SCHOOL OF INTERNATIONAL FUTURES

A FUTURES INNOVATION REPORT

The Promise of Future Design

Using intergenerational role play and negotiation to improve planning and decision-making — and become better ancestors

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Executive Summary

Even as we contend with pessimism about the state of national politics and the need to tackle complex long term problems across the globe, there are emerging innovations in governance and long-term problem-solving that merit our attention – and thoughtful adoption.

One new yet relatively unheralded innovation is Future Design, which is gaining traction in many places across Japan and is being considered in other parts of the world. Variously described as a methodology, a practice, and a movement, Future Design uses role play and "imaginary future generations" to help groups improve their capacity for empathy and creative problem solving, and to better account for the needs of both current and future generations. The School of International Futures (SOIF) is proud to share future-oriented governance insights and practices like Future Design in order to usher in more equitable, just and sustainable futures for all.

This brief shines a light on this emergent interdisciplinary futures practice, with a view towards increasing awareness and adoption in the United States and beyond in a variety of settings. Applications range from local planning and budgeting decisions to bigger policy and governance questions at the state, federal and even international levels. By learning more about this simple yet effective role play method, and by adapting it to serve the needs of communities across the United States and in other countries, we can improve our ability to make decisions that are anticipatory[1] and increase our capacity for creativity, collective imagination, and collective action.

Future Design has proven effective at driving intergenerational dialogue. To build on these accomplishments, it will be important to establish governance and decision making mechanisms that maintain the focus on intergenerational impacts, and to translate intention to action through changes in policy and practice. Thus, Future Design offers the opportunity to learn from and adapt the proven insights on deliberation and planning in Japan to drive a broader transformation from intergenerational conflict towards intergenerational dialogue, intergenerational understanding and, ultimately, intergenerational commitments.

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1. Why focus on Future Design?

There is a number of reasons why we—as organization leaders and as everyday people—care about the long-term effects of our decisions as well as our failures to act or engage. We have a personal stake in the well-being of future generations of our family members and neighbors. We may also want to ensure institutional longevity and long-term prosperity for those in our community, country and also perhaps the planet. Yet, a notable body of research shows that we are ill-equipped to make good on those desires and to engage in long-term thinking and decision making that can credibly incorporate the needs of future generations.

This must change as we and our societies face a number of vexing and complex challenges that will affect us and risk saddling future generations with even bigger problems. We have a well-documented tendency to discount the future, valuing it less than the present. This leaves market-based and political systems unable to adequately care for and value the future without a way to counter that bias in our thinking and decision making.[2] As the reality of those long-term challenges becomes clearer and the consequences of failing to solve them loom over future generations, attention is rightly turning to ways of incentivizing decision makers – from individual voters to groups of citizens to planning councils and elected leaders in the executive and legislative branches – to think about the impact of the decisions they make today on people who will live in the future and to make better decisions based on those considerations.

Future Design draws on insights from psychology, behavioral economics, and foresight, and builds on existing practices in planning and design, to help people become more adept at making decisions that serve the needs of current and future generations alike.

The crux of Future Design is the use of **imaginary future persons** to serve as proxies for members of future generations. These are people ordinarily unable to express their ways of thinking and problem solving and their preferences for decisions in the present that can have significant implications for outcomes affecting future generations.[3] Use of temporal role play and simulated negotiations with future generations can influence decision making so that it considers future impacts.

Given how easy it is to overlook the young and those who will come after us, embodying these "invisible" or barely visible future people through role play is especially powerful. Future Design makes the future "more real" by having people embody the role of future generations, usually through the use of ceremonial attire or other markers to physically manifest a temporal shift in perspective. This embodiment of the future through role play enables people in the present to wrestle with what kind of legacy we want to leave future generations. Future Design thus can improve policy making and decision making by making more explicit the choices, tradeoffs, and constraints that apply across generations. And it can pave the way for normalizing the use of intergenerational fairness criteria to create livable and sustainable futures—for our children, our children's children, and other future generations that we care about.[4]

Our hope is that by improving awareness of Future Design's potential to improve intergenerational empathy and fairness, we can promote increased experimentation with these techniques in the United States and elsewhere. Increased experimentation and adaptation can, in turn, help provoke a necessary shift in mindsets, priorities, and policies that enable decision makers to better anticipate and serve the long-term needs of their communities.

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2. What is Future Design?

