

CULTURE, ARTS AND SOCIETY

THE SHOCK OF THE NEW:
ARTS, TECHNOLOGY, AND
MAKING SENSE OF THE FUTURE

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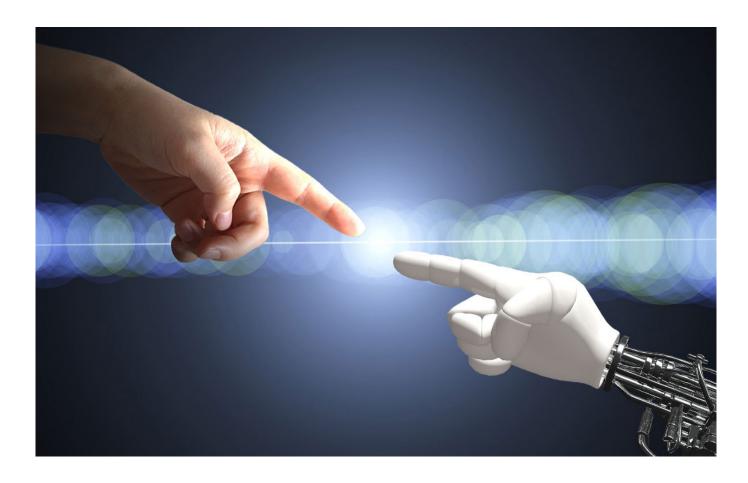
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SALZBURG GLOBAL SEMINAR

CULTURE, ARTS

THE SHOCK OF THE NEW:

ARTS, TECHNOLOGY, AND MAKING SENSE OF THE FUTURE



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Session 593

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SUMMARY

In times characterized by complexity, disruption and an unprecedented speed of change, uncertainty about the future is staring us in the face. While some relish the unknown, believing in the "art of the possible," others struggle to embrace the future with confidence. Societal, economic and cultural divides present wildly different ideas about the future our collective humanity faces. Making sense of what lies ahead will become ever more important as global issues, such as climate change, and the ethics of technological advancements, such as artificial intelligence, transform daily life.

Throughout history, artists have deciphered prospective futures in their work; from Neolithic shrines and cave paintings, to modern film interpretations of utopian and dystopian futures. Cultural practitioners – just like inventors and scientists – also push the boundaries of the human imagination, helping us move beyond the familiar, and become curious about new and emergent technology. But can these creative outputs be used effectively to help minimize the shock of the new, and allow for a positive unified vision of our shared future?

The goal of the Salzburg Global Seminar program, *The Shock of the New: Arts, Technology and Making Sense of the Future*, was to identify ways in which artists, technologists, scientists and futurists could harness the transformative power of the arts to make sense of and advance our understanding of the future (or futures). Recognizing that at the intersection of arts and technology is the ability to challenge the constraints of the present, the Salzburg Global Fellows – as participants of Salzburg Global programs are known – aimed to discover how artists and cultural practitioners can expand their role in advancing policymaking for desirable futures.

Salzburg Global Seminar was founded on the intrinsic belief that we must look to the future in order to challenge the building blocks of our society. This program, part of the long-running multi-year series, *Culture, Arts and Society*, builds on Salzburg Global's mission to challenge present and future leaders to shape a better world, while advancing its commitment to demonstrate the transformative power of culture, creativity and the arts by challenging participants to reimagine the possible.

SUMMARY

PROGRAM PARTICIPANTS AND KEY THEMES

For the program *The Shock of the New: Arts, Technology and Making Sense of the Future* Salzburg Global Seminar convened a group of 50 future thinkers from 25 countries to re-imagine the nexus between the arts and technology, questioning what it means to be human in the Anthropocene and beyond. Participants included artists, futurists, cultural theorists and activists, museum professionals, technologists, educators and policymakers.

The unique cohort of Fellows who gathered in Salzburg engaged in lively discussion and debate following the highly interactive plenary sessions, which included panel discussions centered on artists at the cutting edge of human development, the role of festivals and cultural institutions as catalysts for change, and connecting creative foresight to policymaking. Perspectives gained during these sessions were considered further as artists and cultural practitioners participated in open workshops, exploring storytelling as a shared language for the future, examining the role of festivals and cultural institutions as interpreters of the future, and creating arts-based tools for more sustainable and just futures

Participants convened in small working groups to answer key questions and examine new approaches for collaboration across the following themes:

- **Reimagining Futures:** What do we mean by "future" and what is the value in imagining diverse futures?
- **Arts and Creative Practice:** How do we understand the artist's role and power in developing futures?
- Being Human in the Anthropocene: As we evolve and merge with technology, are
 we becoming more aware and connected, or more controlled and isolated; are we
 devolving?
- Cultural Institutions Influencing the Future: What priorities must cultural institutions have, given that geographical and linguistic barriers affect how we perceive the world?
- **Global Lab for Creative Systems Change:** What could a global or local effort for creative future thinking or creative systems change look like?
- **Policymaking Spheres:** How can we make sense of the future and pragmatically influence decision making, while leveraging shock to create agency for change?
- Tools and Tactics Moving from Thought to Action: How do we empower and implement change ethically?

Presentations from ground-breaking transdisciplinary artists allowed Fellows to explore relationships between arts, technology and scientific research. Though some of the artists' works focused on how technological advancements are merging with human evolution, others used scientific measures to question where human life begins and environment ends. Fellows agreed transdisciplinary arts play a vital role in pushing technology and scientific research forward; yet many urged bioartists to proceed with caution when exploring the manipulation of human life. Regardless of the medium, it became evident that each artist pushes us to explore what it means to be human—a question Fellows argued will become increasingly important as we develop a shared language for the future.

"Artists and creative practitioners truly push the boundaries of the human imagination. By mobilizing intellectual and artistic resources from around the world, Salzburg Global provided a space for groundbreaking conversations about our future, and helped discern innovative pathways to more desirable futures."

Susanna Seidl-Fox Program Director, Salzburg Global Seminar



Language, and the idea of creating "future literate" individuals, emerged as a core theme of the program, as Fellows worked to understand how to bridge future divides in their respective fields. They overwhelmingly agreed it is imperative to create a shared language for the future, irrespective of artistic medium, field of work, cultural divide, or mother tongue. This recommendation proved ever-more important when Fellows from non-Western regions, including Africa and Asia, discussed the inclusivity of shared futures; noting that we imagine different futures based on the resources we have available. A main recommendation emerging from serval focus groups suggested that storytelling be better harnessed as a tool for spreading future literacy, creating equal and culturally relevant understanding of key issues facing humanity, as it has done for hundreds of years.

Closely related to the discussion of shared languages was the debate surrounding the role of cultural institutions and festivals as translators of the future and catalysts for change. Panelists called on these institutions to bridge silos, encourage cross-collaboration, and catalyze a global effort toward accomplishing the United Nations Sustainable Development Goals (SDGs) at a local level, acknowledging that "there is likely no such thing a global problem; but lots of small, super local problems."

The five days at Schloss Leopoldskron evoked a true sense of community between Fellows; a dynamic that they declared vital to making sense of the future. Fellows overwhelmingly agreed arts and culture should be promoted as a mechanism for future literacy and proposed a call to action to continue their collaborations as a group, focusing on micro-narratives in their local communities, concluding "global problems are experienced individually and locally." By bridging divides between culture, economy, language, and what each individual believes to be the most pressing issues facing our collective humanity, perhaps the "Shock of the New" will not be so shocking after all.

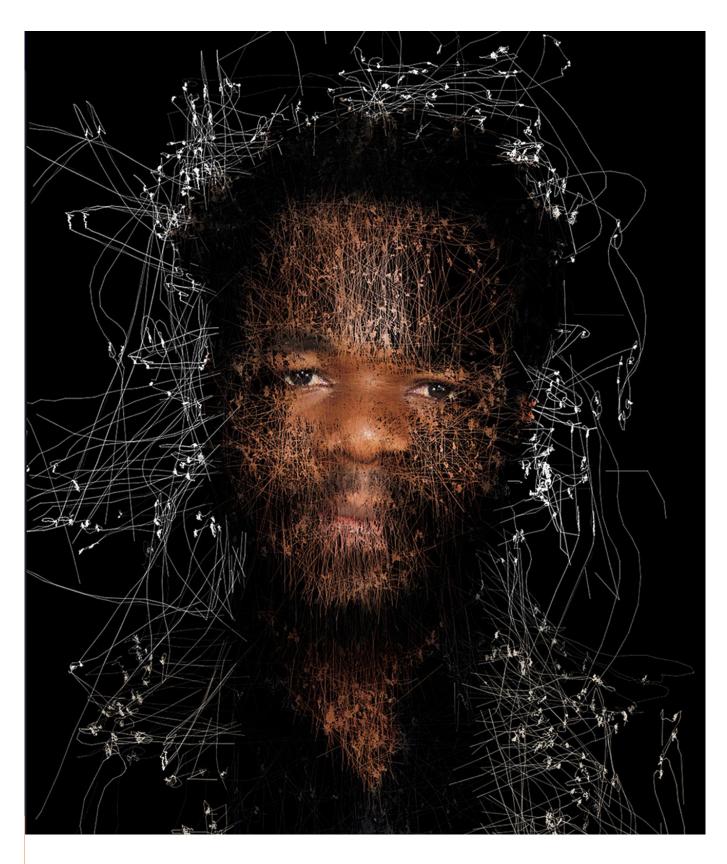
"This program provided a frame to think about futures literacy, how it can be experienced at multiple scales and be fostered through art and cultural strategies."

Kiley Arroyo Program Facilitator; Executive Director, Cultural Strategies Council (CSC)



Fellows of The Shock of the New: Arts, Technology and Making Sense of the Future gather in Parker Hall





Artist Mariano Sardon's work, which combines art with neuroscience, also encourages us to think about invisible aspects of human life by exploring at the relationship between the mind and the eyes. His work "The Wall of Gazes" (2011) used an infrared camera to track the gazes of 150 people viewing a portrait image. A high definition video, generated by combining all of the recorded gazes, proves that our eyes do not visualize in an entire image as our brains may lead us to believe; some parts remain unseen while the gaze is focused elsewhere.

