

# Strategic Foresight Studio: A First-Hand Account of an Experiential Futures Course

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## Abstract

*This article provides a first-hand account of the design, execution, and outcomes of a course in experiential futures, featuring perspectives from the instructor and all 6 students. These reflections are personal and conversational in tone, but are synthesized in the conclusion to draw out more general insights for teachers and practitioners. The*

*main lessons learned from the course revolve around the power of “telescoping” from the abstract realm of possibilities to the concreteness of constitutions and artifacts, and back, without losing contact with either. In this article we manifest multiple intellectual, personal, and institutional layers and the “real-life” dynamics involved in executing a graduate-level course in experiential futures. By drawing out some of the most important lessons and insights from the course, we hope readers will learn, incorporate, and improve upon the pedagogical processes described in their own current and future courses.*

**Keywords:** Experiential Futures, Education, Methods, 2x2, CLA, Alternative Futures, Manoa School, Governance Design, Pedagogy, Jim Dator, Design Futures, CCA.

## Plotting the Course

This article provides a first-hand account of the design, execution, and outcomes of a course in experiential futures. The course, SFMBA 670 Strategic Foresight Studio, was held in the fall of 2015 in the California College of the Arts’ (CCA) Strategic Foresight MBA (SFMBA) program. While targeted toward teachers and practitioners of foresight, anyone with an interest in futures pedagogy, including future-oriented designers, should find useful examples and reflections in the article.

This account features perspectives from the professor and all 6 students in the course—directly expressing their experiences. These reflections are personal and conversational in tone, but are synthesized in the conclusion to draw out more general insights for teachers and practitioners. The main insights and lessons learned from the course revolved around the power of “telescoping” from the abstract realms of principles and possibilities to the concreteness of constitutions and artifacts, and back, without losing contact with either.

Students spent a great deal of time thinking through the values they wanted to see in their political system designs, but also had to consider how it would look and feel to people living in those systems, and how they would represent these experiences. The Experiential Futures Ladder and Social Inventor’s Toolkit were effective scaffolds for building new structures of government and futures situations. They allowed the students to explore uncharted speculative territories, but anchored them in a rigorous process. Thus, when ambiguity or creative conflict arose, or when teams were in flux from stage to stage, there was a logical system that could be returned to in order to think carefully through first principles of foresight and experience design, but that didn’t trap the imagination in formulaic boxes.

In this article we manifest multiple intellectual, personal, and institutional layers and the “real-life” dynamics involved in executing a graduate-level course in experiential futures. By drawing out some of the most important lessons and insights from the course, we hope readers will learn, incorporate, and improve upon the pedagogical processes described in their own current and future courses.

## Situating the Course

Design-oriented futurists and future-oriented designers (including speculative and critical designers), while still defining their practice, are growing in numbers and gaining traction in business, education, and governments (Candy, 2010; Hines & Zinato, 2016). Artists are creating multi-sensory experiences that directly address future-oriented themes and issues (Dunagan, 2015). Conferences like Primer, Future Everything, and SxSW Interactive are bringing together futurists and designers to explore overlapping theories and tools (Primer, n.d.; FutureEverything, n.d.;

SxSWi, n.d.) The Institute for the Future, a non-profit foresight group, has long used design tools and artifacts from the future to deepen engagement with their forecasts (IFTF, n.d.).

Design firms Ideo, Frog, Idea Couture, and others are actively seeking out and incorporating futures concepts and tools into their design and design strategy work (Wilson, 2016; Alexander, 2016). Technology companies such as Intel, Microsoft, and Google are using speculative design to inform strategy and product development, but not without critique (Salmon, 2018). In major universities, programs and courses are emerging that explicitly combine approaches from futures and design. Stanford's Foresight and Innovation program within mediaX, UT Austin's Center for Integrated Design, and Carnegie Mellon's School of Design are just a few of the growing number of university and educational programs seeking to expand and deepen direct connections between foresight and design (Dawson, n.d.).

Why is this convergence happening? Design has in a sense, always been about the future, as the practice of design brings new "things" into the world that had not existed before. But the things that are subject to design are much broader than material objects. Constituting nations, crafting codes of conduct, and conjuring philosophical paradoxes are all products of a design approach to life. Design, like everything, lives in the present, even as it changes the course of our possible futures.