Future Design is an emerging body of scholarship and experimental behavioral practice exploring the use of intergenerational role play and simulations to change attitudes and behavior towards future generations. Future Design was first developed in Japan, notably by Tatsuyoshi Saijo, a Japanese economist initially at Kochi University of Technology and present founder of the Future Design Research Center at Kyoto University of Advanced Science.[5] Other Japanese universities now have academic centers that engage in Future Design and conduct real world experiments, including work by Keishiro Hara and colleagues at the Future Design Lab at Osaka University,[6] Yoshinori Nakagawa at Sophia University and the Research Institute for Humanity and Nature,[7] and the Future Design Research Project at Shinshu University.[8]

Put in the simplest terms, Future Design is a process that gives embodiment to (and thus, “makes more real”) a particular community or organization’s future residents or stakeholders. It achieves this by combining role play of imaginary future generations (often through the use of ceremonial attire or other markers to indicate time change) with exercises that include design thinking, deliberation, negotiation, and other forms of group decision making.

Glossary of Terms Related to Future Design

Future Design is described as a movement[10] and a praxis[11] that studies and informs the design of social systems "that would ensure sustainable environments and societies for future generations."[12]

Imaginary Future Generations are individuals tasked through role play to represent members of future generations. This role play mechanism "allows members of the current generation to virtually communicate and negotiate with members of future generations" and individuals from the present generation who are playing future generation roles to "[interact and negotiate] with others as if he/she were doing so in behalf of a future generation."[13]

Futurability refers to the tendency of persons to experience "an increase in happiness as a result of deciding and acting to forego current benefits as long as it enriches future generations."[14] As Tatsuyoshi Saijo further explains, "It is fundamentally a question of whether the willingness of a parent to eat less to give more to their children can extend to a future generation which is not related by blood."[15]

These behavioral interventions are designed to improve decision making by correcting problems that occur at both the individual level (such as our limited ability to envision and engage with our own futures and the futures of our communities) and at the institutional level (as our systems of governance have short-term evaluation and accountability cycles that can lead to harmful decisions in the long-term).

Future Design exercises usually include a few essential elements that draw on insights and practices from planning, design thinking, social psychology, and behavioral economics:

- ***Perspective taking***: Assignment to a future generational cohort that leads to explicit consideration of long-term futures on a specific topic or issue;
- ***Role play***: Real people play the role of members of different generations, including imaginary future generations, typically differentiated through the use of distinctive attire or markers; and
- ***Direct engagement across generational perspectives***: Deliberation and negotiation[9] among participants who have been assigned one or more generational roles.

The primary field-tested benefits of Future Design include increasing the ability of participants to make intergenerationally fair decisions and engage in creative problem solving, and expanding their capacity for intergenerational empathy, also known as futurability.

Future Design draws on popularized strands of **indigenous wisdom**, especially the Seventh Generation Principle, an ancient Haudenosaunee (Iroquois) philosophy that considers those who are not yet born but who will inherit the world up to seven generations into the future.[16] The Iroquois leaders put this philosophy into practice by imagining seven generations into

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the future when making important decisions.[17] Broadly speaking, the Seventh Generation Principle guides the governance approaches of many indigenous communities, as well as advocacy efforts to shift towards sustainable development practices that are oriented towards stewardship and regeneration.[18]

It builds on **behavioral economics and psychology research**[19] that explores why people often have difficulty making decisions that maximize well-being over time and examines the impact of imagining future selves and future others on individual preferences. That literature shows that humans tend to discount the future and that confronting their future selves or future others can change their calculus in the present, enabling them to be more patient and thus make better decisions for the longer run.

The more people are able to connect with their imagined future selves or future others, the more likely they are able to feel empathy towards them. With greater empathy towards future selves or future others, people are more willing to take action for the benefit of future generations, even if that results in some personal sacrifice in the present.[20] This raises interesting questions about ways to make imagined future people – selves or others – more embodied to enable the formation of stronger emotional bonds. Future Design does this by having real people play the role of imaginary future generations in a tangible manner.

Future Design also builds on **design thinking** and **strategic planning**. In the Netherlands, two practitioners, Igor Verettas and Rick Koster, have led Future Design processes[21] with a wide range of civil society actors and private organizations to stimulate creativity, extend time horizons, and explicitly take into account future societal impact.

Their projects have included two primary school systems in Alkmaar, the Association of Universities of Applied Sciences, and social entrepreneurs at the Nudge Global Impact Challenge. The facilitators used creativity exercises and role play to enable participants to inhabit the future. To date, nearly 400 people in the Netherlands have participated in these sessions. Many report being personally affected by the experience, wanting to live differently now to enable better futures.

As Future Design interventions are tested, refined and adapted, they hold the potential to improve current decisions in a range of settings: from local community decisions on housing development, transportation planning, and other infrastructure projects; to various local, state and national decisions on policies ranging from education, health, environment, and public budgeting that affect the livelihoods and living conditions of future generations. Perhaps even more fundamentally, Future Design can “correct the governance system of

democracy through the creation of an imaginary future generation that is to be accountable as a new constituent."[22] By recasting our mindsets of our future descendants as stakeholders and constituents, Future Design can help societies improve their abilities to consider the future generational impacts of current decisions as well as our failures to act.