PROGRAM INTRODUCTION

Clare Shine Vice President and Chief Program Officer, Salzburg Global Seminar

Susanna Seidl-Fox Program Director – Culture and the Arts, Salzburg Global Seminar

The notion of bridging divides is embedded within the values of Salzburg Global Seminar, but this sentiment has particular resonance as we move forward into times of greater uncertainty. The fate of our planet is at stake; from climate change and growing inequality, to disruptive discoveries in science and technology, participants of this groundbreaking program are each looking for new types of fault lines or risks, as well as incredible opportunities within our societies as we push forward into the Anthropocene.

"How are we going to find the confidence to think about building and exploiting the incredible potentials we have now?" Salzburg Global Seminar Vice President and Chief Program Officer **Clare Shine** asked participants in her opening remarks. The arts, said Shine, encompass a "transformative power as critical building blocks for empathetic humanity, and for helping those entrusted with more formal positions of power and influence to have an understanding of the richness in how their own authorities and mandates can be exercised." The imaginative power of collaboration should be harnessed as we move forward into the future, concluded Shine, setting the tone for a program aimed at discovering how artists, cultural practitioners, futurists and policymakers alike can contribute to desdairable futures.

What will our planet look like in 2050 or 2100? Who or what will control our lives? What will it mean to be human? These questions are pervasive everywhere we look, noted Salzburg Global Program Director for Culture and the Arts, **Susanna Seidl-Fox**. While participants gathered at Schloss Leopoldskron, Ryan Coogler's *Black Panther* garnered over a billion US dollars at the box office, its plot dedicated to envisioning more diverse futures. At the same time, Wes Anderson's animated film *Isle of Dogs* pondered a more dystopian future following a dog flu pandemic. Transdisciplinary bioart allows us to envision the future of the human body merged with technology, whereas art created by artificial intelligence challenges us to redefine artistic value.

"All of this reminds us that artists and creative practitioners push the boundaries of human imagination," said Seidl-Fox, explaining that the goal of this Salzburg Global Seminar program was to question how cultural practitioners can play a more central role in our interdependent world, and help us imagine, anticipate and produce the futures we want.

This program, she explained, built on the work Salzburg Global has done on the transformative power of the arts, while pushing Salzburg Global in a radically forward-looking direction. By bringing together technologists, scientists, futurists, artists and others deeply invested in breakthrough discoveries and the fate of our planet, Salzburg Global hopes to connect the work from this program to other Salzburg Global programs in the areas of sustainability, education, and achieving the Sustainable Development Goals .

In closing, Seidl-Fox declared that the arts and culture sector needs to move from the periphery, to the center of these deliberations, encouraging cross-sectoral collaboration among participants and the foundation of a collaborative global lab for creative future thinking.

"[The arts encompass a] transformative power as critical building blocks for empathetic humanity, and for helping those entrusted with more formal positions of power and influence to have an understanding of the richness in how their own authorities and mandates can be exercised."

Clare Shine Vice President and Chief Program Officer, Salzburg Global Seminar



FUTURE LITERACY

PANEL

SETTING THE SCENE – OPENING CONVERSATION

Amy Karle	Transmedia Artist and Designer, San Francisco, CA, USA
Mark Stevenson	Author; Advisor to Virgin Earth Challenge; Futurist in Residence, National Theatre of Scotland, Glasgow, UK
MODERATOR:	
Clare Shine	Vice President and Chief Program Officer, Salzburg Global Seminar

"We are on the cusp of a new renaissance," declared transmedia artist Amy Karle in the opening conversation. "As we cascade into the fourth industrial revolution, we have the tools and technology to take on an identity that is aspirational—we can become anyone we want to be, individually, and as a society."

Amy Karle's work questions what it means to be human in a world where technological advancements allow us to unlock boundless human potential. Positioning her work as artifacts of a speculative future, where biological, physical and digital systems merge, Karle uses art and technology as a mirror to discover who we are and what we can become.

Karle presented a piece titled "Regenerative Reliquary" (2016), a bioprinted scaffold in the shape of a human hand, 3D-printed in a biodegradable PEGDA-hydrogel that disintegrates over time. The sculpture was installed in a bio-reactor, with the intention that human stem cells seeded onto the design would eventually grow into tissue and mineralize into bone along the scaffold. This focus on "regenerative art" demonstrates how we could grow human replacement parts from cells. "We can use the building blocks of life to generate things we have never seen before," she explained.

Though Karle's work questions how we can enhance the human spirit using technology, in turn, it asks whether we risk pushing the boundaries too far. If we can bio-print replacement parts, do we start using them for life-extension? And, if we can develop parts that allow us to live beyond a human lifespan, what will it then mean to be human? "Human engineering can happen a lot faster than evolution; it is of the upmost importance that we continue to reflect on and have conscious awareness of what we are doing," said Karle.

Author and futurist in residence at the National Theatre of Scotland Mark Stevenson

Clare Shine moderates the opening conversation between artist Amy Karle and futurist Mark Stevenson



takes a more substantive approach to the future, teaching artists, investors, academics, and NGOs to become "future literate" by helping them to wake up to the challenges they face globally and within their prospective fields. Though he believes the arts are fundamental to the work he does, Stevenson admitted he is "consistently underwhelmed" by the arts' literacy about the future. "An artist or arts organization that isn't future-literate is irrelevant at best, and a weapon in defense of the status quo at worst," Stevenson said. His bestselling books *An Optimist's Tour of the Future* and *We Do Things Differently* paint a picture of optimistic futures, profiling individuals around the world developing sustainable solutions to challenges such as climate change. The belief that everything is fixable is imperative to future literacy, he said, noting his favorite "futurist" was Dr. Martin Luther King, Jr., thanks to his famed ability to describe a better, more aspirational future. "You can't make a better future until you can imagine it," said Stevenson.

Despite Stevenson's optimistic take, the conversation with moderator Clare Shine revealed there is still much work to be done when spreading future literacy to the masses. The average person is often excluded from discussions about our collective futures he noted, stating, "You have to paint a picture of what [people] can transition to. Lots of futurism misses this—it talks about this glorious future Elon Musk describes in Ted Talks, but forgets about the truck driver, or the teaching assistant." Stevenson urged participants to envision inclusive futures that involve every member of a society, thus developing a more empathetic humanity, but cautioned, "in terms of moving quickly, forget it. Cultural change takes a long time."

Using art as a tool for learning can help bring about change, as demonstrated by Karle's garment and fashion work, which appeals to an audience that is not necessarily enticed by technology. "They want to see the fashion, but then they read the backstory about the technology and say, 'Wow, I've never heard of 3D-printing," she explained, allowing so-called "ordinary people" to see and understand new technologies.



"An artist or arts organization that isn't future-literate is irrelevant at best, and a weapon in defense of the status quo at worst."

Mark Stevenson

GROUP WORK

WHICH FUTURE(S)? WHOSE FUTURE(S)?

The artists, cultural practitioners, educators, and futurists who gathered for this working group aimed to uncover what we truly mean when we talk about the future – or futures.

The **Defining Future(s)** focus group collectively imagined a child's life: for every year the child grew, a participant awarded it a new milestone or life lesson. One after the other, participants imagined wildly different aspirations for the child; from traditional childhood values such as saying its first word or learning to ride a bike, to more avantgarde ideas, like discovering it was a cyborg.

The exercise highlighted how the future is understood differently by every individual, influenced by their culture, personal beliefs, religion, language, and circumstance. Similarly, the group revealed research that showed the idea of time and "the future" are not understood equally around the world; for example, some South American tribes believe that time accumulates every day, whereas Western thinking assumes time is running out. Similarly, a number of languages, including Chinese and Finnish, lack a future tense.

The group concluded that our visions of the future unveil biases we hold in the present. "For us to create futures that are beyond us, we need to remove the ego from our lives," they said in closing.

INTERVIEW

AMY KARLE: "IT'S REALLY IMPORTANT THAT WE CHOOSE AND FOCUS ON THE FUTURE WE WANT TO ACHIEVE"

Transmedia artist and designer discusses the importance of cross-sectoral collaboration and exploring what it means to be human

Amy Karle's art integrates new technologies in an effort to help the viewer explore what it means to be human and what impact technology has on our humanity



From a very young age, Amy Karle was taught to envision a future full of hope, and as a transdisciplinary artist, she applies this optimism to her work.

Karle is an international award-winning bioartist and designer who examines how technology can be used to support and enhance humanity. Her artwork and designs combine digital, physical and biological systems to explore what it means to be human and how technology can be used to empower humanity.

She understands the importance of transdisciplinary exchange, as many of her projects cannot be created using art and design alone. While producing "Regenerative Reliquary" – a bioprinted scaffold in the shape of a human hand 3-D printed in a biodegradable PEGDA-hydrogel that disintegrates over time – cross-disciplinary collaboration was crucial.

"I definitely had to collaborate with scientists and doctors and technologists to be able to learn how to build these scaffolds, to learn how stem cells will be triggered to turn into different kinds of bone cells... in a way that will biodegrade."

Not only did she have to create partnerships across disciplines, but she also had to collaborate with other life forms. "It was really important that I collaborated with the actual stem cells and collaborated with this intelligence that creates life ...I see a lot of disciplines trying to harness nature and trying to harness the natural and control it. I'm more interested in witnessing it and letting it teach me how it grows, how it creates."

Throughout her career, Karle has used art and design to explore what it means to be human. It's a "very interesting" time in history, according to Karle, a point in time many still consider technology to be outside of ourselves. "However," Karle says, "just in communicating with these devices and working with these devices, we have actually now reshaped out brains to think in different ways."

Although many people see these changes as negative, Karle recognizes the benefits of developing new technologies. By consciously thinking about how we integrate technology into our lives, Karle believes we can explore how it can help empower us.

Despite her optimism, Karle understands this issue is not always black-and-white.

"Human-induced evolution can occur much quicker than natural evolution and we can't undo things like this [genetic editing] so this is where it takes the most conscious awareness."

Images of the future can often appear dark or grim. There appears to be an underlying assumption parts of society will be unable to keep up with advancements in technology and will pay the price. Karle strikes a different note. She says, "When we look at combining artificial intelligence and genetic editing, we can easily see the potential doomsday scenarios, but we can also see enlightened futures as well."

