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Future Design as a Metacognitive Intervention for Presentism

Yoshinori Nakagawa

School of Economics and Management, Kochi University of Technology

Research Institute for Future Design, Kochi University of Technology

Yoichi Hizen

Research Institute for Humanity and Nature, Kyoto

Research Institute for Future Design, Kochi University of Technology

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School of Economics and Management

Research Institute for Future Design

Kochi University of Technology

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2 **Future Design as a Metacognitive Intervention** 3 **for Presentism**

4

5 **Abstract:** Many important problems occur due to the incompatibilities between the interests of
6 the present generation and the welfare of future generations, and thus the present generation may
7 well be captured by presentism. Drawing on the theoretical framework of metacognition, the
8 present study investigated how presentism is overcome by the Future Design intervention
9 incorporating the imaginary future generation setting. Four participants to the workshops were
10 interviewed and the transcriptions were transcribed. There were two major findings. We
11 identified narratives of the participants suggesting that metacognition was active during the
12 workshops, concerning the two cognitions which were governed by the present and future
13 selves. Second, the narratives identified above were classified into two categories and the two
14 corresponding roles of the metacognition were identified: monitoring & controlling function
15 and harmonizing function. The former is essential for the acquisition of the identity as a future
16 person, and the latter is essential for making it coherent with the identity as a present person.
17 The present study proposes the view that Future Design is a tool of intervention with
18 individuals' metacognition concerning the choice of the reference point in the time axis from
19 which to view the past, present, and future of the society, rather than a tool to naively motivate
20 individuals to care for future generations.

21

22 **Keywords:** sustainability; Future Design; imaginary future generation; metacognition;
23 qualitative research; sense of coherence

24

25

26 **1. Introduction**

27 Many important problems currently threaten global sustainability, such as climate
28 change, environmental deterioration, and government debts. These problems mostly occur
29 due to the incompatibilities between the interests of the present generation and the welfare
30 of future generations, and thus the present generation may well be captured by presentism
31 (i.e., the tendency to generate a bias within established laws and policies that have the
32 potential to negatively affect future generations [1–2]).

33 To overcome presentism in the contemporary system of democracy, a number of
34 attempts have been made to consider how future generations' voices can be institutionally
35 reflected in current decision making. A number of authors argue about the possibility that
36 future generations are represented in parliament [3–5]. Adachi [6] classified forms of
37 institutionalization into eight categories, for instance, constitutional provisions for
38 protection of future generations' well-being [7], transferring some of sovereign states'
39 authority to regional or global bodies [8], and creating an independent governmental
40 agency to review all regulations expected to impact future generations significantly and to
41 coordinate among existing agencies [9].

42 In line with these studies, the framework of the imaginary future generation has been
43 proposed in the branch of a future studies discipline called Future Design [10, 11]. Under
44 this framework, individuals take on the role of members of a future generation (hereafter
45 called the imaginary future generation) and engage in designing strategies to be adopted
46 by the present generation. The design procedure can incorporate negotiation between the
47 imaginary future generation and the other participants, who express the perspective of the
48 present generation, to build an intergenerational consensus. Saijo, an economist, proposed
49 this framework out of concern that the market and democratic institutions consume future
50 resources without remorse, and that an alternative device is necessary to incorporate the
51 preferences of future generations in policymaking. Thus, while the framework of imaginary
52 future generation can be narrowly understood as a technique for implementing workshops
53 to create visions in organizations, it should be seen as a concept to be kept in mind by
54 various stakeholders who make various decisions in the society governed by the market
55 and democracy. A growing number of municipalities are utilizing this framework to create
56 their visions in workshops by inviting their citizens or inside the municipalities (e.g., [12,
57 13])

58 However, little is investigated on the subjective experience of the present generation
59 individuals taking on the role of members of a future generation. While earlier experimental
60 studies confirm that the framework of the imaginary future generation encourages
61 individuals to acquire sustainable policy preferences even if it is burdensome to the present
62 generation [14–16], an obvious question arises as to how identities as the present and
63 future generations, which may well conflict with one another, can coexist in a single
64 individual. The present qualitative study aims to answer this question.

65 Answering this question seems even more crucial considering that the issue of
66 practical, real-life institutional representation of future generations' voices remains
67 unresolved. In fact, drawing on case studies of institutions representing future generations

68 in six countries and regions, Jones, O'Brien, and Ryan [17, p.158] concluded, "Institutions
69 which are given too much power, too early in their lifespan, tend to face rejection from
70 politicians." These cases clearly show how introducing representatives of the future
71 generation to the contemporary political system induces intra-generational conflicts and
72 fail to attain its intended goals. Thus, institutional attempts to represent the future
73 generation must be accompanied by the attempt of each stakeholder (e.g., politicians and
74 voters) to overcome his own presentism. Drawing on the theoretical framework of
75 metacognition, the present study indicates the direction toward this ultimate goal.

76

77 **2. Theoretical Framework**

78 Metacognition is a higher level cognition (i.e., a mental action or process of acquiring
79 knowledge and understanding through thought, experience, and the senses) about other
80 cognitions at the object level [18]. Metacognition has attracted a great deal of scholarly
81 attention partly because it is essential for effective learning of school children and adults.
82 According to the review by Veenman et al. [19], the most common distinction in
83 metacognition separates metacognitive knowledge from skills. The former refers to a
84 person's declarative knowledge about the interactions between person, task, and strategy
85 characteristics [20]), whilst the latter refers to a person's procedural knowledge for
86 regulating one's problem-solving and learning activities [21].

