

Article

What Do People Say When They Become “Future People”?—Positioning Imaginary Future Generations (IFGs) in General Rules for Good Decision-Making

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Abstract: In public decisions with long-term implications, decisions of the present generation will affect long-term welfare, including future generations. However, only the present generation is able to participate in such decision-making processes. In this study, we invited “Imaginary Future Generations” (IFGs), as participants in a discussion who take on the role of members of future generations to argue on behalf of their future interests to engage in present-day deliberations among residents of a Japanese town. Through analysis, it was seen that the deliberations among IFGs rose interest in issues that are related to common fundamental needs across generations. While the cognitive aspects of interpersonal reactivity, which measure the reactions of one individual to the observed experiences of another, were seen as useful in arguing for the interests of future generations, it was suggested that the environment for deliberation had a significant impact on the ability to effectively take on the role of members of future generations. Finally, this paper positioned IFGs within the broad context of general rules for good decision-making, based on an analysis of these deliberations and in light of philosophical arguments such as the veil of ignorance by John Rawls.

Keywords: Future Design; Imaginary Future Generations; deliberations; general rules for good decision-making



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1. Introduction

Cross-generational global issues such as climate change have become an urgent issue. According to the Intergovernmental Panel on Climate Change (IPCC) [1], the global average temperature at the end of the 21st century (2081–2100) compared with the end of the 20th century (1986–2005), without effective measures against global warming, will rise by 2.6 to 4.8 °C, and even if severe global warming measures are taken, it is likely to rise by 0.3 to 1.7 °C. Along with this, it is expected that there will be widespread and irreversible effects such as abnormal weather, rising sea levels, adverse effects on the ecosystems, and effects on crop yields. An Independent Review on the Economics of Biodiversity [2,3] (Dasgupta Review) by the HM Treasury, UK, shows that humans are collectively unable to use nature in a sustainable manner. The review points out that the demand for nature far exceeds the capacity to provide natural goods and services. The way we interact with nature today is unsustainable and is endangering the lives of people now and in the future.

Turning from the natural environment to the human world, unprecedented changes in population statistics have sharpened the problem of resource allocation between generations. For example, in Japan, where the gross general government debt GDP ratio in 2020 has exceeded 250%, and its fiscal situation is the worst among developed countries,

social security-related expenses have increased due to the rapid aging of the population, which has inflated its debt. As a result, in order to avoid the divergence of debt (financial collapse), it is necessary to properly manage this burden and the burden associated with the aging population that will continue to be added over the long term. According to Japan's Drafting Committee of the Fiscal System Subcommittee of the Japan Fiscal System Council [4], assuming that the fiscal balance will be permanently improved once in 2020 to stabilize the debt GDP ratio after 2060, it is necessary to improve its primary balance by 8.0 to 9.2% of GDP (reduction in expenditure or increase in revenue) on a general government basis. Even in urban development, the investments in infrastructure and human capital have long-term consequences that transcend the present generation. While good investments support the prosperity of the town in the long run, it is necessary to consider that the debt associated with the investments will be a burden to future residents.

In public decisions that have long-term consequences, such as those addressing global warming, long-term fiscal policies, and town planning, decisions of the present generation will affect long-term welfare, including that of future generations. However, only the present generation can participate in such decision-making processes, and it is often the case for the present generation to increase their own welfare at the cost of future generations. In global warming, we face difficulties in reaching a meaningful agreement to curve atmospheric levels of carbon dioxide.

It is the purpose of this paper to consider the sustainability issue that results from the absence of future generations' involvement in decision-making.

2. Concept of "Future Design" (FD) and the Role of Deliberations

To address the problem of the lack of participation of future generations, Anderson [5] suggested the idea of negotiating between generations. Saijo [6,7] proposed "Future Design" (FD), more specifically, inviting "Imaginary Future Generations" (IFGs), who pretend to be the future generations and express intentions of the future to participate in present-day deliberations. These studies discuss that an individual would achieve *futurability* if they experience an increase in satisfaction as a result of deciding and acting to forego current benefits in order to enrich future generations. Previous research has demonstrated that incorporating IFGs into discussions of issues that will have a future impact is an effective way to overcome shortsighted decision-making. In the first lab-scale experiment, groups that included an IFG demonstrated the capacity to make judgments and decisions that opted to leave resources for future generations, even if that meant reducing the remuneration that the group itself would realize (Kamijo et al. [8]).

How is participating in deliberation as an IFG different from participating in an ordinary deliberation? According to Hara et al. [9], based on observations of deliberation in the town of Yahaba, Japan, in the deliberation of the present generation, discussions tend to focus on the current state of the town and unmet needs. They tend to give the highest priority to the urgent and important policy issues challenging the present generation, such as "economic development" and the "wealth gap." In deliberations among IFGs, in contrast, a higher priority is given to policy issues that take longer to resolve, such as global environmental problems. Nakagawa et al. [10] conducted interviews with two subjects who had active statements as IFGs during the deliberation in the town of Yahaba. In the interview transcript, they arranged psychologically relevant statements and clarified that there were four themes in the subjects' statements: (1) jumping back and forth to shake off present concerns, (2) treating the imagined world as real, (3) recognizing the present generation's actions as a prerequisite for the happiness of the future, and (4) perceiving the coexistence of conflicting identities of the present and the future. In the first theme, by repeating jumping back and forth between the present and future modes, the subjects gradually succeed in putting the present aside. The process of imagining oneself as part of a future generation involves a significant cognitive load because one must put aside everyday affairs—something that people rarely do in their daily lives. Thus, the process is not straightforward. In the second theme, once one succeeds in taking on the part of a

future generation member, one expands the imagination about the future world so that they are very willing to live there. In the third theme, as participants become immersed in their newly formed worldview of the future generation, they soon come to recognize actions by the present generation as a necessary prerequisite to realize this worldview. The reason for this recognition is that inaction or unfavorable action by the present generation threatens the very existence of the imagined future world, as well as of the people living in it. In the fourth theme, while still possessing the original present mode perspective and feeling empathy for those recommending actions that are beneficial to the present generation, the participant is also inclined to support actions that will come to fruition only several decades later. This newly gained dual perspective is of a higher order in the sense that it includes and encompasses the former present-only perspective, whereas the reverse is not true.

Hara et al. [11] reported separate deliberations from Hara et al. [9] in the town of Yahaba. The three-stage deliberation, (1) ordinary deliberation as the present generation, (2) deliberation as IFGs, and (3) deliberation without specifying any (the subjects were asked to leave the reason for their decisions to the future generations), was implemented. In the survey after the third deliberation, the subjects were asked to provide answers in five steps to the following prompts (1. totally disagree, 2. disagree, 3. neither agree nor disagree, 4. agree, and 5. very much agree): “In today’s debate, I thought about things from the standpoint of people living now” and “in today’s debate, I thought about things from the standpoint of the future generations”. There was a positive correlation between the answers to both questions. This suggested that the subjects were thinking from the perspectives of both the current and the future generations simultaneously. Hara et al. [11] proposed the concept of “viewpoint sharing” from this finding. A high degree of viewpoint sharing can activate *futurability*, which can pave the way for the consideration of future generations. Nakagawa and Saijo [12] found that the metacognition was active during their workshops, concerning the two cognitions which were governed by the present and future selves.

Those instructed to become future generations were expected to look back on the present from the future and consider the decisions that were desirable now. Looking back and evaluating the present from the future through a typological remark: “I’m glad I did XX 30 years ago (the present)/I regret making a decision XX” (retrospective assessment) was expected. Anderson et al. [13] found that in considering the impact of the present decisions on the future, it was useful to first look at past decisions and take steps to consider how they affected the present. Nakagawa et al. [14] and Nakagawa et al. [15] asked their subjects to look at past decisions by reading old newspapers and selecting decisions that would affect the future. These studies conducted experiments (the former focused on national and local fiscal policies, and the latter on forest policies in the Kochi Prefecture) and reported that consulting past decisions encouraged the consideration of future generations. They called their retrospective assessment “past design”.

One of the important features of FD is to emphasize the role of deliberations in collective decisions. Regarding the deliberative decisions on social issues, Fishkin [16] reported the results of a number of deliberation practices. Fishkin [16] pointed out that deliberations could be expected to improve citizenship. Deliberations strengthened the attributes that helped citizens solve group problems and led to better decisions. On the other hand, there were more cautious views on the function of deliberations. In Sunstein’s [17] paper with the subtitle “Why groups go to extremes”, he pointed out that there is a phenomenon in which discussions are biased toward extreme opinions through deliberations, and he called this phenomenon “polarization”.

The interest of our paper is social decisions involving multiple generations. This decision differs from the decision on common issues among contemporary people. Social decisions involving multiple generations are not about choosing good policies for those who are living now, but whether they can choose policies that may be negative for those who are living now but positive for those who are in the future. In this regard, Hi-

romitsu [18,19] conducted an experiment in which subjects were asked to make long-term fiscal policy choices and to make collective decisions through deliberations among the subjects. Hiromitsu [18,19] showed that deliberations have the power to change people's opinions, but in an environment where there are few people who originally have opinions that consider the interests of future generations, simple deliberations are not enough for future-oriented decisions. This point is consistent with Charness and Matthias' [20] finding that group decisions are more self-interested than individual decisions. Deliberations encourage decisions that benefit participants but do not necessarily encourage decisions that consider others who are not participants. Opinions of future generations are not represented in the current deliberation forums such as the Parliament. The significance of FD to involve IFGs in deliberations is to increase the diversity of opinions put into the process of deliberations and to improve the quality of deliberations. In the deliberations of the absence of IFGs, in the words of Sunstein [17], there is a "polarization" toward opinions that reflect the interests of the present generation only.

