THE EXPERIENTIAL FUTURES OF FUTUREPROOF:

A Format for Improvising Future Scenarios

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ABSTRACT

The Futureproof project is a model for engaging with the work of experiential futures using the format of improv theatre. It answers to the need for popularizing engagement with futures thinking identified in futures studies, and posits comedy and adaptability - two inherent qualities of improvisation - as areas of particular interest to the aims of futures discourse and experiential futures work. Key methods from its core disciplines of futures studies and improv are evaluated and combined to create a format for the creation and performance of improvised future scenarios that are accessible to a general audience. On a practical level, Futureproof outcomes include three public performances for sold-out crowds at the Bad Dog Theatre in Toronto, staged with a cast of professional improv actors and the engagement of a guest expert, each time representing a different discipline. The analysis and discussion of the experience suggests that both laughter and adaptability, key elements of improv art and the Futureproof format, can be usefully employed in the service of futures thinking and research. Looking ahead, the project also considers possible future iterations of the format, suggesting potentially advantageous design changes to its framework to orient it towards varied audiences.

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FOREWARD

The idea for this project, in its performed version entitled “Futureproof,” first came to me at Improvaganza 2012, an annual, international improv festival held in Edmonton. I was watching a scene in which a visiting German player, Ben, played an amoeba. He moved jelly-like around the stage, smearing himself onto other characters while sharing facts about cell division. It was extremely funny, and more explicitly educational than most other improv comedy scenes I had seen. As a professional researcher and microbiologist, Ben was able to bring vivid detail to the scene, to a striking effect. His perspective was interesting and unique, and one not ordinarily put forward by other improv comedians. It occurred to me then: what would happen if you joined the unique perspectives of science experts with the storytelling and collaborative abilities of professional improvisers?

One year later, while attending the Strategic Foresight & Innovation Program at OCAD University, I learned of Jim Dator’s framework of “Generic Images of the Future”: Continued Growth, Collapse, Discipline, and Transformation. These generic images - or narrative frames through which to view possible future worlds - seemed like a natural fit for improv performers. I remember thinking that, with the right tools, improv performers could fill these frames with rich and detailed stories, human emotion and humour, of course. In the days that followed, a series of unconnected concepts coalesced into the relatively simple premise behind Futureproof: an improv comedy show where experts share their views of possible futures, and a cast of improv artists bring these futures to life in front of, and with the participation of, an audience. In addition to stimulating thought about, and engagement with, the idea of possible future worlds, the levity characteristic of improv would act to relieve some of the anxieties and fear that surround the

future, with its accompanying change and uncertainty, while also loosening the strictures of preconceived notions about what is possible with the disruptive energy of laughter.

While simple in premise, the initial outline of Futureproof quickly gave rise to new questions, some common to futures practice, and some specific to its format. What is the value of predicting something that has by definition not yet come to be, and if the activity of futures forecasting is valuable, what is the value of the Futureproof framework to that endeavour? Can the potential for creation of viable improvised future scenarios translate into practice, and if it falls short of expectation, does it offer something unexpected in turn? What are the benefits of performing improvised futures scenarios in front of a live audience, what are the drawbacks, and do either create opportunities for further exploration of experiential futures within improvised settings? Putting it in the simplest terms: how might improv techniques be used in generating futures scenarios? This project considers these questions through the conceptual design and performances of Futureproof with view to outlining a viable new method of experiential futures practice.

“Any useful idea about the futures should appear to be ridiculous.”

-- Dator’s Second Law

INTRODUCTION

As an attempt to provide a new model of engagement with the creation of future scenarios, Futureproof is situated firmly within the experiential futures (“XF”) branch of futures practice as defined in large part by the work of Stuart Candy. While the project’s conceptual framework extends to tools proposed by other futures practitioners, primarily through the host’s role in Futureproof, in its design the project intends to serve as a platform upon which multiple future scenarios can be experienced in the creatively disruptive setting of improvised and collaborative performance. The aim of Futureproof is increased futures literacy, a goal that Candy identifies as “one of our great challenges, and opportunities” (Candy, 2017, p. 1).

As Candy argues in his recently published paper “Designing the Experiential Scenario”, in order to popularize “social foresight” on a cultural level, “we must bridge the “experiential gulf” between inherently abstract notions of possible futures, and life as it is apprehended, felt, embedded and embodied in the present and on the ground.” (Candy and Dunagan, 2017, p. 2). Futureproof aims to do just that by bringing together subject matter experts, improv artists, and audience members in a collaborative task of experiencing future scenarios through the interpretive work of improvisers, based on input from experts, the host, and the audience. Before addressing the specific contribution that this project makes to futures practice and XF, however, acknowledgement of some fundamental issues confronting futures research is necessary.

Futures studies, 'the futures field', or 'futures research' are all terms used to describe a realm of social inquiry concerned with the systematic study of the future. In the words of Wendell Bell, a Yale sociology professor and futurist: “Futurists [futures studies practitioners] aim to discover or invent, propose, examine and evaluate possible, probable, and preferable

futures. They explore alternative futures in order to assist people in choosing and creating their most desirable future" (Bell, 1996, p. 2). Putting it differently, futures practice seeks to look ahead and approach critically our possible futures with the aim of informing our decisions about the future and our relationship with it. Theoretically, we should be able to alter our present actions in order to move towards a preferred future, or set of circumstances, by understanding the scope of what is possible and preparing for the most likely possibilities.

The desirability of such an effort has been acknowledged, and authoritatively so, for a while. Psychologist Seymour Epstein's work in integrative thinking is a reference when approaching futures from a different vantage point, as Candy cites in his 2010 doctoral dissertation *The Futures of Everyday Life:*

> Einstein said that unless we learn to think differently, we are doomed to self-extinction. He was, of course, referring to the atom bomb. Today, there are other equally significant threats, including pollution of the environment, global warming, depletion of the ozone layer, overpopulation, the failure of our social institutions, and widespread ethnic strife. Considering that we have made this mess for ourselves, if we ever had to learn to think differently, it is now. (Epstein, 1994, p. 721)

There is a paradox at the heart of futures practice, however, for its aim in the longest possible view - the future as it will come to be - is unpredictable until realized; it is a constantly moving target, which aims at predicting what is to come by drawing on all that can be distilled from what once was and what currently exists. The uncertainty of future is both the raison d'etre and the Achilles heel of futures practice, which thrives on possibility - with its value linked to the ability to generate plausible future scenarios - but also relies on the passage of time for its ultimate assessment. Whatever its advantages in the present, futures practice can be fully evaluated only in retrospect, which makes it vulnerable to questions of significance.

The ability to engage in a variety of divergent scenarios by way of approaching the future strategically, with foresight, is a necessary approach given the level of abstraction inherent in

future concepts; in other words, it's difficult to "see" what the future "looks like". The future must be made concrete on relevant levels if we are to rise to its occasion as it comes to pass: to confront and prepare for the future is to embrace the inevitability of unpredictable change. Perhaps not surprisingly, the idea of "futureproofing" has been of increasing interest in business strategy and management consulting circles. There is much to justify desire for a resilient strategy, or a tool for managing rapid change and disruption. Schoemaker (1995, p. 26) reinforces this idea in describing futures research as an "early warning system to recognize opportunities and emerging threats that has long been recognized in warfare, business, and emergency preparedness."

Futureproof explores improv's potential to contribute positively to futures practice, with XF work serving as its main conceptual and methodological reference point. Since improv theatre makes adaptability and change a cornerstone of its value proposition, it seems like a natural partner of futures practice. Looking at possible futures is motivated in large part by the possibility of adapting (well) to the future and the change that comes with it, after all. There may also be value of adding the experience of laughter to the process of developing and communicating experiential futures, as the levity characteristic of improv may help audiences confront challenging and anxiety-inducing visions inherent to some scenarios. In either case, it is improv's playfulness, co-creative nature, and story-centric output that make it into a unique platform for the creation and communication of new experiential futures, with potential to contribute effectively to existing modes of approaching the future warranting further consideration. The main question that drives this research project is thus: How can improv techniques aid the process of generating futures scenarios?

CONTEXTS AND FRAMEWORKS

Futures Practice

Insofar as Futureproof was conceived of instinctually from interest in futures, experience in improv, and a happy coincidence, the specifics of its design lean on a theoretical foundation built, to a significant extent, by the futures work of Jim Dator and Stuart Candy. While a number of other figures and methods in the futures field serve as points of reference for this project, especially through the figure of the host (my role in this version of Futureproof), the basic format of the show as it developed can be most usefully approached through the framework of Candy's "experiential futures ladder" ("XFL"). Before this choice of framework can be addressed more thoroughly, however, a number of other reference points for this project need to be established.

Candy defines XF as "a practice for increasing accessibility and impact, accelerating the creation of shared mental models, and scaffolding both organizational and public imagination" and asserts that its "role is more facilitative than communicative, more exploratory than predictive, and more about the process than product" (Candy, 2014, p. 36). Futureproof answers to this description in its design, as well as shares an aim with Candy's futures work, namely the promotion of futures literacy - the desire to make "high quality futures thinking more widespread" (Candy, 2017, p. 1). It is here that Futureproof diverts from the main current of XF work.

The difference in its positioning is not radical, for the project design includes scenario development techniques in its rehearsal stage, through the use of the Generic Images of the Future (Dator, 2009), and stresses the importance of effective scene-setting to the impact of performed scenarios. The improvised nature of Futureproof performances, however, requires

that this pursuit of verisimilitude embrace the levity that is characteristic of improv. Indeed, it is the creative potential of disruptive laughter in the context of XF work that may open onto the most interesting paths for approaching future Futureproof endeavours.

This is not to say that the project foregoes the scenario development and foresight that serves as the preferred method of engaging in and communicating the outputs of futures research. The benefits of making use of this basic tool of experiential futures are many, as Mietzner and Reger (Mietzner and Reger, 2005, p. 235) highlight:

- "…[scenarios] do not describe just one future, but that several realisable or desirable futures are placed side by side (multiple futures)."
- "…improving communication: scenarios can lead to the creation of a common language for dealing with strategic issues by opening a strategic conversation within an organisation;
- "… the ways of building a scenario are very flexible and can be adjusted to the specific task/ situation."

The most effective future scenarios are not simply communication tools, but compelling, easily understood, and inspiring experiences; they are thought-provoking and might be presented as "day in the life" descriptions, storyboards, videos, theatrical performances, artifacts, and interactive prototypes. Candy stresses the aspect of XF through the concept of "diegetic integrity," asserting that "the trick to designing experiential futures is putting people into your diegesis - your story-world - as seamlessly as possible" (Candy, 2014, p. 35). Within the framework of Futureproof, however, this requirement must be balanced with openness to disruption by laughter.

The creative potential of disruptive laughter is difficult to theorize despite being frequently instanced: on the level of culture alone, it is found in the Dada and Surrealism movements in art, modernism and postmodernism in literature, Absurdist drama and theatre, the cabaret tradition, various modes of satire - the list seems endless. Its potential has not gone

unnoticed in futures research either. Jim Dator's "second law of the future" states, after all, "that any useful idea about the futures should appear to be ridiculous" (Dator, 1995, p. 2). Dator classifies his acceptance of the ridiculous as part of futures research by emphasising the *appearance* of it and noting that futures practitioners "have the additional burden of *making the initially ridiculous idea plausible*" (his emphasis; Dator, 1995, p. 2). Nevertheless, if the ridiculous is a necessary component of futures research, laughter - as the standard reaction to it - has a role to play in the way that we approach the task of imagining and talking about our possible futures. A similar sentiment rings in Candy's assessment of games as vehicles for XF work, which underlines the role of playfulness in the work of increasing futures literacy (Candy, 2017, p. 2, 8).

By embracing the disruption of laughter through using improv to stage future scenarios, Futureproof reconfigures the effectiveness of a futures scenario is terms of its potential to meet and rapidly adapt to the unexpected. Accordingly, the most effective Futureproof scenarios are ones that manage to quickly incorporate the ridiculous (laugh-provoking) elements of their improvised scenes back into the diegetic world that gave rise to them. A successful incorporation of the ridiculous into an improvised futures scenario does not necessarily equal to an increase in its plausibility, but it does increase enjoyment of the experience, and in so doing encourages collective engagement with futures thinking. Ultimately, finding ways to harness the disruptive power of laughter in the work of XF figures is at the horizon of the Futureproof project.

What is to be gained from staging the future in a way that opens it to ridicule, however gentle? Beside the already mentioned increase in the entertainment value of the experience, which ideally translates into deeper engagement with the notion of futures thinking and higher levels of futures anticipation, or foresight, the position taken by Futureproof serves also as counterpoint to "the at times overwhelmingly serious practice of futures" (Candy, 2017, p. 2).

Nevertheless, in its design, Futureproof speaks to two issues of considerable significance to futures practice, namely the need for the creation of multiple futures scenarios and the need to provide means of experiencing futures thinking as a way to spread futures literacy.

The necessity of creating multiple futures by way of answering the challenge of future's ultimate unpredictability is raised in Dator's "first law of the future" (Dator, 1995, p. 1). As he points out elsewhere, since we can never be certain that a particular future will come to pass, we must develop several alternate scenarios to build a comprehensive view of what is possible:

> ...the most crucial of all, is an experience in one or more of at least four alternative futures that are based upon different mixes of the trends, emerging issues, challenges and opportunities from the future, and also based upon different idea about how the world works. There is no single future "out there" to be predicted. There are many alternative futures to be anticipated and pre-experienced to some degree (Dator, 2009, p. 2).

In the specific context of XF work, the development of different futures is oriented toward staging an experience that can be collaboratively shared in by a given group of people with the aim of establishing common modes of thinking about our possible futures.

Hawaii 2050, a workshop organized by Stuart Candy and Jake Dunagan with Dator's support in 2006, is one example of XF practice. The workshop combined immersive theatre techniques with futures studies content, utilizing Dator's scenario classification framework of the "Generic Images of the Future" and mixing a variety of traditional and new media presentations on Hawaii's major dilemmas. Candy, on developing Hawaii 2050:

> [we developed] a set of experiential scenarios, a series of windows on alternative versions of the year 2050 in which people could spend a short period and then have a discussion based on their varying responses to the shared experience, a sort of theatrical hybrid of theme park ride and role playing exercise. (Candy, 2010, p. 11)

Candy goes on to reinforce the importance of being able to experience futures to the process of thinking about them as follows:

> The purpose was to provide material to think with, which is to say, shared reference points for conversation among the participants. When entering a workshop, any group of participants has access to personal and idiosyncratic sets of narrative and reference concerning the future; various popular culture elements including novels, movies, TV shows, and comics, together with perhaps more formal references depending on the kind of work they do and how they spend their spare time. Even so, they all leave the room having undergone a shared experience, crafted to speak to dimensions of possibility germane to their mutual concerns as citizens -- in this case, the fate of the Hawaiian islands (although in principle, it could be anything). Given that future scenarios have no factual, 'evidentiary' referents per se, experiential scenarios and artifacts afford people the rudiments of a common vocabulary, a virtual shared experience, however basic, around which their contributions can cohere, and push off in discussion (Candy, 2010, p. 103).