87 The latter type of metacognition (i.e., procedural metacognition) comprises the
88 processes of metacognitive monitoring (i.e., subjective assessments of ongoing cognitive
89 activities), and metacognitive control (i.e., the regulation of current cognitive activities) [18,
90 22]. According to Roebers [23], monitoring is associated with questions such as "how much
91 effort do I have to put into learning this material?", "did I sufficiently learn this material to
92 remember the details later on?" and "how sure am I that this answer is correct?", whereas
93 controlling includes actions such as selecting material for review while studying,
94 differentially allocating study time to the learning material, and withdrawing answers, or
95 terminating memory search.

96 The present study applies the concept of metacognition in understanding how
97 individuals experiencing the perspective of the future generation accommodates the
98 identities as the present and the future generations, which potentially conflict with one
99 another. With the earlier studies in mind, the present study's research objective mentioned
100 in Introduction section is refined as follows:

101

102 **Objective 1:** To confirm if the activation of metacognition is observed targeting cognitions
103 operated by selves as the present and future generations.

104 **Objective 2:** To investigate the function (or role) of this metacognition.

105

106 Considering the above mentioned previous studies on metacognition that monitor and
107 control another (i.e., lower level) cognition, it is hypothesized that one activates his
108 metacognition to monitor and control another cognition by considering such a question as
109 “which perspective am I adopting (should I adopt) in thinking about the state of the society
110 of 2050, the present generation’s or the future generation’s?” Adoption of the present
111 generation’s perspective means that he is looking forward the future 30 years from now,
112 and imagining what technologies will be available, what future people will be thinking
113 about, and so forth. On the other hand, adoption of the future generation’s perspective
114 means that he is absorbed in the world he is imagining, just like he is absorbed in the story
115 world while reading novels and assuming the realization of a specific future. He may also
116 be looking back on the present generation and regretting or appreciating specific actions
117 (or inactions) of the present generation, such as coping with COVID-19 or reduction of CO2
118 emission. This is just like how we as the present generation look back on the past generation
119 (see earlier studies on retrospective assessment [24]). Thus, for Objective 1, we expect a
120 positive answer, and for Objective 2, we expect that monitoring and controlling are the main
121 functions of metacognition. This will be qualitatively verified.

123 3. Materials and Methods

124 The present study is based on interview surveys with four citizen participants to future
125 design workshops organized by two municipalities in Japan: Yahaba Town (Iwate
126 Prefecture) and Uji City (Kyoto Prefecture).

127 Yahaba is a town in Iwate Prefecture with a population of about 28,000. The town is located
128 conveniently about 20 to 30 minutes' drive away from Morioka City with nearly ten times
129 more population than the town, so the town has been developed as a dormitory town for
130 the city. Such a Town Hall decided to hold a series of workshops in an unusual way to
131 create a long-term vision for the town. The contents of the workshops were to have local
132 citizens to act as future persons of the town, envision the town's future and consider what
133 the town should do for realizing the visions from now on. Two participants to this series of
134 workshops, Mihoko and Miho (anonyms), agreed to participate in the interview survey.
135 They were both females and in their forties at the time of the interviews. The interviews
136 were conducted six months after the series of workshops was completed. Note that the
137 outcomes of the workshops are reported in Hara et al. [12].

138 Uji City is located in the southern part of Kyoto Prefecture, and it is famous for its
139 cultural properties, such as the World Heritage Byodoin Temple, and Uji Tea. Many tourists
140 visit this city on weekends. The population is 180,000, the city had been developed as a
141 residential area since 1960, and the population had increased rapidly, but after 2000, it has
142 been declining. In addition, the percentage of the population aged 65 and over is expected
143 to increase at a pace exceeding the national average. In that situation, the City Hall started
144 working on a workshop in an unusual way to make the citizen think about the local
145 community's future. Two participants to this series of workshops, Mayumi and Hitoshi
146 (anonyms), agreed to participate in interview surveys. They were female in her thirties and
147 male in his sixties, respectively, at the time of the interviews. The interviews were

148 conducted 12 months after the series of workshops was completed.

149 In the workshops of these two municipalities, the four participants were allocated
150 into groups consisting of four members or so, and were asked to collaboratively describe
151 the town (the city) 40 years (30 years) from the present, imagining that they had time-
152 travelled to that time with their ages unchanged and they were living there. This constraint
153 on age is important for the following reason. Future Design is intended to resolve
154 intergenerational problems, and thus has a concern about how conflicts of individuals at
155 the present with *other individuals* in the future can be resolved, rather than with *the same*
156 *individuals* aged in the future. Time-travelling into 40 years in the future with one's age
157 changed (i.e. getting old by 40 years) means that he is allowed to keep his own identity,
158 which we would like to avoid. (For example, an individual can be aged 42 in 2020 and aged
159 82 in 2060.) Time-travelling with his aged *unchanged*, rather than *changed*, is a good (even if
160 not perfect) and easily implemented simulation of getting absorbed in others in the future.

161 In interviews, they were requested to talk about (i) how they decided to participate in the
162 workshops, (ii) how they and their group members managed to take the perspective of the
163 future generation, and (iii) how the experience the participation influenced their lives. The
164 interviews lasted for 1-2 hours. The voices were recorded and transcribed later. The
165 transcription amounted to 129 pages in total. The transcription was analyzed in reference
166 to the theoretical framework introduced in Section 2. The narratives of the four participants
167 are summarized in the story form in Appendix A to D, respectively

168

169 **4. Results**

170 In the transcriptions of the voices of the four participants, two functions of
171 metacognition were identified, and they will be detailed one by one below.