In sustainability science, previous studies pointed out that the participation of various stakeholders enhances the sustainability of corporate activities (Caputo et al. [21–23], Polese et al. [24]). For example, Caputo et al. [23] pointed out that promoting information sharing with stakeholders such as consumers enhanced corporate values and the sustainability of businesses. By nature, future generations should be essential stakeholders in determining cross-generational issues. Suchman [25] pointed out that legitimacy has an important function in business management. According to Suchman [25], p.574, legitimacy is "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions." Legitimacy determines what is considered a problem. Thomas and Lamm [26] pointed out that the legitimacy of an organization with full respect for sustainability had a significant impact on the sustainability of an organization. In determining cross-generational issues, it is necessary to allow sufficient legitimacy to considering interests of future generations. Listening to the voices of future generations through FD can renew legitimacy in determining cross-generational issues.

In collective decisions, there is voting as well as deliberations. As an attempt to introduce the interests of future generations into the voting process, Demeny voting (Demeny [27]) that gives an additional vote to voters with children has been proposed. However, as Steiner et al. [28] argued, the explicit statement of intention regarding sustainability would be merely pretending. The statement would be different from the implicit cognition that appears in intuitive judgment. If this is correct, deliberations leading to decisions through the exchange of explicit opinions may be more effective in guiding people to sustainable decisions than voting.

3. Methods—The Setting for the Deliberations

In this paper, we report on new deliberations in the town of Yahaba. We further advance previous research on FD, which has an innovative significance in decision-making across generations, and aim to clarify and evaluate its function concretely. Specifically, the following issues are addressed through reporting.

Issue 1: To comprehensively understand the characteristics of deliberation as IFGs that previous research has revealed.

In this paper, we understood the characteristics of deliberation using two methods. The first aims to present the overall characteristics of group deliberation through text mining techniques of transcripts. The second focuses on individual subjects in which coders, independent of the experimenter, read the transcript and determine the characteristics of the subject's speech. We combine both methods to understand the characteristics of the deliberation of future generations comprehensively.

Issue 2: To consider conditions that are advantageous for exhibiting the characteristics of IFGs.

In this paper, the psychological scales and attributes of subjects were collected through surveys. By comparing the result of this survey with the judgment of the coders as described in Issue 1, conditions that are advantageous for exhibiting the characteristics of future generations are examined. Does one's personality affect their performance as an IFG? Can anyone be an IFG based on how the deliberation settings are set?

Issue 3: To position the functions of IFGs in general rules for good decision-making.

Rawls [29], in the original position beyond the veil of ignorance, presented a means of agreeing upon two principles of justice independently of individual interests. Becoming an IFG seems to have something in common with Rawls' [29] argument. However, in what sense? Based on considerations in Issue 1, the functions of IFGs are placed in the broad context of general rules for good decision-making.

The deliberation was held on 28 May 2018 in Yahaba Town, which has a population of about 2800 (2015, Census report). It is located in the Iwate Prefecture, in the northeastern region of Japan. It is an old village with paddy fields and a commuter town situated in the outskirts of Morioka City, the capital of the Prefecture. In line with Japan's nationwide trend, the population in the town is also aging. The aging rate of the population (the percentage of the population aged 65 years and over) was 23.6% in 2015 and will continue to rise. The National Institute for Population and Social Security Research has projected that the population will decline to around 2400 in 2045. It was a big event for the town that the Iwate Medical College Hospital was set to move from Morioka City in the fall of 2019. Along with this, facilities were developed to accommodate hospitals, including the construction of an interchange that can climb up and down the expressway, extending from Morioka City.

A total of 30 people participated in the deliberations, including 22 publicly invited residents, 4 town hall officials, and 4 officials from the Ministry of Finance. Approximately 45% of subjects were female. The percentage of subjects younger than 40 and older than 60 were around 45% and 35%, respectively (of the 30 participants who attended the deliberation, 28 responded to the survey because of time constraints). Although the number of participants in the experiment was not large, in this paper, the assertions derived from the observation results were based on statistical significance.

In the beginning, the Yahaba Town Office explained the town's ideas for formulating a comprehensive administration plan, which was the issue to be discussed among the people. As background information, the national government briefed them on Yahaba Town's financial situation as well as the national and global issues, including population aging and climate change. After that, five or six inhabitants, one town hall staff member, and one national staff member were formed as a unit to form four groups separated into different rooms. The subjects were discussed twice with the same members for issues to be raised in the comprehensive plan. In the first session (Part 1), everyone was treated as part of the present generation, and discussions were held for about 60 min. In the second session (Part 2), all subjects were instructed to become IFGs from 2048, and views were exchanged for about 60 min. In Part 2, the subjects received the following instructions: "As a resident of the same age, gender, and other social statuses in 2048, imagine what policies you would like the town to work on. From the perspective of humans in 2048, think about what the comprehensive administrative plan should look like." We asked town and government officials to participate in the deliberations with the same perspective as that of the residents. In each group, a town official (separate from the town officials participating in the deliberation) facilitated the discussion. Another town official worked as a secretary and wrote down the subjects' opinions on a whiteboard.

Finally, the subjects answered the questionnaire. They were asked about the recognition of what was discussed in the deliberation and thoughts on Yahaba Town (Q1–3), Interpersonal Reactivity (Q4), Critical Thinking (Q5), and Generativity (Q6), in addition to information on their basic attributes (Q7).

Table 1 summarizes the psychological scales tested and the basic attributes surveyed. Interpersonal Reactivity (IRI-I) is an index by Davis [30] and Himichi et al. [31] that

measures reactions of one individual to the observed experiences of another. It consists of four factors: Perspective Taking, Fantasy Scale, Empathic Concern, and Personal Distress. It is hypothesized that the higher the Interpersonal Reactivity, the easier it is to make a statement from the perspective of future generations. Critical Thinking, according to Hirayama and Kusumi [32], is a form of reflective thinking that consciously examines one's inference process. Hirayama and Kusumi [32] divided Critical Thinking into four sub-items: awareness of logical thinking, inquiry, objectivity, and emphasis on evidence. We focused only on awareness of logical thinking, which expresses confidence in thinking (the sub-item is shown in Appendix A). Those strongly disposed toward Critical Thinking are expected to be more successful in putting aside their a priori perspectives and open-mindedly assess views of future generations. Generativity is a concept introduced by Erikson [33] and refers to the concern of establishing and guiding the next generation. It is an indicator that measures the nature of being actively involved in the act of creating value for the next generation. In this paper, based on the test in MacAdams et al. [34], the subjects were asked such questions as "Have you taught somebody a skill?" and "Have you served as a role model for a young person?" Nakagawa et al. [14] found that those who have higher Critical Thinking (awareness of logical thinking) or higher Generativity are more likely to make future-oriented choices. With regard to basic attributes, consideration for the future may decrease with age. Nakagawa et al. [14] reported that younger people were more likely to choose fiscal policies that take future generations into account. Public Service means that the subject was a town or government officials. In the discussion, the officials were asked to speak freely from their positions in the offices. However, in their careers, they were trained to be public-spirited. Mill [35] pointed out that offering people roles in Public Service would enhance their public spirit and named the function of the public roles "school of public spirit".

"Still more salutary is the moral part of the instruction afforded by the participation of the private citizen, if even rarely, in public functions. He is called upon, while so engaged, to weigh interests not his own; to be guided, in case of conflicting claims, by another rule than his private partialities; to apply, at every turn, principles and maxims which have for their reason of existence the general good; and he usually finds associated with him in the same work minds more familiarized than his own with these ideas and operations, whose study it will be to supply reasons to his understanding, and stimulation to his feeling for the general interest. He is made to feel himself one of the public, and whatever is their interest to be his interest." Mill [35] (p. 49).

We hypothesized that the officials would play a greater role for future generations.

For IRI-J, Critical Thinking (awareness of logical thinking), and Generativity, factor analysis was performed. Since IRI-J assumes four factors, factor analysis was performed to determine whether each subscale indicates one factor. As a result of factor analysis, one item was excluded from Perspective Taking ("I believe that there are two sides to every question and try to look at both"), two items from the Fantasy Scale ("I really get involved with the feelings of the characters in a novel" and "Becoming extremely involved in a good book or movie is somewhat rare for me"), and two from Personal Distress ("In emergency situations, I feel apprehensive and ill-at-ease" and "When I see someone get hurt, I tend to remain calm"), and subscales were synthesized with other items (reliability coefficient of each scale: Perspective Taking, $\alpha = 0.50$; Fantasy Scale, $\alpha = 0.55$; Empathic Concern, $\alpha = 0.52$; Personal Distress, $\alpha = 0.80$). All items for Critical Thinking and Generativity were used.

Table 1. Summary of the psychological scales tested and basic attributes surveyed.

Scales /Attributes	References	Descriptions of Measure	Previous Studies /Hypotheses
Interpersonal Reactivity (IRI-J)	Davis [30], Himichi et al. [31]	Reactions of one individual to the observed experiences of another. 1 Perspective Taking—The tendency to spontaneously adopt the psychological viewpoints of others. 2 Fantasy Scale—Taps respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, movies, and plays. 3 Empathic Concern—Assesses "other-oriented" feelings of sympathy and concern for unfortunate others. 4 Personal Distress—Measures "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings.	The higher Interpersonal Reactivity, the easier it is to make statements from the perspective of future generations (a hypothesis).
Critical Thinking	Hirayama and Kusumi [32]	Reflective thinking that consciously examines his or her reasoning process. One of the sub-items is "awareness of logical thinking," which expresses confidence in thinking (the sub-item is shown in Appendix A).	The higher the Critical Thinking ability, the easier it is to make future-oriented choices (Nakagawa et al. [14]).
Generativity	McAdams et al. [34]	The nature of being actively involved in actions that create value for the next generation	The higher the Generativity, the easier it is to make future-oriented choices (Nakagawa et al. [14]).
gender	-	-	-
age	-	-	Younger people were more likely to make future-oriented choices (Nakagawa et al. [14]).
Public Service	Mill [35]	Town or government officials.	Officials play greater role of future generations (a hypothesis).