Futures studies, as a field, takes its object of study something that does not exist (as far as we can tell). "The Future" is always a construct from the present, built on the back of the past. Futurists have paid attention to design because it manifests early signals of things to come. Designers create new conditions for possibility and new adjacencies for future action.

Experiential futurists try to understand the connected adjacencies of the future by creating artificial, but tangible, immersions into these spaces. By concretizing the abstract (even though the future will most certainly be different than any imagined scenario), futurists can help connect participants with futures in deeper, more visceral, more emotionally resonant ways. Using design techniques, performance art, new media, and other emerging tools like VR, experiential futurists create spaces for exploration and edification, making new worlds thinkable and, often, makeable.

The California College of the Arts (CCA) has moved aggressively into the foresight and design strategy space. CCA was formed in 1907 and is currently located at two campuses in the Bay Area (Oakland and San Francisco, CA). The school "educates students to shape culture and society through the practice and critical study of art, architecture, design, and writing. The college prepares students for lifelong creative work by cultivating innovation, community engagement, and social and environmental responsibility" (CCA, n.d.).

In 2013, the CCA announced two new degree programs, an MBA in Public Policy Design and an MBA in Strategic Foresight. These programs were intended to build upon on the success of the innovative MBA in Design Strategy (DSMBA) program, which was launched in 2009.<sup>2</sup> As Nathan Shedroff, founder of the DSMBA program, stated at the launch of the SFMBA degree program: "forward-thinking organizations today are demanding creative leadership in the people they hire, and we are excited to respond to that demand with these new specialties," (quoted in CCA, 2013).

Into this disciplinary *mélange* of experimentation and hybridization entered the first cohort (C1) of SFMBA students. The Strategic Foresight Studio course was held in the 3rd of 4 semesters of the 2-year program. By the time the students entered the experiential futures course, they had one year of prior coursework, including more traditional business management courses, such as finance and strategic management. They had, by that time, also developed deep intellectual and personal relationships with each other.<sup>3</sup> They came from a diverse set of personal backgrounds and specialties, but all shared a pioneering spirit and a tolerance of uncertainty. They were trailblazers, and have remained so since their graduation in 2016.<sup>4</sup>

## Designing the Course

### Jake Dunagan, Professor:

With only one semester to teach these students, I included a wealth of futures content I felt was essential for their success as futurists. It was ambitious (or foolhardy) to give them the entire Manoa School of futures approach in one semester but I was determined to try. The Manoa School is defined by the alternative futures method (Jones, 1992). The method is built around 4 scenario archetypes—growth, collapse, discipline, and transformation. The approach also trains students to be social inventors, and requires students to engage in political system design (Dator, 2009). The Manoa School was the intellectual base of the course, and was complemented by other core futures methods, including the 2x2 scenario method (Ogilvy & Schwartz, 2004) (Figure 1) and Causal Layered Analysis (Inayatullah, 1998).

The structure of the course followed the Experiential Futures Ladder. The Ladder is a framework that Stuart Candy created, and he and I further elaborated for envisioning and manifesting tangible experiences of possible futures (Candy & Dunagan, 2017). Over many years, both as an internal guiding process and as a pedagogical tool, the Ladder has proven to be highly effective in helping deliver high quality, original futures work (Candy & Dunagan, 2016) (Figure 2).

The Experiential Futures Ladder has four main stages, moving from abstract to concrete: Setting, Scenario, Situation, and Stuff. The Setting is the top level descriptor or context, for example, the future of Phoenix, AZ. The scenario is a particular story about the future of the setting, so a version of a future Phoenix that is very unsustainable and water scarce. The Situation is the representative scale and real-time experience one is creating—for example, a presentation, demonstration, performance, or media interaction. The Stuff is the stuff: all of the artifacts, decorations, costumes, props, and other physical, digital, or aesthetics assets needed to execute the Situation (Candy & Dunagan, 2017).