The work of Sabina Head at the University of Melbourne provides another approach to XF through a theatrical performance method called "Forward Theatre". Head's work examines how "performers can bring to life a range of possibilities, opening the field to include other ways of representing futures informed by futures concepts, research and visioning techniques" (Head, 2012, p. 41). In describing her project, she highlights the multiple roles played by all of the participants:

> As part of the Futures Theatre research project, 25 students in two Year 12 drama classes were introduced to some futures tools and used them to create their own scenarios. They also observed a stimulus Futures Theatre production before the unit. Their participation involved acting in these roles: co-researchers as they researched trends and created contextual scenarios; co-artists as they wrote and performed futures informed scenes; change agents as they presented possible alternative futures to outside audiences; and critics as they evaluated aspects of the teaching unit (Head, 2012, p. 32).

Futureproof belongs within this growing field of XF work as a forum that brings people together in the common task of imagining the future and with a shared interest in developing effective ways of engaging with what is yet to come. In its reliance on improv, it prioritizes entertainment as its chief means of engagement while retaining the possibility of arriving at genuinely insightful futures in the process. The process involved in staging Futureproof and

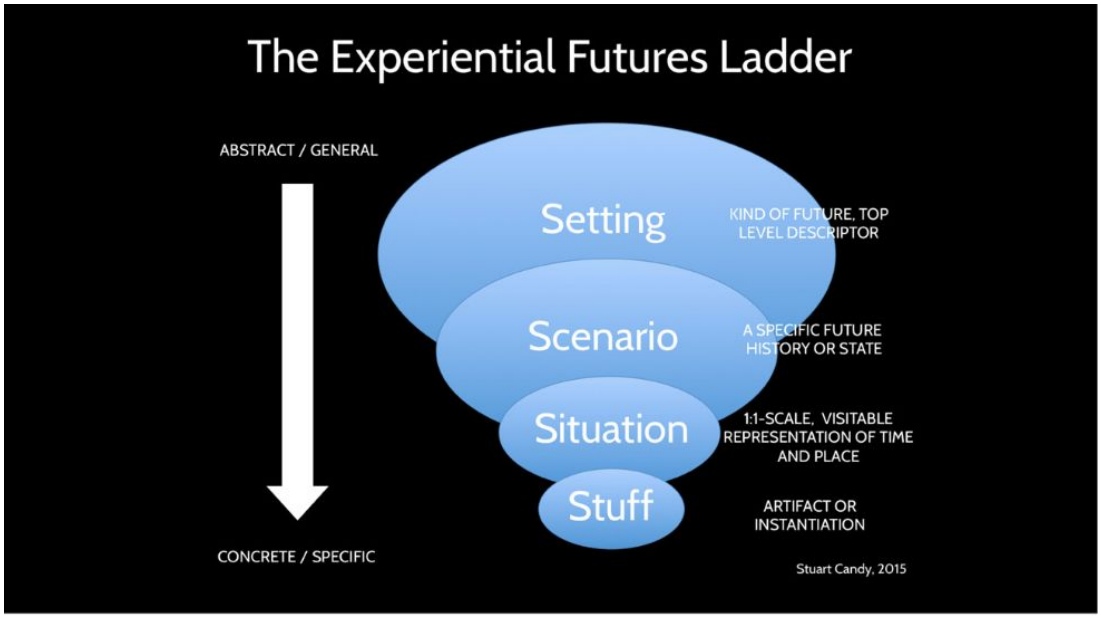
within its particular performances can be usefully conceptualized through reference to the "Experiential Futures Ladder" ("XFL") as recently advanced by Candy and Dunagan.

Experiential Futures Ladder

With XFL, Candy and Dunagan suggest that participants in futures workshops will benefit from a framework that helps draw conversation down from abstract future concepts, toward increasingly granular detail about the world or vision. They describe the value of XFL use as follows:

> Each step towards concreteness is both a choice and an imaginative leap. Many questions about that world must be answered which the abstraction of a high-level scenario can happily gloss over, and the things populating it have to be visualised and manifested tangibly. Broadly, this is why working this way stands to bring something valuable to the field; because it requires a more detailed, textural, and felt engagement with the possibility space. (Candy and Dunagan, 2017, p. 14)

They also represent this process of concretization in diagram form:



[Figure 1 - Diagram of the Experiential Futures Ladder, from Candy and Dunagan, 2017, p. 14]

This model suggests conceptual layers that are simultaneously present in a model of any proposed future world; it is helpful when considering the component parts of the Futureproof project. To begin with, it applies both to the project in general, and its individual performances. In other words, the process of moving from setting to scenario to situation (notably, Futureproof does not arrive at the “stuff” that takes futures foresight into the realm of design; this is discussed later in this document in reference to Design Fiction) is repeatedly renewed within this project’s format, varying with each iteration depending on the participants involved at each stage of the experience. The nature and scope of its impact varies for each of the groups involved in experiencing Futureproof (producer/host, guest expert, improv performers, and audience) and is tied to particular stages of the process (conceptual framework; participant selection and rehearsals; participation; critical analysis).

To present the matter differently: taking a long view of the matter, Futureproof acts as the setting for creation of experiential scenarios within the particular situation of improvisation, while on the level of each rehearsal, show, and performed scene, it offers the means to quickly generate alternative future scenarios in ways that engage all participants, although in varying and not necessarily conscious ways. There is no set way to experience Futureproof futures, which lends vitality to the project while also making it hard to evaluate.

Futureproof Format

The show format emerged from collaboration between myself as the producer (and host of the initial Futureproof run), the performers, and the guest experts. A basic outline of the show, drawn up in advance of rehearsals, was experimented on with the cast and evolved in rehearsals as well as one-on-one conversations between the show producer and its various other participants. This co-creative approach resulted in a format customized to the specific

needs of participating groups, having a positive effect on participants' engagement with the project and the value of the end product. The rehearsals were key to explaining and discussing the show format and objectives, involving a series of improv games aimed at providing the skills and tools required by a live improv (futures) show.

The second phase of research involved three one-hour long, live and public presentations of the Futureproof format at the Bad Dog Theatre, a popular improv theatre venue in Toronto, on July 20, July 27, and August 3 of 2017. After each show, a debrief with performers and the guest expert was conducted and audience feedback gathered through questionnaires and interviews. The final stage of the project involved the analysis of data gathered in the course of Futureproof shows. Scenes were assessed with an eye for relevant content and in the context of the project's overarching objectives, based on direct observation, recall, performance notes, as well as guest and audience feedback. The resulting observations form the basis for the discussion of the Futureproof format in its strengths, weaknesses, and possible future iterations.

There are four distinct groups of participants involved in Futureproof in its current form: the producer (in this case also the host), the guest expert (three over the course of this project), a cast of improv performers (five in total), and an audience, with the expert and audience changing with each show, and some alterations in cast across the performances. Tellingly, repeated immersion in the Futureproof process, which typified the experience of its host, the improv performers, and some audience members, did lead to the creation of more common frames of reference and greater group cohesion in generating futures scenarios, as was evident from scenarios and the success of some performed scenes. This speaks to the potential of Futureproof to serve as a viable method of engaging in playful exploration of possible futures while deriving concrete benefits from the process, including generating new insights and greater

futures literacy.

It is important to point out that, for Futureproof to succeed as an XF project, a level of futures literacy is prerequisite for at least one participating party, namely the show's producer(s): in this case, myself, acting also as the show host. The bigger the futures toolbox of the person responsible for staging Futureproof, the greater the chance of the experience delivering viable scenarios deserving of further thought. This being said, one of the big advantages of the Futureproof experience is that it includes the figure of a guest expert, a person whose expertise in the particular subject area serves as a departure point for the futures scenarios generated during performance, and is easily extended to more random groups of participants: the general and changing audience.

In its design, Futureproof thus has both a curated and a random component. The selection of the guest speaker and the cast of improv performers ideally follows from a firm understanding of, and genuine interest in, futures practice. On this level, Futureproof can take advantage of the scenario development that is common to futures work. In choosing the guest expert, the show producer/host narrows the field of interest for each iteration of Futureproof and has an opportunity to stress some aspects of the future over others. The rehearsals, which also provide a key opportunity for performers to develop a creative dynamic and a shared "vocabulary", can serve to prime certain approaches to envisioning the future.

For this project, beside the already established framework of experiential futures, a number of other models within the field of futures studies served as points of reference either in the conceptualization of the project, the course of its staging, or the process of its analysis. Sohail Inayatullah's Causal Layered Analysis ("CLA"), for instance, offered a useful means of thinking through future scenarios and analysing the project's results. According to Inayatullah, CLA works:

> not so much to better define the future but rather, at some level, to 'undefine' the future. For example, of importance are not population forecasts but how the category of 'population' has become historical valorised in discourse; for example, why population instead of community or people, we might ask? (Inayatullah, 1998, p. 816)

Inayatullah thus aims to stimulate critical conversation around the creation of alternative futures by deconstructing the layers of discourse used in their construction. In order to effectively discuss the future, the approach asserts, all levels of the CLA framework must be explored: litany, social causes, discourse/worldview and myth/metaphor. This allows for a more precise understanding of the issues at stake in the future world scenario under consideration, and can theoretically lead to addressing the issues and thus informing further visions of the future. Within the Futureproof context, CLA aided mainly in the deconstruction of proposed scenarios, but its role could be expanded if explored systematically in rehearsals (which I discuss further at the end of this document).

Awareness of design fiction and its role within futures practice is also helpful, even if the Futureproof format does not aim at creating futures artefacts (the "Stuff" in XFL terms). As a form of tangible speculation, design fiction creates a specific universe in order to open up a discursive space for the discussion of the possibilities arising from its "reality". It represents an embrace of an increasingly narrative and artistic approach to providing audiences with insight into future possibilities. Bleecker, in his article "Design Fiction: From Props to Prototypes" outlines how stories can enhance the development of future scenarios and artefacts:

> The films 2001: A Space Odyssey (1968) and Minority Report (2001) have been cited in support of a theoretical case for design fiction, since they both appear to have caused fact to follow fiction, and are thus used to exemplify the power of the diegetic prototype… There seems to be no substantive reason why they can't form an integral part of research into design fiction: we can study Hollywood films and use them to inform our design fiction practice, for instance taking cues on how is best to construct affecting and believable diegetic prototypes (Bleecker, 2009, p. 6).

In design fiction, the goal is to create material that is “real” - things we can touch, feel, and experience - which clearly lie outside the scope of Futureproof. While its improv format restricts its ability to *produce* “stuff” in the tangible sense, however, it also relies on (and develops) the ability to *imagine* things, both for improv performers and spectators. In other words, improv’s ability to establish the non-existent as “real” - within the ephemeral moment of live performance, on a bare stage (Futureproof included four chairs as props), with only gestures, words, and actions defining the stage - could prove helpful to the task of increasing the levels of social futures literacy.

Improv Practice

Improv ability to adapt and manage chaotic change in real time can become an asset in futures practice. In essence, improvisational theatre is a comedic and performative art form in which actors “make things up on the spot” in front of live audiences. From this perspective, Futureproof is the result of an endlessly creative process by which performers generate relatable futures situations live onstage for collective enjoyment. Futureproof leans on Candy’s claim that the role of a futurist is “more about the process than product” (Candy, 2014, p. 36), making the *process* its product.

Keith Johnstone, one of improv theatre’s pioneers, established its early techniques in the 1950s. He recalls the genesis of an early improv troupe as follows: “We called ourselves ‘The Theatre Machine’, and the British Council sent us around Europe. Soon we were a very influential group, and the only pure improvisation group I knew, in that we prepared nothing, and everything was like a jazzed-up drama class” (Johnstone, 1979, p. 27). Among core improv concepts promoted by Johnstone is “Yes, and...” thinking. “Yes, and…” is a rule-of-thumb in improvisational comedy that points to first accepting another participant’s input ("yes") and then

expanding on their line of thinking ("and..."). “Yes, and…” is a foundational component to the improv art form; it is the mechanism that allows performers to collaboratively develop a vision or “scene”, in real-time, in front of a live audience.

Johnstone developed various games and exercises that utilized “Yes, and…” thinking, which eventually formed the foundation of what is known today as “short-form improv”. This style of improv performance has gained popularity through television programs such as ABC’s *Whose Line is it Anyway*, or the widely franchised Johnstonian theatre format of *Theatresports*; both involve performers taking audience suggestions and playing theatrical games to create funny scenes. The “Questions Only” game has performers relying solely on questions in their scene work, while the “Shoulda Said” game involves audience members yelling out “shoulda said!” at any point in the performance to prompt performers to rephrase their last statement.

Futureproof draws on short-form improv in its use of several of Johnstone's Theatresports tools, including having a host to moderate conversion and audience involvement, audience voting mechanisms, and, foundationally, the “Yes, and…” mode of thinking. Following the “Yes, and…” mode of thinking within the framework provided by Candy’s Experiential Futures Ladder allows performers to collaboratively develop increasingly detailed situations within the futures scenarios engendered by the improv setting. Performers collaboratively build up the details of a potential future situation, move from an abstract and fuzzy image of a future environment at the start of a scene to an emotionally-rich and nuanced narrative by its end.

Futureproof also draws on “long-form improv” for design inspiration. In the early 1990s, improv theatre progressed from short-form, “one-off” scene work toward longer, more intricate and complex plays, due primarily to movements in Chicago and New York. This style of performance is referred to as long-form improv, and has Charna Halpern and Del Close, both

from The Second City, as its champions and the mentors of many *Saturday Night Live* cast members from that decade (Close, 1993).

While Johnstone always advocated for honesty in scenes, the game-based nature of short-form improv makes it inherently playful and "joke-driven." This is an asset for Futureproof in its intention to take a playful approach to experiential scenarios (a stated goal of the project), as well as a challenge with regard to its ability to create "plausible" scenarios with strong diegetic integrity. The emergence of the long-form improv structure, called "Harold" by Close and Halpern, creates more space for actors to "play it real". Speaking about the exploration of truth in comedy, Close contends: "The truth is funny. Honest discovery, observation, and reaction is better than contrived invention." He goes on: "If honesty is the best road to comedic improvisation, then the best vehicle to get us there is Harold." (Close, 1993, p. 15)

"Harold" is an improv performance format that puts organic discovery and connectivity of performers at the centre of the work. This principle allows performers to co-create, freely explore ideas, and "discover" the world they are in, rather than be forced into one via a constrictive game or structure (Close, 1993). Today, long-form improv continues to evolve, with theatre companies such as the Upright Citizen's Brigade, and troupes like TJ & Dave, developing their own signature styles.

In the last case, it is discovery that stands at the forefront of the efforts:

> In TJ & Dave, we aim to be in a constant state of surprise and discovery, where we don't have to make anything up; we just have to get out of the way of what is happening. We don't have to try to make it happen, we don't even have to try to let it happen, just step aside as it is happening. To pay attention and listen is so much easier. (Jagodowski and Pasquesi, 2015, p. 94)

The improv discovery process at play in long-form methods like Harold and *TJ & Dave* allows for humour and play to coexist with a more complex and dramatically rich content than that offered by short-form, joke-driven stories. This is the territory that Futureproof wants to occupy. Its intent

is to create conditions for scenes that effectively balance humour, play, and engagement with a sense of plausibility and relatability; ideally, Futureproof will create entertaining scenes that audience members can “see themselves in”. While not every Futureproof scene can succeed in this regard, even the most absurd, playful scenes offer value by including audience members in an XF scenario, and thus increasing overall futures literacy.