Karle identifies recognition and emotions as ways to explore what it means to be human. The vision behind Regenerative Reliquary was to create something "that was uniquely and immediately recognizable as human." She chose a human hand design because of all of human bones, hands are one of the most identifiable.

She continues, "I feel my contribution to humanity as an artist is that I have a platform to first share these common emotions — common feelings — of what it means to be human. Beyond our skin tone or economic status, what country we are from, or what language we speak, there are common truths about being human that we all share, that we all experience, like death and suffering, and most of us also have an opportunity — even if it's just for one small moment — to experience this joy and the awe and mystery of life as well."

Karle's inspiration derives from personal experiences. "What inspires me is human needs - some of them are my own needs and internal motivations that I can't always identify." She states, "They are what made me who I am from the moment that I was born – the way I tap into the world, the ways that I experience the world and I'm trying to share my exploration and reflections with others."

When asked about her time at Salzburg Global, Karle speaks passionately about the ideas she's heard, including the notion that the artist is not a PR machine for science. She says, "This is really hard for me because in a lot of ways, I am a scientific and a medical illustrator, and that speaks to me. But being a PR machine reduces the importance of the artistic and scientific stories. But it's a tension because we need the PR in order to keep producing the work, to get the funding for the work research, whether that be an art or science."

Karle has maintained an optimistic view of the future throughout her life. "From my very beginnings, I was painted a future of hope. I was born with a life-threatening birth defect, and most of the other cases before me had passed away from this, but my parents instilled and carried this vision of a future full of hope for me.

"I can see all these different kinds of futures that are available to us, and it's really important that we choose and focus on the future that we want to achieve. We cannot always achieve that, but if we are working towards that, we can get a lot closer than if we are blindly going into the future without thinking about it – without being conscious about it. It does require some work."

"Human-induced evolution can occur much quicker than natural evolution and we can't undo things like this so this is where it takes the most conscious awareness."

Karle presents her work
"Regenerative Reliquary" – a
bioprinted scaffold in the shape
of a human hand 3-D printed in a
biodegradable PEGDA-hydrogel
that disintegrates over time





Krisitina Maurer



Mariano Sardon

ARTS AS A CATALYST FOR INNOVATION

PANEL

ARTISTS ON THE CUTTING EDGE

Sonja Bäumel	Artist, Amsterdam, Netherlands
Mariano Sardon	Artist; Professor and Chair of Electronic Art Degree, National University of Tres de Febrero, Buenos Aires, Argentina
MODERATOR:	
Kristina Maurer	Exhibition Developer, ARS Electronica, Linz, Austria

Art has long captivated the mind, allowing us to touch the most imaginative corners of our psyche. Our insatiable human curiosity transforms the arts into a catalyst for innovation, helping us envisage the potential of scientific and technological discoveries—or, in the words of panelist Sonja Bäumel, "democratize scientific research and bring it to the public sphere."

This idea of "artists as catalysts" is fundamental to the work of ARS Electronica, moderator Kristina Maurer explained while introducing the panel. The museum acts as a hub where arts, technology and society collide, taking a critical eye to how technology relates to humanity and how it can change society, said Maurer. Its programming focuses on artists whose work has impact in societal, political and environmental areas, more recently exploring the question of whether artists are the alchemists of our time. This often involves engaging artists who are working toward revolutionary ideas to tackle social issues in obvious or poetic ways. Maurer cited the example of Indonesian artists featured in the ARS Electronica Festival who explored using liquid waste from tofu and tempeh factories, which often acts as a pollutant to surrounding bodies of water, to create bio material that could be turned into fabric.

Bäumel, fascinated by art as a territory for experimentation, as well as the intersection of human life and the environment, centers her art around the study of microbes. In Salzburg, she discussed her work "Expanded Self" (2012), in which she used a giant petri dish as a canvas to map in color the bacteria living on her own body. This piece, Bäumel explained, shows that hundreds of thousands of micro-organisms can live on our bodies at any time, begging the question who or what are we? Bäumel then presented a more recent piece, "Being Encounter" (2017), which asks how we can get in touch with our cellular co-habitants and whether it is possible to sense a language by which we can encounter non-verbal micro-organisms through touch. Her work not only proves we are engaged in deep collaboration on a cellular level, but develops a language combining art and science. "The exhibition space becomes a lab; art becomes an expression of science and the artist is the researcher," said Bäumel.

Artist Mariano Sardon's work, which combines art with neuroscience, also encourages us to think about invisible aspects of human life by exploring at the relationship between the mind and the eyes. Speaking after Bäumel, the Argentinian artist explained his work "The Wall of Gazes" (2011), which used an infrared camera to track the gazes of 150 people viewing a portrait image. A high definition video, generated by combining all of the recorded gazes, proves that our eyes do not visualize in an entire image as our brains may lead us to believe; some parts remain unseen while the gaze is focused elsewhere. The result



shows a partially consumed portrait with a clear fixation on the eyes, evoking the feeling that the eyes are indeed a window to the soul. Similarly, Sardon's work "Read Unread" (2016) shows how people fixate on certain words when reading, instead of digesting an entire book as our minds may lead us to believe. By cutting out the words his subject's fail to read, Sardon's artwork brings us new understanding about the idiosyncrasies of our consciousness.

During panel discussions both artists revealed their work mirrors challenges associated with transdisciplinary collaboration, including language barriers and the notion of legitimate expertise. As Sardon pointed out, when creating art inspired by science, it often takes years of communicating with other artists and scientists to translate the meaning of different concepts to art. Echoing this sentiment, Bäumel noted the languages between transdisciplinary artists are often underestimated, or unused. But, these transdisciplinary media also face boundaries in the art sphere where the success of one's work is often measured by its sale value. "You must imagine you are creating this medium which is alive. This is a big issue, first of all because there are very few places in the world you can exhibit these works," explained Bäumel. "At its core it's not sellable," she continued. "At the end of the exhibition I destroy or kill it, which is a very hurtful process."

In closing, both artists agreed we must shift our thinking from the monetary value of art, to the cultural or scientific value of it, in addition to narrowing the scope between artists and scientists for more seamless collaboration.

Bäumel presents her work, "The Expanded Self" (2012), in which she used a giant petri dish as a canvas to map in color the bacteria living on her own body. This piece, Bäumel explained, shows that hundreds of thousands of micro-organisms can live on our bodies at any time, begging the question who or what

"The exhibition space becomes a lab; art becomes an expression of science and the artist is the researcher."

Sonja Bäumel

GROUP WORK

THE DUCK AND RABBIT MANIFESTO

How can art contribute to society? How can science be harnessed for art's sake?

These were some of the key questions participants of the **Arts and Creative Practice** focus group explored before they put forward the "Duck and Rabbit Manifesto."

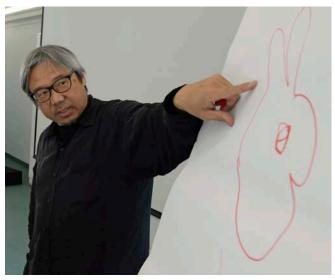
The statement pays tribute to the famous illusion in which both a rabbit and duck are visible in one drawing; while some may see the duck, others will only see a rabbit. The "Duck and Rabbit Manifesto" declares:

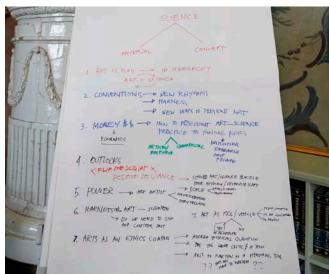
- The artist is not the PR machine of science and technology
- · Art can oppose governments and policies
- Art can galvanize change
- Art can exist for its own sake and not for an audience nor a market
- Artists use text to protect the context of their work
- Art is not the moral compass of a society

One Fellow remarked that they wanted people, in the future, to see both the rabbit and duck, not just one or the other, revealing a new question for the group to examine after the program ended: How can society facilitate art so that we can see both images?

- The Arts and Creative Practice focus group meet in the Chinese Room of Schloss Leopoldskron
- Eiichi Tosaki draws the Duck and Rabbit illusion
- Notes of the Duck and Rabbit Manifesto, mid-focus group







INTERVIEW

DJ SPOOKY: "THE WORLD CAN ALWAYS BE CHANGED AND TRANSFORMED"

Composer, multimedia artist, editor and writer shares his inspiration

Paul D. Miller, a.k.a. DJ Spooky, presents in the historic Max Reinhardt Library of Schloss Leopoldskron

During an informal evening presentation in the historic Max Reinhardt Library of Schloss Leopoldskron, Paul D. Miller, a.k.a. DJ Spooky, took Fellows on a poetic journey through Antarctica, unveiling his large-scale multimedia work that acts as an exploration of the composition of ice and water, and our relationship to the vanishing environment of the polar ice caps.

The project, a result of his art residency at the Metropolitan Museum of Art in New York City, paints a picture of the devastating effect climate change has had on the volume of ice in the Antarctic. Miller recounted his expedition to the South Pole, explaining how ice is a good measure of the changing nature of our environment, but also for how human nature is changing.

"Why is water, which is essential to life, free and diamonds are costly? We need to stop thinking about nature as some sort of exploitation," he told Fellows.

The project blends music and art with data and science. Partnering with Sinfonia Antarctica, Miller created an audible portrait of the landscape, composed using algorithms based on Antarctica's weather and temperature patterns.

The album, *Of Water and Ice*, combines melodies from a string quartet playing the algorithmic compositions, with additional data-driven electronic



sounds and field recordings of ice from Miller's journey to the frozen continent. The result is a representation of climate change through electronic sound.

Miller's work demonstrates how mathematics, science, and technology can be harnessed as art forms.

Drawing on inspiration from famed German mathematician Johannes Kepler and his essay "The Six-Cornered Snowflake," Miller explained how he was able to craft code onto the image of a snowflake, examining the complexity of nature and its influence on human life.

