



COURSE 1

READY SET FUTURE



READING MATERIAL

How Professional Futurists Think About the Future:

A report from the Futurist Imagination Retreat

May 3-4, 2016



INSTITUTE FOR THE FUTURE

FUTURES THINKING

taught by Institute for the Future with **Jane McGonigal**



COURSE 1

READY SET FUTURE

Do you want to think about the future with more creativity and optimism? Do you want to see what's coming, faster, so you can be better prepared for disruptions and more in control of your future? Do you want to get better at changing what's possible—in your company, your industry, your community, and in your own life?

This course will introduce you to the practice of futures thinking, as developed and applied for the past 50 years by the [Institute from the Future](https://www.iftf.org/), a Silicon-Valley-based research and learning group founded in 1968. In this course, you'll build your baseline understanding of what futures thinking is and what you can do with it. You'll master introductory techniques for growing your foresight. You'll meet a range of professional futurists and learn more about how they think and research what's coming. And you'll choose one or more future topics or personal interest to investigate with your new foresight skills.

This course is for anyone who wants to spot opportunities for innovation and invention faster, and gain the skills and confidence to help lead the course of events that are changing the world, instead of being led by them.

About this Specialization

The Institute for the Future is declaring 2020 “The Year of the Future,” because we believe that foresight is a human right. Every human should have the chance to develop the creative skills needed to imagine how the future can be different, and to participate in deciding what the future will be. We believe futures thinking shouldn't be something that only happens in Silicon Valley. With our specialization in Futures Thinking on Coursera, we are the first organization ever to offer massively open, free training in futures thinking. We aim to upskill the entire planet in future thinking and future making, by teaching one million online learners via the Coursera platform. This text is one of 100 free readings distributed as part of our “Year of the Future” training.

Institute for the Future

Institute for the Future is the world's leading futures thinking organization. For over 50 years, businesses, governments, and social impact organizations have depended upon IFTF global forecasts, custom research, and foresight training to navigate complex change and develop world-ready strategies. IFTF methodologies and toolsets yield coherent views of transformative possibilities across all sectors that together support a more sustainable future. Institute for the Future is a registered 501(c)(3) nonprofit organization based in Palo Alto, California.
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How Professional Futurists Think About the Future

***A report from the Futurist Imagination Retreat
May 3-4, 2016
Palo Alto, California***

Participants:

Invited futurists

Stuart Candy

Jamais Cascio

Tessa Finlev

Mark Frauenfelder

Dylan Hendricks

Jane McGonigal

Sarah Smith

Kathi Vian

Imagination Institute

Scott Barry Kaufman

James H. Hovey

Elizabeth Hyde

Report prepared by: Jane McGonigal , PhD, Institute for the Future

Thinking about the future isn't a special skill; virtually everyone does it all the time. We schedule future activities and appointments on our calendars. We make to-do lists, a promise to ourselves of how we will spend our future time and energy. We pack our bag (or pockets) for the day by fast-forwarding mentally to what we'll need later. We look up the weekend's weather. We make predictions about the outcomes of sporting events. We rehearse, practice, study and train for upcoming moments that matter to us. We daydream about events we're eagerly looking forward to. We worry about others.

Most of this commonplace future thinking is about the *near* future: the next few minutes, hours, days, weeks, months or maybe even the next few years of our lives. Few mental cycles, if any, are spent thinking about what our lives will be like, or what actions we should prepare to take, in the *far future*: ten years, twenty years, or even fifty years from now. This kind of far-future thinking is the domain of professional futurists.

Futurists are trained to imagine distant realities that to others seem implausible, or even impossible, today: technologies that don't exist yet, dramatic changes to social norms or laws, detailed scenarios such as the strange pandemic most likely to infect us in the year 2031, or new forms of government that may unfold when space colonization becomes commonplace. Even if such possible futures can be interesting to consider, most lay people view them as little more than an intellectual curiosity. What is the practical purpose in contemplating a world thousands of tomorrows away, a world that may never actually come to pass, when there are so many pressing concerns right now?

Why indeed think about such far-off futures? Are there psychological and social benefits to imagining the world, and our lives, decades in advance? And if so, what does it take to become *good* at imagining the far future? How do you evaluate skill, success and impact? What obstacles might prevent someone from being able, or willing, to practice far-future thinking – and how can we help people overcome them? These were the central questions explored by at the futurists’ retreat organized by the Imagination Institute and the Institute for the Future (IFTF) in Palo Alto, California.