172

173 *Monitoring & controlling function*

174 As expected, the monitoring & controlling function of metacognition of was identified.
175 During the workshops, Miho carefully considered whether she was successful in taking the
176 perspective of the future generation, rather than was keeping the perspective of the present
177 generation, as shown in the following except. Here she explains how she got the idea of
178 what it is like to time-travel to future with her age unchanged, as requested by the organizer
179 of the workshop (See the sixth paragraph of Appendix B).

180 **Miho:** Well, I started imagining the future where I lived as a female aged 80, and
181 thought about what future would interest me. I gradually acquired the feeling that I was
182 there with my age unchanged. It was probably because I felt it was a pity that such an
183 interesting future would be realized only after I get so old.

184 This statement suggests that there is a metacognition monitoring how cognition at the object

185 level (i.e., the cognition as the present self or the cognition at the future self) works, and
186 controlling herself so that the cognition at the future self becomes dominant. Additionally,
187 it was not only herself but her group members that were monitored and controlled. In fact,
188 soon after the start of the discussion, one of the elderly members began to express his
189 opinion with an introductory remark with "I would die by then...", however, while he was
190 immersing himself in envisioning the future world specifically, he came to not use such a
191 remark. The next excerpt of Mayumi shows that she was also monitoring her cognition at
192 the object level.

193 **Mayumi:** During the workshops, I was always questioning to myself whether I was
194 successful in playing the role of the pure future generation or not. I felt the risk that I was
195 simply expressing my selfish ideas as the present generation, pretending that I was doing
196 so from the perspective of the future generation.

197 This monitoring process guided her to arrive at the understanding of what it was like to
198 play the role of the future generation, as shown in the eighth paragraph of Appendix C.
199 This monitoring & controlling function of the metacognition was also active in Hitoshi's
200 case, as shown in the following excerpt.

201 **Interviewer:** Please tell me the story after the series of workshops was over.

202 **Hitoshi:** Yes. The series of the four workshops was over. What I thought was that at the end
203 of the series of workshops I at last got the idea of what it was like to be a future generation,
204 and that the ending of the workshops meant that I would sooner or later lose this sense and
205 had to return to what I used to be before I got familiar with the idea.

206 In saying so, Hitoshi compares the cognitions by the present and the future selves, and
207 prioritize the latter (in his monitoring process). Indeed, he decided to participate in a citizen
208 network as a founding member to keep regular opportunities to activate the cognition as
209 the future self (in his controlling process). The network consists of nearly twenty citizens
210 who participated in the workshops and has the aim of thinking about the future of the city
211 from the perspective of the future generation.

212

213 *Harmonizing function*

214 Another function of metacognition identified is on the harmonization of the object level
215 cognitions. If an individual belonging to the present generation successfully experience the
216 perspective taking of the future generation and then resumes the identity as the present
217 generation, he perceives the coexistence of two identities that may conflict with one another.
218 Such conflict cannot be avoided especially when he is inclined to support actions that will
219 come to fruition in the immediate future. However, Mihoko's narrative illustrate how these
220 identities can be harmonized. We demonstrate that metacognition has the function of
221 harmonizing these two identities (and thus the cognitions associated with the perspectives
222 of the present and future generations). See the last paragraph of Appendix A for the context
223 of the excerpt.

224 **Interviewer:** Now the series of workshops is over, and you are living your everyday life.
225 Do you think about things as a present generation, or recall the experience during the
226 workshops to think about actions to be taken by the present generation?

227 **Mihoko:** Well, that is a difficult question to answer. After all, we succeeded in getting
228 absorbed in the world 40 years from now, and that is why I feel “this should be done right
229 now, otherwise we will not be in time”. This feeling springs up from me as the present
230 generation.

231 This statement suggests that there was an interplay between the cognition governed by the
232 self as the present generation and the cognition governed by the self as the future generation.
233 It also suggests that Mihoko was aware that the two cognitions were consistent with one
234 another (i.e., the state described as the future generation and the actions to be implemented
235 by the present generation are connected by the means-end relation), and thus there is a
236 metacognition enabling the perception that the two cognitions are in harmony with one
237 another. This function of metacognition is also confirmed in the following excerpt of Hitoshi.
238 This statement also illustrates how the two cognitions are perceived to exist with harmony.

239 **Hitoshi:** Some may argue that how future should be like should be left to the future
240 generation’s own choice. However, it would be too late. Without thinking about a desirable
241 future and starting actions right now, the desirable future will not be realized.

242

243 It should be noted that to link the two cognitions by the means-end relationship is
244 not the only way to make these cognitions in harmony with one other. Mayumi found the
245 consistency between the two cognitions in a unique way: not by means of identifying the
246 means-end relationship, but by means of identifying essential similarity between the two
247 cognitions (see the eighth paragraph of Appendix C). Mayumi is well aware that the
248 cognitions by the present and future selves may well reach different conclusions with
249 regard to what should be (have been) done at present. According to her belief, this is
250 because we as the present generation are bound by conventional thinking, which prevents
251 us from realizing what we really want to do. She also believes that taking the perspective
252 of the future generation frees us from such conventional thinking, and thus there is no
253 contradiction between the cognition by the present and future selves.

254

255 **4. Discussion**

256 The present study conducted interview surveys with individuals who participated
257 in Future Design workshops and investigated the role of metacognition concerning the
258 cognitions at the object level governed by the selves with the present and future
259 generation’s perspectives. The answers to the two research questions referred to in the
260 research objectives are summarized as follows.