Asked what inspires his eclectic work, the composer, multimedia artist, editor and author elaborated: "I'm inspired by this

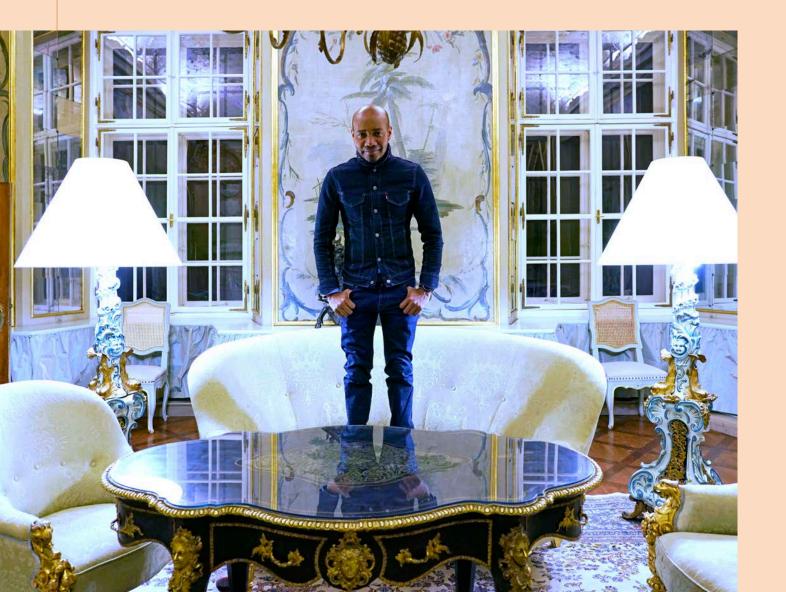
sense that the world isn't the way it could or should be.

"The world can always be changed and transformed. History is the kind of rearview mirror, and the forward facing mirror, so to speak, is pretty much potentially infinite and there are so many different paths we could take.

"I think the arts give us an optimized view of what potential there is in the world. That's where I think the creative economy and this idea that we live in a time where imagination is critical to almost all aspects of living in a data-driven society.

"I want to spark people and transform their sense of standardization of life that we are kind of living in right now."

Multimedia artist Paul Miller, a.k.a. DJ Spooky in the Chinese Room of Schloss Leopoldskron



FEATURE

USING TECH TO DRIVE SOCIAL INNOVATION

Salzburg Global Fellows explore positive effects of technology in day-to-day life and building cross-continental collaborations

When picturing a utopian or dystopian future, technology invariably features. Technology already plays such a ubiquitous role in today's life; one can only guess how humanity's relationship with it can evolve further. Is this something that should scare us or excite us?

Projects such as Chowberry and Wazi Vision remind us of the positives contributions technology is making to society and the social change it can drive. Both were highlighted as examples in Salzburg.

Through innovation and enabling technologies, Chowberry aims to provide affordable nutrition to millions of people. The cloud-based application service is the brainchild of Oscar Ekponimo and was developed as a result of his own experiences. Having experienced financial hardship as a child, he was determined to improve access to quality food in Nigeria for others.

Through the app, those in need get access to quality food from the stores that sell products reaching the end of their shelf-life for lower prices, thus combating food waste and hunger at the same time.

While a lot of requests to export Chowberry to countries in Africa and South America arrive at Ekponimo's door, he is currently focused on starting a new project in Nigeria. With Austrian-based Ars Electronica as a partner, he is working on a "Gallery of Code" to plug the intellectual gap in Nigeria and build a relationship for cultural exchange from both artistic and technological points of view.

Ekponimo explains: "We have put together a lab, or what I would call a creative space that would have a blend of arts and also creative technology. [It's] a collaboration between artists coming in from all around the world to understand the contexts of the local community and produce installations, works of art. [We are] leveraging of skills and intellects from the West here in Europe to work with local hands on the ground, to develop creative technologies that can help solve problems."

Giving back to the community is something that is also present in Brenda Katwesigye's work. With Wazi Vision, she works alongside female artisans in Uganda to transform recycled plastic into affordable eyewear.

As the business continues to grow, Wazi Vision is preparing to launch a range of glasses on Amazon, taking their concept worldwide. Meanwhile, Katwesigye's company is also developing an app that will make eye tests more accessible.

"The reason that people in hard to reach areas do not have access to [conventional testing methods] is because you cannot open up an optical center in the village or somewhere," explains Katwesigye. "So these people don't have access to optical centers and also, at least in Uganda, optometrists and opticians they are not as evenly distributed in the country as they should be... You find all of them in Kampala, in the capital, and then outside of Kampala maybe one or two, if any.

What we are trying to do with the app is for



"[We are] leveraging of skills and intellects from the West here in Europe to work with local hands on the ground, to develop creative technologies that can help solve problems."

Oscar Ekponimo



"Technology is actually changing society and integrating into culture and into the way we do life overall."

Brenda Katwesigye

everybody... That's how technology is actually changing society and integrating into culture and into the way we do life overall."

The Shock of the New: Arts, Technology and Making Sense of the Future sought to bridge divides between creative talents and technologists, scientists, futurists, policymakers, and educators. Despite their different backgrounds, all were united behind the idea to chart collaborative pathways to more livable futures.

Accessibility is a theme which runs through Ekponimo and Katwesigye comments – whether that is access to resources, people, or food. Technology can enable different parties to come together and provide more opportunities for people previously excluded.

When humans and their needs are at the core of projects, integrated change is possible, and technology can act as a social enhancer

- as these two innovative ideas show.

Ekponimo, who won a Rolex Award for Enterprise in 2016, says, "People just need to be empowered with the right skills and when they have the right skills, when they have the right know-how they can solve problems whether it's in health, whether it's in agriculture... This is key because they understand the problem more than an outsider coming in.

"All they just need [are] skills, whether it's technology skills for example and they can then use [those] technology skills and be creative...

"Technology gives you a huge amount of creative power, and with that huge amount of creative power you can solve problems within your community and be effective in that problem-solving approach."

Oscar Ekponimo and Brenda Katwesigye (left) take a selfie with Clare Shine and Claire Nelson



BEING HUMAN IN THE ANTHROPOCENE

PANEL

DESIGNS ON TOMORROW

Mariana Amatullo	Associate Professor, Strategic Design & Management, Parsons School of Design, The New School, New York, NY, USA
Michael Edson	Co-Founder, Museum for the United Nations – UN Live, Washington, DC, USA / Copenhagen, Denmark
Benjamin Julian	Artist, Co-Founder, Conceptual Art Technologies LLC, San Francisco, CA, USA
MODERATOR:	
Alexandra Deschamps Sonsino	Founder of designswarm & Good Night Lamp, London, UK

As we move forward into the Anthropocene, defined as the epoch of significant human impact on the Earth, the ethics of system design become increasingly important. How will the designs of tomorrow impact our shared vision of the future?

These questions already run deep within the design community. As the audience heard, one fine artist who had previously specialized in digital sculpture and industrial automotive design, felt compelled to shift focus to autonomous car development due to the sheer number of people killed in car accidents every year. Although the ethics of autonomous vehicles are still largely contested by the public, allowing self-driving cars to fail in every way possible before unleashing the technology to the public should eventually convince skeptics of their safety.

Profound changes are also occurring in the area of design theory, argued **Mariana Amatullo**, associate professor at the Parsons School of Design in New York. In this fourth industrial revolution, we are in an era of a circular economy which has profound implications on how we think about institutional design. "We know we are going from profit to purpose. The idea of transparency is becoming a key principal of how we look at implications," she said. Much of her work revolves around "design attitude" and how that attitude should be shaped when it comes to problem solving. This design attitude includes connecting multiple perspectives, creativity and empathy, engagement with aesthetics, and ambiguity tolerance.

Institutions themselves must also shift their thinking toward tomorrow, stated Michael Edson, co-founder of the Museum of the United Nations – UN Live. How we think about "now" has changed; now used to be a long, comfortable moment where you could arrange committees or commission years-long reports about issues, but that moment has shrunk dramatically. Using the United Nations Sustainable Development Goals as an example, Edson noted that the UN was designed as a government-to-government organization in a peer-to-peer world; which begs the question, how do we begin designing an effort in society to solve issues that governments are failing on, like poverty, gender inequality, climate change, and sustainability? This prompted the idea of designing a museum looking at the future, building a bridge between these goals and action toward solving them. The idea is to connect people everywhere to the work and values of the UN, while catalyzing a global effort toward accomplishing its goals. But this effort must move



"We know we are going from profit to purpose.
The idea of transparency is becoming a key principal of how we look at implications."

Mariana Amatullo



Benjamin Julian

from thought to action, Edson noted, stating, "in the US, museums are a \$28 billion-a-year business, but do they make us smarter? Do they make us better human beings? That is the question that is on the table right now."

During the question and answer session, panelists discussed mapping a future without human volatility and into a more data-driven system of checks and balances. What if there were no more human world leaders, and instead we elected artificial intelligence to run global governments? "Do humans have a right to choose our own future, given that we are such emotionally driven creatures?" questioned one Fellow. For two of the three panelists, this brought up concerns about Silicon Valley-centric attitudes around technology—can algorithms or artificial intelligence represent a globalized, equitable, diverse set of perspectives? "I would argue not," said one panelist.

In closing, panelists agreed that in order to enable transformative action, we must innovate for the present while being mindful of the future.

GROUP WORK

THE SEVEN CS

To listen, to talk, to maintain hope, to be conflicted, to love, and to be connected to nature and one another.

These were just some of the suggestions put forward by participants when asked by this Focus group, **Being Human in the Anthropocene** This group looked at the foundations of the human experience which could be used as an anchor for dealing with the challenges ahead. Together they mapped the "Seven Cs" of being human in the Anthropocene:

- 1 Connection
- 2 Consciousness
- 3 Control/care
- 4 Choice

- 5 Consequence
- 6 Creation, and
- 7 Collaboration.

The group also offered some thoughts and reflections for beyond the Salzburg program:

- As we evolve and merge with tech, are we becoming more aware and connected, or more controlled and isolated? Are we evolving or devolving?
- What kind of agency does humanity want to have over purpose, technological discovery, evolution and loss?
- There is a growing awareness of how humanity's actions shape others and the environment but how does society deal with the effects it cannot control?
- How can we reduce inequality, taking care of necessities, while enabling sustainable advancement into the future?