Participants in the retreat included professional futurists Stuart Candy (an associate professor of foresight at Carnegie Mellon University’s School of Design); Jamais Cascio (one of *Foreign Policy*’s Top 100 Global Thinkers); Tessa Finlev (a specialist in peace and conflict resolution through futures thinking); Dylan Hendricks (the director of the annual Ten-Year Forecast at IFTF), Jane McGonigal (an expert in use of games to promote collaborative futures thinking), Sarah Smith (a research director at IFTF specializing in the future of food), and Kathi Vian (a distinguished fellow at IFTF with 42 years experience as a futurist). They were engaged in discussion by Scott Barry Kaufman and Elizabeth Hyde of the Imagination Institute, and journalist Mark Fraunfelder.

What do futurists imagine?

The retreat kicked off with participants sharing one thing they’ve recently spent time imagining in the course of their work. Their responses illuminate some of the key and unique elements of far-future imagination as developed and practice by professionals.

“I’ve been looking at general discontent with how our food system works,” Sarah Smith said, “and how it could work differently.” She pointed to two possibilities that have recently captured her imagination: lab-grown meat, which is produced from stem cell cultures and does not require any living animals to be farmed or slaughtered, and genetically-customized diets, which are personalized meal plans made for individuals based on their at-home DNA sequencing results. How could these two inventions change the way society eats? What problems could they solve, and what new ones could they create?

“I’ve been imagining how universal basic income could work in the United States,” Jane McGonigal said of the increasingly popular policy idea that would provide a guaranteed income of \$15,000-20,000/year to every American regardless of work. She explained the concrete details she is trying to envision. “How would it change life choices, like whether to go to college, or when to start a family, or whether to pursue personal passions? Would people still work? Would it change the kind of work we wanted or were willing to do? How many would stop working altogether?”

“I’ve been thinking about the incredible inequalities in society currently, and what role Blockchain technology might play in addressing it,” Kathi Vian said, referring to a new technology that, among other things, notably gave rise to the virtual currency Bitcoin. “There’s a chance this technology will only benefit the already rich and powerful. Is there a way to prevent that future, and if so, what would the alternative look like?”

Tessa Finlev said, “A lot of my time is spent imagining how we can use futures thinking methodology for peace building in conflict regions. Because when you are actively building peace, you are trying to create a future that is radically different from the present and the past. So it takes a lot of imagination to be able to picture what peace actually looks like.” She added another example: “I’m also working with the government of Saudi Arabia to imagine what their economy could look like in fifteen years if they can no longer rely on oil production, which would be a huge change and challenge for them.”

As these examples illustrate, futurists are primarily concerned with *how things could be dramatically different* from the reality we inhabit today. Futurists rarely imagine futures that represent a continuation of the present day, or even a mild shift from today. Instead, futurists look for sectors of society where there is the potential for dramatic change. This potential may be sparked by a new technology, or a new national policy, growing discontent with the way things are, or some other shift in social norms, market demands, or demographics. In short, the ability to imagine a far future is the ability to imagine change.

This drive to investigate and describe to others a world that is very different from the one we live in now is what makes futures work such an imaginative field. Futurists must be able to consider the myriad possible consequences and widespread ripple effects of things that haven’t happened yet. This is a second common feature of what futurists imagine: Big systems. Futurists are usually looking at how dramatic changes play out across big landscapes: an entire industry, or city or nation, or an entire generation’s lived

experiences of major human institutions like work, school, governance, healthcare, or family.

To explore these big landscapes, futurists have to figure out how to describe the rules of a possible future world and how it works. The primary tool they use to do so is a “scenario” or “forecast”, two terms often used interchangeably. Scenarios or forecasts are internally consistent, plausible stories about a future that *could* happen. They are always inspired by “signals”, or changes and innovations starting to take place in the present, that provide clues as to how things could be different in the future.

Jamais Cascio explained one key feature of scenarios and forecasts: “Many stories about the future, or scenarios, start the same way, with these six words: ‘*This is a world in which.*’ It’s the futurist’s version of ‘once upon a time.’ It says, ‘You’re about to hear the tale of another reality.’ A fairy tale, at least of a sort. It will likely have more logic and sensibility, but the fantastic elements are unmistakable—not in the shape of giants and beanstalks, or grandmother-devouring wolves, but as new technologies that seem indistinguishable to us from magic. The phrase ‘*This is a world in which*’ is a useful tool for creating scenarios, because it puts us in the mindset of a whole new world.” In a good future scenario, all assumptions about the way things work come under scrutiny. What do I want this world to be? How does this future differ from the here and now?