261 As the answer to the first objective, we identified narratives of the participants

262 suggesting that metacognition was active concerning the two cognitions at the object level
263 governed by the present and future selves. As the answer to the second objective, the
264 narratives identified above were classified into two categories and the two corresponding
265 roles of the metacognition were identified: monitoring & controlling function and
266 harmonizing function. The former is essential for the acquisition of the identity as a future
267 person, and the latter is essential for making it coherent with the identity as a present person.
268 Figures 1 and 2 are the illustrations of these two functions.

269 (Figures 1 & 2 inserted about here.)

270 Several things should be noted on these findings. First, the narratives on the
271 monitoring & controlling function of the metacognition were mostly on the research
272 participants' experiences during the Future Design workshops. In these workshops
273 participants are requested to activate an unusual cognition by taking the perspective of the
274 future generation, and thus they monitor and control themselves to succeed in doing so.
275 The difficulty and importance of disengagement from the present in future studies
276 workshops has been recognized in the literature [25]. The contribution of the present study
277 on this point is that this transition is perceived by the participants to be discrete, not
278 continuous, and is enabled only by intentionally paying the cost of careful monitoring and
279 controlling. Since overcoming this difficulty is required, it is inevitable that some
280 participants are better at taking this step than others. However, very few earlier studies
281 have paid attention to this individual difference. With the findings of the present study in
282 mind, future studies should investigate whether the ability to disengage from the present
283 is associated with the general metacognitive competence and skills (e.g., [26–29]). Anyway,
284 it is of practical importance for workshop organizers to understand participants' individual
285 characteristics and, where possible, place participants who have relatively low competence
286 of disengaging from the present in groups with people of higher competence, so that the
287 latter can assist the former by leading the discussions.

288 Second, in spite of the potential conflicts between the present and future generations,
289 as well as the difficulty for the present generation to get motivated to care for future
290 generations [30], the present study found that the perspectives of the present and future
291 generations can coexist due to the harmonizing function of metacognition. Furthermore, it
292 was found that this function can be executed in two different manners: either by defining
293 the means-end relationship (i.e., between actions to be done by the present self and the state
294 of the society in which the future self lives in) or by finding an essential similarity in spite
295 of the apparent contradiction. Anyway, this metacognition serves as the bridge between the
296 present and future selves. Therefore, this is expected to contribute to one's sense of
297 coherence [31–32] and thus life satisfaction.

298 Third, while the monitoring & controlling function of metacognition was active
299 mainly during the exposure to the intervention (i.e., during the workshops where
300 individuals are requested to take the perspective of the future generation), the harmonizing
301 function of metacognition seemed to be active for a much longer time. In fact, Mihoko and
302 Hitoshi were interviewed as long as six and 12 months after the series of workshops were
303 completed, and they still felt the sense of coherence, as the excerpts show. It is a crucial future
304 task to quantitatively investigate how durable the Future Design intervention is. The

305 answer to this question determines whether Future Design can really be a promising
306 framework to realize the sustainable society.

307 To conclude, regardless of whether the organizers of the Future Design workshops
308 in Yahaba Town and Uji City had an explicit intention or not, the workshops can be viewed
309 as the intervention with the metacognition of the four participants concerning the choice of
310 the reference point in the time axis from which to view the past, present, and future of the
311 society. Taken together with the empirical evidence on the effectiveness of adopting the
312 future reference point on the formation of individuals' sustainable attitude [31, 32], it would
313 be beneficial for future research to consider how individuals with the metacognition of our
314 four research participants are shared by as many members of the contemporary society as
315 possible, rather than naively questioning how as many members as possible can be
316 motivated to care for future generations. The former question seems to be less difficult to
317 answer than the latter, because adoption of this metacognition is accompanied by a sense
318 of coherence, which is an essential component of life satisfaction.

319

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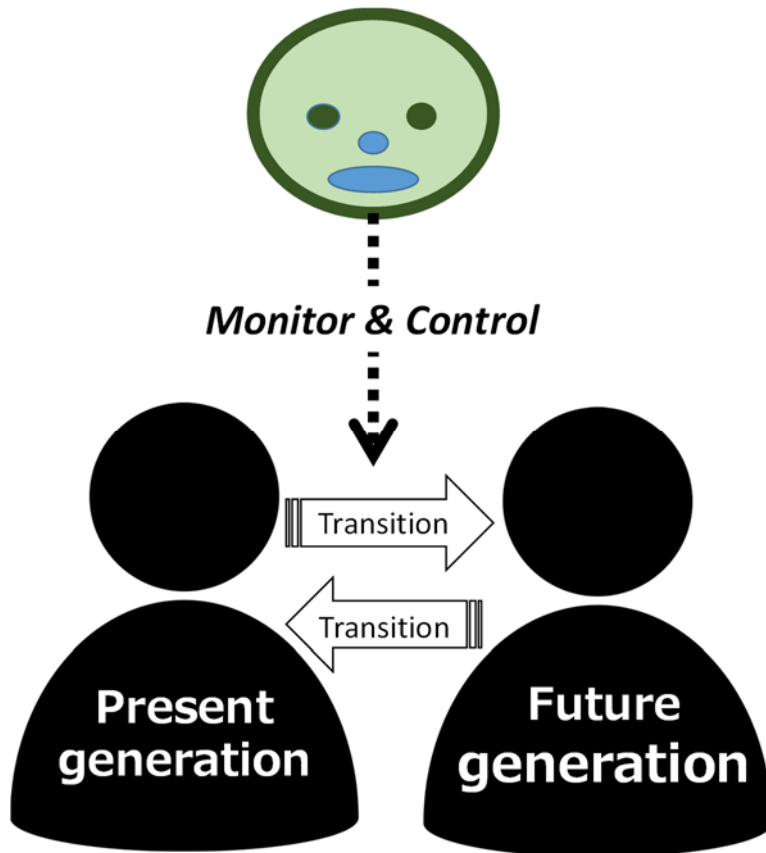
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392

