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Research article

Fuzzy Objects

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Abstract

In *Ways of Worldmaking* Nelson Goodman presents a theory on how we perceive and construct different versions of the world. Building on the idea that practical experience can unlock the potential for sharing knowledge across disciplinary boundaries and intellectual abilities, the following approach aims to translate Goodman's thoughts into a practical investigation, where worldmaking can be experienced in a tangible way. Drawing on Technology Assessment, Futures Studies, and Critical Design Methods, participants in this exploration engage with provocative objects that serve as starting points for the creation of world versions. Through this process, participants should gain an understanding that our assumed descriptions of reality are, in fact, constructions and therefore contingent. Supposedly immutable realities can thus be reimagined as alternatives that are open to change. Additionally, the outcomes of this exploration can be analyzed for implicit values and assumptions, making them visible and open to discussion.

Keywords: Worldmaking; Critical Design; Technology Assessment; Objectual Practice; Design Fiction; Constructivism

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Научная статья

Нечеткие объекты

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Аннотация

В книге “Способы создания миров” Нельсон Гудмен представляет теорию о том, как мы воспринимаем и конструируем различные версии мира. Основываясь на идее о том, что практический опыт может раскрыть потенциал для обмена знаниями, невзирая на дисциплинарные границы и интеллектуальные способности, следующий подход направлен на то, чтобы воплотить мысли Гудмена в практическое исследование, в котором создание миров можно будет испытать осязаемым образом. Опираясь на оценку технологий, исследования будущего и критические методы проектирования, участники этого исследования взаимодействуют с провокационными объектами, которые служат отправной точкой для создания версий миров. Благодаря этому процессу участники должны понять, что наши предполагаемые описания реальности на самом деле являются конструкциями и, следовательно, случайны. Таким образом, предположительно неизменные реальности могут быть переосмыслены как альтернативы, открытые для изменения. Кроме того, результаты этого исследования можно проанализировать на предмет неявных ценностей и предположений, что сделает их видимыми и открытыми для обсуждения.

Ключевые слова: Создание мира; Критический дизайн; Оценка технологий; Объективная практика; дизайнерская фантастика; Конструктивизм

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INTRODUCTION

How do we perceive the world? According to Nelson Goodman perceiving the world – or more accurately worlds – is an act of constant and ever-changing creation (Goodman, 2013). Making this process perceptible is not only an interesting experiment that can give us tangible insight in how we construct meaning; it also serves as a means to explore implicit values and assumptions. These explorations can help us to deconstruct the created fictional worlds and engage in a critical reflection of our implicit values and assumptions, which otherwise are hard to grasp.

The following practical investigation is a playful approach to encounter versions of fictional worlds and a tangible take on Goodmans theoretical work *Ways of Worldmaking*. In critical design practice, the use of so-called “provocative” objects is a common method to allow experiencing phenomena that would otherwise go unnoticed (Malpass, 2017, p. 31). Blending this approach with concepts and methods taken from Futures Studies and Technology Assessment, the following investigation provides an experience of the ever-changing creation of worlds and encourages the participants to reflect on their creations.

This is not just an invitation to read a paper about worldmaking and its practical applications; it is an invitation to be part of the experience and the act of creating a version of a world. Therefore, this article consists of two parts. First and without a lot of explanatory writing, the practical investigation and its execution is presented in a paper-only adaptation. It is recommended to carry out the practical part before reading the rest of the article. Then, the outcome of a practical investigation conducted during a public open event is presented to further broaden the basis of experiences that can be explored. With these insights, the investigations will be grounded in the underlying theory, explaining the different thoughts and ideas reflected in each part of the execution and illustrated with case examples from the public event. The article concludes with a proposal on how the results could be used for further examination.

AN EXPEDITION INTO A FOREIGN WORLD

Imagine the following thought experiment as an expedition into an unknown, foreign world. This strange world already exists in the depths of your brain – even though you don't have access to it yet. Our goal is to change that. We want to explore this world, make its strangeness accessible and understandable. You are the adventurer, a scientist, who is conducting this expedition and wants to find out everything about this undiscovered, mysterious world. Your entry point is a peculiar object, depicted in the following illustrations.

Please follow through with each step of the expedition before reading and proceeding with the next one.

Preparation

Since every successful expedition needs meticulous preparation, take some minutes and get familiar with the object depicted in figures 1 and 2. What the heck is that? If you wish, take some notes to capture your initial thoughts for later reflection.