Figure 1. JJ Hadley and Julia Rose West facilitate a discussion on the 2x2 method (Photo: Jake Dunagan)

The Manoa School provided the intellectual rigor of the course. The Experiential Futures Ladder provided the scaffolding for the design of the course. And finally, what we might call the values, or even the spirit or mood of the course was reflected in this declaration by Johns Hopkins political theorist William Connolly (2002, p. 216):

I say possibilities, not probabilities. A key role of theory is to probe the positive possibilities that might otherwise be overlooked and that, indeed, may be unrecognized because they have been generated by new [[unprecedented, changing]] circumstances of being. The next thing to do is to inspire the pursuit of those possibilities that are most desirable. Paying too much attention to ‘probabilities’ undercuts these efforts. For, most of the time, the recognized register of probabilities consists of things that are already part of the established practice. Those who pursued Christianity, secularism, feminism, gay rights, and so forth at the key moments of their emergence from below the register of established practice were not probabilists of the sort anointed by most social scientists. They were acting to bring something new into the world even more than they were watching to see what was already there. And each time a project succeeds, in a large or small way, it provides another piece of evidence, for those who will look, against the ontology of much of contemporary social science. *Possibilities are for visionaries and activists, probabilities are for spectators and consultants.* [emphasis mine]



Figure 2. An orientation to life in the 18<sup>th</sup> Territory on Mars, 2050. (Photo: Jake Dunagan)



## Running the Course

### Jake Dunagan, Professor

Using the Experiential Futures Ladder as the guide, we began with the overall Setting (subject matter) for the course — Human Settlement of Mars in 2050. In addition to Mars governance being part of Jim Dator's undergraduate political system design course, which I was intimately familiar with, the topic of Mars was becoming ever more culturally resonant. The popular movie *The Martian* debuted that fall, and there was seemingly daily news about the planet from NASA, Elon Musk, SpaceX, and others. As we half-joked in class, "if you don't have a space program, you're nobody."

For the Scenarios phase, I employed a structure I've been using for many years, inspired by an approach outlined by Andrew Curry and Wendy Schultz (2009) comparing diverse scenario generating techniques and the outputs and participant experiences each method generates. The assignment structure is to have students take the same topic and use different methodologies to address it. In this case, I had the 6 students divide into 3 groups of 2. For the subject of the settlement of Mars, one group would use the 2x2 matrix method, a second group would use the Manoa Alternative Futures method, and the final group would employ CLA.

This structure allows the students to have a deep engagement with one of the core scenario methods in futures studies, and learn by comparing their results to the other methods used in the class. In my experience over the past 6 years using this approach, has never failed to elicit quality futures analysis and powerful insights on the relative strengths and weaknesses of the individual methods. CLA is consistently better at pulling out hidden assumptions and amplifying deep psychological realities embedded in core metaphors. The 2x2 method brings clarity and focus to the exploration of possibilities, and the scenario logics are generative of well-defined narratives. The alternative futures method stretches participants to look at distinct zones of possibility that are highly differentiated, uncovering sometimes counterintuitive innovations and responses.

For the next stage of the course, the students were instructed to use the scenarios, and the emergent insights derived from feedback and in-class discussions, as the foundation for the creation of novel political systems for a human settlement of Mars. For this stage, I had the students use the Social Inventor's Toolkit developed with the Institute for the Future (IFTF, 2013). The Toolkit is a process for political system design derived from Jim Dator's UH-Manoa political system design courses, and presented as a step-by-step card deck (Dator, 1998). This process includes 1. investigating the major complaints and challenges to governance, 2. explicit declaration of one's foundational values, cosmology, political subject, and other assumptions 3. a theoretically functional system design that embodies the foundational assumptions, and 4. prototypes, documents, and other artifacts representing the design (IFTF, 2013). In using it with groups in various workshop and classroom settings, I've found it provides a solid structure for systematic thinking about governance design.

Team dynamics are always critical to effective learning and performance. In a group of 6, there are relatively few combinations. Both for diversity of team experience, and reflecting the nature of the learning process for each type of assignment, I changed the team structures at each stage. The Scenario stage were teams of 2. For the System Design assignment, I had each student create one individually. The last stage, which is discussed below, the students were divided into 2 groups of 3.

The Social Inventor's Toolkit was very useful for facilitating the design process, and even though the students were working on a highly accelerated time-frame, the designs were original and provocative. The political system designs created by the students would be critiqued by myself and 2 outside experts, with a single "winner" chosen from amongst the 6 designs. This "winning" design would provide the basis for the last major project in the course — the creation of a simulated experience that reflected life on Mars within that system.