The way in which an improv show is received varies across participants, in line with the different expectations of the audience and cast members. Nevertheless, some best practices can be derived from the Futureproof experience. As Del Close contends, great improv is borne from “terrific connections made intellectually, or terrific revelations made emotionally” (Close, 1993, p. 11). A cast of connected, confident performers who can follow improv rules, respond to the energy of audience and other group members, and approach scenes with a collective, rather than individual mentality (prioritizing scene over individual needs), drives the success of the show. The ability to collaborate, desirable from the perspective of audience-actors relations, is indispensable to effective improv troupe dynamics. As Keith Johnstone observed, “the improviser has to understand that his first skill lies in releasing his partner’s imagination” (Johnstone, 1979, p. 93). The value of reciprocity on stage is also acknowledged by Del Close, widely credited with saying: “If we treat each other as if we are geniuses, poets and artists, we have a better chance of becoming that on stage.” Improv performers work to sustain a “yes, and…” relation with fellow actors, an attitude that overlaps well with the futures practice objective of foregoing set modes of thinking in favour of imaginative innovation.

A sense of connection is also important for audience members. The opportunity to co-create content and interact with performers are two reasons for attending an improv, as opposed to a stand-up comedy show (with the latter offering limited opportunity for participation). Tatiana Maslany, the lead actress on Orphan Black and long-time Canadian

improvisor, finds the activity liberating: “I think there's something really freeing about improv, that it's a collective, creative, in-the-moment piece. That's really exciting and really frustrating, because it's there and gone. There's an amazing interaction with the audience that happens because they are very much another scene partner” (Interviewmagazine.com, 2013). In this, Maslany touches on two critical components in the design of Futureproof: the importance of audience co-creation in the futures development process, and the paradox of using the ephemeral format of improv - “a creative, in-the-moment piece” - to engage in scenario development that looks at an even more ephemeral future.

Audience members respond positively to the often simple scenes produced by improv, which use parables, anecdotes, and storytelling to help the audience project itself into the preformed situation (Thompson, 1992). As Stephen King asserts, “when the reader hears strong echoes of his or her own life and beliefs, he or she is apt to become more interested in the story” (King, 2000, p. 125). The desirability of drawing audience members into the narrative is also marked in Candy’s approach to XF, which stresses “putting people into your diegesis - your story-world - as seamlessly as possible” (Candy, 2014, p. 35). If Futureproof can use improv to engage audiences in stories about the future while retaining improv’s ability to respond dynamically to audience input, it is in a good position to contribute positively to the aims of XF work.

The emotional release of laughing at a shared futures experience with other audience members - with humour being a defining characteristic of improv shows - is a factor deserving of consideration in the context of futures research. People love to laugh, and laughing can build an effective group dynamic, as Maeve Higgins and Jon Ronson (popular Irish comedians) suggest: “It’s connection, that’s what the show’s about. It’s about us and the audience connecting with each other… There’s something about being in the same room with somebody, reading each

other's body language, too" (O'Hara, 2016). The levity typical of improv may prove the ground in which the primary value proposition of Futureproof is seeded. Laughing collectively at the absurdity and ridiculousness of possible futures could prove an effective counterbalance to the atmosphere of crisis that surrounds most future projections. It is perhaps the best response to the single greatest challenge of futures research: the ultimate impossibility of future prediction. As long as the future is yet to pass, nothing can be actually "futureproofed". This is not the outcome that Futureproof aims for. Instead, this project focuses on making the most of one of improv's strengths, namely its ability to adapt to rapid and unexpected shifts in narrative trajectory, and investment in audience reaction as the measure of performance success and scene relatability.

Improvised Futures

In writing about one of his XF projects, *The Thing from the Future*, Candy sums up the value of the experience as follows:

> The playful interface of a card game can conceal considerable complexity, which is a large part of why it works. What *The Thing From The Future* offers as a futures method might be said to consist in the way its design and storytelling engine operates, mostly unseen, "under the hood", with the net effect that without great effort, players can engage in a quite sophisticated form of integrative, imaginative thinking, embedding abstract future-narrative notions in particular concepts for future things — all while actually enjoying themselves. (Candy, 2017, p. 8)

Within this description, a number of qualities are used to define a successful futures experience: effortless yet sophisticated, integrative, imaginative, and enjoyable. The approach aims to engage the audience in futures thinking by concretizing futures scenarios and thereby turning abstract concepts, ideas, and visions of futures into a "real" experience.

To some extent, this approach is a response to one of the challenges of futures studies: the difficulty in crafting a narrative that inspires action from its audience. A number of futures practitioners have noted the difficulty of engaging the public in futures thinking. Jarratt, for instance, notes that: “[as] an analytical futures tool, the scenario method is superb, but it does not necessarily create the most effective narratives for bringing non-futurists new insights on the future” (Jarratt, 2009, p. 7). Slaughter (quoted in Head, 2012, p. 29) reinforces this point and suggests that “one of the problems to be faced if we want to implement foresight at the social level, is how can future possibilities be made real enough to stimulate present-day responses?”

Through the exploration of experiential futures, including projects like *The Thing From The Future*, Candy seeks to create “interventions that exploit the continuum of human experience, the full array of sensory and semiotic vectors, in order to enable a different and deeper engagement in thought and discussion about one or more futures” (Candy, 2010, p. 3). This goal of engagement has further action at its horizon: there would be no need to increase future literacy if there was no need for a language with which to speak of the future. In designing and staging his experiential futures, Candy is looking for:

> ways to translate or articulate the established, routinised foresight outputs with which we are traditionally comfortable talky workshops, scenario documents into an extended range of forms with which still too few futurists are professionally familiar at this time (filmmaking, theatre, and the design disciplines, for starters). It means becoming transmedia producers as well as the transdisciplinary thinkers that we already try to be. This in turn entails not only participating in, but likely often facilitating, collaboration across even more diverse skillsets, and broaching new boundaries such as those between the expressive/narrative arts and analytical scholarship in addition to the disciplinary silos which the field already habitually challenges. (Candy and Dunagan, 2017, p. 15)

The biggest challenge for futures research, as he continues, may “have less to do with generating and broadcasting ideas about the future, than (...) with *designing circumstances or*

situations in which the collective intelligence and imagination of a community can come forth" (Candy and Dunagan, 2017, p. 15, original emphasis).

Against this background, Futureproof appears as a platform for staging multiple futures scenarios in a format that lends to repetition while being entirely singular in its experienced effect. The participation of an uncurated public in the Futureproof experience is one of its notable strengths. By using improv performances as its vehicle of future scenario presentation, Futureproof attends to a crucial component of futures thinking, namely its popularization, positioning enjoyment as key to securing audience attention. With just one run of Futureproof performances completed (and another one in the planning), the scenario of this approach developing a committed audience and a common futures vocabulary is already likely enough to warrant further exploration.

The Futureproof format has much to recommend it as a model of staging experiential futures for futures practitioners. It can serve as a framework for scaling the Experiential Futures Ladder within each of its improvised futures scenarios, generating new ideas and presenting a more concrete vision of the particular futures being shaped. It allows for considerable adjustments when it comes to futures studies content, as curated by the show producer/host and established in rehearsals in collaboration with the improv cast and guest expert. It is also replicable, and can be tailored to the expert's subject area, the particular strengths of the improv performers, as well as the location and interests of projected audiences, allowing for a great measure of flexibility in establishing an effective dynamic between its component parts..

Replicability is an important criterion for futures work, and one that Futureproof satisfies while requiring relatively little time and resources, another significant consideration for the field in general, and XF in particular. As Candy observes in "Experiential Futures: Stepping into OCADu's Time Machine":

> Budgets were shoestring, and production schedules were tight. These time and resource constraints are worth noting, because they go to question of replicability. Events produced by experts and costing thousands of dollars do not necessarily offer a viable model for most foresight teachers of practitioners to use in their own contexts. In contrast, what my collaborators and I have done with students in Singapore and Toronto can readily be done elsewhere. (Candy, 2014, p. 35)

The same is certainly true for Futureproof; the project initially requires only one person to drive its futures component and can draw on a number of available resources (in even moderately urban settings) for its other components. A dedicated improv theatre stage is not necessary, and the level of professionalization among improv artists can vary in line with circumstance. Given the broad scope of fields that intersect with future studies interest, the options for a guest expert to serve as source of reliable data and feedback for the improvised scenarios should be many; given that this figure guides part of the content of improvised scenarios, the choice should be made with view to existing and possible overlaps between the expert's area of interest and the aims of XF work.

Futureproof also resembles Candy's Time Machine (2014) through their mutual use of improvisation; however, Futureproof makes improvisation its primary vehicle of scenario creation and performance, while the Time Machine relies on stricter narrative control (scripts and story outlines are often used) with room for improvisation during the performance. Forward Theatre (Head, 2012) also bears mentioning here as a form of performed experiential theatre, but offers fewer opportunities for improvisation as it relies entirely on scripted and uni-directional storytelling. Futureproof aims to occupying a fully improvisational futures space, closer to Candy's The Thing From The Future, where discovery, creativity, and engagement are the primary value drivers.

One of the great opportunities and challenges of using the Futureproof format stems from the rapid development of various futures scenarios within each show and the broad

spectrum of its participants. As a flexible, playful, and creative means of generating and communicating scenarios, improv brings a needed element of entertainment to the work of XF. In its reliance on imagination - of the experts and the improv artists in projecting their ideas of the future onto the stage in a way to appeals to the audience, and of the audience engaged in interpreting the reality created for them - it works to improve its participants' ability to envision the future despite its inherent unpredictability. The underlying assumption of this approach is that can serve values other than entertainment; that its reception can extend beyond immediate enjoyment (of live performance) to a prolonged engagement with the idea of making futures present.

If relevant data and research can be presented in the form of a compelling story and performance using improvisation, the combination could be of significant value to audiences. As Jarratt explains: "A better story–one that fits an individual's conscious and subconscious, will be more effective in bringing new insights and understanding. It will then give us more leverage when we need to shift expectations, overcome biases and conventional ways of thinking" (Jarratt, 2009, p. 9). Jarratt also highlights the importance of bringing the human perspective to bear on the data, something that the co-creative storytelling tool of improvisation is in a good position to achieve: "People want to understand, or need to understand, the human side, 'Where am I in this story?' Ultimately, the goal of reframing the future is to engage the emotions in the service of better understanding future events and changes. We accommodate the analytical in order to be taken seriously enough to be able to tell the human story" (Jarratt, 2009, p. 11). In his book *The Secrets of Great Communicators*, Thompson adds to this perspective by noting that if a "well-told story" involves feelings—a core principle of good improv scene work—then "people will remember what you say" (Thompson, 1992, p. 36). A likewise focus on the pedagogical potential of XF work is found in Anna Lehtonen's assertion that "In the field of

education for sustainability and a sustainable future the value of multi-method teaching, using word, art, drama and debate, is argued to be efficient and meaningful methods for learning and developing a sense of agency" (Lehtonen, 2012, p.105).

The Futureproof format enables the inclusion of multiple perspectives on what the future might hold within each generated futures scenario and futures show within the performance run. Scenario development in Futureproof is a process that starts with the conceptual work done by the show producer and the practical work performed during rehearsals with chosen improv artists, and continues within each performance as well as, ideally, in their aftermath (through discussion, desire to participate in such an experience again, or the generation of other XF ideas). Improv is a platform that unlocks the imagination and creativity of all participants in the staged experience, and imagination is crucial to the work of futurists. As Johnstone puts it: "You are not imaginatively impotent until you are dead; you are only frozen up. Switch off the no-saying intellect and welcome the unconscious as a friend: it will lead you to places you never dreamed of, and produce results more 'original' than anything you could achieve by aiming at originality" (Johnstone, 1979, p. i).

There is perhaps some discord between the emphasis placed, here and in Futureproof, on the importance of feeding the creative imagination and an assumption frequently voiced in futures research, namely the desire for "plausible scenarios", which requires a level of deep understanding, knowledge, and data that must first be collected and then interpreted (Mietzner and Reger, 2005). It is plausible scenarios that are seen as most desireable from the futures perspective and provide most immediate value to organizations today. Ian Wilson, in his article "Mental Maps of the Future" (Wilson, 1998), also suggests that plausibility is a key criteria for evaluating scenarios; the selected scenarios have to be capable of happening or their credibility can be questioned. This is especially true of commercial futures studies endeavours, where

today's organizations seek scenarios built on reliable data and actionable strategies. The desire for accuracy and plausibility is often desirable in this context, which contributes to the time-consuming nature of developing future scenarios.

Due to its reliance on improv, Futureproof does not set this as the aim of performance: accuracy and plausibility are positioned as beneficial, but not requisite outcomes, with emphasis shifted from outcomes in general and onto the process of scenario generation itself. The idea of "diegetic integrity" identified as a crucial component of XF work by Candy appears in a different light when dealing with improvised futures scenarios. Improv brings its own set of rules to the stage, impacting the way in which the scenarios are generated and received. The strength of improv stems from its ability to rise to the challenge of the unexpected as it arises in scene work, regardless of context. Futureproof leans on this inherent quality of improv in building audience engagement with presented futures. Thompson thus highlights the importance of humour when communicating scenarios :

> In laughter audiences are giving an emotional response almost in spite of themselves as they are "caught up in the message" through laughter. He [Mackay] recommends humour for "unlocking the emotions", and beginning with amusing touches to "get people into the mood of relaxation". Telling a story with humour in it, " adding the absurd in ourselves and the world" works well because it is the most infectious communication technique. It bonds the speaker to the audience through the sharing of laughter, and more: it can also function as our way of dealing with problems. (Thompson, 2001, p. 47)

Futureproof embraces the humour element of improvisation, making it part of the convergence between process and output - the fact that performance provides both the means of generating and of communicating a given scenario. This convergence vastly improves the speed at which scenarios can be developed, the level of audience participation, and can have an impact on the direction of the narrative, as performers respond to audience reactions in real-time and can shift the plot toward more fruitful territory (read: funnier; more emotionally-rich; more *connected* to what the audience wants to see).

The co-creative approach to future scenario generation exemplified by the Futureproof format resonates with a point raised by Sanders and Stappers, leading thinkers regarding co-creation and design: “There is certainly a need for new approaches to design if we are to arrest the escalating problems of the manmade world and citizen participation in decision making could possibly provide a necessary reorientation”. They go on:

> The application of participatory design practices (both at the moment of idea generation and continuing throughout the design process at all key moments of decision) to very large scale problems will change design and may change the world. Participatory design has the potential, as Cross described, ‘to arrest the escalating problems of the manmade world’ (Sanders and Stappers, 2008, p. 9).

Futureproof provides an arena for futures thinking to becomes part of an entertaining and co-creative experience in pushing the limits of collective imagination. Applying too many analytical constraints to the scenes could reduce their entertainment value. Looking for the successful balance of these two competing factors is one of the motivating drives behind this project, with the belief that improv can be usefully combined with XF research without sacrificing (indeed, by making the most of) its entertainment value as its horizon.