393 *Figure 1: Illustration of the monitoring & controlling function of metacognition.*

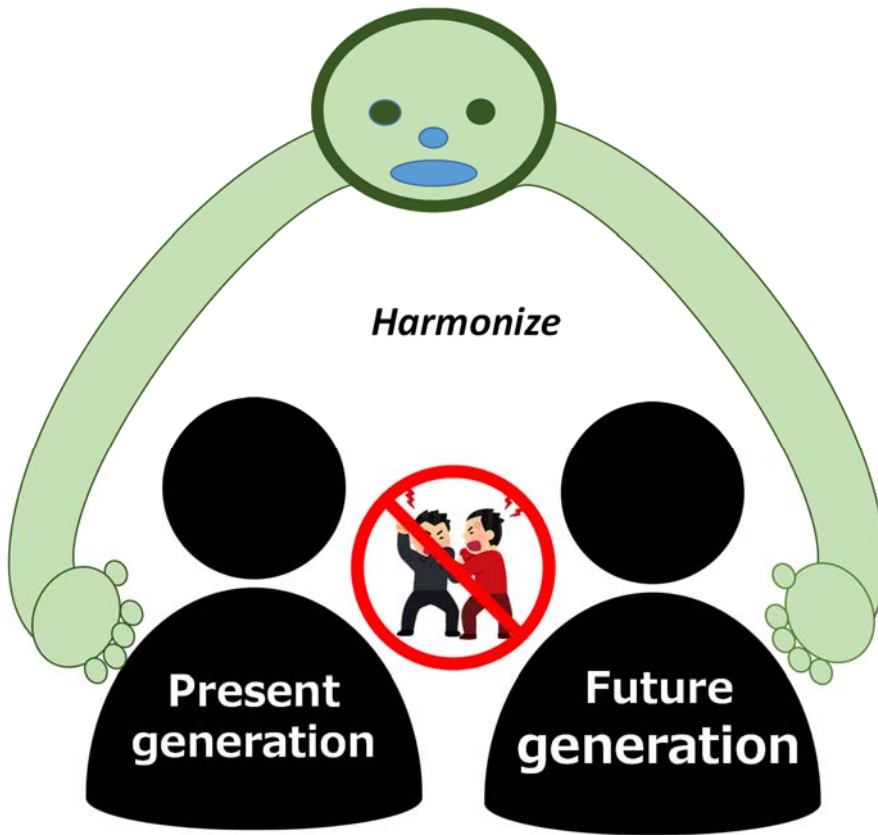


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397 *Figure 2: Illustration of the harmonizing function of metacognition.*



398
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Reference: <https://www.irasutoya.com/>

400 **Appendix A: The Story of Mihoko in Yahaba Town**

401 Mihoko is a cheerful and outspoken woman in her 40s. She was born and grew up in Iwate
402 Prefecture. After graduating from a local high school, she went on to a university in a big
403 city outside of the prefecture. Then, after graduating from the university, she once thought
404 of working in the big city without going back to Iwate Prefecture. However, she decided to
405 return her home prefecture and work in Morioka city by some kind of fate. After a while,
406 she decided to get married. At first, she and her husband thought of living in Morioka city
407 where they were working, but they decided to build a house in Yahaba Town where had
408 no connection with both of them. The reason was the reasonable house building cost in the
409 town, even though the town was located only about 20 to 30 minutes' drive away from
410 Morioka City.

411 Ten years have passed since Mihoko came to live in Yahaba Town. She has little complaint
412 about living in the town. Actually, there are not so much play equipment in a park near her
413 house, but it is sufficient for children to play. The elementary school where her children
414 attend is also close to her home. And above all, the town's tap water tastes better than the
415 Morioka City's. The only unfortunate thing is that many young people, who were born and
416 raised in the town, go on to universities outside of the prefecture and get jobs there. There
417 are some households near her house whose sons and daughters moved to the outside of the
418 prefecture. Such a woman, Mihoko happened to participate in the unusual workshops.

419 On the first day of the workshop, each local citizen participant in a group of six was
420 invited into a room. There were various people in the room where Mihoko was invited,
421 including a young woman around the age of 20 or an elderly man. The persons who
422 planned those workshops was Mr. Yoshioka, Yahaba Town Hall personnel. Mihoko could
423 not understand what this planner's instructions meant at the beginning of the workshop.
424 The instructions were as follows: "Imagine if you could time travel 40 years into the future
425 to Yahaba Town with the present your ages and live there. And then, envision the town's
426 future as a group with representing the interests of the future generations 40 years later,
427 and provide ideas for policy measures which we should implement now." Contrary to the
428 instructions, Mihoko tried to imagine the future 40 years from now and being herself at 80-
429 year-old elderly woman because she thought it was difficult to time travel 40 years into the
430 future with her present age. Even so, she had only thought that "If I were an elderly woman
431 in the future, I would be fine if the town would remain unchanged as it is now, wouldn't
432 I?" As she has no particular complaints about living in Yahaba, it is natural that she should
433 think so.

434 At first, the group started a discussion: which vision should they choose for their
435 town 40 years from now, just as it is now or the different. During the discussion, one of the
436 member of the group, an about 20-year-old young woman expressed, "40 years later from
437 now, I would like to hope that our town would be easier to live than it is now." Her opinion
438 itself was not so surprising. However, the young woman's remarks, which expressed clearly
439 her hope that she would choose the different vision of the town after 40 years, moved
440 Mihoko deeply, and she thought "Well, yes, she is right." The young woman was born and
441 grew up in Yahaba Town, and now commutes to a university in Morioka City while living
442 in the town.