> *Future Design makes the future 'more real' by having people embody the role of future generations... This embodiment enables people in the present to wrestle with what kind of legacy we want to leave future generations.*

3. Demonstrated benefits of Future Design

The first field experiment (i.e., one conducted outside of a classroom setting) took place in 2015, in Yahaba, a town of 28,000 people, in northeastern Japan.[23] At a town hall meeting to discuss policies that would affect the future of their hometown, half the participants were invited to consider the future of their town in 2060 from their present context. The other half were instructed to put on special ceremonial robes and play the part of people from 2060.

They were asked to consider the present from the future vantage point in order to inform town planning. Both groups were then asked to deliberate, in essence to negotiate, over policy priorities and choices. These discussions physically embodied generational trade-offs – like whether to invest in infrastructure or child care, renewable energy or industrial farming.

A different practice was used in Yahaba in 2017 to allow all participants to consider the policy from the perspective of both the current generation and the imaginary future generation. The method enabled the shift in perspective to occur within all individuals and activate their futurability. This mechanism is now widely used.[24]

Participants in a future design workshop to create a Comprehensive Future Plan in Yahaba, Japan

Credit: Tatsuyoshi Saijo and Yahaba City Office

Although Future Design started in small cities in Japan, it has now expanded to larger cities and to settings that include national government agencies. It has led to the creation of a Study Group on Future Design Policies in Japan's Ministry of Economy, Trade and Industry, the creation of a Future Strategy Division[25] in Yahaba applying Future Design to the formulation of the town's comprehensive development plan, and the use of the technique in several other municipalities in Japan, such as Uji City, Matsumoto City, Suita City, Saijo City, and Kyoto.[26] Importantly, a variety of researchers have taken to adapting Future Design to new settings, including work by Keishiro Hara and colleagues involving city government officials in Kyoto, and work in corporate settings such as research and development decisions in a water engineering company.[27]

These future design experiments yield three main benefits:

- greater consideration of long-term impacts of current decisions,
- greater creativity in problem solving, and
- greater empathy across generations

The first benefit is that the negotiation process between current generations and those who play the role of future generations **enables communities to more strongly consider long-term future impacts of decisions alongside short-term ones**. Participants from the

present tend to favor policies that maximize short term benefits, while imaginary future participants tend to advocate for policies that would be better for their communities in the long term. Negotiations between the two groups give more explicit voice and consideration to the likely concerns of future generations, and thereby produce decisions that are more balanced between short-term and long-term impacts than traditional collective decisions. It is precisely this type of negotiation and consensus building across current and imaginary future generations[28] that can lead to the development of equitable cross-generational policies that take a longer term view and are driven by aspirational visions of the future.

In addition to helping produce better decision outcomes, Future Design also **helps expand the ability of participants to engage in creative problem solving**, which prior research has shown to be essential for innovation, entrepreneurship, and organizational transformation.[29] In the case of community decision making, the Future Design experiments from Japan have shown that participants who take on the role of imaginary future generations are better able

Future Design workshop in Cardiff, Wales

Researchers Ichihara and Ishii at RIHN trialed Future Design in Cardiff, Wales, demonstrating its potential to advance intergenerational fairness.

Credit: Masako Ichihara

to think creatively under conditions of complexity and uncertainty. As Saijo notes from one particular study: "The current generation saw the future as an extension of the present time, constructed visions that resolved current problems and issues, and produced ideas rooted within current conditions and restrictions. Meanwhile, the imaginary future generation was creative, giving the highest priority to the resolution of problems that were the most complicated and time-consuming and depicting the future freely, regardless of current circumstances."[30]

Finally, Future Design **helps participants develop greater empathy**. It does so by encouraging perspective taking and the changing of values and preferences, rather than relying on economic incentives, punitive measures or enforcement of social norms.[31] When present-day individuals experience happiness by giving up some current benefits to enrich future generations, that is what Saijo calls futurability, or intergenerational empathy. In one experiment, Future Design exercises increased empathy towards one's neighbors even in the present.[32] To further reduce intergenerational conflict, Saijo and his colleagues are now developing a Future Design methodology which has three steps that all the participants undergo: thinking about the past from the present, the future from the present, and the present from the future.[33] This has the benefit of having all participants enjoy the transformational impact of the practices on their mindset.[34]