The judging process for the designs revealed the difficulties and subjectivities of what makes a quality governance design. One judge is a highly respected designer-futurist, the other a NASA scientist working on the ethics of extraterrestrial colonization.

The judges were given the following 5 criteria to evaluate the governance designs:

1. Expression of core assumptions: did the designer make a clear explanation of their foundational assumptions about human nature, their cosmology, political subject, etc. There are no “right” answers in this sense, as the designers make those choices, but are they well-reasoned, well researched, and coherent. Score: 5(excellent) - 1(poor).
2. Does the political system design reflect and embody the core assumptions as expressed by the designer? Are the values, cosmology, theory of human nature, etc., clearly and consistently imbued in the design? Are there any glaring inconsistencies? 5(highly consistent) - 1(inconsistent/illogical)
3. Is the design plausibly functional? Would it actually work in your opinion? 5(highly functional) - 1(dysfunctional)
4. Is the design original? Are there new ideas, concepts, or approaches? 5(highly original) - 1(unoriginal)
5. Overall quality of the thinking, research, and design. 5(excellent) - 1(poor)

Looking at the judges’ scores, it is evident that evaluating political systems designs is, under these circumstances and criteria at least, a highly variable and subjective exercise. A comparison of the numeric scores only between the two judges shows in many cases how divergent the assessments were (max total 25). Remarkably, the highest score for Judge 1 was the lowest score for Judge 2, and vice versa.<sup>5</sup>

With the “winning” design selected, students were divided into two groups of 3 for the Situation stage. One group was tasked with creating an experience that represent a failure, or breakdown, of the political structure and resulting social dynamics on the Mars colony. The second group were to represent a successful, thriving system and society. Through this process, the students both “road-tested” and “threat modeled” the system and bring those insights to bear on the design of a futures experience.

In the final Residency of the course, each group had one hour to stage an experience of the future Mars colony, through the lens of a failing or thriving governing system. They had been shown many examples of experiential futures work, but were given few constraints in how they would imagine and execute their experience.

In one future, we visited a Mars colony only 10 years removed from total civil breakdown. We were led through a museum experience, guided by our Martian docents, where dozens of physical artifacts and visual media told the story of the herculean efforts over time to maintain order, and of the eventual revolt and independence of the colonists in 2050 (Figure 3).



Figure 3. Lety Murray leads JJ Hadley and Ryan Hogan on a trip to Mars in 2050 (Photo: Jake Dunagan)

In an alternative Mars, the orientation session we experienced helped us to on-board with our new fellow Martians. We were introduced to the political, social, and environmental norms and rules of the society in a very clinical, and somewhat foreboding room. Food, dirt, and rule sheets all came together under a red/orange atmosphere in a very evocative and compelling experience (Figure 4).





Figure 4. A recorded medical briefing from Mars, 2050 (Photo: Jake Dunagan)

## Reflecting on the Course: The Student Experience

Personal reflections from each student in the course are presented below, bringing their own backgrounds, expectations, and critiques to bear on their analysis of the class. These reflections provide first-person insight into the course, and show how idiosyncratic responses can be born of a common experience. These personal reflections come directly from all six students of the course, written 9-months after the end of the course, and three months after graduating from the SFMBA program.

### Alida Draudt

This course was pivotal in my SFMBA experience. Through it, the tension between visioning and practicality was ever-present. It emphasized the necessity of periodically stepping back from immersive work to understand the larger context and potential implications.

### Experiment first – then layer on the logic

A key success factor for this course was that it came during our 3rd semester (of 4). Given this timing, we had the ability to explore and experiment with several design strategy and foresight tools prior to engaging in this class. Previous exposure to the 2x2 matrix, alternative futures, and social innovation (experiential interventions) made the jam-packed semester within reach. Trying and failing to use several of these tools prior to understanding precisely how and why these methods worked was one of the largest learning experiences for me. The course had the effect of lending logic and process to my previously disorganized and exploratory work. There is both an art and a science to futures studies; learning in layers helped me better understand just how important both aspects are.