4. Results and Discussion

4.1. Understanding the Characteristics of Deliberations as IFGs

4.1.1. Understanding the Overall Characteristics of Deliberations

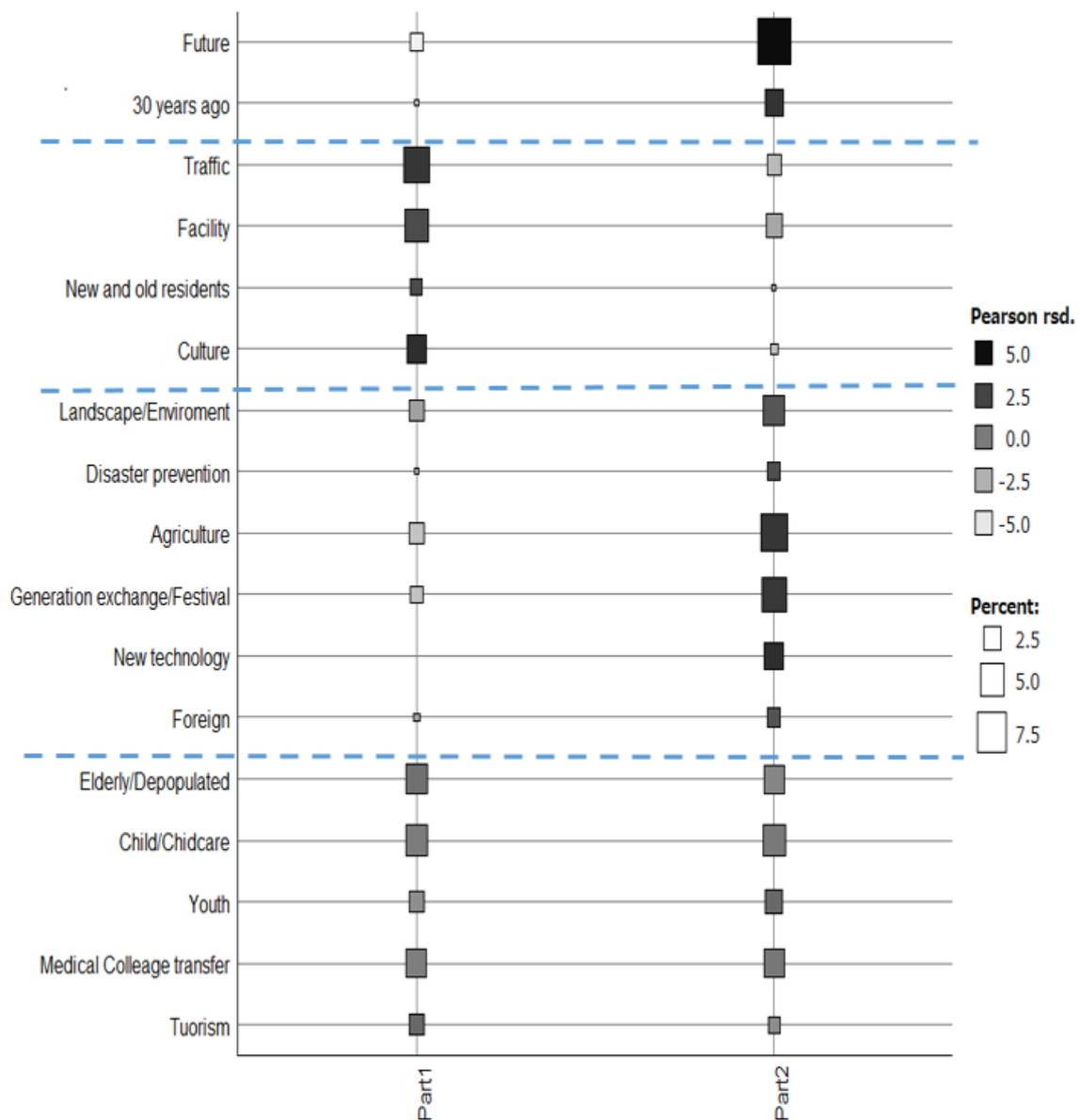
Issue 1 focuses on the characteristics of deliberations. In this paper, these characteristics were understood using two methods. The first aimed to understand the overall characteristics through text mining techniques of the transcripts. The transcripts were divided into Parts 1 and 2, and each group (ABCD) and its characteristics were grasped. One utterance of a speaker was defined as a paragraph, which was used as a unit of analysis (each paragraph consists of multiple sentences or a single sentence). The transcript was mechanically divided into six paragraphs (six utterances) in order from the front, and each was called a "section." By understanding the details in each section, transitions in the discussions according to the progress made were revealed. KH Coder (Higuchi, [36]) was used to create coding rules for verbatim transcripts and to analyze the contents of the deliberations. Nakagawa [37], in his FD workshops in an anonymous town, visualized the group deliberation processes by extending the technique of cognitive mapping. The technique is useful to show the details of the processes; however, the use of coding rules, adopted in this paper, has the advantage of grasping what was discussed in the deliberations objectively.

The coding rules are as seen in Table 2. “Future” is a code that expresses deliberations on the future, of which “30 years later” and “2048” are words used in the instructions in Part 2. “30 years ago” contains words that are expected to be used in the retrospective assessment. “Traffic” comprises words related to traffic and words representing specific modes of transportation. “Facility” comprises words related to facilities and words representing specific facilities. “New and old residents” pertain to the relationship between new and old residents. “Culture” comprises words related to culture and artistic activities. “Landscape/environment” comprises words related to landscape and environment. The landscape includes concrete scenery such as Nanchang Mountain, and the environment excludes elements related to the living environment, such as the child-raising environment. “Disaster prevention” includes words pertaining to disaster prevention and safety, and safety excludes traffic safety. “Agriculture” is related to agriculture and includes specific crops. “Generation exchange/festival” comprises words related to exchanges and connections between generations and festivals in which residents gather. When words related to the elderly/youth/child coexisted in the same utterance (paragraph), it was counted as corresponding to the code. The term “new technology” comprises words related to new technologies and includes words related to technologies that have become more popular, such as the Internet, considering that discussions were conducted by local residents. “Foreign” comprises words related to foreign countries. The term “elderly/depopulated” includes words on the elderly and depopulated, as well as words on related issues such as lonely death. “Child/childcare” comprises words that represent children up to junior high school and words pertaining to childcare. “Youth” refers to young people who are older than high school age. “Medical College transfer” comprises words pertaining to the transfer of the Iwate Medical College Hospital. “Tourism” comprises words pertaining to tourism.

Table 2. Coding rules.

Codes	Rules (Examples)
Future	the future, 30 years later, 2048
30 years ago	30 years ago, now 2048, at that time
Traffic	traffic, undercarriage, car, bus, taxi
Facility	facilities, construction, playgrounds, shops, roads, pools
New and old residents	new residents, old residents, unfamiliar
Culture	culture, art, music, traditional performing arts, dance
Landscape/Environment	landscape, Nanchang Mountain, townscape, environment (excluding “living environment”), forest, green
Disaster prevention	disaster prevention, disaster, typhoon, Nankai Trough, safety (excluding “traffic safety”)
Agriculture	agriculture, farms, paddy fields, rice, vegetables, strawberries, zucchini
Generation Exchange/Festival	generation exchange/connection, appearance of the elderly/youth/child in the same paragraph, festival
New technology	electric vehicle, automatic driving, automatic translation, Internet
Foreign	foreign, US, North Korea, overseas aid, refugees
Elderly/Depopulated	elderly people, depopulation, lonely death, social worker, unoccupied houses
Child/Childcare	child, preschooler, nursery school, elementary school, junior high school, childcare, education
Youth	youth, high school, university
Medical College transfer	Medical College, smart inter, hospital, medical, pharmacy
Tourism	tourism, guide, public relations, sunflower

Figure 1 presents the results of analyzing the characteristics of the deliberations in Part 1 (present generation) and Part 2 (future generation) by using the coding rules for Groups A to D.