Cynthia Selin presents the "Seven Cs" of the Being Human in the Anthropocene focus group



INTERVIEW

ALEXANDRA DESCHAMPS-SONSINO: "TECHNOLOGY HAS THE POWER TO CONNECT BUT ALSO TO MAKE US VERY LAZY ABOUT OUR CONNECTIONS"

Designer and entrepreneur outlines what the future might entail for the Internet of Things (IoT)

Since 2011, Alexandra Deschamps-Sonsino has brought people together in London once a month to hear about the latest developments affecting the Internet of Things. Talks have centered on urban infrastructure, smart grids, open hardware, the quantified self, open data, smart homes, and more. The group has amassed more than 12,000 members and shows no sign of slowing down.

As an interaction designer, and founder of the Good Night Lamp, Deschamps-Sonsino has an interest in this field. The Good Night Lamp is an internet-connected lamp that users can turn on to let the owners of their connected lamps know that they are thinking of them or are available for a call. In 2014, BusinessInsider.com named her as one of the 100 most influential tech women on Twitter. During the Salzburg program, she spoke to Salzburg Global Seminar about the Internet of Things, open data and whether technology brings us together or makes us more isolated.

Since you are involved with the Internet of Things (IoT) community, what do you think should be the next steps toward its implementation?

Well, the Internet of Things is a very dynamic space that is unregulated, and that is open for entrepreneurship. What that has led to are a number of unfortunately bad design decisions that have led to security breaches and to a degree of uncertainty for both entrepreneurs and consumers. So I'm currently working to stir a global community



Designer Alexandra Deschamps-Sonsino is developing a "trustmark" to certify trustworthy Internet of Things devices

to talk about what trustmarks might mean for connected products. What I mean by trustmark is the equivalent to something like the fair-trade mark. So when you put fair-trade on a banana, you know that banana comes from working conditions that are better.

What does that look like for the Internet of Things? Can I put a sticker on a connected thermostat where I know that connected thermostat is not selling my data on to a third party, that has been designed in a secure way, that it is reparable, that if the company goes bankrupt can I still use my physical product but with a digital service offered by someone else? These are some of the things we are exploring.

In your opinion should there be any limits to open data?

I think open data as a concept is important. I think that there are of course different types of sensitivities around what kind of data. Whether your lamp is on or off is "Can I put a sticker on a connected thermostat where I know that connected thermostat is not selling my data on to a third party, that has been designed in a secure way, that it is reparable, that if the company goes bankrupt can I still use my physical product but with a digital service offered by someone else?"

interesting, but not that interesting a piece of data. Where you are in the world, what your health is like, where you are eating and what you're eating... These start to become very personal pieces of data, and so we have to treat it in a very secure way, we have to treat it in a way that complies to something like GDPR, which is the incoming legislation and we have to enable consumers to use archive and keep their own data. So, open in the sense of open and owned by people. We also have to make people care about that because right now they don't.

What's your take on the dichotomy of isolation/connectivity regarding technology?

I think technology has the power to connect but also to make us very lazy about our connections. We assume that a "like" on Facebook or a comment is as powerful as a face-to-face conversation and it isn't of course. We see that everywhere people suffer from more and more isolation, depression, mental illness regardless of the advanced technologies that we have.

What I try to do with the Good Night Lamp is provide a context for people to engage with each other more often. Right now, especially with families who have young children, it's very hard for a grandparent to know when the right time is to catch up either with their

children or with their grandchildren. So to create that opportunity, that opening of time and that window for these complex family structures to actually know when is the right time to sync and to call each other, and to have a meaningful connection.

So I think that it is a dichotomy in the general tech sector, something I try to address in my small way with the Good Night Lamp.

From all the discussions that took place during the session, what do feel are the most important remarks for the IoT community?

I think I will come back with a sense that there are communities in the world who are talking about the interaction between arts and sciences and technology in ways that will reach small companies eventually and it may be in the shape of innovation processes, in the shape of policy-making and I think that most entrepreneurs around me are very concerned with the next six months of their work, with the next engineering challenges and not so much the policy challenges, not so much the cultural shift not so much the innovation processes around them. I would like to highlight those for them. I would like to invite them to be more strategic and to be more high-leveled with the conversations that they would have themselves as small companies.

Deschamps-Sonsino with her working group in the Chinese Room of Schloss Leopoldskron



INTERVIEW

MICHAEL EDSON: "COLLABORATION AND PARTNERSHIPS ARE ESSENTIAL TO UN LIVE"

UN Live co-founder reflects on how the project will be built with everyone's input and ideas

Michael Edson introduces himself as a painter who fell into technology. While working at the Smithsonian Institution's two museums of Asian art in the 1990s, he wanted to educate himself further on the role of technology and new media programs. Although self-taught in this field, it led him to becoming the director of web and new media strategy for the Smithsonian. With this experience behind him, Edson joined the founding team of the Museum for the United Nations – UN Live – a museum being built in Copenhagen, Denmark, which goes way beyond its physical presence.

"I fell in love with the project when I saw how much our stakeholders were committed to being a truly global institution. A world-class building would be critical, but the digital presence and the network of partners would be where the real global action was going to happen," he explains.

UN Live will try to engage as many people as possible in problem-solving across the world on three platforms: UN Live Online, UN Live Network, and the UN Live Building. The latter is scheduled to be open in 2023, but public engagement on the other two platforms is expected to begin later this year.

"The network, I think, is the most powerful part of UN Live. It's a structure that allows a lot of people in the world to understand how they can collaborate and amplify each other's work. It also brings us very close to local communities, which is one of the most important aspects of the museum. I'm beginning to think that there's no such thing



As the co-founder of UN Live, Michael Edson is a strategist and thought leader at the forefront of digital transformation in the cultural sector.

as 'global.' Global, to some degree, is just weaving together a lot of different people's local realities."

This idea of building a bridge between awareness and action, involving as many people as possible, is something Edson expressed during the panel "Designs on Tomorrow" and was reaffirmed through his conversations with other participants at Salzburg Global Seminar.

"Collaboration and partnership are essential to UN Live. We've recognized that there are hundreds or thousands of very effective organizations already doing great work, many of whom have told us they wish to be connected to each other, they wish to have their work amplified, they wish to be networked. We think that we can create more impact in the world, faster, if we serve as a convener — a guide and an aid with many partners — than if we try to do everything ourselves."

"We've recognized that there are hundreds or thousands of very effective organizations already doing great work, many of whom have told us they wish to be connected to each other, they wish to have their work amplified, they wish to be networked. We think that we can create more impact in the world, faster, if we serve as a convener — a guide and an aid with many partners - than if we try to do everything ourselves."



Edson presents the Global Goals for Sustainable Development a.k.a. the SDGs According to Edson, the UN Live project will try to connect everyone in the world to the values and mission of the UN through the idea that local communities already have an abundance of unique skills and expertise that could benefit from more direct links to the United Nations — and to each other.

"A starting point for us has always been to try and unlock people's understanding of the UN's work and values on a personal level and try and understand what it is they have to offer as individuals, communities, as societies to the larger challenges of the world," he states.

UN Live will bring dialogue about intricate topics such as the Sustainable Development Goals down to the language people use in their everyday lives. Leaving jargon out of the equation, this project hopes people will understand they are already working on the same issues as the United Nations with their communities, but they simply use other words for it.

"For millions of people, working on global goals is just solving problems, helping their neighbors, and making better communities," Edson clarifies.

Having worked for a long time in the way arts and technology will define the future, Michael Edson decided attending *The Shock of the New: Arts, Technology and Making Sense of the Future*, was an opportunity he could not resist.

Edson, who proudly labels himself a Salzburg Global Fellow on his social media profiles, says, "When I saw the invitation I realized that this seminar was asking the same questions I've been wrestling with for the last 20 years. The chance to spend a few days here, with this global, diverse, talented bunch of people was an opportunity I could not pass up. It was unimaginable that I would not be here. Whatever I had to do to be here I would do."

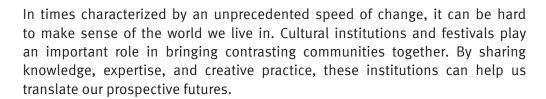
To find out more about UN Live, please visit: www.unlivemuseum.org

CULTURAL INSTITUTIONS AS FUTURES TRANSLATORS

PANEL

THE FESTIVAL AS FUTURE LAB

Tom Higham	Creative Director, York Mediale;
-	former Executive Director, FutureEverything, UK
Cynthia Selin	Director, Center for the Study of Futures,
	Arizona State University, Tempe, AZ, USA
David Lindsay Wright	Senior Research Fellow, Creative Industries Faculty,
	Queensland University of Technology;
	Text-Tube Futures Studio, f3 Futures Film Festival, Brisbane, Australia
MODERATOR:	
Joshua Fouts	Executive Director, Bioneers, San Francisco, CA, USA



Festivals epitomize cultural phenomena in today's society; the popularity of music festivals has revived the spirit of 1969's Woodstock, and yet the sheer volume of tech festivals has left some complaining of "festival fatigue." The focus of this panel discussion was to uncover how to harness the festival as a future lab—a sentiment **Tom Higham**, creative director for the York Mediale festival, believes is wholly possible. "I think festivals are catalysts for experimentation, serendipity and play, [...] all leading to actual innovation, if conducted carefully and thoughtfully," he told participants. He highlighted how festivals present the opportunity for "easy digestion" of expertise, suggesting the results of academic research would be better communicated and reach a larger audience in a festival setting, rather than an expensive research journal. Recognizing that the public can be easily feel inconsequential when it comes to effecting change, Higham noted that festivals provide vibrant meeting points, fueling creativity.

Festivals must also be open and accessible to all individuals in order to create a culture of interdisciplinary success, argued **Cynthia Selin**, director of the Center for the Study of Futures at Arizona State University (ASU). Selin co-founded an ASU event entitled "Emerge," which brings together scientific researchers, artists, educators and students to create new languages about the future, and to think critically about and discuss future technologies. By designing experiences that invite different perspectives and interpretations, Selin noted we avoid "over determining" the future by over articulating what that future may look like. The festival's spirit mirrors ASU's intention of avoiding disciplinary silos within its own faculty, allowing a wide variety of cross-disciplinary departments such as the Center for the Study of Futures, the School for Earth and Space Exploration, and the School for Human Evolution.