### The power of divisiveness

Designing a system of governance for a colony of 50,000 individuals (both human and AI) on Mars in 2050 was both the most challenging and left the biggest impact. By using the Social Innovator's Toolkit to think critically about my own values and beliefs regarding the nature of the human race, this exercise resulted in an extreme design – something I called the Mars Anarchy. Using elements of the human nomad lifestyle, how large or small naturally forming groups tend to

be, and my thoughts on natural human values and beliefs, my design was unusual – it was one of the most divisive designs of the class. Some judges loved it, others despised it. What this taught me, however, is that some of the most interesting discussions are born out of conversational conflict. I must admit, where divisiveness in my own work previously created personal discomfort, I now pointedly seek divisiveness out to stimulate rich, sometimes shocking, but undeniably fascinating debates.

### **(So much) More than professional dreaming**

While immensely fun, foresight work is based solidly in rigor, research, and detail. Engaging fictions can be written about any number of fantastical futures based loosely on the present. Fantastical futures, however, have difficulty translating to the real world. This course helped me develop a skill for creating visions of the future that are not only a blend of novel, intriguing, and ambitious, but also rooted in the nature of humans. It is a delicate balance, but a skill I continue to use today across a broad range of topics.

### **JJ Hadley**

The course was incredibly rich. It challenged you “horizontally,” stretching the limits of your perception, as well as “vertically,” deepening your rigor and ability to get-smart-fast on a given subject. In retrospect, what stands out for me is the course’s focus on the unique value and growing need for experiential futures work – why we must “evidence futures” so clients can experience them, not just think and reason about them.

Something the course did particularly well was teach students to balance human factors, storytelling, and immersive experience design required to present evocative possible futures, with the research, academic rigor, and business applicability needed to deliver a quality futures product. This output was very much rooted in Dunagan and Candy’s collaboration and modeling of the Experiential Futures Ladder.

The value of this approach and type of futures work is in its potential to expand the client’s thinking in new or even radically divergent directions. Even more valuable, is its capacity to install a new context around a possible “tomorrow” that is rich, plausible, and applicable enough to compete with entrenched perceptions, assumptions, and certainties of “today.”

By comparison, futures work that simply “brings people along” with the intent of having them understand the characteristics of a possible future is often diluted down to an abstract or academic exercise. More often than not, the results and applicability of this kind of futures work is fleeting and of questionable value (from the client’s perspective) – even when aligned with objectives, innovation, and strategy.

However, futures work that seeks to transport people experientially into a living breathing set of circumstances with the intent of “de-familiarizing the present” to overcome “cognitive bias” has distinct transformational potential and lasting effects. This is especially true when aligned with strategic objectives, innovation, and decision-making processes.

### **Julia Rose West**

Left to our own devices we would have grouped by gender – three women and three men. One year into our education, we knew the strengths and weaknesses of our teammates. The assignments and team requirements promptly shook up those patterns before they started.

### **You are not alone**

For the first phase I was paired with Ryan Hogan. Ryan, a strong writer, is thoughtful in his point of view and analysis. Ryan and I selected the Causal Layered Analysis (CLA) as a framework

for scenario development. The discovery focused on why people would want or need to go to Mars. Research began by identifying signals, trends, and emerging issues such as: the privatization of space travel, a growing interest and a quest for enlightenment and widespread global connection to name a few.

We plotted our research onto the CLA framework and these four scenarios for Mars colonization unfolded:

- Scientific Exploration – The Mars colony is man’s modern day West Indies.
- Religious Manifesto – Mars is more tolerant of our lifestyle and religious point-of-views.
- A New Awakening - The last generation had Burning Man; this generation has the Mars expedition.
- Escape Pod – A select few were chosen to leave earth in order to maintain human civilization.

At first the CLA technique appeared daunting and the framework somewhat nuanced and difficult. However, after using it to this extent I have come to realize that it is a natural framework for effectively shaping possible futures.

### **You are alone**

For the second phase we worked individually. We were tasked with designing an innovative governance system for Mars, 2050. The Social Inventor’s Toolkit framework provided both scope and a step-by-step guide for systems consideration. Without this framework, deliberate and intelligible designs would have been impossible to devise in the short time allocated.