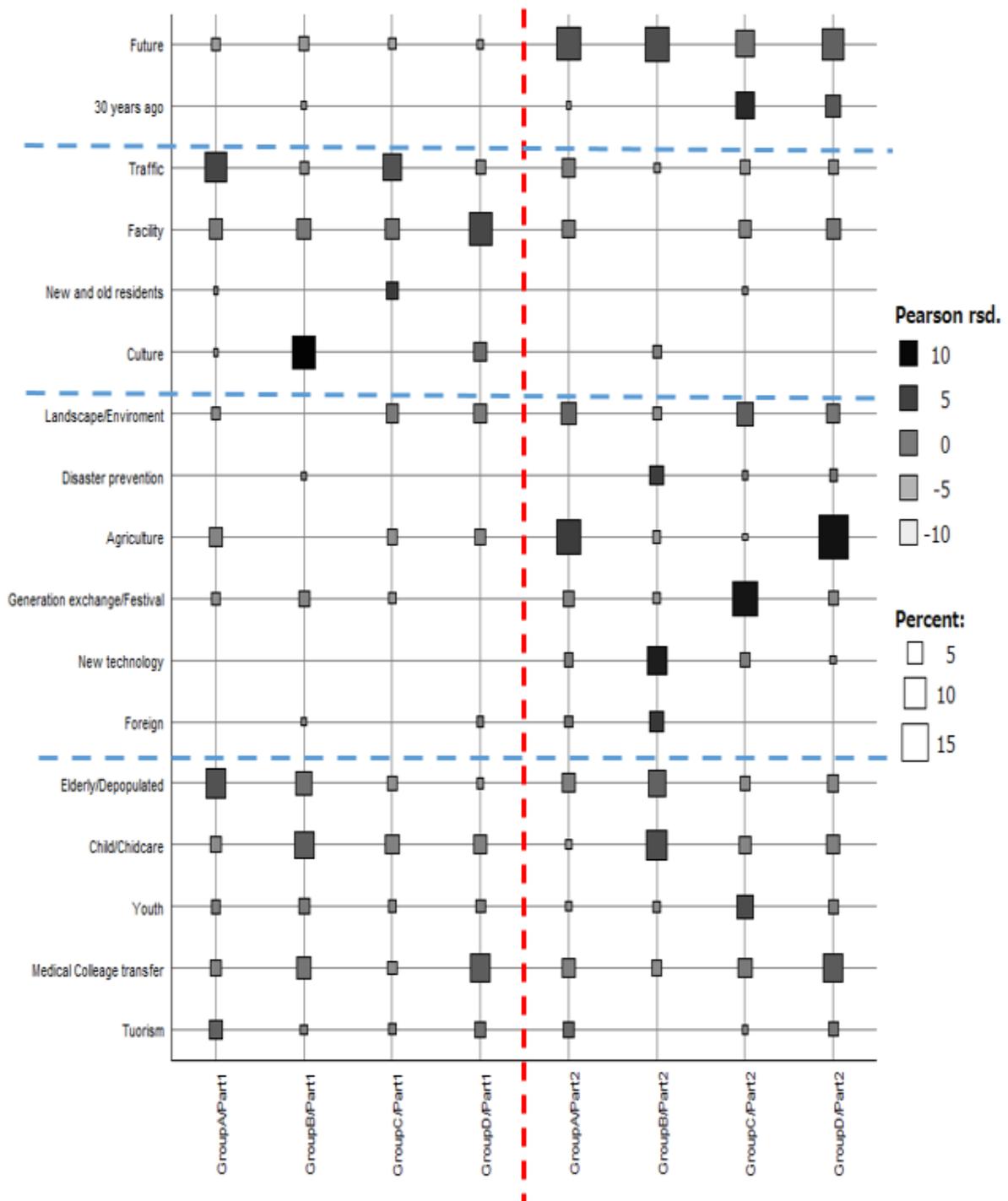


Note (1) The chi-square values and significance levels are as follows: Future (58.7**), 30 years ago (22.4**), traffic (18.5**), facility (8.5**), new and old residents (7.2**), culture (22.0**), landscape/environment (6.7**), disaster prevention (7.9**), agriculture (21.7**), generation exchange/festival (20.3**), new technology (26.0**), foreign (6.0*), elderly/depopulated (0.3), child/childcare (0.0), youth (0.1), Medical College transfer (0.0), tourism (1.0). Note (2) ** $p < 0.001$, * $p < 0.005$.

Figure 1. Contents of deliberations in Parts 1 and 2 (Groups A to D).

Here, the sizes of the squares indicate the proportion (percentage) of the paragraphs corresponding to each code in Parts 1 and 2. As a corollary, “future” was more common in Part 2. The code “30 years ago”, which represents retrospective assessment, was significantly observed in Part 2. The codes that characterized the present generation’s deliberations (Part 1) were “traffic”, “facility”, “new and old residents”, and “culture”. The codes that characterized the deliberation of future generations (Part 2) were “landscape/environment”, “disaster prevention”, “agriculture”, “generation exchange/festival”, “new technology”, and “foreign”. “Elderly/depopulated”, “child/childcare”, “youth”, “Medical College transfer”, and “tourism” were addressed in the deliberations. There was no difference between Parts 1 and 2.

Figure 2 shows the results of performing the same analysis as in Figure 1 for each group. The unit of the analysis remained a paragraph.



Note (1) The chi-square values and significance levels are as follows: Future (67.2**), 30 years ago (78.4**), traffic (51.4**), facility (32.0**), new and old residents (37.1**), culture (32.7**), landscape/environment (20.6**), disaster prevention (36.8**), agriculture (51.9**), generation exchange/festival (98.6**), new technology (83.5**), foreign (42.9**), elderly/depopulated (29.0**), child/childcare (32.5**), youth (22.0**), Medical College transfer (21.3**), tourism (13.8). Note (2) ** $p < 0.001$, * $p < 0.005$.

Figure 2. Contents of deliberations in Parts 1 and 2 (by group).

From Figure 2, it is possible to read the bias in the topic by group. “Traffic” appeared frequently in Part 1 in Groups A and C, “facility” appeared in Part 1 in Group D, and “culture” appeared in Part 1 in Group B. “Landscape/environment” was seen in Part 2 in Group C, “disaster prevention” was in Part 2 in Group B, “agriculture” was in Part 2 in Group A/D, “new technology” and “foreign” were in Part 2 in Group B. The code for “future” appeared commonly in Groups A to D, while the code for “30 years ago” appeared in Groups C and D, especially in Group C. It was suggested that instructing future generations did not necessarily result in a retrospective assessment.

Figure 3 is the result of an analysis for each section in Group C, which shows the transition of topics according to the progress of the deliberations in the group. The horizontal axis represents the progress of sections. From the left-hand side, Sections 1 to 47 of Part 1 and Sections 1 to 54 of Part 2 are shown in the figure (the progress of deliberations in Groups A, B, and D are presented in Appendices B–D).

In the deliberations of Part 2 in Group C, it can be seen that “generational exchange/festival” and “landscape/environment” appeared alternately. “Generation exchange/Festival” included a proposal wherein students at the Iwate Medical College and residents interact at events such as Yosakoi (Japanese dance). “Landscape/environment” included remarks that addressed how they could enjoy the scenery in Nanchang Mountain because they did not have any tall buildings 30 years ago (i.e., now). An important point to be noted from Figure 3 is that the code for retrospective assessment, namely “30 years ago,” first appeared in Section 10 in Part 2 and has been continuously observed since then. This suggests that some turning point might have existed near this section in the appearance of the code. The turning point can be understood from a transcript near Section 10. Here, subject 23 pointed out the importance of communications between newly invited college students and residents.

(Subject 23) “. . . If 30 years later, when I am here if college students and townsmen are separated, I will feel a bit sad, so I hope to make good relationships now. If you do something more and more to promote communication, it will make the town better for newcomers, and it is good for those who are originally there too.”

(Secretary) “Everybody, it is now 2048, so now is 30 years from now.”

(Facilitator) “I should have done it 30 years ago.”

(Secretary) “Yeah, yeah, if I had been doing it for 30 years, it would be growing now!”

(Subject 18) “Thirty years ago, I did not build tall buildings; I did not touch them, so the mountain remains!”

(Facilitator) “You are talking well now.”

With this exchange, remarks of the type “I am glad I did XX 30 years ago (i.e., the present)/I regret having decided XX” continued. The remarks that came out were: (1) The mountain remained because we did not build buildings 30 years ago; (2) we built a transportation facility that can be used easily, so we can go to the town center and the hospital; (3) as we had provided a place to talk beyond generations, there were no lonely deaths; (4) we left behind some ground from a former junior high school as a festival venue, so there is still some space left for events; (5) we created workplaces for young people 30 years ago, so there are young people in town; (6) thanks to the construction of a sports ground for the elderly 30 years ago, they can still exercise well; (7) we built a child-raising facility 30 years ago, so the town did not just get old; and 8) it was good that the disaster prevention and building reinforcement measures were taken 30 years ago.