Kathi Vian shared some questions that futurists often use to decide what kind of story to tell about a particular future:

1. What does a day-in-the-life look like in this future?

2. What new structures, institutions, processes, or concepts are needed to support this future?
3. Who/what are the catalysts in these scenarios—the actors that make things happen?
4. What are the geographies of these scenarios? Are they universal? Do they play out differently in different parts of the world?
5. What are historical precedents that might inform these scenarios? What do they have to teach us about the critical dilemmas?
6. What makes these scenarios sustainable or unsustainable (will these changes be capable of lasting 100+ years)?
7. How might these scenarios be flipped—if they're utopian, what's the dystopian version? If they're scary and negative, what's the hopeful and positive version?

All of these questions represent techniques that futurists use to bring concrete details to their descriptions of imagined future worlds. But the last question here is particularly key to understanding how imagination unfolds in professional futures work. Futurists typically try to imagine both the possible benefits of major changes as well as the new struggles that might arise. At the Institute for the Future, McGonigal noted, these two approaches are referred to as “positive imagination” and “shadow imagination.” The former focuses on new opportunities and hoped-for changes, while the latter focuses on new problems, complications and urgent challenges that may arise as a result of those changes. Bringing both positive and shadow imagination to any possible future is a key

tenet of professional futures work. “There is no singular utopian or dystopian future,” Stuart Candy said. “Every future contains both positive and dark possibilities.”

Why think about the far future?

The late futurist Alvin Toffler argued in his 1970 bestseller *Future Shock*: “In dealing with the future, it is far more important to be imaginative than to be right.” This idea, the futurists at our retreat universally agreed, is one of the most central tenets of professional futures work. Scenarios and forecasts should expand people’s sense of what is possible, rather than to accurately describe what will happen. “We don’t try to predict the future,” Dylan Hendricks said when asked to name a “sacred cow” of the futurist profession. “That would be impossible. There is no single future to predict, because the future doesn’t just happen to us. We actively make it.” Thinking about ways the future could be different helps us figure out which actions to take today, to make those futures we’ve imagined more or less likely.

As another well-known futurist the political scientist William Connolly famously said: “Possibilities are for visionaries and activists, probabilities are for spectators and consultants.” Indeed, the Imagination Institute’s Scott Barry Kaufman noted at the retreat: “There are more *possibility thinkers* here, whereas I think scientists tend to be more *reality discoverers*. I feel like that’s the key difference. The drive for reality discovering versus possibility thinking—they’re not quite the same thing.”

When Kathi Vian heard Kaufman’s comments, she agreed. “I think this goes to the heart of some of the debates we find ourselves in about when we say that ‘We don’t do

prediction.’ Possibility thinking might be a better way to frame what we do. We don’t assume there’s one future reality to be discovered, but rather a field of possibilities, and as futurists, we help people exercise their imagination muscles to widen that field of possibilities.”

This is a central belief of futurists, which helps explain why they believe imagining far off futures matters: You can’t create change, or invent something new, unless you can imagine how things can be different. And as Finlev said, “The future is a place where everything can be different.”

“We try to bring to others a sense of creativity and curiosity about what *could* happen in the future,” McGonigal said. “The further off the future, the more likely people are to accept that things could be different. This allows them to be more innovative and inventive, more open to change, and more open-minded about alternatives the current ways the world works.”

What does it take to be good at far-future imagination?

So, if accuracy in predicting the future is not the primary measure of excellence in the field of futures thinking – what is?

This question sparked a lot of interest in the group assembled for our retreat, as no one was aware of any existing tools for formally evaluating a scenario or forecast. Each futurist in the group had their own informal benchmarks for success, like emotional response: Hendricks likes to see his work spark emotions like awe and wonder, and Cascio considers his forecasts particularly successful when they make

people cry! McGonigal, on the other hand, said she hopes her scenarios spark genuinely new and innovative ideas in the people who hear them: “The stranger the ideas someone comes up with after hearing it, the better the forecast.”