### **A team endeavor**

For the final phase we were divided into two teams. I was paired with Ryan Hogan and JJ Hadley to envision a thriving and successful system. My governance design, based on values, involved collaboration with children – in this system we designed the future with children and not for children. When I designed the system I really went to the heart of my values. The exercise codified that values are the heart of a lot of decisions especially in creating governance systems. The other team chose to break the system and identified child labor to collapse the world.

We were asked to transform a hypothetical Mars future into real-world experiences. Ryan, JJ, and I attempted to appeal to all human senses. We covered all light sources in the room with red velum to cast a red glow over the room. We wore lab coats and provided lab coats and name tags to each spectator. We displayed examples of failed past experiments on pedestals. We recorded testimonials and good luck messages from previous lab participants; we offered really bad mars food, chalky dry bars and cloudy water for drinking. Using red sand, we designed an interactive ritual for new lab participants. Finally, JJ arranged for a musician to play customized music, helping to further transform the environment and drown out external noise and distraction.

We assigned in-world roles for spectators – when they entered the space they were asked to adopt the personas of newly appointed Mars innovators. By having them actively participate in our worlds, instead of merely watching from a distance, it was easier to convince them of the plausibility of the scenario. Experiential futures put the spectators and participants into the imagination of those trying to paint a picture of a future. The future is hard to envision and even harder to believe. Experiential futures allow us to time travel and temporarily be part of that distant possible reality.

## Ryan Hogan

This course offered critical reflections at each phase of the process that were key to our learning. The experiential futures forced us to evaluate and consider all opportunities and weaknesses of Mars colonization scenarios. As a studio course, it diverged from the traditional hierarchy of knowledge by taking a learn-by-doing approach. Experiential futures created an intimacy and knowledge of governance design that couldn't have been achieved otherwise.

Ultimately, the future is an abstraction. We are unable to know how it will exactly play out. By virtue of this, when bringing a future scenario to an audience, this has to be done through touch points that the viewer can relate to from the present. Through this intimate exposure to different methods of futures studies, I have found some parallels to my art making practice which preceded my time in CCA's foresight program. For my art practice, I attempted to make non-representational "artifacts" but without careful consideration, these forms could easily become too "other" and become rendered completely inaccessible to the viewer. Without certain grounding, future scenarios can also fall prey to the same outcome. Inaccessible futures are not very effective for challenging or changing the views of the intended audience.

With my natural gravitation towards ambiguity, I selected to create scenarios using the causal layered analysis method. When evangelizing the futures practice to clients, I can see the difficulties that would accompany pitching this method; however, it is the method which resonates with me the most. CLA may not be initially viewed as the most "practical" for profit-oriented clients looking to grow or shape businesses, but this method arrives at rich insights for how humans operate and interact with one another. This is something very valuable to any client, but especially so for the assigned topic of Mars colonization and the ensuing governance project. The systematic exploration challenged the core assumptions about why individuals would even choose to go to Mars, and how those motivations and values would influence their behaviors after they have colonized.

Through my experience at CCA, much of the work was done in concert as teams. It did seem strange at first that governance design was one of the few things that was not done by committee. Doing this as individuals highlighted the difficulties of changing complex systems. It also highlighted that some of these established systems actually do have merit and explain why they have some degree of longevity. With that being said, such systems are still in dire need of innovation. This class tempered my overly techno-optimist views that advancing technology would miraculously ameliorate our problems. The future is built by several disparate, sometimes conflicting voices. Arriving at a preferred outcome will require rigorous, intentional, human-focused design.

## Gregory Stock

### Failing, moving forward to possibilities

As a foresight practitioner, teasing out our own biases, experiences, and learning to trust our developing aesthetic is vital. Trying to juggle these pieces can be a problematic at times. Learning to claim the mistakes and moving past them was integral to the Foresight Studio. The class allowed us to exercise our intellectual capacities (not often found in traditional MBA programs). The entire semester was an opportunity to conduct deep dives into theories and research.

We had a big question ahead of us: How might we imagine governance on Mars? As I researched governance and utilized the frameworks in our toolkit, I found myself attracted to theories of the past to inform the future. Personally, I found this large governance challenge led me to central questions of human values. How do we imagine an equitable society in the future? What are the true possibilities of colonizing space? Theories by economist Elinor Ostrom (1990) and theorist Judith Butler (2013) were foundational in my exploration of this "future commons" in Mars. As a designer, I was able to truly flex my foresight muscles and experiment with theories that

existed in our present day.