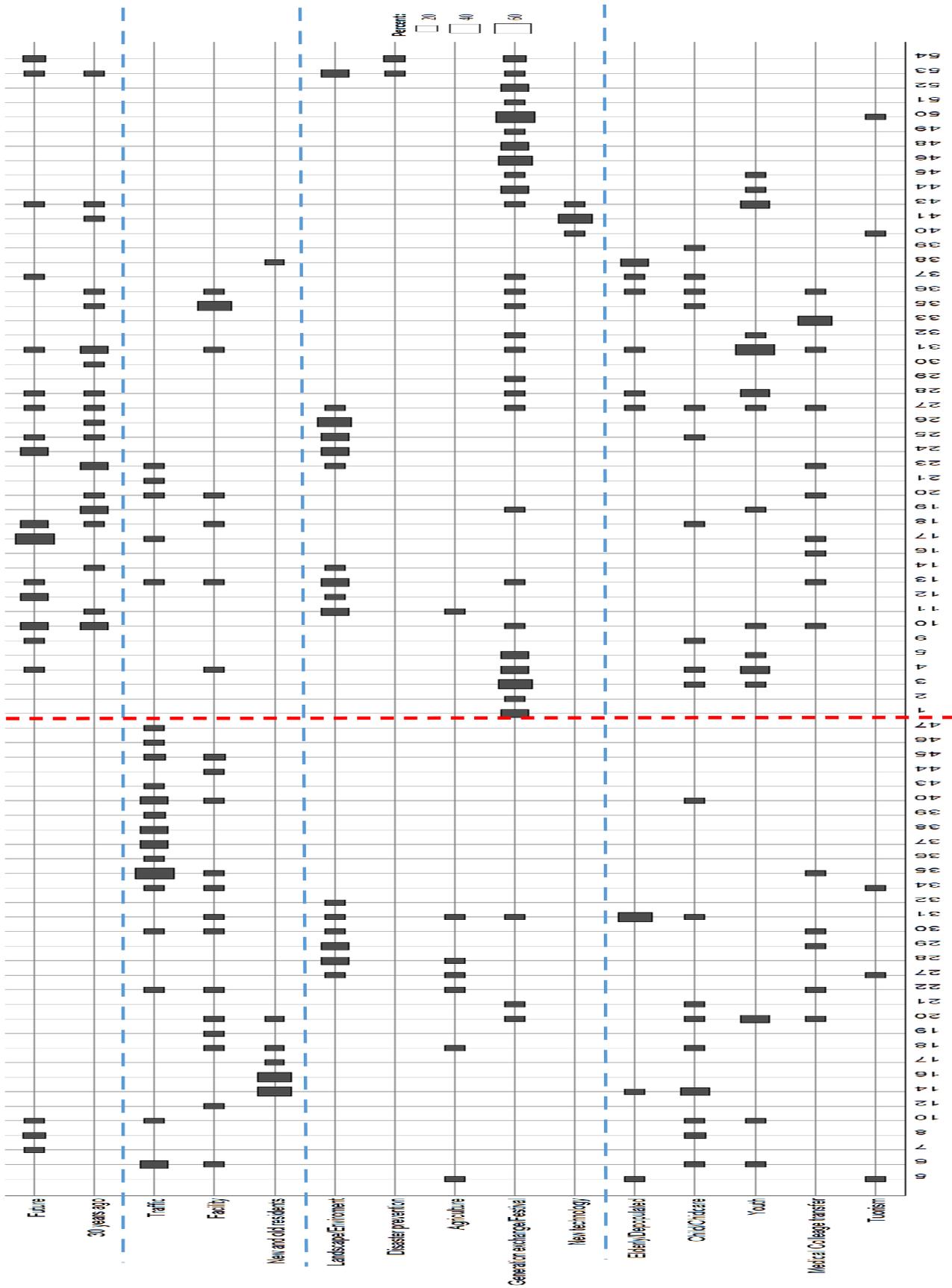


Figure 3. Deliberation process in Group C (changes in each section).

4.1.2. Judgment of Individual Subject's Statements by Coders

Another approach toward characterizing the deliberations is to have independent coders read the transcripts and make judgments on the characteristics of each subject's speech. We hired three college students, all unrelated to this study. The coders were asked to determine whether the following three features were found in the statement of each subject in each Part.

Feature 1 (statements from the current state):

Speaking from the current state/Speaking from unmet needs

Feature 2 (relationship with the future):

Make statements with at least two of the following four characteristics:

- Statements jumping back and forth to shake off present concerns.
- Statements treating the imagined world as real.
- Statements recognizing the present generation's actions as a prerequisite for the happiness of the future.
- Statements perceiving the coexistence of two conflicting identities of the present and the future.

Feature 3 (retrospective assessment):

Making statements that assess the present from the future, such as "I'm glad I did XX 30 years ago (i.e., the present)/I regret having decided XX."

Hara et al. [9] identified Feature 1 as a feature of deliberations in the present generation. Feature 2 can be called a "relationship with the future." It was taken from Nakagawa et al. [10], who analyzed the characteristics of statements obtained by interviewing those who made remarkable statements as part of the future generation. Feature 2 has four properties; however, considering the limited time for discussion, it was requested to judge positive if not all four properties but two or more of the four were observed in each subject's speech. A judgment of retrospective assessment was necessary for Feature 3, based on the presence or absence of typical statements. The sum of the number of coders who made positive judgments for each Feature was set as a score (3, 2, 1, 0 points) of each subject.

Table 3 summarizes the judgment by the coders. In Part 1 (present generation), Feature 1 (statement from the current state) appeared in most subjects. Remarks from the current state or from unmet needs were dominant. Features 2 (relationship with the future) and 3 (retrospective assessment) were (almost) not seen. It seems that the subjects requested town policies based on their immediate awareness of the problem, and their request was not spread over time. On the other hand, in Part 2 (future generation), although Feature 1 (statement from the current state) was continuously observed, its presence was declining. Instead, Feature 2 (relationship with the future) was seen in each group. Although Feature 3 (retrospective assessment) was also observed, it was intensively observed in specific groups (especially Group C, then Group D). When the difference between the averages of the scores of Features 1, 2, and 3 was tested between Parts 1 and 2, the difference was significant.

Table 3. Judgment by coders for the features of each subject.

Judgment by Coders						
Subjects	Part 1 (Present Generation)			Part 2 (Future Generation)		
Group A	Feature 1	Feature 2	Feature 3	Feature 1	Feature 2	Feature 3
1	3	0	0	0	1	1
2	3	0	0	2	1	0
3	3	0	0	2	2	1
4	3	1	0	0	2	0
5	3	0	0	3	0	0
6	3	0	0	1	1	0
7	3	0	0	1	0	0
8	2	1	0	1	1	1
Group B	Feature 1	Feature 2	Feature 3	Feature 1	Feature 2	Feature 3
9	2	0	0	2	2	0
10	3	0	0	3	2	0
11	2	0	0	0	2	0
12	2	0	0	1	0	0
13	3	1	0	3	1	0
14	3	0	0	0	1	1
15	3	0	0	2	2	0
16	1	0	0	2	1	1
Group C	Feature 1	Feature 2	Feature 3	Feature 1	Feature 2	Feature 3
17	3	0	0	3	0	3
18	3	0	0	3	0	3
19	3	0	0	2	1	3
20	3	0	0	2	1	2
21	3	0	0	2	1	2
22	1	0	0	0	0	3
23	1	0	0	3	2	3
Group D	Feature 1	Feature 2	Feature 3	Feature 1	Feature 2	Feature 3
24	3	0	0	2	1	0
25	3	0	0	1	1	0
26	3	0	0	3	2	0
27	3	0	0	2	3	2
28	1	0	0	3	0	2
29	3	0	0	1	0	0
30	2	0	0	1	1	0
Average	2.57	0.10	0	1.70 **	1.07 **	1.16 **

Note (1) The number of coders (3 to 0) judged to have the relevant feature is described. 3 is colored by orange, 2 by yellow, 1 by green, and 0 by blue. In the average column, the difference between the averages of Parts 1 and 2 is tested (** 1%, * 5%, † 10% significant). Note (2) Feature 1: “statements from the current state”; Feature 2: “relationship with the future”; Feature 3: “retrospective assessment”.

These results were consistent with the overall tendency, as seen in Figures 1 and 2. In Part 2, it was already pointed out that the frequency of the code of the “future” had increased and that the time horizon of the discussion had been broadened. The code “30 years ago” appeared in Groups C and D, and this was consistent with the findings by the coders of subjects with Feature 3 (retrospective assessment) in Groups C and D. Feature 1 (statement from the current state) maintained a certain presence although it was attenuated in Part 2. This fact matched the fact that codes such as “traffic” and “facility” retreated in Part 2 in Figures 1 and 2. However, issues such as “elderly/depopulated”, “child/child care”, “youth”, and “Medical College transfer” were kept to be discussed in Part 2.

Table 4 shows the correlation matrix of each feature in Part 2. There is no correlation between the features. Feature 1, which was characteristic of the discussion of the present generation, did not have any conflicts with Features 2 (relationship with the future) and 3 (retrospective assessment). The absence of the correlation was consistent with the fact that

the codes related to the future of “future” and “30 years ago” coexisted with the codes of “elderly/depopulated”, “child/childcare”, “youth”, and “Medical College transfer,” which also appeared in Part 1. It could be seen from Figure 3 (or Attachment) that there was no conflict between the references to these issues such as the elderly and the appearance of the codes for the “future” and “30 years ago” (there was no correlation between Features 2 and 3, which are discussed in Section 4.3 below).

Table 4. Correlation matrix for each feature (Part 2).

Feature 1 (Statements from the Current State)	Feature 2 (Relationship with the Future)	Feature 3 (Retrospective Assessment)	
1.00	0.02	0.19	Feature 1
	1.00	−0.14	Feature 2
		1.00	Feature 3

Note n = 30 (** 1%, * 5%, † 10% significance).

4.1.3. Discussion

Instructing the subjects to discuss as future generations expanded their temporal perspective. It was easy to understand that attention to new technologies gained strength. Increased references to foreign countries suggested that expanding the temporal perspective was accompanied by expanding the geographic perspective. Retrospectives assessment did not always occur in discussions among the future generations (Figure 2). The progress of deliberations in Group C suggested that in the appearance of the retrospective assessment, there was a turning point in which the subjects learned the type of utterance (Figure 3).

Whereas there are topics that are characteristic of deliberations as the present generation, there are also those that are characteristic of deliberations as future generations. Some topics were consistently taken up by both present and future generations (Figures 1–3). The present generation discussed complaints on public transport such as community buses, which will be abolished soon, and familiar requests for the development of specific facilities such as playgrounds, shops, roads, and pools. The future generations deliberated on topics such as landscape/environment, disaster prevention, agriculture, generational exchange/festival, which could be summarized as issues pertaining to common basic needs across generations. Landscape and environment constituted the basic living environment that the townspeople of the present and the future enjoyed in common. Disaster prevention was the basis of survival for all generations. Agriculture concerned the basic human need for food and also the basis of life for Yahaba, a rural area. The generational exchange was a joint effort to address the challenges of each generation, and festivals were opportunities for various members of the community to meet face-to-face and share time and place. Finally, there were topics that were consistently mentioned in the discussions of the present and future generations, such as the elderly, depopulation, and childcare. These issues were already clearly recognized as issues and were expected to continue to remain issues in the future.