But the challenge to come up with a formal evaluation of a futurists’ imaginings was exciting to the group, and Cascio took the lead in producing the following tool:

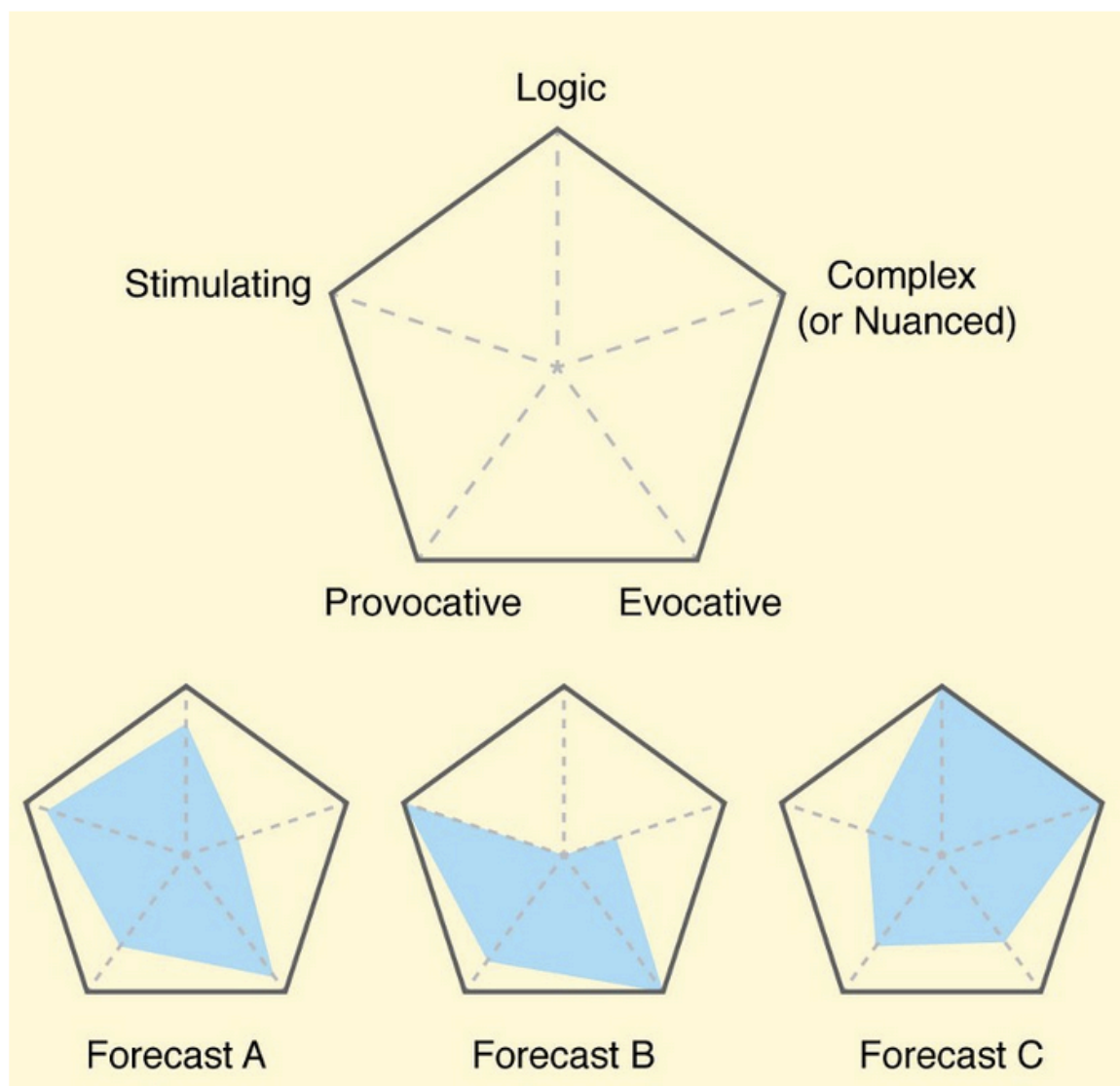


Figure 1 A tool for evaluating the effectiveness of a far future forecast, invented by Jamais Cascio during the retreat.