After each project in the class, we built towards creating a new experience. Working in teams in developing a successful experience had its own challenges. What was the ultimate goal of our governance experience? We had to decide on how to present brand new ways of thinking, transporting participants to Mars and exploring scenarios never before heard. I realized the more practice at communicating new ideas I would get, the better I would be at bringing my audience along into new visions of the future (Figure 5).

While reflecting on the studio, it was one of the rare moments that a professor challenged us to put existing systems behind us and try to innovate new ones. At times, we failed and we were wrong. These constraints and learnings pushed us to new ways of activating foresight techniques. Ultimately, we expanded our paradigms of what might be possible for our clients (and ourselves) in the near future.



*Figure 5. Gregory Stock returns to Earth, 2015 (Photo: Jake Dunagan)*

## **Lety Murray**

Trained as an architect and currently discontent with where I found myself heading in the profession, only designing to solve immediate problems, not looking beyond the scope or other issues that could impact our work in the future, I found myself attracted to the SFMBA program at CCA. A program that could help me not just visualize but also vocalize societal issues in need of acknowledgment, give a voice to those often overseen and to better design a future for all.



The Strategic Foresight course in our third semester allowed me to revisit the systemic thinking from my previous training and combine it with the foresight tools we had been exposed to in the semester prior, to imagine what it would take to successfully inhabit Mars by 2050.

### Exposure to tools does not equal mastering

To this day, we learn more each and every time we use one of the tools/methods we acquired throughout the degree. During the first phase of the course, we generated scenarios using alternative foresight methodologies, my partner Gregory Stock and I were tasked with using the 2x2 Matrix method. We began by asking ourselves who would be a Martian in 2050 and what through our research would be the two most significant uncertainties that would shape the possible futures. Our two uncertainties, *Political Ideologies*-ranging from the belief in Anarchy to a Reign of Terror, and *Societal Values*-that ranged from Uniformity to valuing Diversity, formed the two axes for our 2x2. This method allowed us to create the following four clearly distinct scenarios:

- **Design for Servitude** “The Human Race proves to be heinous.”
- **Utopian Mars** “Some are more equal than others.”
- **The Red Military** “Military coup on Mars; Communications to Earth cut, leads to confusion”
- **The Melting Pot** “Moon as breeding ground proves successful, Martian animal species takes hold.”

Each one unique in its own way, with its own advantages and disadvantages. However, coming off the previous semester’s high of discovering *Science Fiction Prototyping*, we found ourselves pushing even further into the future, perhaps beyond 2050 and getting caught up in the details instead of focusing on the implications of what was at stake and who it would affect. We know this now, but it was only possible having gone through this experience and receiving the feedback from Jake and our peers.

### Pushing Boundaries through Frameworks

Without the use of the Social Inventor’s Toolkit, I’m not sure we would have imagined the six distinct governance systems in the short timeframe the course allowed for. At this point in our program, we learned to manage the difficulties of working in teams and actually looked forward to being a team of one, so the thought of designing a governance system on my own was just overwhelming. The Toolkit provided a framework that allowed me to question my values and beliefs, to question current governance system and imagine multiple possibilities for future systems in a clear and cohesive matter while maintaining my sanity.

### Experiencing the Future

By far, hands-down my favorite part of the course was in the final stage. Not only were we back in teams, but this time we were able to put together a physical experience, that not unlike Architecture would inspire you and transport you to another state of mind, to another world. Through the creation of a future Martian museum exhibition set in 2060, we retold the story of the Martian Revolt of 2050. A carefully curated tour led visitors through the collection of artifacts, images and Revolt paraphernalia. Afterwards guests were invited to partake in a conversation as the last surviving members of the Martian Collective, brought together to discuss the error in their ways, to rectify the revolt, and to explore what the future may hold.

This course solidified my decision in having chosen a graduate degree that focused on Strategic Foresight. It allowed me to come around full circle and continue using design to shape the world,

yet this time through a much broader lens with a new set of tools to explore alternative futures, all while embracing uncertainty.