443 Mihoko started to think strongly that she also wanted to choose the different vision
444 from now, triggered by the young woman's remark. She wants the town after 40 years,
445 which population would be aging, to be a place where young people, who would support
446 the elderly, can think "We don't want to move outside of the town." The town surely should
447 be like such. In fact, the town would be inundated with so many applicants who hope to
448 move there from all parts of the country, and it couldn't help rejecting most of them. In this
449 way, Mihoko and the group members expand their imaginations. A playground for
450 children and an exercise and health management facility for senior citizens would be
451 established in the same place, so children and the elderly could come together. The facility
452 also would serve as a workplace for the elderly to cook lunch boxes and delicatessens, and
453 the young generation would buy those meals and communicate with the elderly. Thus, the
454 group reached the concept of "Yahaba, a Healthy Town." This concept connects each group
455 idea, such as enticing a university hospital to establish which has realized already,
456 reforming a closed junior high school ground into a sport stadium.

457 On the other day of the workshop, a debate between the participants of future
458 generations (Mihoko's group who envisioned the Yahaba's future as the future generations)
459 and the participants of the present generations (the group who ordinarily lived in the
460 present town as the present generations) was held. They discussed the town's policy
461 measures which the town should implement from now. The present generations insisted
462 that important things were to achieve free medical care and education for children. When
463 Mihoko heard their opinions, she found a certain thing. The present generations were just
464 obsessing about solving immediate issues. She appealed to such present generations. "We
465 are living in the future on the assumption that you took an action to look into the future 40
466 years from now. Therefore, we will be at a loss if you fail to take such proper action."

467 Even so, Mihoko didn't have the slightest intention of criticizing the present
468 generations. If she was the position of the present generations, she must have focused on
469 immediate issues they were facing now and solving the issues in timely manner as needed,
470 and must have seen the world 40 years later would be on the extension of such short-sighted
471 behavior. Therefore, in the debate, she must have insisted that we should solve immediate
472 issues facing now. Moreover, she had even thought, 40 years later, "If I were an elderly
473 woman in the future, I would be fine if the town would remain unchanged as it is now,
474 wouldn't I?" before she heard the idea of the woman university student at the first
475 workshop. For that reason, she understood sufficiently that the present generations would
476 criticize the future generations' ideas and say "Consider realistically more immediate
477 issues!"

478 Now, a few months has passed since Mihoko participated in the workshops and she
479 thinks back to her experience of the workshop participation. And now she feels that she
480 could learn to have her own thoughts what we need now or not as the citizens of the town.
481 In fact, when she walks around the town and sees the scenery, sometimes she remembers
482 the days of the workshop when she acquired the future generations' view. Then she thinks
483 that "We cannot make it in time unless we move to action immediately." Mihoko as the
484 future person certainly still lives on in her mind. She is full of gratitude for Yahaba Town
485 that gave her such a valuable experience.

486

487 **Appendix B: The Story of Miho in Yahaba Town**

488 Miho lives in Yahaba town with her husband and two children. One child is in the first year
489 of junior high school, and the other is in the fourth year of elementary school. Six years ago
490 from now, invited by her friend, she started her activity as a member of the civil panel to
491 study and give opinions on the town waterworks. At that time, she had been overwhelmed
492 with childcare and household chores even more than now and had been frantic to live
493 through each and every day. That is why this activity made her forget temporarily childcare
494 and gave her a fresh experience to make her eyes turn to the other things. Without this
495 activity, she could never have had a chance to know the system of waterworks such as
496 production of tap water and home water supply, which enable us to get clean water just by
497 turning on a faucet routinely. Such a woman, Miho happened to participate in the unusual
498 workshops.

499 On the first day of the workshop, each local citizen participant in a group of six was invited
500 into a room. There were men and women of all ages in the room where Miho was invited.
501 The persons who planned those workshops were Mr. Yoshioka, Yahaba Town Hall
502 personnel, and Prof. Hara for Osaka University. At the beginning of the workshop, Miho
503 and the other participants received the following instructions by those planners. "Imagine
504 if you could time travel 40 years into the future to Yahaba Town with the present your ages
505 and live there. And then, envision the town's future as a group with representing the
506 interests of the future generations 40 years later, and provide ideas for policy measures
507 which we should implement now." However, since Miho who lives in the present could not
508 image at all that she would be a future person, she could not help but participate in the
509 discussion with hesitation. Contrary to the planners' instructions, she tried to imagine
510 herself to be an 80-year-old elderly woman after 40 years from now, but the result was the
511 same.

512 When the discussion had been going on for a while, the group were discussing how high
513 was the priority for the government to tackle childcare supports such as free medical care
514 and ensuring day-care centers. This subject was exactly what Miho had been worrying
515 about as an urgent issue because she had been overwhelmed with childcare. Contrary to
516 her thoughts, Mr. Omura, one of a member of the group and about a 70-year-old man,
517 expressed his opinion. "Since we are future persons, we may think that such issues could
518 be solved in a few years and it would already have been solved 40 years from now."

519 Miho was taken aback by his casual comments. "I had been thinking of issues that I wanted
520 to be solved in the near future since I had been bound myself by childcare too much. That
521 is why I could not be a future person well. The issues like childcare, which I have been
522 worrying about could be solved in a few years, and it would surely have been solved in the
523 world 40 years from now. I'll forget temporarily daily childcare. I'll forget temporarily
524 issues which could be solved in a few years. And then I'll imagine Yahaba town 40 years
525 from now!"