By being instructed to become future generations, the subjects came to think of these issues from perspectives that were detached from the here and now and from “me.” They moved away from the immediate interests of community buses and facilities and thought about things from the perspective of time, place, and inhabitants that would continue from the present to the future. Since the importance of continuous issues such as aging would not change for future generations, Feature 1 (statements from the current state) would not disappear among future generations. On the other hand, there was a growing interest in common basic needs across generations, which were not paid attention to in the present generation, such as landscape, disaster prevention, and agriculture. In deliberations of future generations, Feature 1 (statement from the current state) and Features 2 and 3 coexisted in the same subject’s speech. Saijo [6,7] and Hara et al. [11] argued that subjects

in the role of IFGs looked at things from a perspective that looked at both positions of present and future generations. This paper traced the path to the acquisition of this bird's eye view from the change of topics covered.

There was no correlation between the appearance of Features 2 (relationship with the future) and 3 (retrospective assessment). Although both emerged in future generations' deliberations, this correlation absence suggested that they were distinct from each other. The retrospective assessment was a distinguished statement for IFGs, but it was not the only type that represented the future generation's statement. The progress of deliberations in Group C (Figure 3) suggested that there was a turning point in the deliberations with the advent of retrospective assessment. By learning the type of thinking that manifests "I am glad I did XX 30 years ago/I regret making a XX decision", Feature 3 could be duplicated.

4.2. Are There any Conditions That Are Advantageous for the Performance of IFGs?

4.2.1. Matching with Questionnaire Survey

Issue 2 focused on conditions that were advantageous for exhibiting the characteristics of future generations. What is the relationship between the Features of each subject's remarks judged by the coders and the psychological scales and personal attributes obtained from the questionnaire survey? Regression analysis (order logit) was performed taking, Perspective Taking, Fantasy Scale, Empathic Concern, Personal Distress, Critical Thinking (awareness of logical thinking), Generativity, and personal attributes (gender, age, and Public Service) as explanatory variables. In Part 1, most subjects exhibited Feature 1 (statement from the current state), and Features 2 and 3 were (almost) not observed. Thus, only Part 2 was analyzed.

Table 5 shows the results.

Table 5. Regression analysis with coder judgments as the objective variables (order logit).

	Part 2 Feature 1 (Statements from the Current State)				Part 2 Feature 2 (Relationship with the Future)						Part 2 Feature 3 (Retrospective Assessment)					
	Model 1		Model 2 (Stepwise)		Model 3		Model 4 (Stepwise)		Model 5 (with Deliberation Environment)		Model 6		Model 7 (Stepwise)		Model 8 (with Deliberation Environment)	
	coef.	p	coef.	p	coef.	p	coef.	p	coef.	p	coef.	p	coef.	p	coef.	p
Perspective Taking	−1.29	0.16	−1.2	0.11	1.27	0.16	1.36 †	0.07	1.49 †	0.06	−3.00 †	0.09	−2.76 *	0.04	−2	0.13
Fantasy Scale	−0.51	0.54			0.81	0.3					0.46	0.67				
Empathic Concern	1.4	0.32			0.47	0.74					−6.00 †	0.02	−5.89 *	0.02	−4.63 *	0.02
Personal Distress	0.46	0.57			−0.87	0.27					−0.04	0.97				
Critical Thinking	1.04	0.39	1.19	0.14	−1.36	0.25	−0.56	0.49			6.16 †	0.06	6.39 *	0.04		
Generativity	0	0.88			−0.01	0.75					0.09 *	0.04	0.07 *	0.05	0.12 *	0.02
Gender	0.6	0.53	1.12	0.14	−0.33	0.74					1.95	0.14			4.00 *	0.02
Age	0	0.99			0.01	0.88	0.02	0.37	0.2	0.31	−0.19 *	0.02	−0.20 **	0.01		
Public Service	−0.37	0.83			−0.81	0.65					−4.66 †	0.07	−5.80 *	0.01		
Deliberation Environment	—	—	—	—	—	—	—	—	−4.99	0.23	—	—	—	—	10.10 **	0
AIC	84.7		75.7		77.9		69.4		70.1		60.1		56.9		39.5	

Note (1) n = 28 (** 1%, * 5%, † 10% significance). Note (2) Details of each variable. For Perspective Taking, Fantasy Scale, Empathic Concern, Personal Distress, and Critical Thinking, the average value of the answers "1. Not at all to 5. Very applicable" after correcting the reversal items. Regarding Generativity, the average value of the respondents who answered that they performed a certain action in the past year "0. Not at all–2. more than twice." Gender (0 = male, 1 = female). Age (18–30 = 24, 31–39 = 35, 40–49 = 45, 50–59 = 55, 60–69 = 65, 70 or older = 75). Public Service (0 = non-officials, 1 = town or government officials). The deliberation environment indicates how much a certain subject was exposed to each characteristic exhibited by another subject. It is calculated by (total score of each feature of all members except the subject)/(3 × (number of members of the group−1)); (0 or more, 1 or less).

Models 1, 3, and 6 were the results of the multiple regression analysis using all the explanatory variables, and Models 1, 2, and 7 were obtained by processing these stepwise. From Model 2, we could not find any relationship between the psychological scale and the personal attributes for Feature 1 (statements from the current state). According to Model 4, for Feature 2 (relationship with the future), the coefficient of Perspective Taking was positive and significant. According to Model 7, for Feature 3 (retrospective assessment), the coefficients of Perspective Taking, Empathic Concern, age, and Public Service were negative and significant, and the coefficients for Critical Thinking and Generativity were positive.

We found that during the deliberation process, there was a turning point that activated Feature 3 (retrospective assessment). As an explanatory variable for examining the influence of such an environment, the “deliberation environment” was considered. The deliberation environment was calculated by $(\text{a total score of each feature of all members except the subject}) / (3 \times (\text{number of members of the group} - 1))$. This index indicated how much of the subjects in the group, other than the subject, exhibited either Feature 2 or 3. The score was higher (0 or more and 1 or less) as the subjects other than the person exhibiting the feature. When this deliberation environment was included in the model and regression was performed, the coefficient for the deliberation environment for Feature 2 was not significant, while the coefficient for Perspective Taking was still positive and significant (Model 5). On the other hand, when the deliberation environment was included for Feature 3, the coefficient of the environment was positive and significant, the coefficient of Empathic Concern was negative, and the coefficients of Generativity and gender (female) were positive. The significance of Perspective Taking, age, and Public Service was lost (Model 8).

4.2.2. Discussion

The coefficient of Perspective Taking for Feature 2 (relationship with the future) was positive. The coefficient of Empathic Concern was negative, and the coefficients of Generativity and gender (female) were positive for Feature 3 (retrospective assessment). In Feature 3, the coefficient of the deliberation environment was positive, which was consistent with the existence of a turning point in the process suggested by the analysis in Section 4.1.1.

From the indicators of the Interpersonal Reactivity Index, it could be seen that Perspective Taking, which was measured using responses to questions such as “I try to look at everybody’s side of a disagreement before I make a decision”, showed a tendency to spontaneously adopt the psychological perspective of others. Feature 2 included in its definition “statements jumping back and forth to shake off present concerns.” It seemed natural that Perspective Taking had an advantageous effect on the display of Feature 2. On the other hand, the relationship between Feature 2 and Empathic Concern could not be confirmed. Empathic Concern was measured by responses such as “I often have tender, concerned feelings for people less fortunate than me.” It was a scale of assessing “other-oriented” feelings of sympathy and concern for unfortunate others, which was closely related to helping behavior. The results of the regression analysis suggested that Feature 2 was not necessarily evoked in the context of helping behavior. When it came to Feature 3, the relationship with Empathic Concern was rather negative. Feature 3 was not evoked from the context of the helping behavior, and the effect of Feature 3 might be suppressed in a person who was likely to arouse “other-oriented” feelings. Empathic Concern and Personal Distress measured emotional aspects, and Perspective Taking and Fantasy Scale measured cognitive aspects of Interpersonal Reactivity Index (Himichi et al. [31]). The analysis showed that the cognitive aspects of Interpersonal Reactivity played roles in deliberating as future generations, while there was no evidence that emotional aspects of helping future generations worked.

Generativity is an index that measures the nature of being actively involved in actions that create value for the next generation. In these deliberations, a positive relationship was confirmed between Generativity and Feature 3. Nakagawa et al. [14] found that those with

Critical Thinking or high Generativity tended to make more future-oriented choices. The findings of this paper were consistent with Nakagawa et al. [14] in Generativity; however, there was no connection with Critical Thinking. In Nakagawa et al. [14], the subjects were imposed with great cognitive load, in which they had to look back at past policy decisions by reading old newspapers before making fiscal policy choices. The cognitive load imposed in the deliberation in this paper was not as great as that in Nakagawa et al. [14], which might be a factor in not finding a connection with Critical Thinking.

Although a relationship with gender was suggested, no relationship was found for age with both Features 2 and 3. Consideration for the future might decrease with age. Nakagawa et al. [14] reported that younger people were more likely to choose fiscal policies that take future generations into account. Hiromitsu [18,19], through an experimental study that made subjects choose hypothetical fiscal policy options, also confirmed that there was a tendency for older people to make short-sighted choices that postponed the burden for the future. We could not confirm concerns around decreasing consideration for the future with age. Hiromitsu [18,19] affirmed the existence of a decrease but pointed out that the degree of decrease was not as strong as that among selfish individuals. Hiromitsu [18,19] argued that the reason that the decrease was not so strong was that the older one was, the closer they are to nirvana and the more likely they are to make a public judgment. In the deliberation as future generations, the subjects paid attention to the common generational issues of landscape, disaster prevention, agriculture, and generational exchange. If senior subjects were instructed to become future generations rather than stay silent, and instead focused on these issues that were common to all generations, then it is a natural consequence that there was no relationship between age and Features 2 and 3.