## Conclusions: Learning from the Course

The institutional and design context, as well as the personal narratives, were intended to help readers understand the multiple dimensions of learning that took place in the course. The depth of engagement and quality of work is due to the remarkable commitment of the students, and the willingness for all to take an attitude of full-bodied experimentation. Speed can make knowledge a blur, but it can also make manifest the essential nature of systems, as in behaviors and interactions seen through time-lapse photography.

There were several core lessons taken from the course—lessons that should be applicable to foresight instructors and practitioners, as well as future-oriented designers and design strategists. First, mind matters. Students were asked to carefully examine their own assumptions about the future and what kind of future mind they have and want. This internal assessment helps one understand the futures mind of others, and find capacities and blind-spots that commonly exist. JJ Hadley recalled the concept of “defamiliarizing the present,” while Ali Draudt acknowledged and then sought out the benefits of divisiveness to provoke new ideas and directions. To break from habits of thought about governance, and following the insight that Jim Dator had long ago, we put our inhabitants on Mars, and offered more of a “blank slate” with which to start the political system designs.

Second, by covering multiple futures methods (2x2, CLA, Alternative Futures) around a common topic (Mars 2050), students were able to practice the methods, and importantly, to see the relative strength and weaknesses in each. We had extensive discussions about how each method opened one up to differing perspectives, and changed the language and mindset of how a user would approach a topic. This included the multiple team formations that generated insights into how to express and navigate one’s own values and those of others into a coherent whole, as Julia West observed.

Third, and finally, one of the most important insights from experiential futures was confirmed: that to make futures thinkable, you must first make it feel-able. The physical metaphors used by the students, e.g. “learning-by-doing” (Hogan), “flex foresight muscles” (Stock), “vocalize” (Murray), signal the importance of spatiality and embodiment to making futures matter.

The advantages and disadvantages, the benefits and the loopholes, of the “winning” governing system were felt on and in the bodies of the students in the experiences, and gave a deeper level of understanding to those pluses and minuses than a written or strictly oral critique would have done. The experience is not the “work” of experiential futures: mind change and ultimately system change is. But mind change is connected to embodied experiences of situations and the capacity for mental simulation of future scenarios. Experiential futures is a key tool for doing better, deeper, more impactful futures work. The students left the course better prepared to use these tools in their lives and careers.

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## Notes

1. The name of the Public Policy Design program was later changed to MBA in Civic Innovation. The program was “launched” in February 2015, but no cohort was ever created. The SFMBA was on very unstable ground as well. This “existential threat” loomed over the educational experience of the students in the course.
2. The DSMBA program has offered a second-year elective in Strategic Foresight since its inception. The course was first co-taught by Jay Ogilvy, a founding member of the Global Business Network and originator of the 2x2 scenario matrix method, and Stuart Candy, an experiential futurist currently on the faculty in the School of Design at CMU. The second iteration of the course was taught by Stuart Candy and Jake Dunagan. For more information and history of the course, see Candy (2010) *Strategic Foresight*, in *Design Strategy in Action*, Shedroff, N., editor. Retrieved from [https://www.researchgate.net/publication/305724413\\_Strategic\\_Foresight/citations](https://www.researchgate.net/publication/305724413_Strategic_Foresight/citations)
3. The SFMBA, like the DSMBA, is designed in a low-residency model, wherein students (and professors) who are working full-time, or are not local to San Francisco, can commute in once a month. This works well for an intense and content-rich experience during each residency, but also requires attention to the month-long gaps between Residencies.
4. Ultimately, the SFMBA only lasted two years as a stand-alone program, closing after the second cohort graduated in 2017. However, foresight is not dead at CCA. New program chair Andy Dong has made strategic foresight a requirement for all students in their first semester, and remains an integral part of the DSMBA experience.
5. Raw scores for the governance design assignments. Judges used the same criteria, yet came back with significantly differing opinions. (Table 1)

Table 1. *Raw scores for the governance design assignments*

	Judge 1 Scores	Judge 2 Scores
Student 1	10	15
<b>Student 2</b>	<b>23</b>	<b>14</b>
Student 3	17	15
Student 4	16	16
<b>Student 5</b>	<b>5</b>	<b>19</b>
Student 6	22	16

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