David Lindsay Wright, a senior research fellow in Queensland University of Technology's Creative Industries Faculty, explained how he is working to develop a futures



Cynthia Selin



Joshua Fouts



David Lindsay Wright



"I think festivals
are catalysts for
experimentation,
serendipity and play,
[...] all leading to actual
innovation, if conducted
carefully and thoughtfully."

Tom Higham

- 1 Memo Akten performs
 "Simple Harmonic Motion
 for 16 Percussionists"
 at FutureEverything in
 2015 (photo: courtesy of
 FutureEverything)
- 2 Artists and designers re-imagine the future at the 2012 Emerge festival organized by Arizona State University (photo: Herberger Institute/Tim Trumble)
- 3 English electronic music producer Evian Christ performs at FutureEverything Moscow in 2014, (photo: courtesy of FutureEverything)
- 4 "Frankenstein" was the theme for Emerge 2017 (photo: Hiu Zhi Wei).

film and transmedia event titled "f3" which will help develop new storytelling methods around future studies. Wright explained his vision for an annual celebration of all things future, one that would occur simultaneously in cities around the world, and translate future studies at a community level. The strategy would be to engage whole communities in understanding what the future is, where it emerges from, and how it can be actively shaped by all community stakeholders. Wright, who expressed apprehension around using the term "festival" due to the aforementioned concern of "festival fatigue," described the event as "a way to generate new kinds of means [and] synergies which brings in people from around the world who have futuristic ideas, not just high-techy, Silicon Valley kind of stuff, but new kinds of social experimentation ideas."

During the panel discussion, several participants commented on festivals as the art of making, versus the art of creating. Should we instead organize festivals to work on new projects, instead of projects that are already finished? Participants expressed overwhelming support for changing the current model.









PANEL

CULTURAL INSTITUTIONS AS CATALYSTS FOR THINKING ABOUT TOMORROW

Stefan Brandt	Director, Futurium, Berlin, Germany
Alexandre Fernandes	Head of Marketing and Audience Development, Museum of Tomorrow, Rio de Janeiro, Brazil
Marlies Wirth	Curator, Digital Culture and Head of Design Collection, Museum of Applied Arts, Vienna, Austria
MODERATOR:	
Stefan Wally	Director, Robert Jungk Library for Future Studies, Salzburg, Austria

Opening this panel of Cultural Institutions as Catalysts for Thinking about Tomorrow, moderator Stefan Wally posed a simple question to participants: "We have so many institutions dedicated to the study of history, why are there so few dedicated to understanding the future?"

The Robert Jungk Library for Future Studies in Salzburg, of which **Stefan Wally** is the director, supports public engagement about future studies and debate about emerging technology, such as blockchain and its potential uses. Conceived as a study center for developments in futurology and as a site for dialogue about "possible futures," the library also houses Robert Jungk's private book collection. Jungk is largely perceived as the cofounder of futurology. As a vocal activist against the Nazi regime, he was driven by the desire to stop totalitarianism. His teachings encouraged people to anticipate the future and ask questions such as "why did we get so many predictions wrong?" Jungk's lessons warn us to be careful when saying "prepare for the future," Wally explained, because it insinuates that the future is already decided.

In Berlin, the Futurium regards itself as a house of futures – bringing together different opinions and visions, explained **Stefan Brandt**, director of the institute. It should be seen as "radically open" and available to everyone, he said. The institute will not aim to predict futures, but rather ask how we want to live 50 or 100 years from now; in turn, encouraging people to become active participants in shaping the future. Due to formally open in spring 2019, Brandt said the Futurium will address the lack of responsibility we have in today's



"[The Museum of
Tomorrow] not called
the museum of the future
because we believe
that is too far ahead.
We are building tomorrow
right now, with our
actions today."

Alexandre Fernandes

Alexandre Fernandes, Stefan Wally, Marlies Wirth and Stefan Brandt examine the role of cultural institutions



societies; every exhibit or experience will demonstrate a real impact on the visitors' lives. To this end, the space will focus on three key issues: our relation to technology and new horizons, such as artificial intelligence; our relationship to nature and reconsidering how to nurture that relationship in an urban setting; and what it means to be human in the Anthropocene.

Highlighting a different approach, **Alexandre Fernandes**, head of marketing and audience development for the recently opened Museum of Tomorrow in Rio de Janeiro, noted that the museum's name was selected carefully: "We are not called the museum of the future because we believe that is too far ahead. We are building tomorrow right now, with our actions today." The immersive experience leads visitors through three areas: Cosmos (where we come from), Anthropocene (where we are), and Tomorrow (where we are going). The museum is dedicated to sustainability, exploring how we relate to the natural world and to each other. Visitors are encouraged to realize that tomorrow starts now with the choices we make today, and that we can transform the planet by our own interventions.

Conversely, Marlies Wirth described the Vienna Museum of Applied Art as a "museum of the now," often curating exhibits that touch on current day concerns about the near future. In 2015, the museum initiated the Vienna Biennale for art and design. In 2017, the Biennale focused on the topic "Robots. Work. Our Future," touching on humanistic fears of autonomy, questions such as "will robots take our jobs?" and "are robots advancing human evolution?" The museum also features a design lab and a futures lab where they aim to educate the public about the intersection of art and futures.

But how do we curate for a world where ideas of the future are constantly changing? As one Fellow pointed out, many of our ideas about the future are already 50-years-old, but are still relevant to our visions of the future. Brandt posited the value of designing an exhibit on "past futures," noting that there are many failed ideas about the past that may be relevant now. "The past is as relevant as the future for us," he added.

In closing, panelists agreed that by twisting the conventional measures of what constitutes a museum, these institutions can nurture knowledge and awareness about speculative futures for a wider audience.

Rio de Janeiro's Museum of Tomorrow was opened in 2015 and leads visitors through three areas: Cosmos (where we come from), Anthropocene (where we are), and Tomorrow (where we are going) (image: courtesy of Alexandre Fernandes)





GROUP WORK

AN INSTITUTION OF FORESIGHT

Futurists, cultural practitioners, and educators gathered for this Focus group which worked to answer what priorities cultural institutions must have, given geographic, cultural, environmental, and language barriers between global citizens.

The Focus group **Cultural Institutions Influencing the Future** developed an idea for an institute that would use foresight or "fore-sensing" to map potential futures. While brainstorming, the group referred to the work of Harold Lasswell, Sohail Inayatullah, and Ziauddin Sardar. The proposed "Institution of Foresight" would be a "post-normal" organization, taking ideas from creative industries.

CALL TO ACTION

With all Fellows of this Salzburg Global Seminar program connected to globally reaching networks, both formal and informal, the group must remain intact and become the cultural organization to influence change.

We must develop a common language of and for alternative future engagement:

- Redefine what the problems are: Mass media have sensationalized many key issues facing humanity. Those problems need to be looked at with fresh perspective, taking into consideration different cultural points of view. New definitions must be formed.
- Create images of a positive, realistic future: We are bombarded by negative, dystopian images of the future. We need to generate compelling, positive images of the future across multiple forms of media.
- Create a common language: Future studies talk about the same issues, but use different terms. We need to develop a common language to spread the message. "Banksy that" bring it to the streets and make it accessible.

Fellows present their work and recommendations from the focus groups in plenary in Parker Hall

INTERVIEW

STEFAN BRANDT: THE "FUTURE IS A VERY ABSTRACT TOPIC"

Futurium Director speaks to Salzburg Global ahead of workshop opening

Stefan Brandt is leading the Futurium, which will be a museum of the future, a future laboratory, a future forum, and a stage for the future in the heart of Berlin



In the heart of Berlin, next to the German Bundestag and the German Chancellery, a building designed to give visitors a glimpse of the future has opened its doors for its first workshop week.

Ahead of its final launch in 2019, Futurium invited people to get to know them in an event that will cover topics such as digitization, civic involvement, climate protection and sustainability.

Between May 30 and June 9, 2018, people had the chance to experience the venue as a museum of the future, a future laboratory, a future forum, and a stage for the future.

Stefan Brandt, director of the Futurium, said the concept of a museum is a valuable part of the project. Brandt spoke to Salzburg Global Seminar while attending the program, *The Shock of the New: Arts, Technology and Making Sense of the Future* in February 2018, ahead of the workshop.

Brandt said, "I think we definitely want to show and present things, objects on [the] future but I think is not enough... We need all the other dimensions as well. There are many things, many problems, and challenges that you cannot fully address in an exhibition. You need other dimensions to deal with. For instance, you need a debate, a discussion, workshop... You need artistic performances because often in the past artists had a better feeling of what could happen in the future because they don't think in a linear way. They rather associate or work [associatively] with different observations and thoughts, and they get a completely surprising vision of the future that at the end is sometimes closer to reality than the more linear analysis that a scientist might do."

The workshop's theme is "Areas of Tension. Approaching Possible Futures." This is something that falls in line with the thoughts shared by Brandt during his stay in Salzburg. After all, Brandt does not believe in a single future; he believes in multiple futures. Futures are just our different ideas of what the future might look like. These ideas may be consistent, complementary or conflicting and that's why it is important to share them in an eclectic space like the Futurium.

When Futurium opens at fully capacity in spring 2019 the first floor of the building will accommodate a permanent exhibition guided by the question "How do we want to live?" This exhibition will be divided into three different thinking spaces that will tackle the future relationship of humans with themselves, nature and technology.

In the building's basement, visitors will

find the Futurium Lab, something Brandt considers essential because the handson approach allows for a more intimate experience.

"Future is a very abstract topic... What we have seen in our work with children, with pupils at schools is that once they are closely in touch with future, to objects or to books – to materials that are dealing directly with future – they feel connected somehow... Therefore, I think that the objects and the concrete doing is something so important for an institution like us," Brandt clarified.

During his time at Salzburg, Brandt presented the Futurium as a translator, the missing link in a fragmented society where arts, science, and policy-makers have trouble communicating with each other.

"We think sometimes very simplistic about politics, and it's good to understand what the problems for politics are to get things done. On the other hand, we also don't value enough what arts can contribute to such a discourse because arts are not just the pretty flower on something. It is sometimes really the core of something – of our approach

to future, for instance. On the other hand, without knowledge that comes from science, from scientific work we would not be able to further explore futures. Therefore, I would say that yes, we need to understand more the value of each other...to really start a qualified debate," Brandt said.