In this tool, each vertex of the pentagon evaluates one aspect of a scenario or forecast:

1. **Logical.** Does it make sense? Is it internally consistent? Is it plausible? Does it lead to an “a ha!” insight about what might be possible?
2. **Complex (or Nuanced).** Does it take many factors into account, avoiding a simplistic model of the world? Does it address both positive and shadow imagination (that is, positive aspects of the future as well as problematic or challenging ones)?
3. **Evocative.** Does it cause an emotional response? Does it create awe and wonder at what could become possible? Does it provoke a sense of hope, joy or excitement for this future? Or, on the flip side, does it create a sense of fear or urgency to avoid this future? Does it create compassion for people living in this future?
4. **Provocative.** Does it upset, excite, and cause discomfort? This is different from simply evoking a negative emotion, and it is the most subtle of these five dimensions. It speaks to another foundational belief of futurists: That it is their job to make people uncomfortable. A good scenario challenges your assumptions about the way the world should work, or has to work. The more common assumptions a scenario upsets, the more provocative it is.
5. **Stimulating.** Does it include implications? Does it lead to a chain reaction of possibilities – if this future unfolds, then suddenly many other things change or become possible? This speaks to the generative aspects of a scenario. When you hear it, does your mind start to spin out in multiple possible directions? Can you

see the implications for your personal future? For your organization's? Your field or industry's? Does it spark you to think about change in multiple contexts, such as work, learning, recreation, spirituality, activism, well-being?

The three examples below the basic tool show how different forecasts might be evaluated and mapped. Forecast A is strong in most aspects, but suffers from being overly simplistic. Forecast B is emotionally powerful, but lacks logic and complexity. Forecast C is complex and logical, but perhaps not as stimulating as it could be. This forecast quality map is a rough prototype, of course. The group made a commitment to continue work on the tool, developing the five dimensions further and testing its usefulness.

Scott Barry Kaufman further proposed that the tool could be used to investigate and better understand the underlying cognitive skills and talents required for future-oriented imagination. He suggested that the same five qualities that make for a good forecast – is it logical, complex/nuanced, emotionally vocative, provocative, and stimulating – could be adapted and studied as the core skills necessary to develop the capacity to imagine far futures. For example, the translation might look like this: Does this individual have a strong sense of logical thinking and cause-and-effect; the psychological flexibility to hold and accept both positive and negative possibilities in their mind at the same time; the artistic capability to tell stories or create media that generate strong emotional reactions; the courage to present unorthodox points of view and challenge conventional thinking; and the empathy and social intelligence to think broadly about how different people, communities and cultures might react to a given scenario? Beyond these five

skills, the group agreed that “curiosity” was a central value and strength of most futurists. Futurists must constantly be scanning the horizon, learning and discovering the new forces that will shape the decades to come.

What can imagining the far future change?

The five-dimensional forecast quality map is one way to evaluate the skill of a futurist. Another way would be to assess their ability to help individuals develop greater optimism and self-efficacy with respect to the future.

Early on day two of the retreat, the group played a simple, five-minute game that is well known to many futurists. The game, usually referred to as the “Future Orientation Game”, was led at the retreat by McGonigal, and is often used by futurists in group settings to get a sense of the “psychological baseline” of the group when it comes to thinking about far futures. This game also happens to effectively illustrate the two primary dimensions of psychological impact that most futurists aim to effect through their work: *optimism versus pessimism* about the direction of change in the world, and *agency versus lack of agency* to influence the direction of change.

Here’s how the game works:

- Create space in the room for players to move around a large square area.
- Provide the first prompt: “In the next 10 years, do you see the world as *getting better* or *getting worse*?” Point to opposite ends of the room to indicate the ends of a scale – for example, “The far right side of the room represents ‘getting much, much better’, the far left side ‘getting much, much worse’. Ask people to stand along a continuum according to where they’d

position themselves on a scale in response to that prompt. This is the “x” axis.

- With people still lined up, ask them the next prompt: “How capable do you feel of personally affecting the future?” Point to the other two ends of the room to create a second axis, for example: “The front of the room is very capable; the back of the room is not at all capable.” Ask players to remain where they are on the x-axis, and move themselves along the y-axis only.
- If you have played the game successfully, you will have created a two-dimensional space divided into four quadrants representing four points of view on the future: The world is getting worse and I have little agency to affect it; The world is getting worse and I have a lot of agency to affect it; The world is getting better and my own efforts are not important either way; The world is getting better and my own efforts can help direct that positive change.
- While still standing, generate a group conversation. Seek perspectives from people standing at various ends of the spectrum, and in the middle. Ask people to explain to the group why they are standing where they are standing.