To return to the main question behind this research project: how can improv aid the process of generating futures scenarios? Based on the Futureproof experience, some aspects of the answer can be outlined. To begin with, improv does appear to foster audience engagement with its staged futures experiences by adding an element of levity to its treatment of a potentially anxiety-inducing pursuit. Futureproof performances generated laughs along with multiple future scenarios, proving attractive to audiences, which is promising from the perspective of this project serving as a model for further futures performances of its kind. Its potential for delivering new insights into futures work requires further investigation, as the input of the improv artists and the audience could lead the guest expert to new insight and perspectives by expanding their set of experiences to tap into. Immersion in an improvised

performance could also prove instructive for all participants as an exercise in ability to make sudden leaps of logic and adjust to the unexpected. As the actor Alan Arkin once observed: “One of the things I learned from improvising is that all of life is an improvisation, whether you like it or not. Some of the greatest scientific discoveries of the 20th century came out of people dropping things” (Abele, 2009). Finally, the Futureproof process suggests that the demands of improv can lead to a greater level of futures literacy among project participants, with the project offering multiple opportunities for conversation and critical thought. As Candy stresses in “Experiential Futures”: ‘‘the design ‘output’ is not the end in itself, but rather (...) a means to discover, suggest, and provoke” (Candy, 2010, p. 188).

PROJECT DESCRIPTION

Co-creating Futureproof

The output of this project - the Futureproof show - emerged from a collaboration between performers, guest experts, and, in the project's final stages, audience members. This co-creative approach allowed for the customization of the show format to best address the specific needs of those groups, thereby increasing the value of the end product. Potential show formats were made functional quickly and presented to performers and audiences early in the design process, in advance of finalizing the format, in order to allow for a better understanding of people's range of reactions and the incorporation of observations drawn into subsequent iterations of the concept. This approach leverages elements of the Human-centred Design pioneered by Tim Brown and his team at IDEO. They underline its importance to the design process in their *Design Kit* as follows: "The point is to put something out into the world and then use it to keep learning, keep asking, and keep testing. When human-centered designers get it right, it's because they got it wrong first" (IDEO, 2014).

Guiding Principles

Four key points guided the design process with an eye to maintaining an effective balance between plausibility and entertainment. Firstly, emphasis was placed on the entertainment value of the shows over their potential contributions to research, since entertainment in Futureproof is the primary means of engaging the audience and cannot be sacrificed. It is the motivating force driving audience members to attend a Futureproof show and to return for its further instalments.

The performers were instructed to focus on real human interactions in their improvisations, however, as a means of fostering more plausible scenes. The starting assumption here is that asking performers to “play it real” and create scenes on some level true to life (rather than absurd, unrealistic fantasies) would increase the potential insight and relatability of the presented futures. Thirdly, establishing a positive collaboration between the three participating groups (performers, subject expert/guest, and the audience) served as a key benchmark of success, based in the belief that audience engagement increases within an environment of open participation. Finally, each stage of the process (conceptualization, rehearsals, and the performances taken individually and as a project) aims to further the evolution of the show. Different themes, techniques, and formats were developed and introduced with each iteration of the format, a process intended to continue until the show format is customized for effectiveness to a reliable degree.

Design Components

Futureproof is based on five foundational formats and concepts that are discussed individually below:

1. “**Truth in Comedy**” as a reference for scene work
2. The **Armando** format as a reference for external monologists to inspire scenes
3. **Design Thinking** → **Theatresports** as a means to structure co-creation and balance entertainment and plausibility
4. Jim Dator’s **Generic Images of the Future** to structure the narrative arc of the show
5. **Scene-painting** to help performers quickly and collaboratively create vivid futures settings, scenarios, and situations

Truth in Comedy

The concept of “truth in comedy,” as developed and presented by Close in *Truth in Comedy: Manual for Improvisation* (Close, 1993), signals an improvisation method that foregoes the easy

joke in order to showcase the humour of everyday life through playing with and subverting audience expectations. Its underlying assumption is that these everyday human interactions are of primary interest to audience members, who look for real emotion and genuine human connection rather than a series of one-liners in improv performances. This concept is critical in the context of this project, since the explicit aim of Futureproof is to create a show that balances entertainment with relatable experiential futures. Although the improvised scenes should be entertaining, and with entertainment we must accept a sense of the ridiculous, they should still be played honestly, realistically, and with commitment.

Armando

The Armando is a long-form improv method named after its creator, Armando Diaz, a Chicago Improv Olympic teacher and player. Its departure point is a storytelling-style monologue based on an audience suggestion. This monologue then serves as inspiration for players in improvising scenes, and may be continued at later stages of the performance. In Futureproof, the Armando structure is the primary mechanism for performers to engage with guest experts, whose monologues and interviews bring credible research and data into the show with the view to increasing the plausibility of its outcomes. Futureproof performers use the guest expert's monologue as the departure point of their scene work, taking inspiration from the content of their talk to explore their own interpretation of their vision in interplay between other performers, audience reactions, and the guidance of the host.

Design Thinking → Theatresports

Futureproof further seeks to balance plausibility and entertainment through the application of a Design Thinking framework that exposed the two alternating modes of thinking: divergent and

convergent (British Design Council, 2015). In this model, divergent thinking is creative, associated with the big picture and the generation of possibilities; convergent thinking, in turn, is analytical, deductive, and rational, and responsible for decision-making.

The benefit of the design thinking approach is that it accounts for the two modes of information processing that influence how people think and, consequently, how they act. The psychologist Seymour Epstein identifies these modes as “rational” and “experiential,” and, as Candy points out, “a key implication of the ‘dual process’ conception of human experience is that both sides of our processing system need to be taken into account if the major challenges facing humanity are to be met” (Candy, 2010, p. 79).

Drawing on this insight, Futureproof is designed to prompt the activation of both modes of processing. The expert knowledge of the guest, which represents rational or convergent processing (in that they use trends and data to guide their perspective of the future), is provided through monologues and on stage interviews. The improv troupe then performs scenes based on this perspective, shifting the primary mode of thinking over to divergence. Their creative exploration of a concept or idea raised by the guest generates, in turn, new ideas and relationships that the guest and audience can “converge” upon in their reception and discussion of the scene.

A parallel can be drawn here to the voting/judging mechanism popularized by Johnstone’s Theatresports. In Theatresports, two teams tackle improv game challenges that are evaluated by the audience and judges on a scene by scene basis. At the end of a Theatresports show, the team with the highest score is named the winner. With Futureproof, the use of the Theatresports voting mechanism aids the convergent or rational mode of thinking by assigning key roles to the guest expert and the audience at, respectively, the onset and conclusion of each improvised scene. This way, instead of seeing back-to-back scenes driven by performers’

divergent perspective and immediate audience response, we see scenes interspersed with rational - convergent - feedback on how accurately it reflects the research, and the adjustments that the cast could make in future scenes. In short, the Theatresports voting system plays a part in making Futureproof constructively co-creative.

In his workshops for Theatresports players, Johnstone often tells participants: "The improvisers should be funny, not the judges. The judges are the stern parents. The improvisers are the naughty children" (Dudeck, 2014). Johnstone's separation of tasks between performers and judges resonates with this project's aim of utilizing two modes of thinking in the development of scenarios, with the "naughty" performers in a divergent role, the "stern" guest expert in a rational and convergent one, and the audience shifting between modes in the process of participating in the show and each scene.

Generic Images of the Future

Another pillar in the design of Futureproof is Jim Dator's Generic Images of the Future, characterized as: Continued Growth, Collapse, Discipline, Transformation. Each of these model world views is simply scripted, yet rich with vivid detail and possibility; they offer simple scenario frameworks with the appropriate level of detail and narrative constraint. In Futureproof, Dator's generic images of future frameworks serve performers as "guideposts" for the scenes, helping to set their direction, style, and tone. Performers were provided with the following descriptions of Dator's Generic Images (Dator, 2009) as part of their preparation process:

- "Continued growth" is the "official" view of the future held by all modern governments, educational systems, and organizations. According to this model, the purpose of social life in the present and recent past is to build vibrant economies, and develop the people, institutions, and technologies to sustain civilizational growth and change indefinitely.
- "Collapse" represents a vision in which economic, environmental, resource, moral, or ideological factors, or a failure of will or imagination, has led to the destruction of the world as we know it. The collapse scenario is often prompted by external factors, such as an invasion by foreigners, or threats from outer space (such as meteors), as well as

natural disasters such as hurricanes, tsunamis, fires and earthquakes, a new ice age or rapid acceleration in global warming, and new or renewed pandemics. n its darkest version, a collapse scenario ends with the extinction of humanity.

- "Discipline", as the third alternative future is generically referred to, responds to the human tendency to confront an unknown future by actively seeking to preserve an existing state of affairs. Continuous economic growth is seen as a threat, with focus shifting to social survival and fair distribution of goods. A rise in fundamental values across a broad spectrum of social life speaks to the search for a purpose other than the pursuit of wealth and consumerism.

- “Transform”, the fourth alternative future model, focuses on the transformative power of technology. It is a world redefined by robotics and artificial intelligence, genetic engineering, nanotechnology, teleportation, space settlement, and the emergence of a "dream society" as the successor to the "information society". It welcomes the transformation of all life, the possibility of a "posthuman" form existing on an entirely artificial planet as an extension of intelligent life from Earth.

The explicitness to which audience members were aware of the Generic Images structure varied between Futureproof shows. By design, these elements were intended to be hidden, as was the case in show 1; however, in show 2 the structure was accidentally mentioned by the expert, though few people noticed; then it was explicitly mentioned in show 3 by the host when introducing the show. Awareness of the generic images had little impact on the audience enjoyment, though by design, not revealing their existence to the audience was intended to prevent audience bias. In other words, if the audience doesn’t know the performers are aiming at a “Collapse” scene, they won’t judge what they see with this in mind.

Scene Painting

The emergence of scene painting, a classic improv game (Improv Encyclopedia, n.d.), bears special mention here. It was not initially part of the design, but quickly emerged as a necessary tool for performers, and by extension audience members, to descend the Experiential Futures Ladder and increase the concreteness level of the improvised future. Through scene painting,

described in greater detail in the “Insights” section of Rehearsal 1, performers are able to quickly build a common view of the future setting, scenario, and in some cases the situational levels of the XFL. Futureproof relies on its ability to tell an improvised story seamlessly, so that it may appear to have been scripted. In a high-quality improv show, nothing should appear to be a mistake. Scene painting, by adding a level of “telling” rather than “showing”, serves to counterbalance the speed of scenario creation, decreasing the chances of misinterpretation by the audience.

Sample Show Walkthrough

The following plan served as a guide in directing the flow of activities that comprised each Futureproof show:

1. The Host welcomes the Audience, warms them up with an improv game, and introduces the Guest Expert.
2. The Host sets a time horizon in the future (from 2020 to 2100) and interviews the Guest Expert about their projections for that time in the context of their area of expertise.
3. The Performers then create four scenes using interview content as inspiration. Each scene is framed as one of the Generic Images of the Future, in order of: *Continued Growth, Collapse, Discipline,* and *Transformation*.
4. The Audience and Guest Expert vote on each scene at its conclusion. The audience judges its entertainment value, and the guest its potential to provoke thought and insight.
5. After all four scenes have been performed, the host tallies the score to identify the “preferred” future, which becomes the basis of one more “lightning scene”.

The Role of the Host

In a 2014 article on experiential futures, Candy asserts that:

> The heart of the futurist’s job is to create spaces of heightened understanding, strategic engagement, and creativity. Our work is fundamentally about enabling insights that can be useful to others, rather than merely dispensing such insights. This means that the role is more facilitative than communicative, more exploratory than predictive, and more

> about process than product. It is often usefully framed as the design of strategic conversations, but zoom out one level from that and we find the *design of catalytic situations.* (Candy, 2014, p. 36)

In the Futureproof format, the host plays the role of the facilitator and lead futurist, serving as a link between the performers, guest expert, and audience; they moderate the co-creation process, helping to maneuver the show towards its intended outcome: the rapid creation of entertaining and plausible future scenarios. Sanders and Stappers, in their paper “Co-creation and the new landscapes of design”, propose that the role of a facilitator is especially critical when working creatively:

> In the traditional design process, the researcher served as a translator between the ‘users’ and the designer. In co-designing, the researcher (who may be a designer) takes on the role of a facilitator. When we acknowledge that different levels of creativity exist, it becomes evident that we need to learn how to offer relevant experiences to facilitate people’s expressions of creativity at all levels. This means leading, guiding, and providing scaffolds, as well as clean slates to encourage people at all levels of creativity. It is not always the case that we want to push people beyond their level of interest, passion and creativity. Different approaches to inviting and involving future users into the design development process will be needed for the different levels of creativity. (Sanders and Stappers, 2005, pg. 8)

The host’s function in Futureproof is centered on creating a supportive, fluid, and creative environment for everyone to participate in. In practice, it includes the audience warm up, introductions (of the show, cast, guests, and concepts), commentary on scenes, conducting the discussion, managing the voting process, and sometimes naming and ending scenes.

[Figure 2 - Futureproof Show 1. Host gets the “expert opinion”, Author’s own, 2017]

The role of the host for this iteration of Futureproof had the additional responsibility of curating the cast of performers, guest experts, and overall format and framing of the show. The host in this sense was also the show producer, coordinating logistics, creating and distributing marketing material; the show director, responsible for the creative aspects of the production such as costume design, branding, show design, and performer coaching; and finally, the MRP researcher analyzing the process and outcomes of each Futureproof staging. As host, it is significantly advantageous to have a deep understanding both futures and improv practices, as familiarity with the toolsets of each discipline opens a multitude of new configurations of the Futureproof format which provide additional value to diverse audiences.

Cast and Expert Selection

The cast selected for the initial run of Futureproof (July/Aug 2017) comprised of professional improv performers who received a percentage of ticket sales (33%) for their participation as a troupe. They were chosen for their level of improv skill, their natural ability to “play it real”, patience, resourcefulness, and their “sense of the future” -- i.e. how familiar they

are with science fiction tropes, emerging technology, and other future-friendly concepts. The last point was a consideration based on the assumption that performers with a more extensive frame of “future” references to draw on would have an advantage in quickly generating relatable future scenarios. Though no explicit prior knowledge of futures studies is required to perform Futureproof, exposure to future-friendly ideas and technologies does enhance a performer's ability to add detail to the scenes (described in more detail in the ANALYSIS section via cast member Evany)

The Guests Experts for the initial Futureproof run were drawn from the author’s personal network, but could have been sourced by exploring the professional networks of potentially engaging fields. The following criteria applied to Guest Expert selection: in-depth knowledge of a subject matter; ability to frame the subject for the performers and audience concretely, optimally as an experience or narrative; a related ability to tell a story, participate in interviews and discussion, and engage with the audience; and, ideally, some experience with Futures Studies or related fields and interest areas.

The selection of the time horizon that was the focus of each guest monologue was experimented with over the run of shows. In show 1, the horizon was selected during the show, while for show 2 and 3, the horizon was provided to the guests in advance, in order to lower the preparation pressure.