Bringing all sectors of society together to discuss which future everyone wants is the primary goal of this groundbreaking project that also aims to change lives for the better.

Brandt says, "Keeping peace at least in a major part of the world will be a big achievement and the second is that we really try to solve problems solemnly and not superficially... [After questioning preexisting systems we] understand each sector is connected to the other sectors and we need holistic solutions, but it takes time, and it takes patience, and you need to have the will to go this way, and this is a difficult way. My hope is that we make at least some steps on this way."

To learn more about Futurium's first workshop week, please visit: www.futurium.de/en/ news/workshop-weeks

Visitors attend a pre-opening event at the Futurium in June 2018. The institution will fully open in 2019. (photo: Jan Windszus)



CREATING SHARED LANGUAGES FOR THE FUTURE

PANEL

STRATEGIES FOR REIMAGINING THE FUTURE

Karl Burkart	Director of Innovation, Media & Technology, Leonardo DiCaprio Foundation, Los Angeles, CA, USA
Claire Nelson	Futurist & Sustainability Engineer, The Futures Forum, Washington, DC, USA
Michell Zappa	Technology Futurist; Founder of Envisioning, Milan, Italy
MODERATOR:	
Tanja Hichert	Founder, Hichert & Associates; Strategic Foresight Practitioner, Cape Town, South Africa

Storytelling is an intrinsic value of culture. The art of storytelling has been a fundamental communication method for over 40,000 years, since the first cave paintings. Evolution has wired our brains for storytelling; it plays an essential role in language, making it vital to the human condition. Within this context, storytelling should be harnessed as a fundamental tactic for reimagining the future.

Karl Burkart, director of innovation, media and technology at the Leonardo DiCaprio Foundation, emphasized that our current model of futures storytelling is not doing enough to paint positive images of the future, leading global citizens to feel disempowered about key issues like climate change. Many of the images we have of the future are manufactured by Hollywood, but these images too often depict bleak images of the future; how do we create positive images of the futures we want? To this end, Burkart noted that by harnessing the "science of the probable" and the "art of the possible," the foundation has been successful in profiling innovations to reduce climate change, such as research on 100 percent renewable energy resources. Following this research, over 100 sub-national and national governments and dozens of Fortune 500 companies are signing on to the idea. "That's the power of putting forward a big, crazy idea and articulating it well," he said. He prompted Fellows to ask how we can tell more positive stories that will make global citizens interested in creating actionable changes for the future.

Claire Nelson, futurist and sustainability engineer with The Futures Forum, questioned how we can make change happen when faced with economic, political, religious, and other social barriers. We cannot prescribe the same future to someone in Kingston, Jamaica, as we do those facing a water crisis in Cape Town, South Africa. We need a new paradigm beyond global treaties, academic education, the status quo, and cognitive knowledge; a type of evolutionary leadership that makes space for citizens at the table said Nelson. The 17 goals and 169 targets of the SDGs is not a story; we need a larger, more central story to rally people around the SDGs. With rapid urbanization causing more water stress in cities around the world, Nelson hypothesized this issue may affect enough people globally to become a rallying cry.



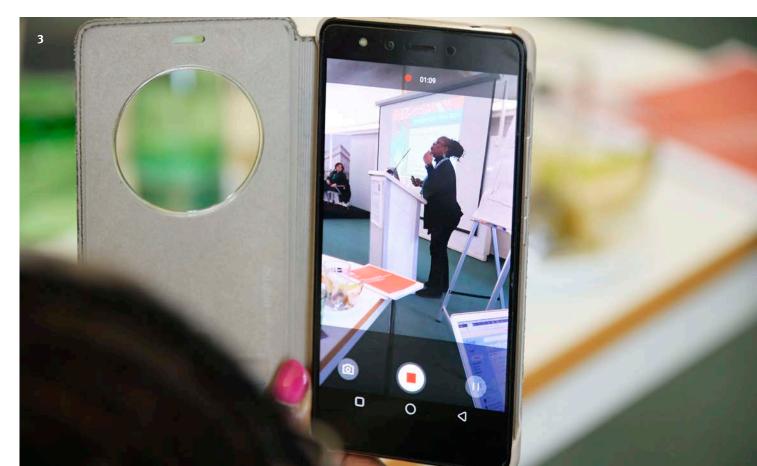
Tanja Hichert

Technology futurist **Michell Zappa** has also tapped in to the fundamental power of storytelling by helping individuals and organizations to understand how technology is evolving, to understand its progress, and to better predict its speculative future. His company, Envisioning, develops creative tools and methodologies to document and track emerging technologies, analyzing the viability, desirability and readiness of such technologies. Zappa illustrated how this work can bring value and clarity to many of the conversations going on around technology, particularly related to issues facing the value of stories in today's wired world. While data is still largely seen as a legitimate and trusted model, storytelling is losing its legitimacy in online spheres. Zappa noted this is largely due to the underlying models of engagement for social networks—for example, websites like Facebook are optimized for clicking and sharing within our narrow view (friends, family, political spheres, etc.). How we address these issues remains to be answered, but ensuring that people understand the power of technology and how it can affect our decision making is key, said Zappa.

- 1 Karl Burkhart presents lessons learned in putting forward big ideas at the Leonardo DiCaprio Foundation
- 2 Michell Zappa highlights the power of technology and how it effects our decision making
- 3 A Fellow films Claire Nelson as she speaks about overcoming barriers.









The Creating a Global Lab for Creative Systems Change focus group devise a "lab of labs" approach



"The combination of artists and technologists and futurists was outside the norm, and as a result I believe the discussions we shared and the proposals for projects, such as the global network of futures labs, may actually live to see the light of day."

GROUP WORK

A "LAB OF LABS"

What could a global effort for creative future thinking look like? What initiatives or labs already exist, and how can they be linked?

The **Creating a Global Lab for Creative Systems Change** Focus group proposed a global "lab of labs" for radical collaboration and transformative system change that unites communities, organizations and policymakers to share insights in order to enact change locally and globally.

At its core, the lab would be community-focused and community-driven. It must build bridges between knowledge and action; profoundly and humanely understand global challenges, recognizing that people who sometimes effect change from outside do not understand the problems on the ground. Participants agreed the global lab of labs is not only a plausible idea, but one that could be grown organically when Fellows return to their local communities. If the insights gathering from each Fellow's local community are shared with the global network that the Fellows have created, together they can help foster change on a global level and become the "lab of labs."

BRIDGING THE FUTURE DIVIDE

PANEL

CONNECTING CREATIVE FORESIGHT TO POLICYMAKING

Martin Bohle	Advisor, "New Organisational Structures," DG Research and Innovation, European Commission, Brussels, Belgium
Zhouying Jin	Director, Center for Technology Innovation and Strategy, Chinese Academy of Social Sciences, Beijing, China
Alberto Cottica	Head of Research, Edgeryders, Brussels, Belgium
MODERATOR:	
Rika Preiser	Senior Researcher, Centre for Complex Systems in Transition, University of Stellenbosch, South Africa

The UN Sustainable Development Goals (SDGs) paint an optimistic picture of what our planet could look like in 2030, but accomplishing these 17 goals and 169 targets is no small task; much of our success will rely on policymakers to turn thought into action. However, the job of policymakers has become increasingly complicated over the 21st century due to the complexity of the issues to be addressed, the volatility and uncertainty of the policy implementation process, and the changing nature of the relationship between state and citizen.

The notion of foresight has emerged as an essential addition to conventional planning and policy tools. The UNDP, which recently released a practical manual introducing strategic foresight as an important practice in the context of the SDGs, notes that foresight empowers policymakers to use new ways of thinking about, talking about, and implementing strategic plans that are compatible with alternative futures. These strategic planning, policy formulation and solution design methods do not predict the future, but work with a variety of future scenarios, said panel moderator **Rika Preiser**. According to Preiser creative foresight in policymaking is "a systematic, participatory, future intelligence gathering, and medium-to-long-term vision building process aimed at enabling present day decisions and mobilizing joint action."

Though foresight empowers policymakers, Brussels-based researcher **Alberto Cottica** – who called his presentation the "Black Briefing" – argued there is a mismatch between reality and our tools in governing complexities, affecting autonomy and agency. Failure is the default in public policy, he suggested, noting that he and many other open data activists in the early 2000s believed the internet would bring more transparency to government processes; however, many open government projects have been deemed failures. Cottica argued that the processes of change in government institutions are fundamentally different from processes of change in civil society, making it extremely difficult to harness bottom-up approaches to bring change to top-down government policy. Noting that governments have historically harnessed policy to create more efficient and profitable societies, Cottica warned that without creative foresight policymakers may cause more harm than good.

Martin Bohle from the European Commission called upon policymakers to shift the scale from global to local, acknowledging that they must consult underlying communities before they can claim to have all the knowledge needed to do their job effectively. Using an image of a cube as a visualization, he said we must look at three axes of reflection;



"[Creative foresight in policymaking] is a systematic, participatory, future intelligence gathering, and medium-tolong-term vision building process aimed at enabling present day decisions and mobilizing joint action."

Rika Preiser

wicked games, policymaking using semiotic resources, and policymaking creating semiotic responses. He said policymaking relies on culture to play this "wicked game," addressing complex issues with multiple values and conflicting interests. "Including people in policymaking involves putting a broken status quo in the wicked game," he explained, noting in cultures where voluntary participation in this process is strong, there is agile orchestration from the top down. Bohle suggested a key function of the cultural sector is to create new systemic resources needed by society when confronting change and disruption.

The final panelist, **Zhouying Jin**, director at the Center for Technology Innovation and Strategy at the Chinese Academy of Social Sciences in Beijing, echoed calls for citizen engagement in policymaking, noting that mankind has never stopped striving to realize an ideal society. From any credible perspective, we are standing at a crossroads in the history of human civilization, she said; but an important symbol of human process is the ability to control our own destiny. Long-term foresight must be reflected in the near- and medium-term strategic and policy options.