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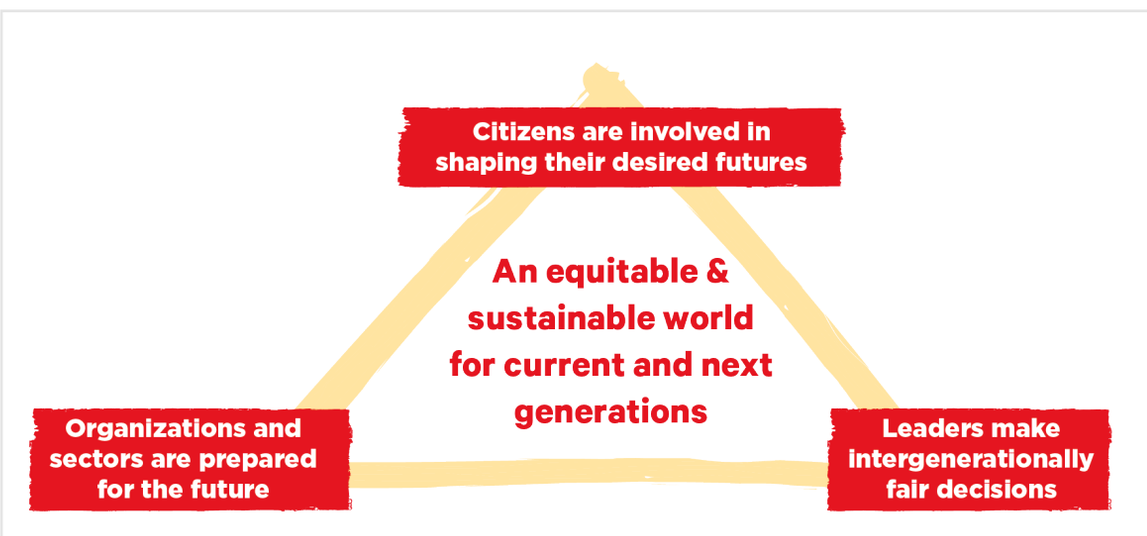
4. Promising areas for applying Future Design

Future Design is one of many approaches that help decision makers think about the future in a structured way under conditions of high uncertainty and complexity to make better decisions that take into account intergenerational impacts.

As with other foresight and futuring tools, Future Design can be deployed in various settings, from corporate board rooms to civil society organizations, planning agencies, legislative caucuses, and citizen assemblies. As the transformative foresight triangle from School of International Futures (or SOIF triangle) indicates, tools such as Future Design can be most effective when they engage at three different levels—leaders, organizations, and constituents.[35] Indeed, as some of the more advanced applications from Japan have shown, Future Design has progressed from shifting mindsets and problem-solving capabilities among citizens, to enabling leaders and staff in public agencies and businesses to translate ideas into action.

SOIF transformative foresight triangle



The transformative foresight triangle reflects SOIF's theory of change. It has emerged from our research and practice in multiple sectors across more than 50 countries. Effective transformation sticks only if interventions involve citizens, organizations and leaders working together. Citizens, especially next generation voices, need to have the power to shape their desired futures by participating in decision-making. Leaders need to be enabled to take the interests of future generations into account in their decisions. Organizations, social movements and sectors need to be able to navigate uncertain futures.

Credit: School of International Futures

There are several promising ways in which Future Design can improve the quality of deliberation and decision making in communities across the United States and elsewhere. The most obvious applications are in the areas of **community planning and infrastructure design**, where the long-term consequences of decisions are already apparent and where decision makers and stakeholders alike are accustomed to working in highly participatory settings such as design charrettes. We also see the opportunity to take Future Design into broader contexts of decision making, including serving as an important upgrade to existing efforts in **participatory democracy**, such as citizen assemblies, town hall and public meetings, and participatory budgeting, and in more **traditional decision making by bureaucracies and legislatures.**

Application to planning and design

One of the most immediate applications for Future Design in the United States is in the context of local planning, for two reasons. First, the practice has been developed and field tested in dozens of examples pertaining to local planning in Japan, providing an easy path to adopt and adapt these methods to planning decisions in the United States and elsewhere, on issues ranging from transportation and housing, to the development of parks and other public spaces. Planning processes already involve extensive use of design exercises and simplified versions of futures thinking through charrettes, which are intensive multi-day events that engage municipal officials, developers, residents and other stakeholders in a process to drive a consensus strategy among parties with diverse or even divergent interests and preferences.

Charrettes typically involve three phases: a brainstorming or ideation phase that includes the production of design renderings of what has been discussed; a presentation and review phase where participants provide feedback on the initial renderings and make recommendations on necessary changes; and a third phase where the public provides a confirmation of the final design or additional recommendations for revision.[36] In order for design charrettes to be helpful, they also often involve an extensive period of research into the local context and preparation of key design elements for a multi-day engagement process.