ANALYSIS

This part of the project relates the process of working with a group of five professional improv performers over the course of Futureproof rehearsals and performances in Toronto during July and August of 2017. It attends to the ways in which the experience, especially in its iterative aspect and the context of received feedback and insights, matches the intentions behind this project's design.

Rehearsal 1

Cast:

- Nicole Passmore
- Anders Yates

Rehearsal Format:

- Physical warm-up
- Mental warm-up
- Space exploration
- Scenes from the future

Insights:

The rehearsal began with an explanation of the vision behind the show and emphasis on the importance of "playing it real" and establishing a sense of patience and discovery. The performers were instructed to "discover the future environments all around them," and to be more honest and truthful, and less wacky, in their performance. The rehearsal included warm-up exercises, of which one offered some advantages to the Futureproof process that are worth mentioning here. In a version of the mental warm up exercise "5 Things" (Improv Encyclopedia, n.d.), which involves connecting five things from the same conceptual family (for example: "five

small town newspaper headlines"), the performers were asked to link two disconnected moments in time in five steps, by offering a sequence of events to connect them. This technique helps performers to make the leaps in logic required to create future worlds and primes them to think five moves ahead.

The first exercise to directly explore the future focused on "space exploration": as performers moved in silence and independently around the rehearsal space, they received instructions on what to do and think. Their first task was to discover an environment from the future around them, and to pick up and use an object specific to that space once they established it. Numerous environments underwent such "exploration," and the resulting improvisations were clear and purposeful enough to be recognizable.

During the rehearsal debrief, both performers spoke of an instinct toward "house things". This speaks to the importance of easily accessible frames of reference in the future scenario generating process: a house is an environment that most North Americans are familiar with, providing a readily available reference point for the performers and the audience, which is important from the perspective of live performance. Interestingly, although Anders first instinct was to think about shaving, another readily available reference point of a daily activity familiar to most, he decided to go with a more exotic location (a zoo), with good results.

Both performers mentioned that they were usually inspired by already existing things. Anders recalls: "At one point, at the zoo, I loaded an animal into a machine and I thought, I wonder if this machine is going to cook or clean this animal. Then I decided it would clean the animal because I'd seen a YouTube video about a machine that gives your cat a bath." Nicole, in turn, repeatedly sought inspiration in the popular BBC television series about technology and dystopic visions of possible futures *Black Mirror*, so much so that she called this referential tendency the "*Black Mirror* Effect". In both instances, the performers used their own experiences

and knowledge in creating their future worlds, underlining the importance of being able to utilise shared frames of reference during the live shows by way of engaging the audience.

During scene work, the performers were given two suggestions to help set up their scenes: a year in the future, and a location or object (for example: 2020 on an airplane). The performers began by creating scenes in the simple environments of an airplane and a food court, but the outcomes lacked playfulness and sense of connected energy, the two critical elements of a successful improv show. A number of factors could explain this initial sense of disconnectedness, including the need for performers to familiarize themselves with each other and the concept, and the amount of information they were given to process for the first time.

Both performers found “keeping it real” challenging, and were unsure of how to demonstrate the sense of “futurity” without outright stating “we are in the future”. As Nicole confessed: “I made several choices to arrive at my vision of the future, but I couldn’t find a good way of communicating them to Anders.” In order to resolve these issues, the option of beginning the scene with narration, or “scene paint”, was suggested. Using “scene paint”, the performers could verbally “paint” (narrate) characteristics of the world on the stage before playing out the scene in character, which effectively gives performers the permission to “say not show.” Furthermore, the performers were allowed to set aside “keeping it real” in the scenes and to focus instead on injecting more playfulness into the performance.

The final scenes of the rehearsal were conducted with the above changes in play with positive outcomes. The addition of the scene paint helped the performers, and eventually the audience, to quickly and explicitly build a common image of the world and the specific environment being presented, which helped to advance the scenes and create connections between the performers. Freeing the performers from the need to “play it real” proved helpful, and, contrary to initial expectation, did not lead to radically implausible scenes. Instead, the

elimination of this performance constraint reduced the cognitive load of each cast member, and allowed them to concentrate more readily on connecting with each other and “following the fun”.

Rehearsal 2

Cast:

- Nicole Passmore
- Evany Rosen
- Anders Yates

Rehearsal Format:

- Physical warm-up
- Mental warm-up
- Scenes from the future
- Dator Scenes

Insights:

The second rehearsal session started with some warm-up exercises and quickly progressed to scene work. The insights obtained from the first rehearsal continued to be useful: scene painting reliably provided a strong narrative anchor for the performers (and later the audience), and the scenes became more playful on removal of the “play it real” constraint. On this occasion, however, the scenes were also more noticeably “implausible” than in the previous rehearsal. Part of their implausibility can be explained with reference to the fact that they were based entirely on the performers’ perspectives, and did not include the analytic input from a guest expert. Since improvisors are naturally playful and ridiculous, the scenes were naturally playful and ridiculous. This tendency worked from an entertainment perspective, leading to connected, fun, and honest scenes, but it also signalled a possible challenge in reconciling this goal of the project with its other aim of also create plausible future scenarios.

The addition of Evany to the group drove home the importance of performers having a broad frame of "future" references to draw on in their scene work, an issue already noted in Rehearsal 1. As an avid science fiction fan, Evany was able to bring a number of technological, science-fiction, and "future-friendly" concepts and ideas to the scenes, which made them more detailed and conceptually-fruitful. The second rehearsal also introduced performers to the concept of Jim Dator's Generic Images of the Future and their function as frames for Futureproof scenes. The four concepts of "Continued Growth", "Collapse", "Discipline", and "Transformation" were discussed to set up the process of generating "Dator Scenes." Additionally, in order to introduce more data into the format and as a means to shift the rehearsal structure closer to the full Futureproof vision, the performers listened to the a monologue about the future to simulate the presence of a guest expert on the show. The offered vision of 2030 focused on smart cities, as well as the advancement of data analytics and its impact on personalization; the scene created by the performers was compelling, with several trends emerging.

Performers continued to draw on personal references to create detail in scenes, with numerous popular culture reference made over the course of four scenes, which took the form of a single joke or statement, a theme in the scene, or even a characteristic of the world. For example, in Scene 4 (Transformation), the performers created a world that was clearly inspired by *The Matrix*, with performers plugged into an artificial reality, while in Scene 2 (Collapse), a group of rabid elderly people attack and invade a hospital, playing on common tropes from apocalypse and zombie films. The role that an individual reference library plays in creating future scenarios suggests there is similar value in using Dator's Generic Images to help define the frame of reference most relevant to a given scenario. By priming performers with these four shared frameworks, they can begin each scene with more alignment; instead of starting with an

infinite number of “smart cities in 2030” references, they can zero in on a pre-established aspect of the projected future, in line with the concepts of continued growth, collapse, discipline, and transformation.

Besides bringing in their individual reference points, performers also rely on deeper, more universal ideas and tropes in their scene work, like the socially-stratified world defined in the Discipline scene. Here, the application of Causal Layered Analysis (Inayatullah, 1998) makes sense as a means of discerning the logic at play in a particular scene through identification of the layers that constitute the created world; a performer’s use of reference may signal the presence of worldview and mythic aspects in the scene that could prove key in assessing its plausibility. In a related point: it was already during the second rehearsal that a certain tendency for scenes to evolve toward “robe-based” scenarios, meaning ones in which performers resort to druid-like, return-to-nature settings once they reach a future horizon they cannot see beyond. That there is something universal about this horizon limit is evidenced by the consistency with which various performers chose this direction in their future worlds. There are numerous examples of this phenomenon in both rehearsals, including a Transformation scene from Rehearsal 1 set in 2100 in which the performers lounged near a stream playing with “memory orbs”; and a scene in Rehearsal 2 where a stern father and rebellious son explore a cave of “crystal computers”.

Finally, the second rehearsal revealed that the “futurity” of the scenes - the different technologies, environments, and interactions constituting a given world - does not vary significantly across short time horizons. In other words, the future of 2030 is unlikely to feel much different that the future of 2035. As a result, only three time horizons for generating different future worlds were identified as necessary to the process: near (2020 - 2040), medium (2040 - 2070), far (2070 - 2100).

Rehearsal 3

Cast:

- Matt Folliott
- Evany Rosen
- Becky Johnson

Rehearsal Format:

- Physical warm-up
- Mental warm-up
- Futureproof run through x 2

The third rehearsal included two new performers, with one of them new to the format, which served as an opportunity to review the best practices that had emerged from previous rehearsals, namely: use scene painting to set up the future world and use the environment within them; apply Dator's frames of Continued Growth, Collapse, Discipline, and Transformations; and work to maintain plausibility while also having fun and following your impulses.

The final rehearsal prior to the live shows centered on creating experiences as close to the live show format as possible. YouTube videos featuring the future visions of thought-leaders were used in place of the guest expert (with monologues from Elon Musk on AI and Bill Gates on disease selected as inputs). The difference between the two monologues in their content and style had a big impact on the performers' scene work.

The Elon Musk monologue (Recode, 2017) was filled with detail and vivid descriptions of the future experience; conversely, the Bill Gates monologue (Vox, 2017) was structured more as a presentation of trends and factors that are driving his vision of the future. Initially, both examples seemed like valuable and interesting perspectives on the future, but the performers really struggled with the Gates monologue. Musk's ability to convey his vision as a story was an

important factor in helping the performers create successful scenes. Their details were easier to understand and more readily visualized by the cast, which increased their alignment. The fact that Gates' views were expressed abstractly, as data, made his vision more difficult for the performers to interpret and turn into a story.

Part of the success of the AI scene that was based on Musk's monologue related to the long-time improv experience of both performers. In addition, Evany was able to once again bring her depth of knowledge and strong "sense of the future" to the scene, creating a relatable and future-feeling vision of an elementary school in 2050: Acting as a young girl talking to her mother about school, Evany says: "I haven't been comfortable at school since the principal became the building. He talks to me in the bathroom. It's weird." The AI scene from Rehearsal 3 is perhaps the best example of the right balance between plausibility and playfulness that Futureproof aims to strike. In this reality, AI is at scale, explored by a performer with a foundational understanding of what AI is and what it might be capable of, which allows them to explore the scene in more detail. The lack or shortage of futures references to draw on appears as a distinct disadvantage for performers in this context.

The ability to make something out of a weakness is an important skill of improv performers, as evidenced by ways in which Becky and Matt, whose knowledge of science fiction is limited, responded to the challenge of the "disease" future vision suggested by Gates' monologue. The scenes they created were driven primarily by human connection and emotional discovery, revealing human truths within future environments. For example, their "Collapse" scene presented two members of the corporate "rat race" meeting at a watering hole in a post-apocalyptic future, with the relationship between these two characters becoming their focus. Their backstories (Uber Driver and Pharma Rep), along with their fears, hopes, and emotions, were developed in place of further details about the future world. This approach

addresses one of the goals of Futureproof, namely the creation of truthful, emotional, and connected scenes. Even without much detail, the scene was a valuable exploration of a relatable, human story set in a future context.

The final rehearsal brought into sharp focus the fundamental tension between plausibility and playfulness (entertainment) that performers had to contend with in the Futureproof model. Embracing playfulness and allowing the performers to follow the fun tends to increase the entertainment value of the show, but at some cost to plausibility. The question of whether there exists a way to reconcile the two, and maintain performers' freedom of expression along with a sense of plausibility, became leading in the days ahead of the live show.

Show 1

Cast:

- Matt Folliott
- Nicole Passmore
- Evany Rosen
- Anders Yates
- Becky Johnson

Guest:

- Britt Wray - Future of Genetic Modification - 2070

Video URL:

- https://www.youtube.com/watch?v=np1rOrJUdOM

Performance Data:

- 55 audience members
- 24 audience members surveyed
- 8.5/10 average audience entertainment assessment
- 6.5/10 average audience education assessment

Performance Format:

- Introduction and Guest interview
- Four Dator Scenes
- Audience Vote after each scene (scores out of five for "Entertainment Value")

- Guest Vote after each scene (scores out of five for “Research Value”)
- Closing iteration on the “winning” scene

Scenes:

- Continued Growth: *Pre-congratulations Party*[1]
- Collapse: *New Etobicoke*
- Discipline: *Dart in Your Neck*
- Transformation: *Thank You for Your Fluids*

Insights:

This was the first instance of a guest expert entering the Futureproof format, and it is not altogether surprising that the insight obtained from the show in large part touched on the role of the expert. Based on audience feedback, one common desire was for more engagement with the guest. In this first iteration of the show, Britt (bio in Appendix B) delivered her future visions at the beginning of the show only, and the comments that she provided after each scene were minimal. Both performers and the audience felt the show would benefit from the expert having more stage time to present their vision and address their experience of created scenes. This is important in the context of this project and its design, as the guest represents the convergent, rational perspective needed to balance the show. Without meaningful guest feedback, performers cannot effectively adjust the direction of their scene work. For example, in Scene 2, Matt plays the main character from *Forrest Gump*, which is perplexing: how does the fictional *Forrest Gump* figure in this vision of genetic modification in 2070? This choice is disruptive and never directly addressed or questioned by the expert, with both the audience and performers losing out on a learning opportunity. Becky addressed the role of the rational expert after the show as follows: “This is about two things coming together, entertainment and research. They don't get along, and you should embrace that. Let the guest be mean; have them hold us to task for all our weird choices.”

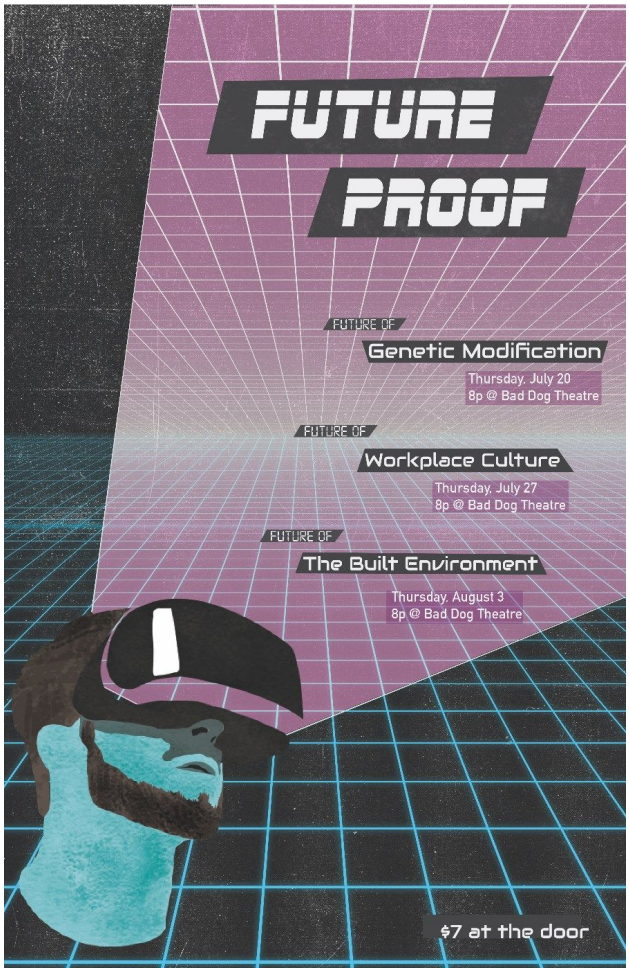
[1] Each scene was named by the author after each performance to simplify reference in discussion.