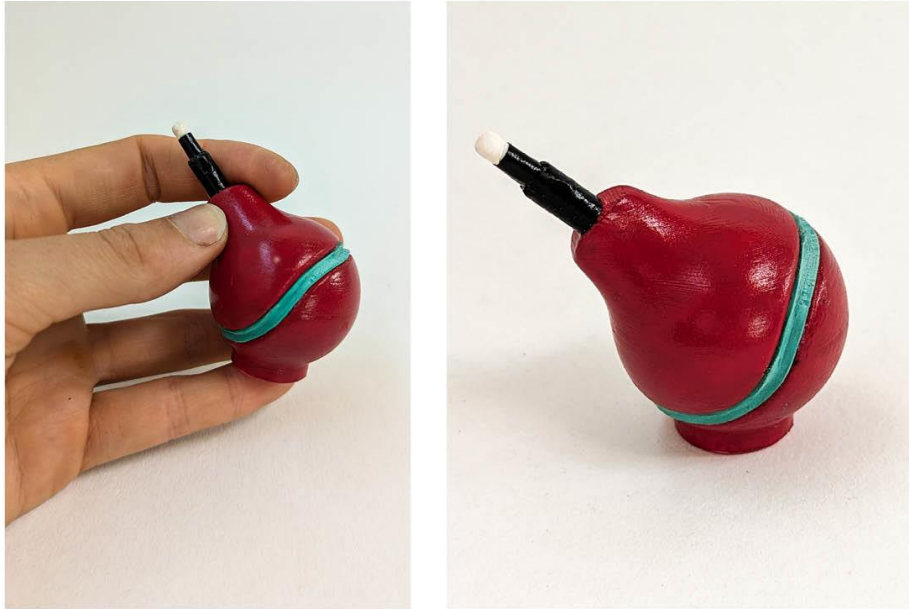


Figure 1. Fuzzy Object_00

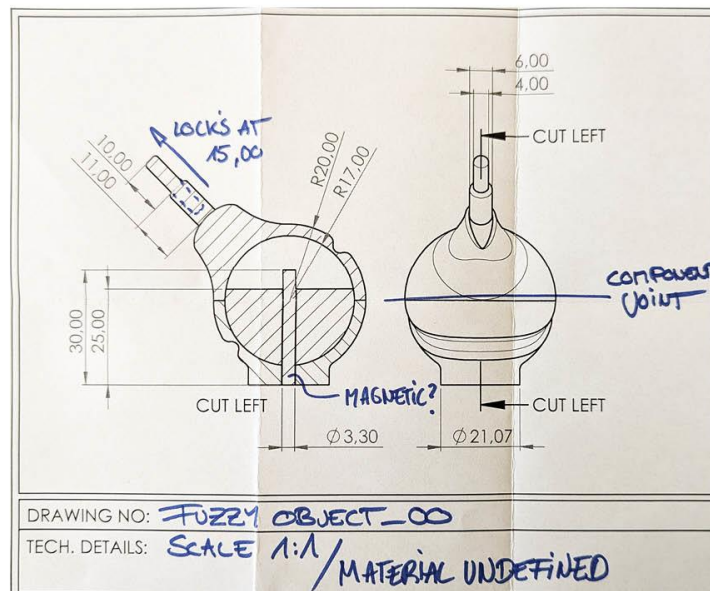


Figure 2. Technical Drawing_Fuzzy Object_00



Step One

You should be familiar with the object by now. How large is it? What kind of shape does it have? All these things should be clear to you. Maybe you already developed some idea of what this outlandish thing is used for? I mean, it looks like some kind of technology, right?

With the object now familiar, you are ready to embark on the first part of your journey into the unknown. Our aim is to explore what this object is used for and what kind of world it is coming from.

However, you will need to set aside your initial assumptions. You won't be assigning meaning to the object arbitrarily. Instead, you will work within a specific frame consisting of a user group, a field of application, and a time frame. To determine this frame, pick three numbers between 1 and 5. In Table 1 you will find the different contextualizations referentiated by the numbers you pick (e.g., if you choose 3, 5, and 2, your frame will be: women, 100 years into the future, and health care).

Return to the object and consider its use in the given frame. What is it for? Why is that thing needed in the given time frame? How exactly is it used? How do the different components work together? And how does a world look in which your object is to be used? If you like, write down your thoughts so you can revisit them later.