The introduction of imaginary future generations at key moments in a charrette could expand the capacity of residents and stakeholders to think more creatively and longer term as they brainstorm and make decisions. Future Design is most likely to be useful in local planning decisions when it is incorporated as early as possible into the charrette process (preparation and brainstorming phase) rather than waiting for the final stages (review and confirmation phases) of a design process. This is because Future Design exercises are, by their nature, generative exercises that are intended to expand the imagination and creative capacity of participants. Participants who are introduced to the idea of role playing and taking on the perspective of imaginary future generations will also be more likely to entertain the perspective of future generations when it comes to the review and confirmation phases of final plans and designs.[37]

Application to participatory democracy

A number of participatory democratic practices (sometimes also known as deliberative democracy or co-governance)[38] are gaining ground in the United States and elsewhere. They seek to give greater voice and agency to members of the public in expressing their policy preferences and tackling tough issues (e.g., abortion, end of life, climate change, land use etc). The most common illustrations are public (citizens') assemblies and participatory budgeting processes. Public assemblies take many forms but typically involve groups of randomly selected residents, designed to be representative of the general population, who are given the resources, access to experts and time to learn and deliberate on a set topic in order to produce a set of recommendations that will inform broader decision making.

At a time when trust in democratic institutions is low and polarization high, participatory democracy offers some key benefits: surfacing shared policy preferences, working in diverse groups for sustained periods, and engaging in more intensive forms of civic engagement. However, there is nothing inherent in the structure of assemblies that focuses them on the future beyond the fact that they exist apart from the electoral cycle, which is inevitably short term. That longer term focus needs to be intentionally embedded in the context setting and design of the deliberative process itself – in the selection and framing of the topic, in the use of scenarios and imagination exercises, and in the use of intergenerational role play as part of the deliberation itself.[39] Design interventions like these will ensure that decisions made through deliberative processes benefit from a longer time horizon and greater creativity, and foster intergenerational awareness and empathy.

> ***Interventions like Future Design will ensure that decisions made through deliberative processes benefit from a longer time horizon and greater creativity, and foster intergenerational awareness and empathy.***

The Japanese example from Yahaba[40] (discussed earlier in this brief) shows how Future Design can be incorporated deeply into a participatory democracy process and how it affects both the nature of the deliberation and the policy recommendations. The Yahaba deliberation was novel because the residents were divided into groups, evenly divided between those being their present selves and taking on the role of representatives from 2060. At the end of their deliberations, the two groups had very different policy recommendations and rankings. In their subsequent negotiations, the future generation groups were able to shift the perspective of the present groups to extend their circle of concern to their descendants.

The same basic insight applies to other participatory and deliberative settings, from participatory budgeting processes to official public meetings. In the case of participatory budgeting, community members decide how to spend part of a public budget.[41] As these processes spread[42] and the dollar amounts they are able to influence increase, role play using imaginary future generations could influence budgetary priorities, reflecting deeper thinking about how the world should look in the future as well as intergenerational negotiations. Introducing Future Design into official public meetings may promote more shared aspirations for the locality or agency in question and help model how to have better conversations and visioning across diverse viewpoints. This is particularly crucial as many of the official interactions between residents and local governments, school systems, planning boards, and police departments are full of frustration, conflict, and mistrust, when they could be opportunities to bring communities together productively to focus on how to improve them, and provide a safe venue for constructive dialogue.

Application to governance and governing institutions

The examples we've shared from Japan show that taking on the personas of imaginary future persons can change preferences and decision making outcomes. The next frontier is the application of Future Design to settings where most policy makers are making important decisions – like administrative and legislative bodies. Indeed, most legislative decisions already involve implicit assumptions and theories about future conditions and the continued efficacy of policies, interventions and investments.

By making futures and intergenerational trade-offs more explicit rather than implicit, Future Design holds the potential to help legislators get more creative and adept at generating solutions that can take into account the needs of current generations as well as future generations. In this manner, Future Design can also be an entree for legislators and executive agency staff to get comfortable with a broader range of foresight tools that enable institutions to thrive under a range of different scenarios. This technique can be used at all levels of government in their administrative and legislative branches.[43]

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Future Design can also complement and boost other efforts to improve intergenerational fairness. The SOIF Framework for Intergenerational Fairness (IGF), as detailed on the School of International Futures website and in a recent toolkit published by California 100 and School of International Futures, has three essential elements—an intergenerational policy assessment tool, intergenerational dialogue, and institutional stewardship.[44] Future Design can be used in varying degrees at each stage of the Framework for Intergenerational Fairness, and most notably in the dialogue phase.

As the Intergenerational Fairness toolkit indicates, an intergenerational dialogue is a "participative foresight process that collaboratively explores potential futures of a society or system, including a collective ideal vision for the future."[45] Future Design can be deployed as one particular version of intergenerational dialogue that enables greater creativity and concreteness with respect to engaging future generations. It can also be used as preparatory work for more standard versions of intergenerational dialogues, by using an imaginary future generation component in the first phase to develop necessary context (defining the issues and drivers of change that shape a community's future) and the design of plausible scenarios.