Beside the expert, the audience also asked for more opportunities to interact with the show (detailed in Appendix C: Survey Data). Voting alone proved insufficient as a form of participation. Several recommendations asked for a “Question Period” where the audience can address both performers and the guest. Conceptually, the idea of more audience involvement is appealing, since more perspectives means more inputs to draw on when creating scenes. Furthermore, increase in audience participation benefits the individual agency of audience members, who can chose to become more or less involved with the performance.

The show was a success overall, although several scenes were absurd and “implausible”. Among the four presented worlds, all from the year 2070, were scenes of 1) a pre-congratulations party, 2) rival groups of human and mutant hybrids, 3) social control administered via a dart in the neck, and 4) a singular existence where a rock-em-sock-em robot decides between two possible fates: suicide, or a petting zoo. There exists some correlation between Generic Images employed and the absurdity of the scenes. Among the most realistic scenarios was Scene 1, framed by Continued Growth, which presented a vision of a pre-congratulations party that reflected the status quo narrative about genetic modification as understood by the performers. Likewise, the third scene related to the Discipline framework, presenting a world in which the desire for social control has run wild, offered relatable details in its use of the workplace setting and corporate ethos. The second scene based on the Collapse framework, with its central concept of rival human and mutant hybrid groups, fell short of plausibility, with the final scene of Transformation being the most unrealistic of all. The possible tendency of Collapse and Transformation-inspired scenes toward absurdity signals the increasing extremity of visions created in a “revolutionary” context. Positing future worlds as evolutions of current realities, as is the case with the Continued Growth and Discipline frameworks, leads to greater plausibility of emerging scenarios, while viewing such worlds

through the lens of revolution or reversal, as Collapse and Transformation do, appears to push the performers to more radical versions of future worlds.

Despite the expectation that a high degree of implausibility would reduce the value of the show to pure entertainment, the survey data presented an alternate picture. Several comments spoke to the educational value the show was and mentioned how the scene work inspired new thoughts, considerations, and connections, especially on the subject of genetic modification, with an average assessment of the show's educational value of 6.5 (out of ten).



[Figure 3 - Futureproof Show Poster, Author's own, 2017]

[Figure 4 - Futureproof Show 1 with guest Britt, a synthetic biologist, cast, and host, Author's own, 2017]

Show 2

Cast:

- Matt Folliott
- Nicole Passmore
- Anders Yates
- Becky Johnson

Guest:

- Leah Shelly - Future of Workplace - 2050

Video URL:

- https://www.youtube.com/watch?v=eFUlAmULJzY&t

Performance Data:

- 41 audience members
- 34 audience members surveyed
- 8.7/10 average audience entertainment assessment
- 6.5/10 average audience education assessment

Performance Format:

- Guest interview to start the show (time horizon is predetermined)
- Performers create four Dator Scenes
- Host to moderate questions and discussion period in between scenes
- No voting between scenes, only at the end
- Return to the "winning" scene for final scene of show

Scenes:

- Continued Growth: *Pepsi High*
- Collapse: *The Great Event*
- Discipline: *Sexy Nicole*
- Transformation: *Natthew is the Sewer*

Insights:

This show reinforced several concepts that emerged in the development process, including the idea that humour is a positive element of the process despite reducing the plausibility of the scenes. A strong example of this came in Scene 4, “Natthew is the Sewer”, in which a male character is converted into the city sewer system for a day with the use of “nanobots”. While completely absurd, the scene nevertheless resonated with the audience, who laughed and willingly went along for the ride. In their surveys, numerous audience members named “Natthew is the Sewer” as a stand-out scene.

Despite its absurdity, the scenario contains elements of truth. The idea of an advanced AI choosing daily jobs for a couple is conceptually connected to Leah’s vision of an evolved “gig economy.” The audience perceives this “truthful element” just under the surface without necessarily being conscious of it, responding with laughter, which drives the scene forward as performers continue to build on it, encouraged by its reception. Earlier observations regarding the value of an existing outlook on the future and a developed personal “future reference library” apply also to this show. In the scene just discussed, Becky referenced Michael Bay’s *The Island* to inform her character choices as the AI. Her voice and offer of “The Lottery” as a concept for daily job provision both reference the film. Similarly, in Scene 2 of “The Great Event”, in her scene paint of the future world setting, Becky asks the audience directly: “Who here has seen that movie *Gravity*? Yeah… that happens.”

This iteration of the Futureproof format included the question and discussion period that came up in recommendations following the first show. Feedback from the audience and the performers, however, suggested that the addition was not effective. Questions were directed at performers for the most part, and while provided responses were fun and added some detail, they did not result in the creation of a more convergent perspective on the scenes presented. If anything, the approach added to the divergent mode of thinking at play in the improvised scenarios.

Based on feedback, the role of the host could be expanded to more actively facilitate the conversation, with some suggesting the host recommend the most fruitful territory for the performers to the expert guest. There is some room for such an expanded role in the format's original design, and the idea of developing a tool for structuring conversations around the improvised scenarios generated by Futureproof is worth considering in the future.

Finally, a note on voting: voting at the end of the show is problematic as audience members tend to vote on what they can remember best, which often biases their vote toward the last scene. In this show, they voted for Natthew is the Sewer, which happened to be the last scene. Voting in between the scenes is preferable as it also helps to reinforce the show's divergent/convergent structure. Although the guest expert was consulted at various points in this show, the commentary lacked the context of a formal voting process. As a result, the guest expert ended up offering new details for possible future scenarios instead of analysing the scene critically, thereby adding additional divergent thinking to the show, rather than the intended convergent thinking (discussed in more detail in the analysis of show 3).

[Figure 5 - Futureproof Show 2. Citizens meet to remember “The Great Event”, Author’s own, 2017]

Show 3

Cast:

- Matt Folliott
- Evany Rosen
- Anders Yates
- Becky Johnson

Guest:

- Brian Glancy - Future of Cities, 2050

Video link:

- https://www.youtube.com/watch?v=ALMSrLmywCA

Performance Data:

- 57 audience members
- 31 audience members surveyed
- 8.4/10 average audience entertainment assessment
- 6.6/10 average audience education assessment

Performance Format:

- Expert provides a future vision using one of the Generic Images before each scene
- Audience can ask questions of the expert after they share the vision
- Instead of voting, the expert chooses one of the worlds to return to at the end of the show, or suggests a wildcard scenario

Scenes:

- Continued Growth: *Houses Are the Same as People*
- Collapse: *Human Jet-ski*
- Discipline: *Concretes vs Woods (aka Shawshank)*
- Transformation: *Jeepus*

Insights:

As sometimes happens with final performances, the energy level at this show was initially low. The performers struggled to maintain their energy during warm up, which was complicated further by an overbooking of the space. The usual hour for set up before showtime was thus reduced to thirty minutes, which put the performers under pressure to settle in and warm-up quickly. The show started late and ran overtime since the guest expert was given considerably more time to share his scenarios. As a result, the “winning” future did not get another iteration, with the show ending after four scenes.

The final iteration of the show format included two major changes: instructing the guest to describe not one, but four separate scenarios using the Generic Images as reference, and foregoing audience voting in favour of an expert suggestion. The decision to eliminate audience voting was an attempt to test its possible role in show outcomes. Since the show was not competitive, the concept of voting was not inherently necessary. The experience of Show 3 suggests, however, that voting plays an important role in maintaining audience energy and creating momentum within the show. It is a controlled mechanism of audience participation and part of the co-creation process that Futureproof aims at.

The different energy of the final show is in part the result of a shift in the stage time given to the guest expert and the performers. In previous iterations, the performers were the dominant presence on stage, along with their divergent mode of thinking. In the last show, Brian (bio in Appendix B) had more stage time, giving not one, but four separate monologues. This content was appreciated by the audience, with several audience members commenting that Brian’s

visions were “vivid” and their “favorite parts of the show”. At the same time, this component slowed the pace of the show, which proved challenging for performers. Overall, they generated fewer laughs among the audience, less anticipation, and quieter applause breaks.

While Brian provided vivid details about the future of cities before each scene, the detail was too rich for many of the performers to absorb. In speaking about the level of detail in Brian’s monologues, Becky admitted: “The detail is so great I just want to sit there and listen to more. I think the audience felt that way too. We’d jump up and start doing a scene and there’s no way it can be as good as what he just shared.” This is a very important drawback of the shift in balance of stage time between the guest expert and the performers, with the idea needing reconsideration.

Another reason why this particular iteration of the Futureproof format should not be reused as here outlined is that Brian was unable to offer criticism after each scene. This undercut the design thinking approach that supports the structure of the show. There was no meaningful feedback offered by the guest expert, or the audience, after any of the scenes. As was the case in Show 2, instead of critique, Brian provided the performers with new content for the next future scenario.

In this context, the relatively static score of entertainment and education for this show deserves consideration. Audience rating stayed at approximately 8.5 and 6.5 across all three shows, despite there being “better” (more funny, energetic, engaging, connected) shows than others. Part of the explanation for this is that people are not able to accurately convey their assessment of value, with a show’s entertainment value being a simpler concept for an audience to assess than its educational value. A frame of reference for judging the education value of the show would be a challenge to construct, but such effort is needed to better understand the total value of this experience for all of its participants.

[Figure 6 - Futureproof Show 3. AIs pray to ”Jeepus”, Author’s own, 2017]

DISCUSSION

General Remarks

Futureproof set out to use improv to generate experiential scenarios, and its outcomes suggest that the process can be utilized in the service of this goal, though not necessarily in predictable or consistent ways. On the level of engagement, in the course of three rehearsals and three public performances, improv artists and guest experts along with more than a hundred and fifty paying audience members participated in creating over thirty scenes from the future on subjects as diverse as AI, disease, cities, work, and genetic modification. The process gave rise to fruitful suggestions about possible future iterations of the format, which will be addressed alongside recommendations for optimizing the theatrical show.

To a large extent, it is difficult to assess the level of insights or impact for the revolving members of the Futureproof audience. The presence of willing participants in the experience on each occasion of its staging suggests that the format offers something valuable to the audiences it involves. It certainly combines two things that are attractive to audiences: an interesting perspective (supplied by the guest expert) and funny stories (generated by the improvisers). By framing research as entertainment, the format brings awareness of issues that are key to a particular field in the context of futures studies. In its optimal version, Futureproof strikes a balance between learning and laughter -- plausibility and playfulness -- prioritizing entertainment over plausibility in order to secure the engagement of the audience. This principle already informs some established forms of entertainment, including daily comedy news show, as Matt inadvertently and humorously pointed out before Show 2: “Futureproof is really

on-trend. It's like *The Daily Show* or *Last Week Tonight*. That's where a lot of people get their news from."

The audience survey data confirms that Futureproof succeeded in its goal to entertain and engage, with the mean entertainment rating of 8.5 out of ten, while also providing a measure of plausible information, with the mean education rating of 6.5 out of ten. It would be interesting to explore whether there is a significant correlation between the guest expert's time on stage and the educational value assigned to the show by the audience, and whether the show's entertainment value diminishes with an increase in its educational score. The data collected from the three performances is insufficient to draw any firm conclusions in this regard. What is encouraging, however, is the high entertainment value given to every performance by a broad audience, which testifies to Futureproof's potential to serve as model for further explorations of futures through improv.

Futureproof affords audiences an opportunity to co-create the future with comedians and researchers, rather than simply experience an output. Other formats, like Forward Theatre (and Design Fiction -- though the latter achieves this through the creation of objects rather than performance), present more curated experiences by creating a concept and a vision that is then offered to audiences to experience. While this leads to greater control over the end product, it restricts input from the end user. With Futureproof, audience members contribute to building the future vision being portrayed in front of them, most significantly through their reactions, including laughter. When the presented idea connects with the audience, as indicated by a positive response, the performers move the scene in the direction that the audience is responding to. One example of this type of co-creation was seen in Show 3, when Matt and Becky perform a scene about gang members tunneling into a rival community. When they reference *The Shawshank Redemption,* the audience responds enthusiastically, which in turn prompts Becky

to return to the *Shawshank* joke later in the scene, in a completely different context and that is where the scene ends. The laughter and energy of the audience thus guided the direction of the show: their connection with the Shawshank reference inspired Becky to mine it for more details, adding to audience satisfaction in the process.

Furthermore, the audience also participates in the creation of the show through mechanisms such as voting, the question period, and any ad-hoc crowd interaction between the host, guest, and performers. Audience input was noted and appreciated by the improvisers in their feedback on the project. As Becky observed after Show 1: “This show really has a kind of ‘in the room’ feeling, like we’re all in the writers’ room together.” The ability of the Futureproof format to aid in the rapid creation of future scenarios with input from multiple perspectives has from the onset figured as a possible advantage. The fact that relatively minor upfront investment on the parts of host, guests, performers, and audience led to the generation of numerous and detailed future worlds with minimal effort is encouraging. Futureproof can serve as a platform to engage in futures thinking within a safe and fun environment that enables also their discussion.

From a time-investment perspective, each cast member required four hours of rehearsals in order to prepare for the shows, with their training in the method yielding five future scenes per show. Beside four hours of rehearsals, each performer (with five cast members being the optimal number per show) dedicated two hours to each public performance. The guest experts, in turn, required about two hours to prepare (a half-hour phone call with the show producer explaining the format, and one and a half hours to frame their research and form their predictions before the show), and two hours for the show itself. Finally, audience members invested one hour per show, paying money to do so.

One foreseeable challenge of Futureproof pertained to its ability to arrive at plausibility within the parameters of improvised performance. Undoubtedly, scenarios generated in the

course of Futureproof lack the reliability of traditional scenarios developed over a period of time, driven by research, and having the advantage of critical input from a foresight or futures team. Futureproof scenes are often ridiculous, absurd, with wildly exaggerated elements of truth. While plausibility remains a major issue for futures, it does not figure at the top of the Futureproof agenda. Futureproof is not positioned as an alternative to creating rigorous, data-driven scenarios, but rather a supplementary exercise in stretching the limits of imagination intended to provoke, suggest, and potentially uncover new ways of dealing with the future in all of its unexpectedness.

The audience does not presume that they are watching scientifically-rigorous scenarios: “No one attends a Futureproof show because they think improvisors are going to accurately predict the future” according to Bad Dog Artistic Director, Etan Muskat, who was interviewed after Show 3. The guest’s perspective adds an interesting and new component to the show, but the show itself is enjoyed as improv normally would be: a playful means of creating stories *inspired* by real content rather than *bound* by it. Indeed, Futureproof does have a mechanism in place to address this concern, since the guest expert evaluates each scene after its performance and can highlight elements of value and those unlikely to happen.

The Futureproof method does rely on niche skillsets of professional improvisers to some extent, which may place some limitations on its appeal to audiences outside of improv circles. Starting with the latter: every project is at some point limited in its reach, and the possible audience pool that Futureproof can draw on is actually extensive. At a minimum, it includes the academic and student communities, as well as futurists and science-fiction fans. In this regard, much depends on the show’s producer, place of production, and mode of advertising. Cities with developed cultural scenes and a range of educational institutions are possibly the best forums for mounting Futureproof productions. In this context, the criticism of the need for niche skillsets

of performers carries less weight. Futureproof provides improvisers with a different setting in which to hone their craft and a troupe of five performers is an attainable goal even within a relatively small cultural community.