526 After that, Miho thought what kind of town would be interesting when she would be at 80

527 years old and came to lead the workshop discussion. In that way, one of the ideas the group
528 reached was to create a public transportation network to connect schools, the Town Hall
529 and tourist spots in the motif of "Night on the Galactic Railroad", a children's story by Kenji
530 Miyazawa. Future vehicles might connect those places. Giovanni, the main character of this
531 story, get on the Galactic Train from a small hill with his one friend and finding what a true
532 happiness is, while traveling through various constellations. Giovanni wakes up when he
533 loses sight of the friend and finds out that all the events happened were in his dream world.
534 And in the real world, he was noticed that the friend fell into the river and went missing to
535 save his acquaintance. Mt. Nansho in Yahaba is said to be the model of the hill where the
536 train starts in this beautiful story.

537 In this way, while Miho was envisioning Yahaba's future 40 years from now and imagining
538 herself at 80 years old, she came to be under the sensation as if she had actually lived in the
539 future world with her present age. She noticed that other members of the group also shared
540 the same sensation. In fact, soon after the start of the discussion, one of the elderly members
541 began to express his opinion with an introductory remark with "I would die by then...",
542 however, while he was immersing himself in envisioning the future world specifically, he
543 came to not use such a remark. In this way, the members of the group gradually and
544 naturally came to follow the instructions by Mr. Yoshioka, "Imagine if you could time travel
545 into the future with the present your ages."

546 On the other day of the workshop, a debate between the participants of future generations
547 (Miho's group) and the participants of the present generations (the group who ordinarily
548 lived in the present town as the present generations) was held. They discussed the town's
549 policy measures which the town should implement from now. As expected, the present
550 generations insisted that the town should implement the immediate measures such as
551 childcare supports. At that time, Miho thought as follows: "They are still talking about such
552 issues (laughing). Such issues already have been solved in our future world (laughing)."
553 However, that thought is slightly different from looking down on the present generations.
554 Miho herself also had been persisting in solving the immediate issues before she would be
555 the future generations. If she and other future generation members still had been the
556 present generations, they should have thought that the transportation network vision in the
557 motif of "Galactic Railroad" would be only an empty dream. Miho as the future generation
558 might have felt how she got matured after experiencing the future generation's perspective.

559 Now that the series of workshop is over, Miho thinks back to the moment when she could
560 be a future person, triggered by the remark of Mr. Omura, a 70-year-old man. And she felt
561 that she could response to his remark since she had attachment and reliability to her country,
562 Japan. There are difficult situations for working mothers such as chronic shortages of day-
563 care centers and men's still-low involvement in childcare in Japan now. However, the
564 Japanese must not be so foolish as to leave such issues unsolved in 40 years. The Japanese
565 surely could solve such issues in the near future. That is why Miho charged the present
566 generations with finding solutions for such issues, and forgot temporarily such issues and
567 could boldly time travel 40 years into the future world. Acting as a future person was such
568 an experience for her.

569

570 **Appendix C: The Story of Mayumi in Uji City**

571 Mayumi is a woman in her 30s and serving on a PTA Board at her first-born 10-year-old
572 daughter's elementary school. When her daughter reached the age to enter an elementary
573 school, a problem came up. Her daughter started saying, "I never want to go to the
574 elementary school." After all, she has been repeatedly attending and missing school while
575 enrolled the school, and now she is in the fourth grade. Some odd things often occur; when
576 her daughter is absent from school, she goes to her daughter's school for PTA activities.

577 When her daughter became unable to go to school, she noticed a thing. That was there were
578 only mothers with their little children and the elderly strolling around the streets in the
579 weekday daytime. Mayumi and her elementary school daughter were easy to notice in such
580 a situation, so sometimes elderly strangers at a park spoke to her like "Children should go
581 to school properly," and she was ashamed a little. She fully understood the meaning of their
582 advice. However, she doesn't want to force her daughter to go to school without regard to
583 her daughter's feelings at hand. She wants her daughter to go to school with feelings of her
584 own will such as "I want to go to school" or "want to study", and wants her to absorb many
585 things.

586 Mayumi knows that most people cannot accept such opinions about school. When she was
587 carrying such her thoughts to one by one carefully, she often felt her heart would break. In
588 that situation, the existence of several mothers whose children in the same situation was a
589 precious support for her to share the same feelings. Each mom friend lives in a different
590 area, but they send text messages by mobile phones to encourage each other. Mayumi, in
591 such a situation, happened to see a leaflet to recruit participants for the unusual workshop.

592 "Try to be future persons and consider the shape of the local community in Uji City 30 years
593 later," the idea was very interesting. On the day of the workshop, there were many elderly
594 people like the elderly who had spoken to her at a park before, so she felt uneasy a little,
595 but her anxiety was gradually eased as the discussion proceeded with a group of four. The
596 instructions for the participants by the City Hall personnel were as follows: "Imagine if you
597 could time travel 30 years into the future to Uji City with the present your ages and live
598 there. And then, tell us what the city's local community would look like."

599 At first, she felt ashamed to express her opinion by acting as a future person. If she carelessly
600 says, "The other day, I watched such a program on TV", the facilitator corrects it like "There
601 was such a TV program 30 years ago, wasn't there?" However, thanks to such corrections,
602 she felt to be able to envision the future freely without being restricted by the present
603 people's view. In such an atmosphere, when she envisioned and expressed the future,
604 which children could freely learn across school districts and grades boundaries, was
605 realized, no one in the group turned down her opinion. It was also a moment that she was
606 surprised and pleased with the group's warm-heart and affinity across the generation gap
607 between the elderly and herself.

