance of third-party involvement from an evolutionary biology perspective. Through interviews with 98 individuals and 24 experts, we organized the advantages and disadvantages from each perspective (parent, the child, and third-party, respectively) to promote CCC. We found that they

prioritized the following points: From the parents' perspective, "Ensuring children are not harmed", "Third-parties are trustworthy", "Feeling reassured." From the children's perspective, "Easy to talk", "Not to be nervous", "Listening to me." From the third-parties' perspective, "Feeling good", "Having mental flexibility", "Having sufficient time."

##### Task 1b:

From a sociological perspective, we reviewed around 150 sources on systems supporting childcare beyond biological parents, including institutional care, foster care, adoption, childcare centers, and home-based childcare providers (保育ママ). We also conducted interviews and case studies on the "Island Parents (島親)" system in Ama Town, Shimane Prefecture. Based on these insights, we surveyed 3,900 adults to explore what kinds of childcare systems they would prefer to use or contribute to as third-party supporters. This revealed that parents are more likely to entrust their children to care services when those services are provided in public spaces. Similarly, the willingness of third-party individuals to participate as caregivers increased when the care was in public settings rather than private homes. Additionally, people were more inclined to contribute when the childcare activities focused on sharing everyone's strengths instead of following fixed programs. These findings highlight the importance of public, flexible, and individualized approaches to fostering broader involvement in childcare support systems.



##### Task 2:

We formed a "team Kazoku" consisting of parent, the children, and third-parties as an example of CCC. We recorded changes in the relationships between team Kazoku members and challenges (confusion) in forming those relationships. Through these implementations, we clarified the importance of coordinator role and clues for building relationships among team family members.

Additionally, we developed a workshop aimed at promoting awareness and understanding of team Kazoku style relationships to imagine the present and future of such teams. We also created a manga booklet that reconstructs real events experienced within team Kazoku settings into narrative form.

#### 3. Future plans

We will continue to clarify the functional requirements of CCC in a more quantitative manner, thereby elucidating the future form of alloparenting (childcare by multiple caretakers in addition to biological parents) based on scientific evidence. It is necessary to identify factors related to the context of local communities. We also plan to continue the team family practice, record long-term changes, develop workshops for the introduction of CCC.



## 2. System Design of Child Care Commons

### Progress until FY2024

#### 1. Outline of the project

This Research and Development project aims to establish the requirements for a system that will be necessary to realize Child Care Commons (CCC). To achieve this goal, we will identify a set of functions that should be realized by the system and examine the requirements for technologies that can implement these functions. We will also consider the effect of CCC on parents, their children, and third parties.

#### Task 3: Create ICT systems necessary for CCC operation

In CCC activities, we establish digital technology requirements supporting diverse individuals (beyond parents) to participate actively, flexibly, and responsibly in childcare. Specifically, we use everyday technologies like SNS to visualize social relationships from communication logs, enhancing participants' awareness of their roles and motivation. Additionally, we support ensuring the authenticity of information about relationships among parents, children, and third parties, and recognizing the value of those relationships, potentially through blockchain or similar technologies.

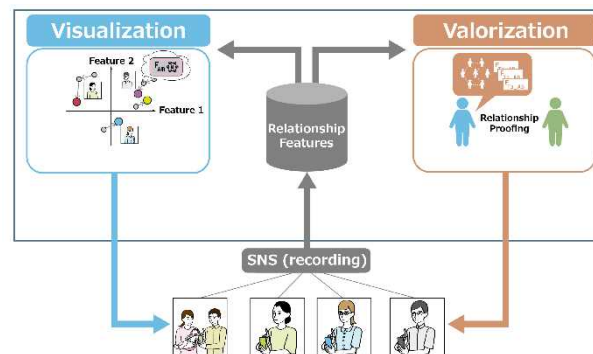
#### Task4: Evidence and acceptability that support CCC

We will consider the effect of CCC on children, parents, and third parties (participants), and how CCC can have a positive effect on parents, children, and third parties, and examine the evidence for this from the perspective of neuroscience and psychology.

#### 2. Outcome so far

##### Task 3: Create ICT systems necessary for CCC operations

We collaborated with Task 5 and organized technical specifications and data operations for the CCC system, enabling the application of existing and related technologies to parent-child relationships. Additionally, we validated a system for visualizing social relationship using real data from Task 2, which conducted CCC practice.



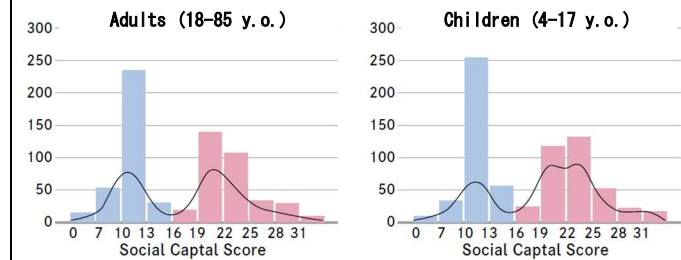
(A functional concept diagram of CCC operational system)

##### Task 4: Examining the benefits of CCC from cognitive neuroscience

##### A: Clarifying the neural basis of individual characteristics

A survey that was conducted to 292 university students showed that those who had rich social relationships with trustworthy third parties during childhood were more likely to report higher well-being as adults.