Table 1. Framing

	User Group	Time Frame	Field of Application
1	humans	10 years into the future	food production
2	working class	20 years into the future	health care
3	women	1000 years into the future	education
4	robots	tomorrow	entertainment
5	animals	100 years into the future	safety

Step Two

You know the object now. You know what it is used for, by whom, and in what field. All good, right? But as you might know from other objects, things don't always work out as they are supposed to.

Table 2. Reconception

	Task
1	Who is strictly against the usage of your artifact and wants it to be forbidden?
2	Which malfunction occurs frequently using this artifact? What is a common fix or work-around?
3	Why does the government subsidise the use of your artifact?
4	Pick a second field of application number. How could the artifact be adapted to this context?
5	Pick a second time frame number. Your artifact will develop for the shown number of years. How will it change?



And so it is time to pick another number between 1 and 5 and go to Table 2. There you find a question you will have to answer and that might shake up your first thoughts a bit. Take your time and reconsider what this new question could mean in relation to your object.

Reflection

Congratulations! You successfully conducted the expedition through this previously undiscovered world in your mind! Or in other words: You have developed a significant piece of a fictional vision of a world by now. A world in which your object has a specific meaning and purpose. You have also revealed its flaws, or perhaps discovered new uses that the object's designer did not foresee or intended to provoke.

Before you proceed, you deserve a short break of reflection on your journey. Get a cup of coffee or a tea and think about the experience you just had. How did you feel during your investigation? Was there something outstanding for you that you will keep in mind for a while or that sparked a new thought?

STORIES TOLD BY FELLOW TRAVELERS

Though they may not have been in the same place at the same time as you, some fellow travelers also ventured into the unknown.

Before you embarked on your journey, this investigation was conducted and documented during a public event organized by Berlin Realities (fig. 3).

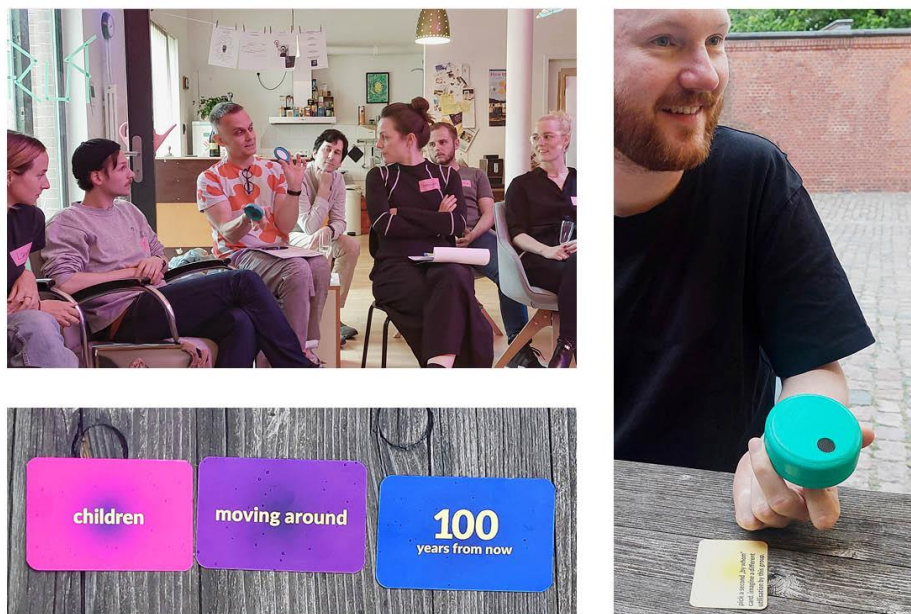


Figure 3. Fellow Travelers_Berlin Realities



The participants were sent on an expedition to explore a new world, as in the version modified for this article. The world was explored using various objects. In contrast to the version presented here, the objects were physically available. They could be touched and explored haptically. The use of physical objects adds depth to the practical investigation, as using different media to access the same world enhances the immersive effect (Wolf, 2018, p. 143). Studies also indicate that using our hands significantly influences our thinking (Prinz, 2013, p. xii).¹

The group consisted of around 20 participants and was divided into four “expedition” teams, each assigned an object to explore. The results of each round of investigation were documented in writing by the participants in a protocol. The discussion rounds were also recorded so that the negotiation processes could be reconstructed and evaluated later. Based on these recordings, some of Goodman's theoretical ideas can be traced through the investigation.