Here the community-forming value of laughter cannot be underplayed. Futureproof was from the start intended to serve as an entertaining platform on which to explore and in the process popularize XF scenarios and modes of thinking. With entertainment as its unabashed value, and the support of improv's ability to utilize laughter in the process of scenario creation, the arrival at plausible visions of future worlds is on the distant horizon of Futureproof, and of greater consequence to some participants (the show producer and the guest experts) than to others (the improv performers and audiences). The unresearched predictions of improv artists about the future cannot be as "accurate" as those of experts supported by depth of expertise and careful research, though significantly, the co-creative process of rising to the occasion of improvising responses to both scholarly data provided by the expert and audience input as indicated by their reactions proves relevant for an important dimension of futures practice: the ability to use unbridled imagination.

Dunne and Raby note that (speculative) futures designers should "act as catalysts for public debate and discussion about the kinds of futures people really want" (2013, p.6). Futureproof engages audiences through humour and entertainment to act as catalyst for conversations about the future and possible present-day interventions. The process of engagement takes place independently of whether the created futures are plausible and credible, and it is the process that matters most in the Futureproof model. It is in the interest of the guest expert to suggest futures that could feasibly happen, and it is the aim of performers to find ways of communicating a given concept to the audience in a way that engages them. If this engagement is signalled only by laughter, the outcome is still positive.

Inevitably, the improv format sometimes leads to scenes that verge on the ridiculous, with satire overriding the data-driven and rigorously-researched approach to scenario generation characteristic of XF work. Downplaying the need for realism, however, opens both performers and audience to a broader range of perspectives. Having constructed a certain reality, the improvisers can shift emphasis toward entertaining its myriad possibilities in a way that entertains the audience, arriving in the process at “truth in comedy” (Close, 1994): an engaging, connected, honest, and relatable scene.

Following their comedic instincts gets performers in trouble at times, and there is great unpredictability in the trajectory that a scenario takes in the course of performance. Both Transformation scenes In Shows 1 and 2, for instance, became absurd enough for their value and relatability to become questionable. In Show 1, a translucent fluid sack travelled to a fork in the road that separated life’s only two choices: a petting zoo or suicide; in Show 2, a man physically transforms into the city sewer as a result of a daily “job lottery”. When taken at face value, these premises are insane. Yet their absurdity is not without potential. Indeed, the extreme nature of scenarios presented in both instances speaks to our current understanding of transformation as prone to absurdity, extremism, and the abandonment, or reversal, of all accepted norms. Rehearsal 2 provides a further illustration of this point. The constructed scenario showed the rise of two opposing factions: the “take-care-of-your-body” group and the edgier, “real experiences” group. The idea of living for today, and its counterpoint of living for tomorrow, are not new in themselves; indeed, it is their cultural currency that makes them so appropriate for the scene. While the tension between these two camps rises to ridiculous, post-apocalyptic levels on stage, it speaks to the important issue of balancing our present-day needs with those of our imaginable futures.

Futureproof's approach to exploring future scenarios is emotionally-driven, which needs to be noted. In improv theatre, performers are told to "follow their instincts", "behave honestly", and "trust their partner" (Close, 1993). The best improv scenes do not have scripted outcomes; most often, it is the honest reactions of people dealing with absurd situations that we appreciate most in improv scenes. A degree of connectedness between experience participants is necessary for its effectiveness. Futureproof acts as a melting pot in which performers, audience members, and the guest expert build a collaborative vision of the future depending on their ability to arrive at a shared understanding of the situation at hand. If the output of performers aligns with the perception of reality shared by the audience members, for instance through the use of common reference points and recognizable tropes, the scene becomes more relatable. The best way to ensure audience connectedness, in fact, is to let spectators "in on the joke" so that all parties can become "writers in a room together". This requires establishing a shared vocabulary that is appropriate to the improv setting and which works to create relatable futures scenarios and situations.

When you ask someone what they think of when they think about the future, their answer is likely to draw upon previously encountered visions of the future, or the emotions that such visions provoke. An individual's well of future images and reference points may contain snippets of films, television shows, and books along with the hopes or fears previous exposure to this content may have inspired. People's visions of the future are constructed from a multitude of not necessarily convergent reference points, which taken together provide the "next best thing" to visualising what has not yet come to pass. With Futureproof, this process is made tangible on stage as the improvisers create future scenarios on the spot for our amusement. Improv performers regularly use borrowed content in order to fill in details of the scene, and each show provided examples of this technique:

- In Show 2, Scene 4, Becky played an AI that was clearly inspired by the AI in Michael Bay's *The Island*, right down to the voice and the concept of "The Lottery";

- In Show 3, Scene 3, the already discussed reference to *Shawshank Redemption* became a recurring thread in the scene;

- In Show 1, Scene 2, Evany framed the scene as a "real *Island of Dr Moreau* situation", an idea that other performers picked up as the scene progressed by creating human-animal hybrids.

This tendency is part of a broader creative process: we approach a novel idea or concept through a filter of individual reference points, previously encountered images and ideas that can help us construct a version of the future. The richer the reservoir of these reference points, the more detailed the vision created. This is supported by the fact that performers who had a strong foundation or interest in futures before joining Futureproof added most nuance to the presented futures. Evany, a long-time improv practitioner and an avid sci-fi fan, acted as a narrative anchor for the cast and played a critical role during shows: she was able to offer relatable details in scenes by drawing on a wealth of sci-fi tropes and classic stories, understood technology concepts like AI, autonomous vehicles, and genetic modification, and knew how to satirize them effectively, having been previously exposed to them. If access to a rich reservoir of future images and concepts is key to the work of futurists, then the potential and value of Futureproof is worth re-examining. In aiming at speed, simplicity, and volume of scenario generation, "Futureproof' generates a high volume of potential future reference points. Optimally, Futureproof audience members will leave with a richer store of images to draw on when engaging with the thought of the world ahead.

While some of the created scenarios were quite ridiculous (see: "Natthew is the Sewer" in Show 2), there were also moments of real insight. Becky's and Evany's performance in Rehearsal 3 struck the perfect balance between playfulness and plausibility, and might offer

genuine insight into how our lives might change in the future. The Elon Musk monologue that the performers were given to work with during Rehearsal 3 provided them with a concrete story to approach the issue of AI in the future. The dynamic between Evany and Becky worked remarkably well, with Evany's knowledge and interest in futures serving as an effective scaffold for Becky to make the most of her ability to connect emotionally in a scene. Together, they worked through multiple scenarios, managing to effectively balance plausibility of their scenes with their emotional relatability, connectedness, and humour, of course. From the perspective of XFL framework, the greatest challenge for Futureproof comes from its ability to reliably scale the different levels of experiential futures in its improvised futures scenario work. Within the setting of improvised theatre, the demand for concreteness can be difficult to respond to effectively. Insofar as improv performers always need to find effective ways of connecting the audiences to performed scene work, they are uniquely able to meet the challenge of XF work in securing the attention and engagement of their audiences in the process of staging possible futures.

The fact that "scene painting" emerged as a necessary technique for performers to use in descending the experiential futures ladder is worth noting here. Scene painting allows performers to quickly setup core elements of the scene, including setting and characters, using words and gestures. In stepping onto an empty stage, the improv actor can quickly outline the key elements of the given setting (for instance, a kitchen in 2050) and the particular scenario that is beginning to unfold (such as a pre-congratulations party), establishing a shared frame of spatial and narrative orientation for themselves, other performers, as well as the spectators. This tool helped performers to create a relatable "sense of futurity", which proved a struggle initially. Within the framework of improvised experiential futures, scene painting is indispensable for conveying the future setting and concretizing it into a scenario and a situation. For improv

performers tasked with rapidly creating engaging scenes about possible future, scene painting was key to arriving at a shared sense of reality .

Much of the analytical potential of Futureproof depends on the producer's investment in the show and ability to apply some of the tools offered in existing futures research to the outcomes generated in the process of staging improvised futures. One such tool is the already mentioned Causal Layered Analysis (CLA), a technique that provides futurists with a means of identifying various levels of discourse which, taken together, mark the path of a possible future. Known in short as a) litany, b) causes, c) worldview, and d) metaphor/myth, these discursive levels succeed one another, from litany through to myth, and together construct plausible versions of the future in line with an introduced change. It is within the interplay of these levels that the key to the way people act when confronted with change is located, according to Inayatullah (1998), paraphrased below:

- The first level is the 'litany'—quantitative trends, problems, often exaggerated, often used for political purposes—(overpopulation, eg) usually presented by the news media. Events, issues and trends are not connected and appear discontinuous.

- The second level is concerned with social causes, including economic, cultural, political and historical factors (rising birthrates, lack of family planning, eg). Interpretation is given to quantitative data.

- The third deeper level is concerned with structure and the discourse/worldview that supports and legitimates it (population growth and civilizational perspectives of family; lack of women's power; lack of social security; the population/consumption debate, eg.).

- The fourth layer of analysis is at the level of metaphor or myth. These are the deep stories, the collective archetypes, the unconscious dimensions of the problem or the paradox (seeing population as non-statistical, as community, or seeing people as creative resources, e.g.). This level provides a gut/emotional level experience to the worldview under inquiry.

When applied to Futureproof, CLA can provide a useful means of coming to terms with complex challenges and understanding desire and barriers to transformational change.

There are many tools to tackle specifically litany-level problems, and most commercial strategy work done today is arguably focused on litany, and occasionally cause level change. Strategy sessions focused on changes in worldview, or the metaphor/mythic levels, are less frequent despite being the primary drivers of culture. This is a missed opportunity as the acceptance of an idea, change, or strategy is largely determined by cultural readiness; a problem or a solution need to be viewed through all levels of CLA to comprehensively reveal its impact and barriers. In the words of Peter Drucker, a renowned management consultant and the creator of many modern management concepts: “Culture eats strategy for breakfast” (Forbes, 2015).

Stimulating conversation about litany, social, worldview, and mythic collective conceptualizations makes for a natural outcome with Futureproof, given the fluid nature of the improv scene work and its intent to discover, suggest, and provoke. In Futureproof, a litany level problem could become the focus of a scene as much as a mythic criticism; all levels are incorporated and satirized indiscriminately, because performers “follow the fun”. As the following examples demonstrate, Futureproof explores a multitude of problems and ideas at all levels of the Causal Layered Analysis, whether litany, social, worldview, or mythical:

- In Show 2, a “Great Event” caused an electrical outage that complicated Becky’s heart operation, as she explains to Anders: “I was being operated on when the Great Event happened, and now my heart doesn’t work good.” Within this scenario, the “Great Event” represents a litany problem, of which the malfunction of Becky’s heart is only one outcome, while at the same time signalling the mythic dimension of the issue, as indicated in the very name of “Great Event”;

- In a different scene from Show 2, Nicole is assigned the job of a Police Chief for a day as a result of a daily job lottery, which provokes Matt to say: “Make sure you correct systematic racism.” The audience reaction of roaring laughter suggests that Matt’s casual remark about a relatable social issue for the people of Toronto in 2017 -- the racial bias of police departments across Canada, including Toronto - served as a bridge between litany and social (causal) level problems.

- In Show 3, two “House AIs”, played by Evany and Matt, as discuss traditional gender roles. When Matt admits that he “thought women computers were good at multitasking,” Evany calls him out on his worldview, denying his gender categorizations: “I feel like our gender binaries are kind of random and you’re kind of putting that on me as a house.” Here Matt and Evany question the utility of AI gender, while Becky and Anders, playing the human owners of the houses, simultaneously enact a scene about a date gone wrong.

- In Show 1, Evany leads a Transformation scene where humans have become sacks of translucent skin and their existence has been reduced to visiting a robot who decides whether you go to a petting zoo or to a suicide machine. This extremely absurd scene completed reframes the human experience, questioning humanity’s most basic mythic stories and concepts.

Futureproof Design Option 1: Turn Toward Interpretation

Futureproof can speak to all levels at stake in CLA and their interplay was a frequent element of created scenarios. In this iteration, however, the show does not call attention to this fact. Only performers were provided with the context of Dator’s four possible future frames, and the specific frame utilized in a particular scene was not disclosed to either the guest expert, or the audience. While this was done to free them from preconceptions about the scenarios, awareness of these frames proves useful on an analytical level in helping to identify the discursive elements at play in a scene, and to make sense of their interplay in the aftermath of performance.

To make room for the meta and internal-individual analysis that CLA embraces, Futureproof could be reframed as a workshop where a group of participants experience improvised scenarios with the help of a facilitation team in charge of scene content and discussion. This would undoubtedly undercut its ability to serve as an entertaining and public performance. Were Futureproof to run along similar lines as Hawaii 2050 and Head’s Forward Theatre, where formal opportunities for debriefing and discussion are built into the design, the

format would allow participants to better examine the logic behind choices made by performers, and optimally lead to an examination of the participants' own worldview challenges.

Futureproof Design Option 2: Turn Toward Plausibility

While it would be unreasonable to expect Futureproof to deliver plausible scenarios on the same level as those delivered by professional futures researchers, there is every reason to believe that the format could become more data-driven than it was in its first iteration. There are a few ways to bolster its scientific rigour without sacrificing the show's public-facing and fun aspect.

Such adjustment could involve changes to the guest expert's role. One possibility is to bring more than one expert on at a time, thus creating a debate panel and a more analytical atmosphere. These experts could represent the same field, or a range of disciplines, with the dynamic between them playing a role in the co-creative process. The guest expert's stage time would need to increase in order to accommodate additional perspectives, which would likely result in either longer shows, or fewer scenes. These benefits have to be weighed against the entertainment rating of the altered format to ensure that greater emphasis on data does not detract from the show's ability to engage its audience.

Another design change that could lead to more scientifically rigorous scenarios would put more control over the improvised output of performers in the hands of guest experts. This approach draws on the Second City method of using improv to develop comedic stage plays and gives experts the right to intervene in scenes in order to alter their elements. While retaining the value of improv artists, this increases the amount of convergent thinking at work in the experience. Much of this process takes place behind the scenes, although the performers can still "follow the fun" during live shows to some degree. Their responsibility is split between

following the script and entertaining the audience, with both performers and researchers assessing the show's resonance with audiences and establishing the right balance of play and information on moving forward.

Futureproof Design Option 3: Turn Toward Adaptability

Based on outcomes of the first three Futureproof shows, the format has long-term potential to serve as an entertaining means of deepening our understanding of, and connectedness to, possible futures. Its optimal future iteration will maintain its current focus on combining the entertainment and thought-provoking aspects of its design in a way that fosters accessibility of a general audience.

With only three different iterations of the show to look back on, its optimal form is yet to be determined. To a great extent, this was a predictable outcome of this project. Futureproof from the onset aimed at broadening the horizons of future scenarios using improvisation - a necessarily open form. Adaptability lies at the heart of the Futureproof project. In its overall design and individual performances, Futureproof functions on multiple levels and necessitates quick and constant adjustments on the part of its participants. The feedback received from guest experts, cast, and audience members (including survey results) points to areas of possible improvement for future iterations of the Futureproof experience. Consensus was reached, for example, on Show 1 offering the strongest engagement between the audience and performers, and Show 3 succeeding best with respect to guest engagement; the right balance for an effective Futureproof performance appears to exist somewhere between the structure of these two shows.