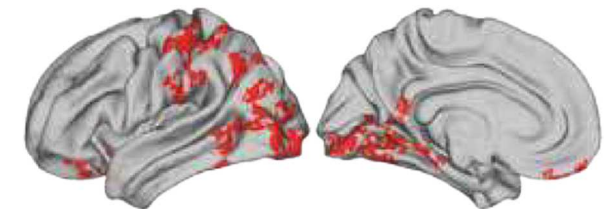
Through the other survey that was conducted to 4,000 people (aged 4 to 85), we found that there was clear dichotomy between those who had few people they could rely on when in



trouble (blue) and those who had many people they could rely on (pink) (see above Figure).

##### B: Examining the relation between social relationship capital/social networks in early childhood, school-age, and adolescence and subsequent well-being

Regarding this disparity in social capital, brain imaging analysis (fMRI) of 109 adults showed that people with rich social capital had more developed brain regions associated with empathy than those without such social capitals.



(The areas of the brain that are more developed in people with high social capital are shown in red, compared to those with low social capital)

#### 3. Future plans

In the future, we'll design a system that integrates the requirements we have established, as well as accumulate evidence on the benefits of CCC and develop an environment that will allow people to participate in CCC without worry.

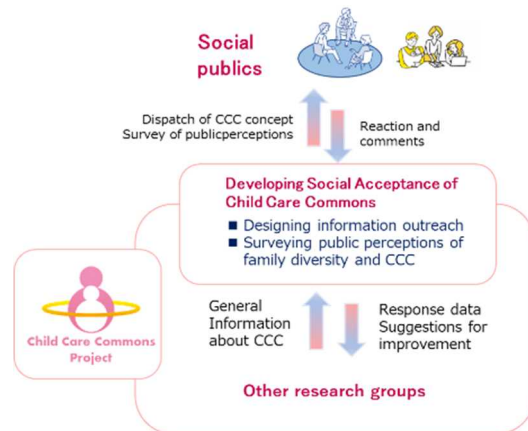


### 3. Fostering Social Acceptance of Child Care Commons

#### Progress until FY2024

##### 1. Outline of the project

In this research project, we investigate various potential criticisms and opinions from the general public about the possibilities of various child-rearing environments. Furthermore, based on the survey results, we will propose modifications to the system and build requirements for CCC to be accepted by society in general, ultimately aiming to gain a broad understanding of the benefits of CCC and to create an atmosphere of acceptance for voluntary choice of various forms of child-rearing.



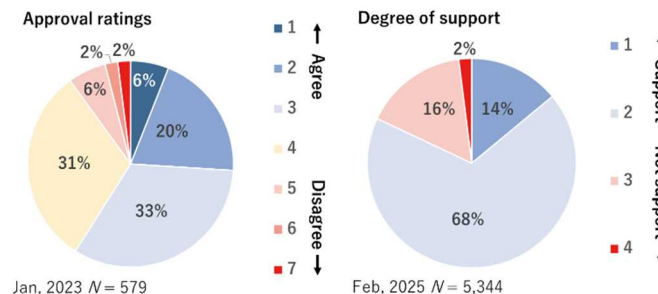
##### 2. Outcome so far

###### Task 5:

###### Survey on general impressions of CCC

We created leaflets, work sheets, and a website

(<https://childcarecommons.org/>) explaining the concepts of CCC. Based on these materials, we conducted multiple surveys to assess the level of understanding and acceptance of CCC. The results showed that approximately 10% of respondents clearly opposed the CCC concept, while 80–90% of respondents agreed with the explanations provided about CCC (see Figure below). From these findings, although there is room for improvement in the details, we were able to create materials that function effectively as explanatory resources to a certain extent.



(Excerpts from the white paper published in 2025)

##### Extraction of requirements for social acceptance of CCC

In collaboration with Task 1, 2, and 3, we conducted a large-scale survey and found that approximately 25% of respondents expressed an interest in participating in childcare as a third party.

We also asked about their expectations for participating in CCC and potential barriers to participation. Among the expectations, “growing

together with children” (39.2%), and “gaining various perspectives through interacting with children” (36.4%) were highlighted, indicating that participants expected personal growth and learning. On the other hand, concerns such as “mental burden” (36.5%), “responsibility arising from involvement” (29.0%), and “financial burden” (27.7%) were identified as barriers to participation.

Additionally, in this survey, when asked about preferred communication media for interactions, about 70% indicated they would like to use social media platforms such as LINE, Instagram, and Facebook appropriately. However, about 30% stated they prefer to communicate only in person, highlighting the need to consider those who do not wish to use social media.

##### 3. Future plans

We found that one in four people are interested in getting involved in childcare as a third party, which was higher than our expectation. However, we also revealed that there are concerns about various burdens and that preferences for communication tools vary from person to person.

In the future, in order to propose a system that will encourage more people to participate, it will be necessary to consider how to support those who feel the burden described above.

Additionally, there is still unanalyzed data, such as data related to personality traits, so it is important to conduct further detailed analyses and report these findings in academic conferences and specialized journals.