During our gameplay at the retreat, the professional futurists in the group varied in regard to how optimistic or pessimistic they felt about the future, but all chose to stand towards the “I feel very capable of affecting the future” side of the room. This is to be expected: One of the primary outcomes of systematic far-future thinking, the

group agreed, is to increase individual and collective sense of agency that the actions we take today can shape the future we share.

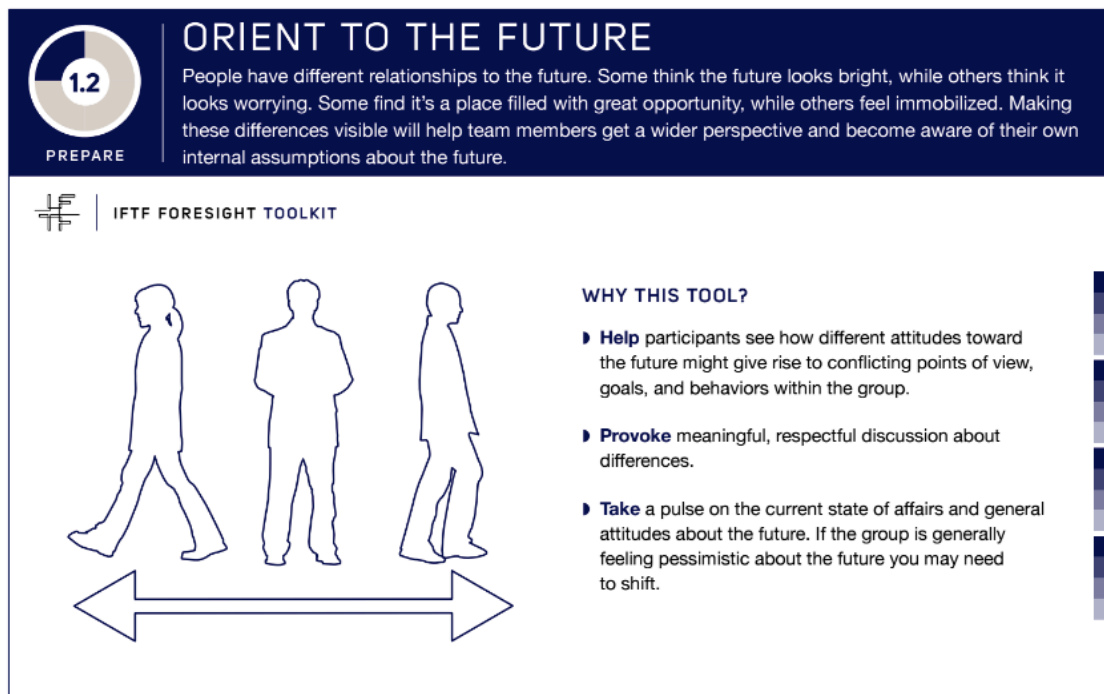


Figure 2 An introduction to the "Future Orientation Game". Copyright the Institute for the Future (2016).

After the game was finished, Stuart Candy asked how many in the group were familiar with the origins of the game. He shared its history, which starts with the work of Fred Polak, one of the founding fathers of futures thinking.

Polak was a Dutch sociologist, and also Jewish. He spent the Second World War hiding out in German occupied Netherlands, survived that experience and went on and wrote a two-volume magnum opus called *The Image of the Future*, first published in Dutch in the 1950s and then in English in 1961. It became a seminal text in the field. As Candy explained: "It's is an epic work that attempts to introduce to sociology and the

intellectual world at large ‘the image of the future’ as a category of analysis that we should pay close attention to in societies. The pattern that he found in his work looking at all sorts of societies through history was that when the image of the future was in full bloom, when they were upbeat what the future would be like, they did well. But when the image of the future began to decay, when it was deeply pessimistic, apocalyptic, that was one of the leading indicators that the society was on the way down. It is one of the lynch pins of future scholarship because it draws attention to the importance of the way the individual and collectives imagine the future in terms of what then goes on to actually happen. Polak also identified a second axis of influence on the future, which was agency. On the whole, do people in a society feel that they can make the future better?”

These are the two scales that futurists like to use to measure individual and collective orientation toward the far future. And these are the two scales that futurists hope to effect change. The future-orientation game is a simple way to take the pulse of a group on both axes. And as the game demonstrates, these psychological dimensions can be measured at both the individual (personal) and social (collective) level. Interviews can be interviewed to find out why they identify at different points on the spectrum. As Candy noted: “Imagination is not a property of a single brain.” But distribution of the group across the quadrants can be predictive – more than any individual future forecast! – of whether that group will experience a positive or a more challenging and problematic future.