In the following, I will outline the theoretical considerations behind this practical investigation and illustrate them based on the discussions documented at the event. Let us begin with an insight into the four worlds that the participants discovered in their expeditions:

Object 1 - The Male-Hormon Applicator



Figure 4. Fuzzy Object_01

¹ The so-called “action-language compatibility effect” describes the phenomenon that we find it easier to understand abstract ideas once we can translate them into bodily movement (which often includes hand gestures) (Prinz, 2013, p. xii).



The expedition team of Object 1 (fig. 4) explored a world 50 years into the future. Their object is used by men for the purpose of moving around.

Object 1 is an applicator with which eye drops can be applied via the mucous membrane of the eye. The eye drops contain a solution of artificial male sex hormones. In 50 years' time, the use of these drops as a narcotic will be as widespread as smoking is today. Future earthlings will consume the drops for fun before and at parties. It is not entirely clear whether the consumption of the drops actually leads to a short-term physical change or whether the substance merely has a cognitive effect. If the former is the case, it is assumed that women not only use the applicator at parties, but also as a means for getting home more safely.

The applicators are not an expensive luxury item, but can be obtained at any kiosk or late-night shop at a price comparable to the electronic vapes used today.

Which malfunction occurs frequently using this artifact? What is a common fix or work-around?

There is a catch, though: Despite the age classification, sometimes these applicators end up in the hands of young people who use them to prank others, mixing the drops into drinks and causing unintended transformations.

Object 2 - The Art of Breathing

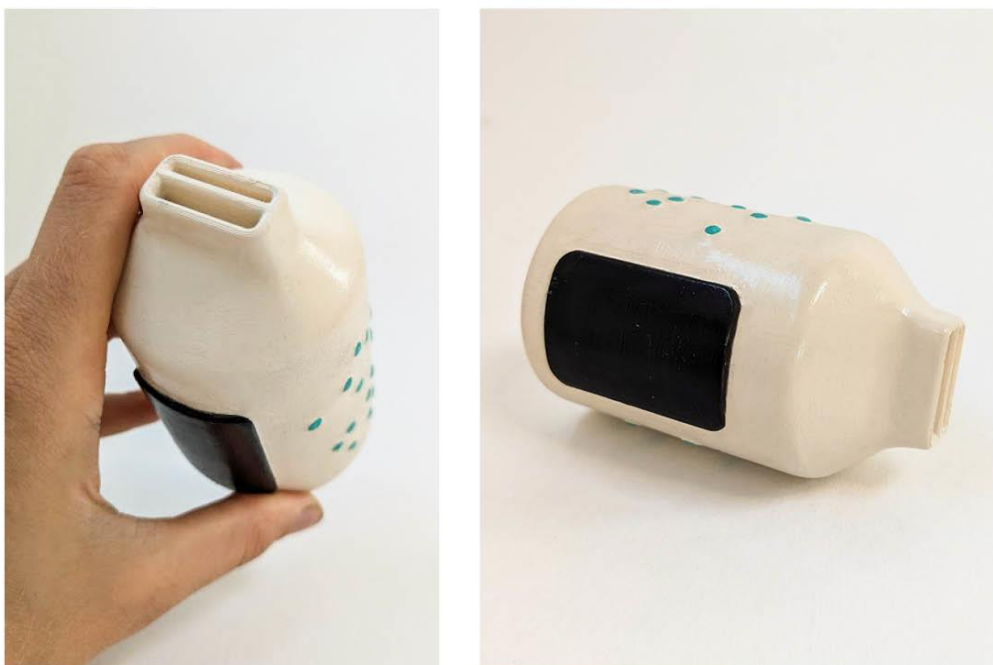


Figure 5. Fuzzy Object_02



The expedition team of Object 2 (fig. 5) explored a world 20 years in the future. Their object is used by high society to create art.

Object 2 is the mouthpiece of an actually larger artifact that is used to inhale specially filtered air that may also be enriched with additional active ingredients.

In twenty years, clean air will be a rare commodity reserved for those who can afford it. As clean air becomes scarce, society's perception of breathing will change. "Breathing well" is being elevated to an art form. Object 2 is therefore used to practice this art in various breathing exercises, some of which can induce hypnosis-like states.

Pick a second "when" card. Your artifact will develop for the shown number of years. How will it change?