608 What surprised her was not only that experience. The elderly participants in the other
609 future persons' groups also imagined new visions of schools one after another. One group
610 envisioned the future that children could study special fields without school divisions such

611 as elementary, junior high and senior high schools. Another group envisioned the future
612 that children could study and take credits at home, and each student could develop their
613 ability on their own ground. In Japan, a present person Mayumi lives, when children turn
614 six years old, they should enter elementary school at the same time, then go to junior high
615 and senior high in order. Such standardized school system has been continued as a matter
616 of course. However, many future persons' groups abandoned such conventional thinking
617 with no difficulty.

618 She felt a great hope when she saw many participants envisioned free styles of learning by
619 being future persons. As soon as the workshop was over, she sent messages to her mom
620 friends who she always exchanged emails on mobile phones. "Now the workshop was over.
621 Contrary to our expectations, all the elderly might have the same hope as we have!"

622 We have a lot of issues to start acting for the next generation. In the process of starting an
623 action, we may meet persons whose opinions would be different with us. However,
624 Mayumi thinks it is too one-sided that we only to tell the person, like "You should change
625 your opinion." Having said that, we could realize and share "things that we want to cherish"
626 that we put in the back of our mind with being restricted by social relationships and
627 conventional thinking in the daily life. For her, the experience of being a future person was
628 abandoning conventional thinking temporarily, which restricted her usual life, and
629 envisioning freely the world that she would really want to live.

630 In the spring, a few months after she experienced being a future person, her daughter
631 became the fourth grade in the elementary school. While Mayumi has the child who doesn't
632 like the school, but she decided to be a PTA Board member. The reason was that she wanted
633 to contribute to making the school better for all children, even just a little, like they can think
634 the school "Incredibly enjoyable." She wants parents and guardians, and local people to
635 know how good to think about things from a viewpoint of a future person. The hope is
636 expressed clearly on a newsletter message which she wrote as a PTA board member.

637

638 **Appendix D: The Story of Hitoshi in Uji City**

639 There is a tea house on the front approach to Byodoin Temple. The tea house is on the first
640 floor of a Japanese modern building which is built with bare concrete and wooden materials,
641 and it curiously harmonizes with its surrounding buildings while showing its presence. A
642 person, who is serving tea to customers while talking cheerfully at the tea counter, is Hitoshi,
643 a main character of this story. When sometimes customers are attracted to the building and
644 enter the tea house, he is in a good mood. The reason is because he designed the building
645 and has an attachment to it.

646 Actually, Hitoshi is not an owner of the tea house. He runs an architectural design
647 office on the second floor of this building. When the tea house is crowded with customers,
648 he comes down the stairs to help. He designed the building when he was 38 years old and
649 ran a design office outside Uji City. He wanted to build a building with distinctive presence
650 and to make the whole front approach to the temple even more attractive due to the

651 building while harmonizing with the other shops. That was his wish.

652 When Hitoshi was 50 years old, he had a chance to move his design office to the
653 second floor of the building. After that, he became the chairman of the association of the
654 front approach consisting of about 60 members including shops and neighbors on the
655 approach. The members cannot always reach agreements on various issues, including how
656 to regulate vehicles during tourist peak hours or how to receive newcomers.

657 In such a situation, Hitoshi happened to get a leaflet to recruit participants for a series
658 of citizen workshops. He was attracted by the theme of the workshops, Future Design,
659 which has positive meaning such as designing and creating the future. After the
660 participants were divided into a group of four at the workshop, they were instructed by the
661 City Hall personnel as follows: "Imagine if you could time travel 30 years into the future to
662 Uji City with the present your ages and live there. And then, envision what the city's local
663 community would look like."

664 However, the members of the Hitoshi's group thought it was more difficult than they
665 expected to place all of them in 30 years later and envision the Uji in the future. The reason
666 was that they tended to discuss solutions for complaints as present persons such as how to
667 use parks in the city. One of the other groups imagined that people were flying with Take-
668 copters (Hopters). When he saw the group, he thought "They have become future persons
669 well," and was envious of them.

670 He thought that envisioning the future as a future person would be imaging boldly
671 a situation that an issue facing present persons would not have even occurred. This is the
672 answer he got. For example, current Uji City has a problem that youth are reluctant to join
673 neighborhood and community associations. Not resolving it with a stopgap measure, but
674 it should be better to think an exciting system which naturally brings youth and the elderly
675 together.

676 One of the other groups envisioned the future that the local elderly would set up a
677 small private school at home to provide a learning place for children. By realizing such
678 places, a bond between people would be built naturally. Consequently, many issues, which
679 are caused by low percentage of membership in neighborhood and community associations,
680 would also be resolved by themselves. This idea taught Hitoshi that we could envision an
681 exciting future if we just adapt new ways of thinking without imaging a dreamlike
682 technology such as Take-copters.

683 Now the series of workshops were over, Hitoshi is still doing his best as the chairman
684 of the association of the approach. He realizes that the participation of the workshops made
685 his thoughts stronger. The present front approach to the temple has many issues including
686 reconciling vehicles and pedestrians, and how to receive newcomers. However, just aiming
687 to resolve the issues with stopgap measures are not enough. It is necessary that everyone
688 shares the future visions such as "We want to make the approach like that." By doing so, the
689 present issues would have been resolved naturally.

690 Then what is "the approach like that we in the association wants?" The exact answer

691 is not known yet, but the approach would be like that at least "people could think the whole
692 of Uji City is attractive due to the presence of the approach." When Hitoshi was 38 years
693 old, he thought, "I wish to make the whole front approach to the temple more attractive by
694 constructing one building." He is now 62 years old and what he is looking forward is the
695 future of whole Uji City.



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