Cascio coined a term, “Super-Empowered Hopeful Individuals” to describe the potential effect of far futures thinking on individuals or a group, where they increase both their agency and hope for the future. McGonigal coined the term “urgent optimism” to describe both confidence that the future can be better, combined with a sense of personal agency to get actively involved, right now, in shaping how the future turns out.

Although there are no formal measures to assess urgent optimism or a super-empowered hopeful stance toward the future, the group agreed these would be extremely helpful psychological measures to develop, in order to assess the possible impact of futures thinking on psychological well-being. Futurists believe their work increases hope and agency; it is important to investigate this through formal studies and measures.

What prevents people from imagining the far future?

If far future thinking is indeed a useful skill, for increasing creativity, innovation and openness to change, as well as potentially increasing optimism and agency, what are the obstacles to getting individuals, communities and organizations to engage in this practice?

McGonigal led a group exercise to explore this question. Everyone was given a pad of giant sticky notes and asked to write down the reasons why some people can’t (or don’t want to) imagine the future. After a few minutes, McGonigal collected the sticky notes, and we all discussed how the notes should be organized into related clusters. As Jane arranged the notes on the wall, the clustering triggered even more ideas for sticky notes. In fact, the most interesting sticky notes were generated *after* the first round had

been put on the wall. The main clusters were organized into two buckets: 1) Why *don't* or *won't* some people imagine the future, and 2) what prevents some people who *do* imagine the future from *being good at it*, despite their best efforts?

In category one, the group identified eight clusters that prevent people from imagining far futures:

Urgent matters in present. Hunger. Violence. Fear. Poverty. Too many pressing present-day problems. Lack of time.

Fear of being wrong. Not wanting to look stupid or be embarrassed by making incorrect predictions. Also, the flip side of this coin: What Cascio dubbed the “Cassandra Factor”, which is the belief that no one will listen to me even if I’m right. (Cassandra was the tragic ancient oracle of Greek mythology who correctly foretold the future, but to her great distress, no one believed her.) Candy pointed out that this is actually the same problem, because both assume that the goal of future thinking is to accurately predict the future. Therefore, related to this problem is “monofuturism”, or the belief there is one single future that I can see or not.

“What’s the point?” Belief that futures thinking is a waste of time. That it’s unserious or unproductive. It doesn’t feel practical to me. This is part of a bigger issue: Cultural biases against creativity and imagination as worthwhile endeavors regardless of practical application.

Difficulty proving its value. Even to those who personally believe there may be value in far future thinking, the lack of impact measurements and quantifiable results

make it hard to commit their own personal or organizational time and resources to the activity.

Lack of agency with respect to the future. The belief that I personally can't affect the future, so why think about it. The belief that I have a small circle of influence, that my actions don't and can't affect my community, organization or society at scale.

Lack of hope or optimism that things can change. The belief the future can't be different. Belief that the world is fixed. A lack of understanding of the past (and major changes). Belief that the future will be continued growth in the same directions – in other words, “We already know what the future will be like: the present, but moreso.”

Lack of encouragement to think imaginatively about the future. This is particularly true in our schools!

Lack of role models who think about the future. There are few, if any, specific well-known futurists in popular culture or within various intellectual communities. This is a particular problem for women and people of color; a recent collection of essays by leading futurists consisted of essays by 17 white men.

In category two, the group identified six clusters that prevent people from being effective when they imagine far futures, despite their best efforts:

Lack of exposure to future thinking tools. There are well-established methods that futurists use, like the development of scenarios and forecasts, but there are scarce formal opportunities to learn and practice these tools. Lack of guidance or mentorship in futures thinking.

Not aware of the transformational forces (or what futurists call “signals”), so they can’t see the directions of change. If someone is not exposed to leading-edge technologies, science, demographic shifts, market shifts and other “future forces”, the futures they imagine will not be grounded in the reality of what is likely to influence the future. Similarly, having too small or narrow a reservoir of the kinds of experiences and knowledge which are necessary to see how things can be different, or how change happens, can be problematic: little world travel, or being young, or not aware of major transformations in your own country, culture or organization’s history.