With regard to Public Service, we hypothesize that officials play a greater role for future generations; however, no relation was found with both Features 2 and 3. Daily training to be public-spirited had nothing to do with playing the role of future generations. To put it the other way, it was suggested that common people performed well as IFGs.

Taken together, those with high cognitive aspects of Interpersonal Reactivity tended to make characteristic utterances in future generations, but the impact of psychological measures and attributes within the analyzed range was not necessarily definitive. In particular, Feature 3, which had a typical pattern, could be learned from the deliberation environment. This discovery had meaning in promoting the social implementation of FD. In the context of implementation, if we incorporated a mechanism that calls for “looking back at the present from the point of view of XX years ago” in advance, within the setting of the deliberations, it was possible to enhance the deliberations of future generations by encouraging Feature 3.

4.3. IFGs and General Rules for Good Decision-Making

Finally, we work on positioning IFGs in general rules for good decision-making, which has been set as Issue 3. Becoming IFGs means detachment from the here and now and “me,” and seems to have something in common with the veil of ignorance as articulated by Rawls [29]:

“The idea of the original position is to set up a fair procedure so that any principles agreed to will be just. The aim is to use the notion of pure procedural justice as a basis of the theory. Somehow, we must nullify the effects of specific contingencies which put men at odds and tempt them to exploit social and natural circumstances to their own advantage. Now, in order to do this, I assume that the parties are situated behind a veil of ignorance. *They do not know how the various alternatives will affect their own particular case, and they are obliged to evaluate principles solely on the basis of general considerations.*”

“It is assumed, then, that the parties do not know certain kinds of particular facts. First of all, no one knows his place in society, his class position, or social status; nor does he know his fortune in the distribution of natural assets and abilities, his intelligence and strength, and the like. Nor, again, does anyone

know his conception of the good, the particulars of his rational plan of life, or even the special features of his psychology such as his aversion to risk or liability to optimism or pessimism. More than this, I assume that the parties do not know the particular circumstances of their own society. That is, they do not know its economic or political situation or the level of civilization and culture it has been able to achieve. The persons in the original position have no information as to which generation they belong. These broader restrictions on knowledge are appropriate in part because questions of social justice arise between generations as well as within them, for example, the question of the appropriate rate of capital saving and of the conservation of natural resources and the environment of nature. There is also, theoretically anyway, the question of a reasonable genetic policy. In these cases, too, in order to carry through the idea of the original position, the parties must not know the contingencies that set them in opposition. *They must choose principles the consequences of which they are prepared to live with whatever generation they turn out to belong to.*" (Rawls [29] (pp. 118–119); italic by quoters).

According to Rawls, the veil of ignorance separates us from the information of who we are and makes us choose the principle of justice in the original position. The important point here is that problem-setting after detachment becomes a matter of choosing principles. The path for choosing principles from points detached from individuality is part of the general rules to follow while making good decisions. In the context of the constitutional process, at the position detached from individual circumstances (personal, regional, and sectarian interests), deliberations and decisions on highly abstract principles (basic human rights and basic principles of governance) are taken. The reconciliation of interests on a case-by-case basis takes place after the end of the constitutional process. Taking fiscal policy as an example, most must agree with the importance of sound fiscal management while choosing principles. However, if individual circumstances come into view, various means of achieving the same goal of sound finance, such as whether to reduce expenditures or increase taxes, are separated. If a majority vote is held in this situation, the sound fiscal policy, which is originally the majority, may be defeated by a loose-minded one because of the cracking of votes. To avoid such problems, it is conceivable to return to the constitutional process and incorporate the basic principles of sound finance into the constitution. Ishida and Oguro [38] argued that in such policies as fiscal consolidation, there are a lot of means to achieve a goal and that there is a possibility that votes will be broken by a majority vote. As a countermeasure, they recommended considering a voting system that is strongly set against vote splitting, such as Borda voting. In contrast to their findings, our argument is that, while facing similar challenges, we should separate choices of goals from those of means (rather than introducing a new voting system that is immune to vote splitting).

The motif of discussion at the level of the principles is shared by the IFGs. As discussed earlier (4.1), factors that are absent in the deliberations as the current generation and present in the deliberations as the future generations are discussions on topics such as landscape, disaster prevention, agriculture, and generational exchange, which are issues related to common basic needs. By being asked to be future generations, people focus on issues that are common to all generations. To discuss common issues is to consider them from the standpoint of principles that are appropriate and commonly applied to all generations. Working on landscape and disaster prevention is choosing principles of allocating resources to the basic needs of humans, and being involved in agriculture (for many Yahaba residents) is a return to basics as humans. Intergenerational exchange is to work together on issues that are common for all generations. By deliberating as future generations, people are invited to discuss issues at the level of principles, and in this sense, FD shares a motif with the veil of ignorance. Another important philosophical study related to FD is Mackie [39], which argued that moral judgments were what could be universalized and listed three stages of universalization. Its third step is to take account of different tastes and rival ideas,

in which a person puts herself completely in the position of others and makes an effort to see things from her own and others' perspectives. Mackie [39] raised the perspective of future generations as one of the perspectives of others to be considered. IFGs can be interpreted as an attempt to find moral judgments based on principles that can be universalized among generations by proceeding to the third stage in Mackie [39] (though Mackie [39] itself ended up rejecting moral universalism).

What kinds of principles are actually present in the deliberations by future generations? Here, Sufficiencyarianism plays an important role. It was proposed by Frankfurt [40] as an alternative to egalitarianism, in which the moral significance is that everyone has enough income and wealth (not that everyone has the same income and wealth). Page [41] studied Sufficiencyarianism in intergenerational problems and found that each generation has to ensure that the life of the future generations does not fall below the level of basic needs (universal and objective across generations). Determining the specifics of "basic needs" is a task that still remains to be addressed. However, under Sufficiencyarianism, basic needs should be protected, and thus it is prohibited to make choices that have the potential to devastate future generations. The attitudes of the people who sought to be future generations in Yahaba seem to share the principle and logic of Sufficiencyarianism, especially in the discussion on the issues of landscape and disaster prevention. They believed that the future townsfolk should also enjoy the beauty of the Nanchang Mountain. They gave up the construction of tall buildings, which affect the view (Part 2, Group C). They believed that future townsmen should be protected from the Nankai Trough earthquake and that their public facilities should be reinforced (Part 2, Group C).

Another principle that plays an important role is Communitarianism (e.g., MacIntyre [42]). Awareness of the fundamental needs of generations is supported by a sense of community that encompasses multiple generations. The reference to the view of Nanchang Mountain is based on the consciousness of the town, which extends beyond a single generation, symbolized by the mountain. Agriculture and festivals, which are rooted in tradition, are closely related to the community. Scheffler [43] sought to place trans-individual values based on intergenerational ethics. He presented an "infertility scenario", in which no one will die prematurely, but no children will be born in the future. Here, people cannot be indifferent to the fact of infertility merely because they do not die early. Scheffler [43] argued that apathy must be pervasive in society. The value we found is indeed really valuable only in the presence of life after death. We need to pay attention to future generations. This paper handled the policies of the town of Yahaba, and although the focus was on the small community, the subjects were arguing that the town was a carrier of continuous value beyond themselves.

5. Conclusions

We now drew out conclusions and identified remaining issues. Table 6 summarizes the key points. First, the features of the present and future generations at each deliberation were identified. Topics characteristic of the present generation were familiar problems, such as transportation and facilities, and topics characteristic of future generations related to basic needs that were common to all generations. There were also issues that were consistently addressed by the present and future generations and that were expected to continue to remain issues, such as aging. There was a tendency for the present and future generations to make remarks about the current situation, but this was a natural consequence given the ongoing challenges. With respect to the retrospective assessments of a standard type such as "I am glad I did XX 30 years ago/I regret making a decision XX", there was a turning point in the deliberation process when it appeared.

Table 6. Features of deliberations (summary).

Deliberations as the present generation	Current issues (complaints, immediate requests), for example, traffic, and facility.	
	Current issue and at the same time, ongoing challenges in the future, for example, elderly/depopulated, child/childcare, and youth.	Detachment from individuality
Deliberations as the future generations	Relationship with the future, retrospective assessment, expanding temporal and geographic perspectives, attention to basic needs for all generations, for example, landscape/environment, disaster prevention, agriculture, and intergenerational exchange.	⇒Discussions at the level of principles - Sufficentarianism - Communitarianism

Second, while the cognitive aspects of Interpersonal Reactivity were found to be favorable conditions for exerting the features of IFGs, there was no evidence that the emotional aspects of wanting to help future generations worked. On the other hand, the effects of psychological measures and attributes were not necessarily definitive. In particular, retrospective assessment could be learned from others. There was a view that consideration for the future would diminish as people grow older, but as far as the deliberations in this paper were concerned, this view was not supported.

Third, it was shown that instructing the future generations not only fulfilled the detachment from individuality but also shifted the focus of deliberations to the level of principles. This was an excellent property of IFGs that followed general rules for good decision-making. During the discussion as future generations, remarks based on the principles of Sufficentarianism and Communitarianism were observed.

The first of the remaining issues relates to favorable conditions for exhibiting the features of future generations. Although this study did not find a relationship between Critical Thinking and age and the features, Nakagawa et al. [14] were more positive about these aspects. It is necessary to accumulate practices and clarify who is likely to become a future person and when.