Future Design can also help strengthen the capabilities and commitments of governing institutions to implement solutions that are intergenerationally fair. As noted in the Intergenerational Fairness toolkit, institutional stewardship can be built in a range of governing institutions including executive and legislative branches of government, appointed commissioners or watchdogs representing current or or future generations (such as the Future Generations Commissioner for Wales)[46], and civil society actors such as nonprofit foundations, interest groups organizing around particular issues, and businesses that prioritize sustainability and social impact.[47] As examples from corporate boardrooms and municipal agencies in Japan have shown, institutions can use Future Design not only in their public engagement activities but also in their internal work to strengthen organizational capacity for resilience and anticipatory decision making.

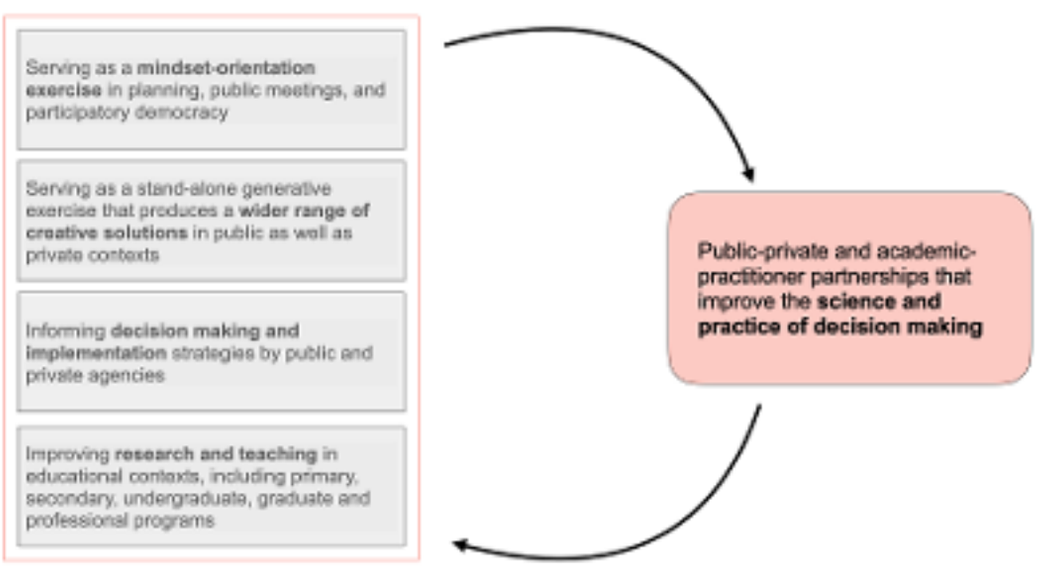
Finally, Future Design can be utilized by international organizations and agencies. With the upcoming United Nations Summit of the Future[48] in September 2024, and the commitment of various United Nations agencies to deepen work in foresight and engage youth voices in a more intentional manner in futures planning,[49] Future Design can be a helpful tool to translate intention to action.

5. Activating Future Design

Future Design is a promising futures practice and intervention that can be used in a number of different ways to combat policy myopia, spark creativity, and improve long-term decision making. In the broadest sense, Future Design can be used to enhance perspective taking and raise awareness by enabling participants to experience and embody how actions taken (or not taken) today can affect the lives and livelihoods of future generations.

We see a menu of options that organization leaders and decision makers of all stripes can use when adopting and adapting Future Design to the U.S. context and more broadly. First, as we have discussed in the case of design charrettes and deliberative democracy, elements of Future Design can easily be incorporated as a warm-up exercise or mindset-orientation exercise as part of other deliberative or participatory exercises. The preparation required for this option involves a review of key reference material on Future Design in Japan, creating role playing scenarios that make sense for participants in other countries, and paying attention to the relevant context of participants in the design, deliberation or decision making exercise.

Menu of options for Future Design



Credit: Karthick Ramakrishnan

Future Design can be used effectively not only in local contexts but also for larger-scale policy conversations at the state, national, and international levels. Indeed, this technique can be particularly relevant to decisions involving short-term costs and longer-term benefits, such as spending on public infrastructure, early childhood education, and plans to decarbonize housing and energy sources. The method can also help to address simmering intergenerational conflicts on issues such as housing supply, quality jobs, climate change and energy transitions, solvency of social welfare programs, and debt burdens, to name a few examples. Finally, Future Design could also help policy makers, corporations, civil society organizations, and members of the public engage more effectively on the ethical, policy, and research decisions pertaining to technology, their potential for disruption, and their contributions to the social good.[50`]

With increased experimentation and adoption in planning and other contexts of deliberation and decision making, we see an important role and need for academic and other research institutions to iterate, improve upon and evaluate Future Design practices in experiments being conducted across the globe. Academic institutions in Japan are already playing this role, working in partnership with public and private agencies, improving their decision making — by applying the latest insights from the science of Future Design.