Rigid ideology. In nations, organizations or cultures with rigid ideologies, they may be too close-minded to accept that dramatic changes are possible and even likely in the future.

Too much influence from pop culture. When some lay people think about the future, they are over-influenced by dominant science fiction ideas. They repeat ideas from *Star Trek*, *The Matrix*, *Minority Report*, etc. Their minds are preprogrammed to go to specific and limited, “copycat” visions of the future.

Futures thinking requires time, more time than may be available. The group agreed it takes at least a day or two to switch mental models from the present or near-future thinking to far-future thinking. However, many future events are one or two days in length, meaning as soon as the mind is prepared, the process has ended!

Neurological hindrances. It is known, for example, that Alzheimer’s patients have difficulty imagining the future. The same is often true of depressed patients. Further

investigation into the neurological and psychological hindrances to far future

imagination is of great interest to this group.

All fourteen of these obstacles represent unique opportunities for intervention to increase future imagination in society.

Are there any types of futures that are particularly hard to imagine?

One final question that captured the imagination (so to speak!) of the group was this: Are there any types of futures that are particular hard to imagine? Or, as Scott Barry Kaufman put it: “What is the futurist’s equivalent to writer’s block?”

The group agreed that for many organizations, it’s harder to imagine success than it is to imagine failure. Cascio said, “It’s often very difficult to get organizations to be willing to explore a scenario on which they are successful, especially if they are a goal-driven organization. If you come up with multiple scenarios, and in at least one of them the organization actually manages to carry out its goal, it’s very, very difficult to get them to think about that future, the future in which they win. For some reason, that’s the future they have the hardest time picturing. That’s been true for environmental groups, and for geopolitical groups. I recently did a big project around the future of nuclear weapons, and it was incredibly difficult to get people to actually think through what it would actually look like to get to a world where nuclear weapons have been discarded.”

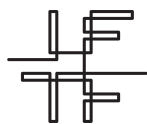
When pressed for reasons why that might be, Cascio suggested, “Well, there is a cynical reason that they’re not needed in such a positive future, so they don’t actually

want that future to come to pass. Or it could be a fear that this just isn't realistic, that it turns out they don't actually believe their mission is possible in its fullest version. Or it could be that it doesn't feel as serious or purposeful to imagine success as does to imagine failure. Because if they succeed, well, they don't have to worry about that future. That's a great future, we don't have to worry about, let's only think about futures that worry us."

Sarah Smith agreed. "In working with an environmental group, how do you even lay the groundwork for imagining a future in which we have solved environmental challenges, what does that even look like? It might be one of those unimaginable futures. But maybe not, because we actually tackled exactly this challenge recently, with the ARCUS foundation, an advocacy and political action group for LGBTQ rights. For a long time, the LGBTW movement had been focused primarily on marriage equality. And then all of a sudden, gay marriage is a legal thing! So then what is the future of the LGBTQ movement when it doesn't have that one singular thing to focus on anymore? I think that was an instance of an mission-based organization experiencing a total success in what the movement was trying to achieve, and then having to re-evaluate: Okay, what are the different people who have been fighting towards this, and what else do their values align on? What is our new hoped for future, since we just got to the future faster than we thought possible? And so they asked us specifically at that point in their organizational history to reach out to the youngest members of the LGBTQ movement and find out what they happens to the movement from there."

Dylan Hendricks suggested that another kind of future that is becoming increasingly relevant and may prove the toughest for both professional futurists and lay people to imagine in coming years: Futures with less human agency, where robots and algorithms are making choices and guiding decision and directing major components of our work, education, health care, and family lives.

Hendricks said, “Whenever a human agency gets lost in a forecast, it becomes very difficult to imagine how somebody is going to be able to process that and react to it. A lot of what we ask people to do is to immerse yourself in a scenario in the future and then think about what you would do in that situation, sort of looking around and thinking about your own actions in the future. But a lot of things we’re forecasting these days are around blockchain, data encryption, algorithms, things that are invisible to people that are moving at a thousand times the pace at how humans make decisions. So I think that’s often the struggle is when you leave the sort of realm of human agency altogether, then it’s a very difficult to make a scenario that feels useful to people. You have to kind of reframe it, and come back around to think about, “Okay, so what would be the different scenarios of how humans might interact with those systems, where *is* the room for human agency in this future? This is a space that futures thinking is hitting up against right now, where we need to stretch our own imagination.”



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