50 years later, the earth is now virtually uninhabitable in terms of air quality. People are living under domes in small communities. After years of rampant individualism, collective living and mutual responsibility are regaining importance. The company that first brought Object 2 to the market 50 years ago has adapted its concept to these new living conditions. The function of the object has essentially remained unchanged; it is still used to filter air. However, it is now part of a full-body suit that makes it possible to leave the dome and enter the outside world. Adventurers and artists in particular are drawn out into the destroyed world to document the "outside" and bring it back into the domes as inspiration or work of art.

Object 3 - A hovering Companion



Figure 6. Fuzzy Object_03



The expedition team of Object 3 (fig. 6) explored a world 100 years into the future. Their object is used by cyborgs for moving around.

Object 3 is a collector of olfactory memories. It is used by cyborgs in the future to store odors during the course of their lives, which can then be recalled during a “memory journey.” The object follows its owner, hovering like a small pet. The memories are reproduced in the red „cherry“ (the „odor stone“) and released through the membrane. By turning the lid of the box, the exact time of the memorization can be selected.

Pick a second “by whom” card. Imagine a different utilization by this group.

At some point Object 3 is discovered by a new user group: Children. The children are using it as a parent substitute. It is called the “root” and is taken on every mission for the rest of the child's life and can be used to keep in touch with a contact person, such as a parent. The membrane serves as a tactile surface through which the heartbeat of the small piece of heart (formerly known as the „cherry”) in the box can be felt.

Object 4 - Shamanic Healing Appliance



Figure 7. Fuzzy Object_04

The expedition team of Object 4 (fig. 7) explored a world of today. Their object is used by inhabitants of another planet for safety.

Object 4 is a low-tech universal device that is used in various ways for healing purposes. The extraterrestrial society that uses Object 4 acts more shamanically than scientifically. The long side of the device is inserted into the body - either via a body



opening or it is rammed into the body like a needle. The mouthpiece with the black lip can then be used to suck out the diseases or whisper healing messages into the body.

Pick a second “what for” card. How could the artifact be adapted to this context?

As was discovered during the subsequent expedition, Object 4 is technically more complex than initially assumed. It is used for an imaging procedure to collect information about a patient's state of health. The device is penetrated into the body and a sample is taken, which is then blown out into an image for analysis. Rumors suggest that Jackson Pollock may in fact be a shaman of this extraterrestrial life form.

THE THEORETICAL ELEMENTS IN PRACTIAL USE

As the examples illustrate, interaction with the fuzzy objects stimulates participants' imagination, even of those who consider themselves “not creative.” They are becoming “active imagineers” as Dunne and Raby describe the same phenomenon observed amongst people trying to decipher unknown artifacts in historical museums (2013, p. 93). But how do these imaginations relate to Goodmans theory?

Goodman does not use the concept of world as a term for the physical world, but as a descriptive term in itself: Worlds are constructed from symbol systems, which can be languages, scientific theories, or art forms. In this sense, however, describing is not just pure recognition, but always also creation (Goodman, 2013, p. 22). This creation is defined on the one hand by the medium and style, i.e., the symbol system used for description, and on the other hand by the chosen composition in which the world is constructed: Which aspects are placed at the center, which are given less weight? How is the composition organized, what is left out? To demonstrate these ways of recognition, respectively creation, any world version can be used. Although, I will argue in the following that some world versions are more suitable than others for this kind of demonstration.

In everyday life, both the process of creating and assigning meaning to the world and the perception of the implicit values and assumptions contained therein are difficult to comprehend. As humans, we are born into a specific construction of reality. We internalize and objectify parts of our perception to such an extent that it appears to us as a non-constructed, ahistorical state of the world. Some meanings are therefore naturalized and thus appear as unmediated descriptions of reality (Fischer, 2023, p. 21).

Translating that into Goodmans theory, we do not create new world versions out of nothing. They are based on previous versions of the world, which we reassemble and change (Goodman, 2013, p. 6-17). Certain values or assumptions about the world can therefore be carried over different iterations of world versions and either change or remain stable. I like to argue that the more stable specific components remain across iterating world versions, the more difficult it becomes to recognize them as constructions. Their meaning is naturalized and assumed to be a direct description of reality.



Unfamiliarity as a Tool

In this context, the strangeness of the fuzzy objects – or more precisely, their absence of inherent meaning – serves several functions for the conducted investigation:

First of all, the objects make it possible to consciously experience world construction. As already mentioned, it is difficult to clearly identify the moment of construction in everyday life, as the processes of assigning meaning and creating world can rarely be determined. The unfamiliarity of the object allows us such a delimitation. Since we are confronted with the object for the first time and are unable to decipher its “real” meaning using conventional codes or the help of common knowledge, the construction process can be clearly defined. The result of this process is a world version that can be precisely delimited and – in contrast to world versions that emerge in the context of everyday life – can be examined within a fixed outline.