In addition to promoting applied research and supporting communities of interest in Future Design, universities can play an important role in integrating Future Design into the curricula of professional schools of architecture, design, urban planning, and public policy,50 and into a range of public-private partnerships that support government agencies in their efforts to incorporate more innovation into their planning and design. We also see an opportunity for existing institutions and communities who specialize in strategic foresight to deepen their expertise in Future Design, produce public-facing toolkits, and eventually provide technical assistance to those who wish to implement the technique.

Whether in government, civil society, or academia, Future Design offers a low cost, accessible intervention to broaden perspectives, encourage more long term, imaginative thinking, and build empathy. Future Design can introduce more aspirational thinking into any number of conversations that are already taking place, as well as encourage new ones. At a time of great flux, threat and possibility, this is an essential technique to add to our toolbox.

Endnotes

1. Anticipatory decision making is more sophisticated than proactive decision making; the former uses foresight techniques such as scenarios that take into account the possibility of multiple futures, while the latter relies on simpler techniques such as forecasting that project recent trends into future likelihoods.

2. Wasserman, Lambert, and Selin, "Future Design: Exploring Affirmative Futures Through an Intergenerational Outlook."

3. In addition to having the element of Imaginary Future Generations, Future Design exercises can also include other elements of systems thinking such as causal loop design (Hara et al., "Policy Design by 'Imaginary Future Generations' with Systems Thinking."), scenarios (Hara et al., "Reconciling Intergenerational Conflicts with Imaginary Future Generations."), and other systems change exercises (Kania, Kramer, and Senge, "The Water of Systems Change.") that can illustrate the consequences of various hypothetical decisions.

4. For more on intergenerational fairness tools and practices, read the Intergenerational Fairness Toolkit from California 100 and School of International Futures (SOIF). Additional resources and examples are available at SOIF's Intergenerational Fairness Collaboratory.

5. Information about the Future Design Research Center at Kyoto University of Advanced Science is online, with some materials available in English.

6. The Hara Lab, or Future Design Lab at Osaka University, conducts research and works with partners in industry, academia, and government to change the "design of social systems to address complex and long term issues related to the future and create a sustainable society."

7. Nakagawa is currently leading a Future Design project at RIHN, and will return to Sophia University in spring 2025. In addition, Masako Ichihara, a researcher at RIHN, has been conducting Future Design for the Future of Agriculture in Kyoto at the Kyoto Climate Change Adaptation Center.

8. Shinshu University is located in Nagano prefecture, and the Future Design Research Project is working with local governments in the region. There is information online in Japanese.

9. Saijo, “Future Design: An Introduction.”

10. Saijo, “Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations”

11. Hara, “Application of Future Design to Policies.”

12. Saijo, “Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations”

13. Kamijo et al., “Negotiating with the Future.”

14. Saijo, “Future Design.”

15. Ibid. See also Saijo, “Futurability, Survivability, and the Non-Steady State in the Intergenerational Sustainability Dilemma.”

16. There is an articulation of Haudeosaunee values here. Notably, the Haudenosaunee Confederacy, which includes the Mohawks, Oneidas, Onondagas, Cayugas, and Senecas, is said to have inspired the framers of the U.S. Constitution (Jennifer Davis, “The Haudenosaunee Confederacy and the Constitution,” Library of Congress, September 21, 2023.

17. Sakura and Saijo, “Future Design - Discuss Japan.”

18. Clarkson et al., Our Responsibility to the Seventh Generation. “The concept of intergenerational equity, embodied in the teaching of the seventh generation, points out the necessity of ensuring the survival of future generations to a society whose heavy discounting of the future has resulted in a massive degradation of the world inherited from their parents and grandparents.” (p. 76)

19. Hershfield, “The Self Over Time.”

20. Hershfield, “Essay | The Benefits of Getting to Know Your Future Self.”

21. There is more information on their approach, and detailed slides on the three step Future Design methodology now being used by Tatsuyoshi Saijo and his colleagues that they adapted for use in the Netherlands, Also in the Netherlands, the Scientific Council for Government Policy ran an eight-person Future Design pilot.