In mounting Futureproof again, a number of small, yet significant alterations to its design should be considered. The participating groups can remain the same. The host can continue to

introduce the show, guests, and performers, overseeing the entire performance, and future scenarios explored by performers can still be seeded in the input of the guest expert (as in Show 3). The performers would share two, not four scenarios, however, with the cast performing two scenes connected to each scenario. The audience and the guest would continue to vote on each scene with a focus on entertainment and value, respectively. By exploring a single scenario in two scenes, this format reduces the amount of possible worlds generated, but increases the amount of detail and analysis around each presented futures proposal. The total number of scenes per show would remain the same at five, with the fifth scene returning to the "winning future", as established by the host's tally of votes at the end.

It is through the application of this final design iteration that Futureproof might build on two of its major strengths, namely its embrace of the humour and adaptability that comes with improv practice. The positive energy of improv theatre lends well to the work of XF. Futureproof audiences were overwhelmingly receptive in their reactions to the show, and their enthusiasm could be sustained and fuelled further with repeated runs of the Futureproof format. The model provides considerable flexibility in terms of the emphasis placed on its particular components, with futures research and improv practice both having a seat at the table, and the audience always retaining its position as the experience's guest of honour.

CONCLUSION

In a world where the thought of the future is often anxiety-inducing, coming up in threatening contexts of climate change, nuclear arms, and global pandemics, the potential value of laughter as a tool of approaching thinking about the future has not received enough consideration. Futureproof works to redress this oversight by bringing improv and futures practice together, and harnessing laughter and adaptability characteristic of improv to the aims of futures research, understood here as generating public awareness, engagement, and futures literacy. In its design, Futureproof is a tool for concretizing abstract future ideas on stage, in front of a live audience, through improvised scenarios and situations, and for creating a space for a conversation around them. It is a means of imagining and experiencing possible futures, and of laughing at them, together. The laughter and responsiveness of Futureproof could provide the best path for approaching the most difficult visions of what lies ahead.

Futureproof set out to find ways of using improv theatre to generate experiential scenarios, and in this regard it was a success. Over the course of the project, various design, futures studies, and improv techniques were combined and remoulded to optimize the Futureproof format for engagement, discovery, and exploration. After the close of each Futureproof show, audiences would fill the theatre lobby, staying to share their thoughts on possible futures and making comparisons between their individual visions. The conversations were interesting and excitement about future possibilities perceptible (not captured in this staging of Futureproof, but of interest in future presentations of the format). This level of engagement is not common for many improv shows, with audiences often quickly departing and rarely thinking twice about the specific content of performed scenes. The format of Futureproof, its combination of XF research, subject matter expertise, and improv theatre, appears to create

an environment conducive to more prolonged critical engagement that most forms of entertainment. This could be a valuable advantage for futurists looking for tools with which to explore the best ways of presenting and evaluating experiential scenarios.

Needless to say, and appropriately to its improv roots, the name Futureproof is not meant to be taken seriously. On a fundamental level, the future cannot be predicted and "futureproofing" is an essentially impossible task. What we may be able to predict of the future (for instance, the weather in a particular place over the course of the next few hours, perhaps even days) shrinks into insignificance with all that we cannot predict (for instance, the fact that Houston would stand today submerged in record amount of rainfall, virtually unrecognizable (CNN, 2017)). The future may be unknowable, but corporations, governments, and individuals will continue to invest significant money and time into the serious study of possible futures. While the process cannot accurately predict the future and entirely eliminate risk and uncertainty, the hope is that it will bring insight into some future possibilities and allow us to better prepare for them. Futureproof embraces the paradox of futures studies, and raises the stakes with a paradox of its own: applying a format that, in its truest form, exists purely in the present - improvisation - to the task of engaging with futures thinking.

The playfulness of the Futureproof concept is attractive to audiences, with over one hundred and fifty people coming to see the show over its run. The Futureproof series also generated a small profit from audience proceeds, and was able to pay the performers, theatre, and production teams for their work on the project. In the realm of independently produced improv comedy, this is a notable rarity. Moving forward, a second run of Futureproof in co-production with Bad Dog Theatre has already been confirmed for Spring 2018. This co-production will allow for a larger team, increased advertising reach, greater diversity of the cast, and an overall higher-profile production. Significantly for the ideas tackled in this project, it

will also provide new opportunities for revising the format with the view to its optimization. One goal behind the second run of Futureproof is tied to the development of a guide for independent improv artists, producers, and theatres wishing to produce their own Futureproof events. The planned guide will simplify the underlying mechanics and techniques of Futureproof as outlined here, providing succinct and easy-to-follow instructions suitable for a practitioner audience. The ultimate benchmark of success for Futureproof, given its emphasis on securing social engagement and provoking further futures action, will be reached when the format is adapted by others in pursuit of related goals.

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APPENDICES

Appendix A: Cast Bios

Anders Yates
Anders Yates is a founding member of the Canadian Comedy Award nominated company Uncalled For, with which he's performed in improv and sketch comedy shows for well over a decade across Canada, the US and Poland. Company highlights include Hypnogogic Logic, Today Is All Your Birthdays, Blastback Babyzap and the long-running late-night cabaret The 13th Hour. Other stage credits include: Slap Shot Live! (The Second City), Forbidden Zone (Hanakengo), Humans (Tableau D'Hôte), Exit, Pursued by a Bear (Quality Slippers Productions), Possible Worlds (Uncalled For) and Dance Animal (Robin Henderson Productions). Anders has taught multi-week improv classes with Bad Dog Theatre, weekend improv workshops with Uncalled For and sketch comedy writing classes with Montreal Improv. He can currently be seen on stage as a member of the Second City's National Touring Company and on television in the Superchannel comedy 24 Hour Rental.

Evany Rosen
Evany Rosen is a Toronto native and founding member of acclaimed sketch troupe *Picnicface,* who's titular television series on the Comedy Network has gained awards for everything from Best Writing to Best Ensemble. An accomplished improviser and standup, Evany has toured festivals across Canada, including Just for Laughs, the Winnipeg Comedy Festival, and Edmonton's Improvaganza. When not on stage, she can be seen starring in award winning web series *Space Janitors* or playing truly awkward bit parts in Canadian series like HBO's *Call Me Fitz* and CTV's *Saving Hope*. She can be heard regularly on CBC's *The Debaters*, and as cartoon characters in upcoming series like Teletoon's *The Ridonculous Race* and *Winston Steinburger & Dudley Ding Dong*. Evany's writing credits also include *This Hour Has 22 Minutes*, *Meet the Family*, *Unusually Thicke,* and most recently *Gaming Show in My Parents' Garage* on Disney XD. A Bad Dog regular, Evany can often be found lurking around the theatre performing, directing, and teaching as a member of the Bad Dog Academy Faculty. She is also an avid and highly unsolicited enthusiast of 90s fish-out-of-water sitcom, *The Nanny* (now on Canadian Netflix!)

Matt Folliott
Matt Folliott is a comedian and actor born and raised in Toronto, Canada and performs comedy with S&P, Chad Mallett, The Sketchersons, and Canadian Comedy Award Nominees K$M. He can also be seen regularly on shows like Rapp Battlezz, Bad Dog theatre's Filthy, and Catch 23;

he was nominated for Now Magazine's Reader's Choice Award for Best Male Improvisor in 2014 and 2015. Matt has travelled all across North America performing in comedy festivals like Improvaganza (AB), VIIF (BC), the Out of Bounds Comedy Festival (TX), and MProv (QC), to name a few. Matt is an instructor at Second City and Bad Dog Theatre. He has numerous film and TV credits.

Nicole Passmore
Nicole is an improviser and comedian who has been performing regularly for 17 years, and teaching improv for over a decade. Originally hailing from Instant Theatre Company in Vancouver, Nicole now makes her home as a faculty member and player at the Bad Dog Theatre Company in Toronto. Whether solo or with one of her troupes (Virginia Jack, Benjamins, The Royal We), she has performed at festivals across North America, including Improvaganza (Edmonton), Duofest (Philadelphia), VIIF (Vancouver), Stumptown (Portland), Out of Bounds (Austin), and the Detroit Improv Festival. Nicole has been a trainer and coach with the Canadian Improv Games at the national level, is the reigning Bad Dog Globehead Tournament winner, was voted Bad Dog's 2015 "Favourite Instructor", and can be heard in multiple episodes of the award-winning podcast Stop Podcasting Yourself.

Becky Johnson
Becky has been performing silly things in various ways for over twenty years. In improv, she is probably best known as one half of lauded Toronto improv duos IRON COBRA (with Graham Wagner) and The Sufferettes (with Kayla Lorette) and as a long-time co-producer at *Catch23 Improv* at Comedy Bar. Theatre credits include the European premiere of Daniel MacIvor's *A Beautiful View* (BeMe Theatre/Volcano) and the world then American premieres of Shiela Heti's *All Our Happy Days Are Stupid* (Suburban Beast/Harbourfront Centre/McSweeney's). Becky has been nominated for numerous Canadian Comedy Awards and has won a few. You can also see her play a bunch of gross clones in the web series *Space Riders: Division Earth.* Becky may or may not attract snakes.

Appendix B: Guest Expert Bios

Britt Wray
Britt currently pursuing a PhD at the University of Copenhagen in the Department of Media, Cognition and Communication where she studies science communication with a focus on synthetic biology. Britt does practice-led research, meaning that she produces media (documentaries, installations, etc) for broadcast or other forms of public engagement as a direct translation of my academic research. She uses her background in art, media and design in combination with her training as a biologist to explore scientific topics through storytelling with diverse audiences. Britt is also the author of Rise of the Necrofauna, a book about the science, ethics and risks of de-extinction, which will be published in Fall 2017 by Greystone Books on the David Suzuki Foundation imprint**.**

Leah Shelly
Leah Shelly is a director of Global Engagement for adventure tourism company G Adventures in Toronto, Canada. She has a Bachelor of Commerce from the University of Guelph and a Masters in Design from OCADu.

Brian Glancy
Brian Glancy grew up in Dublin, Ireland and moved to Toronto in April 2010. After graduating from Dublin City University with an Honors Degree in Mechatronic engineering, he spent a short stint brewing beer for Ireland's largest craft brewery before taking on an Engineering and New Product Management role with Kingspan. During this time he designed, installed and project managed multimillion-dollar production lines at multiple locations across Europe. More recently he became Research and Development Manager for Kingspan North America, where he applied his creativity and design thinking to develop award-winning products for the construction industry. His designs enhanced speed of build, insulation values, recyclability and environmental sustainability for the industry. These products are key features in Kingspan's strategic growth. In his spare time, he enjoys cycling, live music and travelling.

Appendix C: Survey Data

Entertainment	Education	New Ideas	Other comments
8	7	Y	Enjoyed it.
10	7	Y	Recognized value in divergent nature of improv - "opens researchers eyes".
8	7	n/a	Noted that nothing seemed too new because "I'm a sci-fi buff"
7	5	n/a	Had issues with plausibility
8	6.5	Y	Actor. Wrote a screenplay about "Futurism". Noted there could be more discussion about fears and assumptions
9	5	Y	Felt inspired to go investigate genetics. Wanted more educational material
7	4	Y	Wanted more audience interactivity
9	8	Y	"Awesome show!" It was an eye opener.
7	7	n/a	More audience involvement. Liked that the show "informs people"
9	5	Y	Wanted to ask the expert questions
8	7	Y	Felt the possibilities were "likely"
8	10	Y	Thought futures were very unlikely

6	9	Y	Noted that each expert-raised concept should be explored separately.
10	7	n/a	"Some elements" will come to pass
8	6	Y	Very likely this future will come to pass
9	6	Y	Some elements will come to pass
8	5	Y	Considered the show only entertainment
10	8	n/a	Parts will be real
9	8	Y	Didn't feel it was likely
8	3	Y	Didn't feel it was likely
7	5	n/a	Pulled multiple quotes from multiple scenes
9	8	Y	Enthusiastic - a converted fan
9	8	Y	Couldn't remember many details of the scenes. Another comment about how they don't care about the futures because they will be dead by then
10	7	Y	"It's not real, but it is, you know?"
9	7	n/a	Loved the opening monologue. Too jokey to be "real"
9	7	Y	Another person referencing the pig with human organs
10	3	n/a	"I will be dead by then". Some stuff seemed real
8.5	7	n/a	Wants more audience involvement. Didn't feel it was likely
n/a	n/a	n/a	wanted more audience interactivity
n/a	n/a	n/a	Neuroscientist. Noted: "how society view the tech" as a benefit
n/a	n/a	Y	Only filled back page

10	n/a	Y	Mentioned it was valuable to see a more tangible vision of the future
8	7	Y	thought critically about the content of the scenes and connected improv ideas to real world value
8	5	Y	"spookier improv"
9	6.5	Y	Highly critical. Wanted more plausibility. Liked the participation aspect
10	10	Y	"I think about these ideas a lot, but it's interesting to see the humorous side of it".
10	6	n/a	Wanted a panel of experts.
9	7	Y	Noted it was interesting to see the impact of technology on the people

9	1	n/a	incomplete survey
9	4	Y	Wants to hear multiple options (scenarios) from the expert
8	4	Y	"Scared about the future." Wanted the show to be 90 mins
9	6	n/a	“It was also a decent social event"
9	9	Y	"I'm nervous about the future now". I wanted to ask the expert questions.
9	5	Y	Make it real. Somethings may not happen by 2040, but they can happen in the future.
8	6	Y	Wanted better credentials from the expert
10	5	Y	n/a
7	6	Y	Liked the final scene "Natthew is the Sewer". Thought the expert was insightful.
9	5	n/a	Didn't like question period
7	6	n/a	Thought performers spent "too much time setting up the scenes"
8	8	Y	Optimistic setting to discuss the future. Wanted more variety in scenes explored -- more diverse settings
8	8	Y	"This show put me at ease about a few things"
8	7	Y	Remembered "Natthew Sewer". Wanted a tighter constraint on futures
10	10	Y	Thought the communication circle was creepy and seemed like it could come true...
9	5	Y	"I'm looking forward to the job lottery"
10	5	Y	Stretches your imagination. "Anything is possible"
10	5	Y	"I need to learn to program"
7.5	7.5	Y	Thought-provoking. Wanted a slightly longer show.
8	8	Y	Wanted more questions from audience
9	7	n/a	Made me think about the future. Liked the mix of expert and improv.
8	7	Y	Doesn't agree that corporations should be portrayed only negatively
6	7	Y	"Sometimes things are just too crazy!"
10	8	Y	Wants more question period. Suggests getting input from audience on what to "fine tune". Liked that the show encourages participation.
10	8	Y	Thought the show opened a discussion around the challenges humanity faces. Thought about scenarios they never thought about before.

8	9	Y	Thought it was "thought-provoking" rather than educational. Liked the discussion. Describes personal fears about future.
8	5	Y	"Thought-provoking". Confirmed some of my own fears about the future.