During discussions, one Fellow noted that the public feels policy is not a lever for change. Do we continue to work in a broken system or instead work outside that framework? How do we make that choice? Bohle challenged participants to reconsider what they label policymaking and consider the societal context as well. "When you take the message of this institution [Salzburg Global Seminar]—three people having an idea and seizing an opportunity—that was highly effective policymaking," he concluded.

Martin Bohle, Alberto Cottica, Zhouying Jin and Rika Preiser discuss the role of policymaking



GROUP WORK

A TEMPLATE FOR POLICYMAKING

How would you help people trying to influence policy change?

The **Policymaking Spheres** focus group, comprised of futurists, policymakers and cultural practitioners, set out to chart more creative paths to influence collective decision making. Inspired by the Cape Town water crisis, a real-world complex policy issue, the group created a template for those galvanized to take action but had no background in policymaking.

- 1 **Map the issue.** One must have a systemic understanding of the issue, the dysfunctional dynamics between political parties, and structural components (i.e. when discussing the Cape Town water crisis, the group noted business models around water in the region were vital to understanding the issue).
- 2 **Identify and build relationships** with stakeholder groups.
- 3 **Develop multiple storytelling tactics** tailored to each stakeholder group, recognizing that each group has a different understanding of the issue and will respond differently to these tactics.

Participants noted that while this outcome can serve as framework for better citizen engagement, the question of how we empower people to feel like they have a role in policymaking remains unanswered.

Noyuri Mima, Richard Lum and Tanja Hichert consider their policymaking template



GROUP WORK

A CHECKLIST FOR ETHICAL CHANGE-MAKING

"Ethical change-making is what happens when would-be agents of change take on a role knowing they can deliver something that an impartial observer would consider a good result."

So declared the **Tools and Tactics: How to move from thought to actions?** focus group as they compiled their "Checklist for Ethical Change-Making"

The group noted that by generating discussion with our colleagues on the issues about which we are passionate, we are empowered with a tool set of differing opinions and voices. The group asked themselves, what do we need to do to avoid total failure, while recognizing that failure can be harnessed as a positive force.

The group encouraged Fellows to continue contributing to the crowdsourced checklist for action-making using a Google Doc, in order to fuel continued conversations beyond the walls of Schloss Leopoldskron.

- 1 The Tools and Tactics focus group compile their "Checklist for Ethical Change-Making"
- 2 The Defining Future(s) focus group explore the stages of human life – now and in the future
- 3 The Being Human in the Anthropocene focus group ask "What does it mean to be alive?" and "What is life?"
- 4 The Being Human in the Anthropocene focus group consider humanity in a tech-driven future









INFORMAL PRESENTATIONS

Ideas discussed during the program's panels and focus groups were examined further as participants gathered for open workshops and informal presentations, allowing artists and cultural practitioners to present their work in a more intimate, informal fashion.

During a morning discussion, transdisciplinary artist Derek Tumala exemplified the way in which the human imagination allows us to transcend the status quo by examining pre-colonial scientific studies through art. Tumala discussed his work "To Where the Sky Will Lead Us," which highlights the theory of ethnoastronomy, a pre-colonial form of astrology conceived in the Philippines. "[These topics] are not being studied,

so I created sculptures based on that to bring this old knowledge to new platforms." Declaring that artists and scientists should work more collaboratively to spark empowerment, Tumala noted that art should not be viewed just to function, but to educate.

Wit Pimkanchanapong, a

Thai artist who specializes in kinetic sculptures and robotics, noted that as an artist he finds it increasingly important to collaborate with rural community members who have little interaction with technology. This unique form of collaboration allows him to develop new perspectives in his work.

Open workshops held in the evening saw Fellows participate in a maker lab, designing fictitious tools they would like to see manifest in a more sustainable and just future. One participant, for example, designed a nonlethal handgun in response outrage surrounding the deadly school shooting in Parkland, FL, USA, which had happened shortly before the program started.

Claire Nelson took participants on a journey to the moon, using her theatrical storytelling skills to dream up a futuristic world of mankind's journey to transform the moon into a World Heritage Site, showcasing the power of stories "rooted in truth." Others Fellows also showed videos, or creative documentaries related to futurism.

Hong Kong-based artist, **Alan Kwan** shared the

prototype of a video game he is developing to highlight the issue of climate migration, whereby players can experience a desolate landscape as characters including a wolf (below, right; Screenshot, videogame "Good Dog").

Professor at the Future
University in Japan and
former deputy director
of the National Museum
of Emerging Science
and Innovation, Noyuri
Mima led a presentation
and discussion on the
critical role of education
and communication in
developing a society's future
literacy (below, left; photo:
Science Support Hakodate).





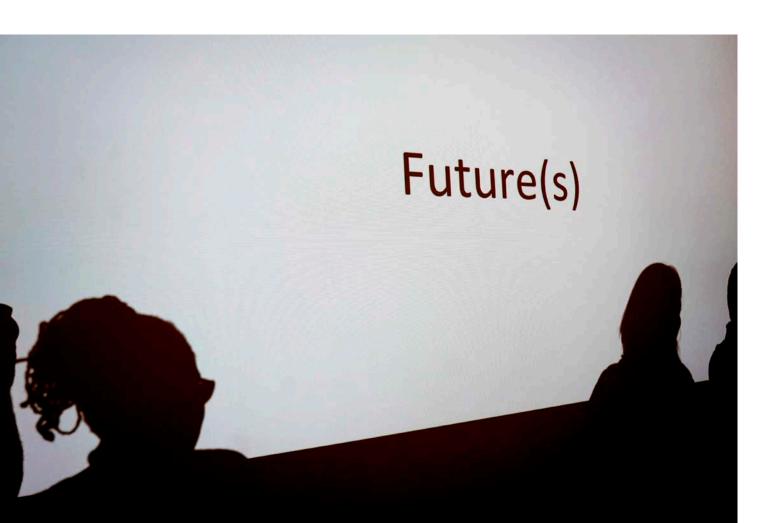
CONCLUSION

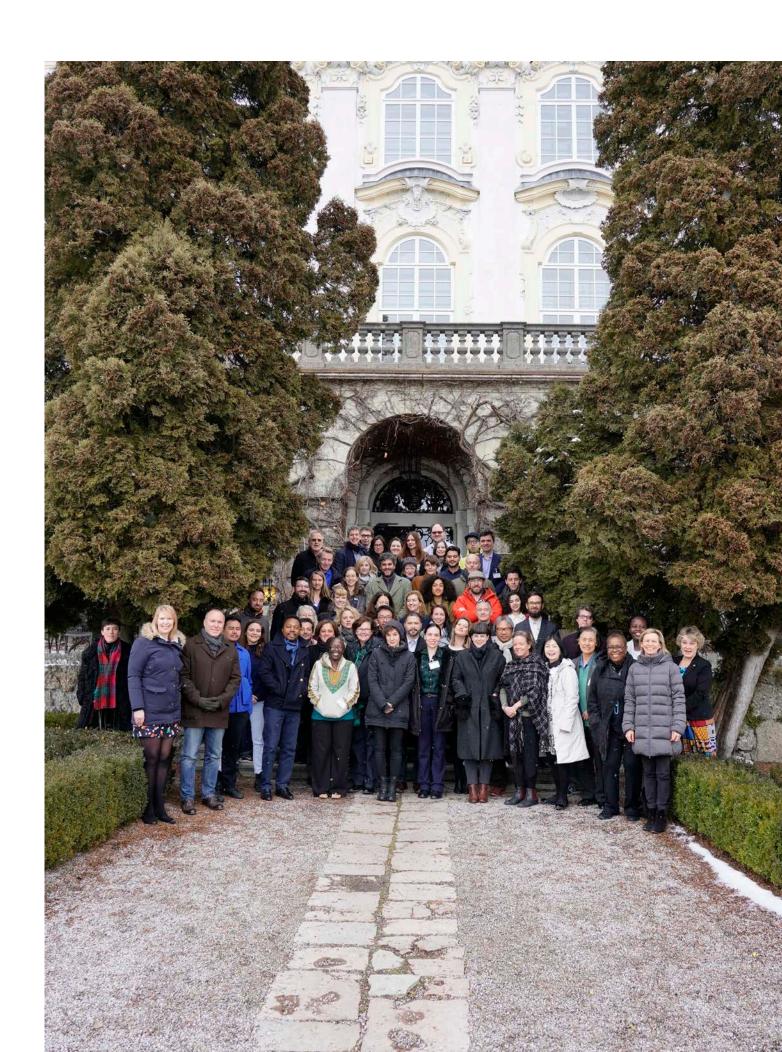
Society's capacity to transcend challenges, address complex issues and adapt to uncertainty relies on our ability to envision and assess alternative futures cooperatively. Fellows of this groundbreaking program overwhelmingly agreed the arts and cultural sector plays an intrinsic role in developing "future literate" societies, as well as helping cultural practitioners and community members expand their role in advancing policymaking for desirable futures.

Participants called on each other to harness the transformative power of the arts to develop shared languages for the future, noting that we must be careful when calling on citizens to "prepare for the future," as it insinuates the future is already decided. To this end, we must remember that there is no such thing as "the future"—it is a multitude of things, defined by personal, political and socioeconomic biases.

As we push forth into the Anthropocene, it is imperative that we communicate diverse images of the future and in order to inspire people to make actionable changes at a community level. Fellows agreed we must bridge silos, encourage cross-disciplinary collaboration, and catalyze both global and local efforts toward accomplishing the Sustainable Development Goals, acknowledging that "there is likely no such thing a global problem; but lots of small, super local problems."

Though the program's title "The Shock of the New" points toward the turbulence often felt during times of unprecedented change, Fellows left Schloss Leopoldskron encouraged by the discussions and inspired by the role that the creative community can play in shaping the 21st century.





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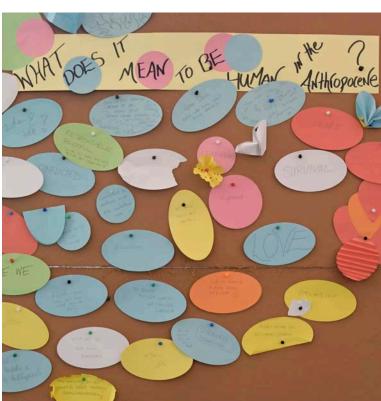
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