22. Wasserman, Lambert, and Selin, "Future Design: Exploring Affirmative Futures Through an Intergenerational Outlook."

23. Hara et al., "Reconciling Intergenerational Conflicts with Imaginary Future Generations."

24. Hara et al., "Effects of Experiencing the Role of Imaginary Future Generations in Decision-Making."

25. Hara, "Application of Future Design to Policies."

26. Saijo, "Future Forebearers."

27. Hara et al., "Policy Design by 'Imaginary Future Generations' with Systems Thinking."; Hara, Kuroda, and Nomaguchi, "How Does Research and Development (R&D) Strategy Shift by Adopting Imaginary Future Generations?"

28. Hara et al., "Reconciling Intergenerational Conflicts with Imaginary Future Generations."

29. Edwards-Schachter et al., "Disentangling Competences."; Rank, Pace, and Frese, "Three Avenues for Future Research on Creativity, Innovation, and Initiative."

30. Saijo, "Future Design."

31. Pandit et al., "Taking the Perspectives of Future Generations as an Effective Method for Achieving Sustainable Waste Management."

32. Hara et al., "Effects of Experiencing the Role of Imaginary Future Generations in Decision-Making."

33. Described in an email communication from Tatsuyoshi Saijo to the authors, dated April 19, 2024.

34. Nakagawa and Saijo, "Future Design as a Metacognitive Intervention for Presentism."

35. Glenday et al., Beyond Strategic Planning: A Foresight Toolkit for Decision Makers.

36. Gardner, "Not All Public Participation Events Are Charrettes."

37. The evolving science and practice of Future Design in Japan indicates that imaginary future generation interventions can make a difference to all participants in a design process rather than simply being confined to a treatment group vis a vis a control group that receives no treatment in imaginary future generation perspective taking. See Hara et al., "Effects of Experiencing the Role of Imaginary Future Generations in Decision-Making."

38. Participedia is "a global crowdsourcing platform for researchers, activists, practitioners, and anyone interested in public participation and democratic innovations." It shows the wide range of democratic practices that are considered participatory and include people's assemblies, participatory budgeting, and town or local meetings.

39. The California 100 initiative conducted a series of deliberative democracy exercises, adding a prompy about future scenarios, and found that California resident opinions on various policies and about the future of California varied significantly between deliberators and non-deliberators (California 100, "California Considers: Policy Deliberations for our Long-term Success.") After conducting a simplified version of Future Design at a subsequent event, the California 100 team found that participants in the Future Design exercise were much more likely to engage in transformational thinking and displaying openness to bolder solutions than those who participated in the prior deliberative democracy exercise without a similar Imaginary Future Generations component.

40. Hara et al., "Reconciling Intergenerational Conflicts with Imaginary Future Generations."

41. Participatory Budgeting Project.

42. Gilman and Lucero, "Participatory Budgeting Is About to Blow Up Across the Country." (February 2023).

43. Organizations like Future Caucus in the United States work with bipartisan groups of legislators to solve problems in a collaborative and constructive way despite at a time of deep partisan polarization, distrust and dysfunction. Many of their legislators are younger than average. Recently, the organization began convening policymakers to develop strategic foresight skills through their Policy Innovation Lab. To build on this momentum, one could try new role play techniques with receptive legislators to socialize and normalize their use.

44. Glenday et al., Intergenerational Fairness Toolkit: Designing Policies and Practices for Current and Future Generations.

45. Ibid., p 21.

46. The Future Generations Commissioner role for Wales was created by the 2015 Well-being of Future Generations Act and new functions on intergenerational fairness considerations have been added to the Wales Auditor General.

47. Glenday et al., Intergenerational Fairness Toolkit: Designing Policies and Practices for Current and Future Generations, p 26.

48. United Nations, Summit of the Future.

49. See Our Common Agenda, UN Secretary General Guterres' vision for the future of global cooperation.

50. See Daniel Barben et al., "Anticipatory Governance of Nanotechnology: Foresight, Engagement, and Integration"; Hara et al., "Designing Research Strategy and Technology Innovation for Sustainability by Adopting 'Imaginary Future Generations'—a Case Study Using Metallurgy"; Hara et al., "Assessing Future Potentiality of Technologies from the Perspective of 'Imaginary Future Generations' – a Case Study of Hydrothermal Technology"; Hara, Kuroda, and Nomaguchi, "How Does Research and Development (R&D) Strategy Shift by Adopting Imaginary Future Generations?"

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Acknowledgments: We are grateful to Tatsuyoshi Saijo, Keishiro Hara, Yoshinori Nakagawa, and Cynthia Selin for reading prior drafts of this report, providing valuable feedback and suggesting helpful resources. Responsibility for errors of fact or interpretation lies solely with the authors.

Suggested citation: Suzette Brooks Masters and Karthick Ramakrishnan, 2024. The Promise of Future Design: Using intergenerational role play and negotiation to improve planning and decision-making—and become better ancestors. London, UK: School of International Futures.

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V1.1 - 05/24