The second issue is the consideration of issues that have sharper intergenerational conflicts. The deliberations in this paper handled the comprehensive administrative plan of a local government and did not necessarily imply sharp intergenerational conflicts. We found that instructing the future generations broadened temporal perspectives and increased interest in the basic needs of all generations; however, it is an issue to be examined whether it is true in sharper conflicts of interests.

In this paper, town planning was the topic of FD. The last issue is to carry out experiments on other topics such as climate change and try to compare them with the findings obtained in this paper. Catlin et al. [44] associated the social dimension of sustainability more with affective, short-term, and local considerations, and the environmental dimension more with cognitive, long-term, and global considerations. It is interesting to understand what kind of characteristics are exhibited when FD is used for environmental issues.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the town of Yahaba (the deliberation was taken place as a Residents’ meeting organized by the town and study was allowed by the town).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data supporting reported results can be found in <http://thiromitsu.seesaa.net/category/24863119-1.html> (accessed on 9 June 2021).

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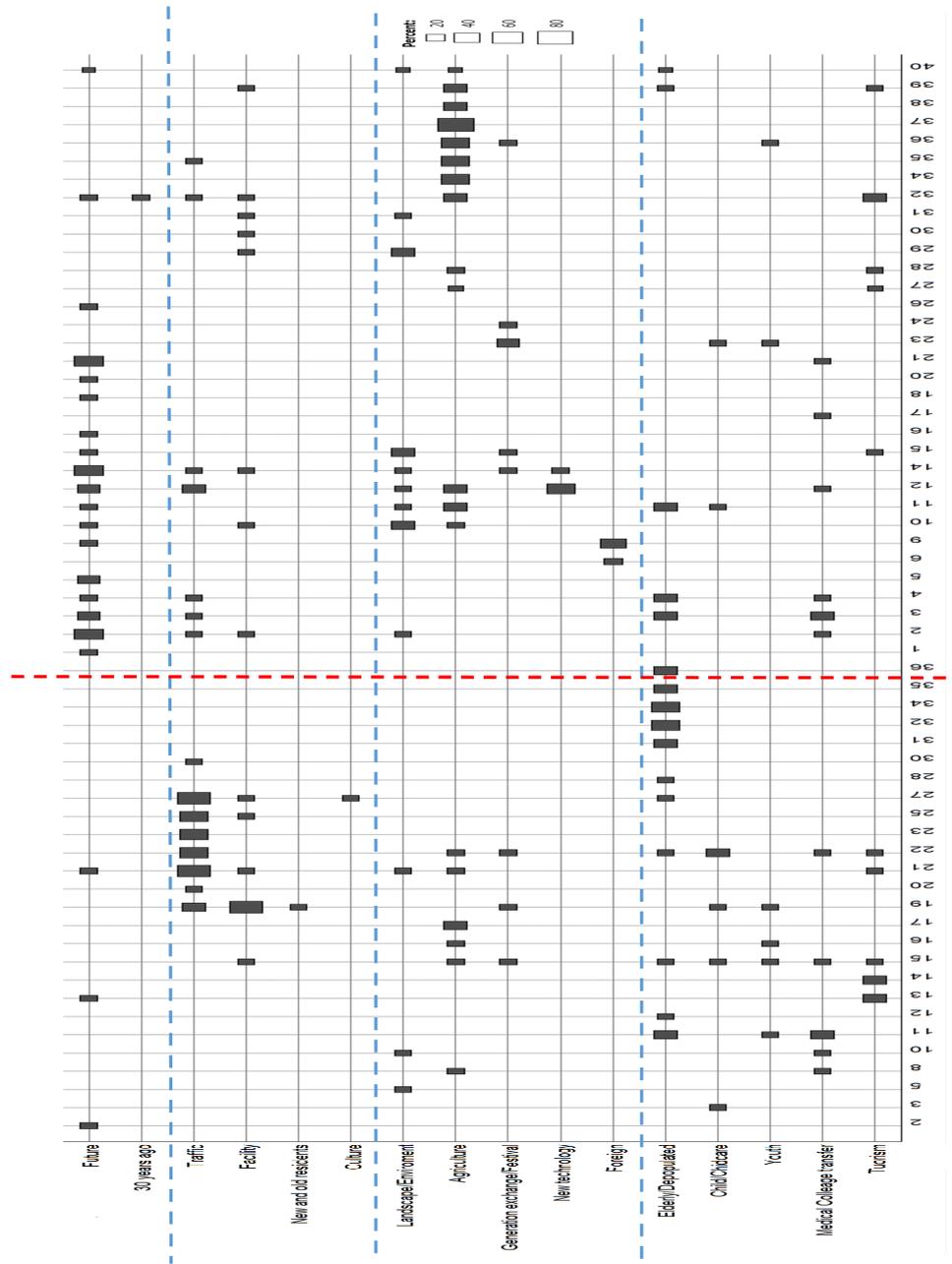
Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. Critical Thinking (Awareness of Logical Thinking) Disposition Scale Items

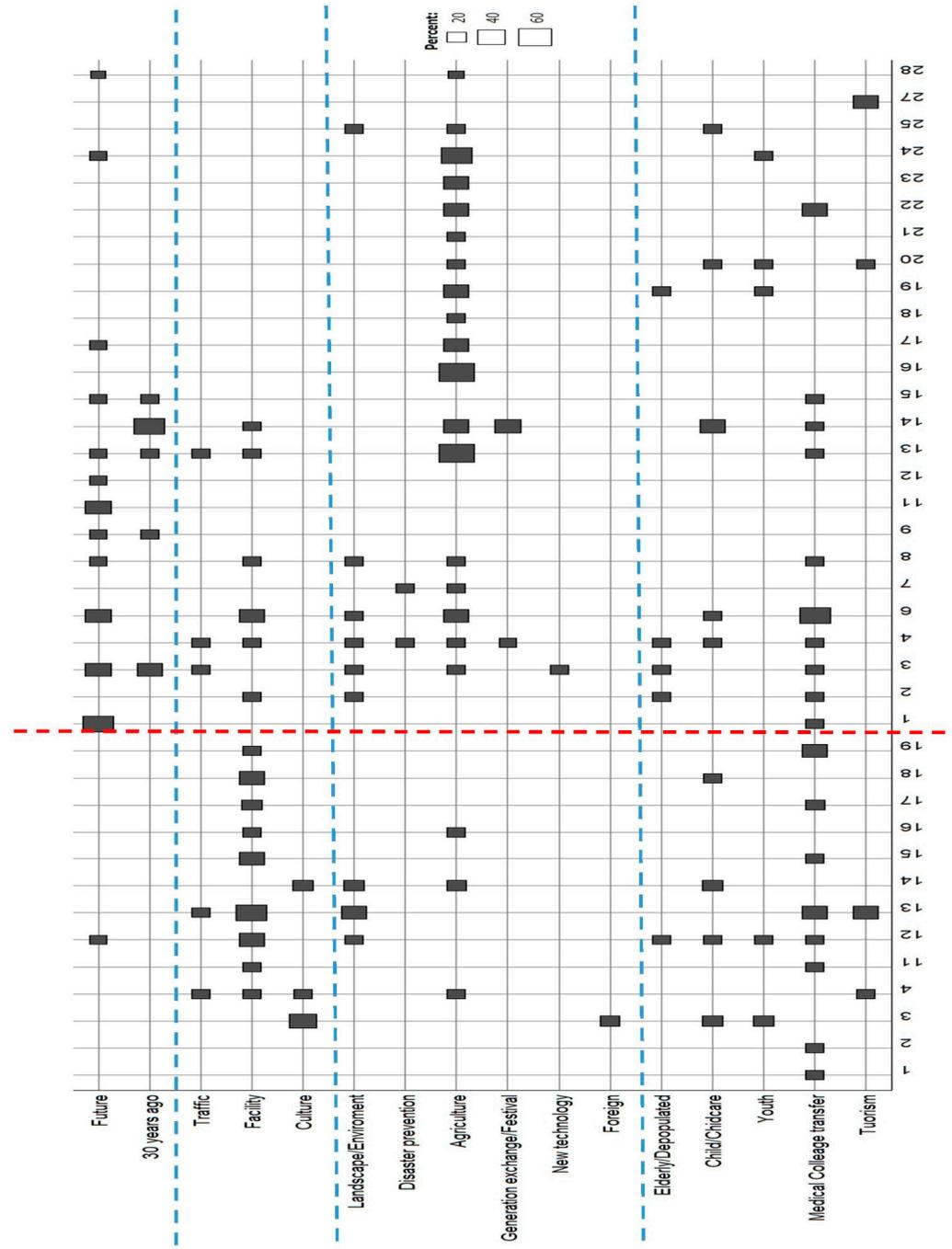
No	Item
1.	I am good at thinking about complex problems in an orderly fashion.
2.	I am good at collecting my thoughts.
3.	I am confident in thinking about things precisely.
4.	I am good at making persuasive arguments.
5.	I am confused when thinking about complex problems *
6.	I am the one to make decisions because my peers believe I can make fair judgments.
7.	I can concentrate on grappling with problems.
8.	I can continue working on a difficult problem which is not straight forward.
9.	I can think about things coherently.
10.	My shortcoming is that I am easily distracted *
11.	When I think about a solution. I cannot afford to think about other alternatives *
12.	I can inquire into things carefully.
13.	I am constructive in proposing alternatives.

Note. *: Reverse item. Items were rated from 1 = “Strongly disagree” to 5 = “Strongly agree.” The theoretical range is 13–65. (Hirayama and Kusumi [32]).

Appendix B. Deliberation Process in Group A



Appendix D. Deliberation Process in Group D



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