Secondly, the lack of a declared functionality interrupts the chain of naturalized meaning. The object offers only limited points of reference to a “real” use (even if certain elements of the object might convey the feeling of being made for specific functions), so all meanings assigned to it are known to originate from the participants. We have not been able to adopt or learn them from others; they reflect our own assumptions and values in an undiluted fashion.

At the same time, the strangeness also serves as a means of contrast. It is like being on a journey on which we discover cultural characteristics that remain hidden from us in our home country. Only the new, different cultural background contrasts our habits and makes them visible to us. Similarly, the unfamiliarity of the object contrasts the significance we read into it.

In the following, I would like to guide through the various steps of the game and offer an approach to interpreting the experiences that could be made in the process.

We Cannot not Try to Understand

The practical investigation starts before it really begins. One of the decisive moments for the perception of worldmaking is the first contact with the object. To ensure participants are as unbiased as possible, they receive minimal information about the investigation. They are only instructed to “familiarize” themselves with the object, without further details.

During the event, one participant after the other took their assigned object in their hands in order to examine it in greater detail. During this process, they discover elements that seem familiar to them from their existing knowledge and experience. These elements are then used as an anchor point to “understand” their object. Interestingly, hardly any discussions among the expedition groups involve geometrical descriptions. Instead, the understanding of the objects is developed through specific meanings of the elements.

The group surrounding Object 3, for example, describes their object as follows:



P1: “*There is a membrane in the lid...*” [person turns the object in their hands and opens the aforementioned “lid” to look inside] “– *and here is the cherry.*” [points to the red element inside]

P2: “*It looked like a loudspeaker to me at first.*” “*The red thing is a little light to me... is it a smoke detector? The one that lets the gases through?*” [P2 points to the structure previously declared to be a membrane]

Across all groups, a visible desire to understand the object’s purpose arises during the encounter. This need to explain everything around us is not just the result of a very engaged group of participants; it is a fundamental brain function, as studies on split-brain patients demonstrate:

The two hemispheres of the brain each control different aspects of thought and action. The left brain is dominant for language and speech, while the right excels at visual-motor tasks. While usually connected, the hemispheres of split brain patients are dissected via the corpus callosum and are thus unable to communicate. Even then, the patients are able to describe images or objects shown on the right side of their visual field. But if things are shown on the left side, the patients are not able to verbalize their impressions anymore. Given a pen in their left hand however, they are able to visually reproduce what they see (Gazzaniga, 1998, p. 51-52).

During studies conducted by Gazzaniga, split brain patients were shown a funny picture in the right field of vision and reacted by laughing, while the right hemisphere obviously could not have any explanation for this laughter. When the person was asked why they had laughed, something interesting happened: Instead of admitting that they could not answer this question, they made up reasons for their reaction. They might have just had a funny thought, for example. The same applied to a patient who was shown a sign with the instruction to “WALK.” When he complied with the request and was asked why he had gotten up, he explained that he was thirsty and wanted to get a Coke (Gottschall, 2012). Apparently our brain would rather make things up than admit that it has no answer.

What can be experienced through the investigations and what is neurologically demonstrated by the studies on split brain patients thus reveals that we cannot not try to understand. When we encounter an unfamiliar object, a situation, an interaction, we try to understand it and, to return to Goodman, we create a world version as explanation. As these versions are developed to rationalize contexts, it is necessary for them to seem believable to us.

Creating Believable Worlds

After participants experienced the near-impossibility of encountering an unfamiliar object without trying to assign meaning to it, the first round of the expedition involves consciously creating a world around the fuzzy object.

Conceptually, the objects can be understood as so-called diegetic prototypes. In design fiction, diegetic prototypes are objects that are assumed to be actually existing



artifacts in the world from which they originate (Kirby, 2010, p. 43). Based on the What if...? principle borrowed from science fiction, a socio-technical system,² respectively a world version, can then be built around these artifacts (Steinmüller, 1995, p. 78).

According to media scientist Wolf, three aspects are crucial in order to develop a credible and interesting fictional world: high degrees of invention, completeness and consistency (Wolf, 2012, p. 34). Even if the label “interesting” may be of secondary importance within this investigation, I would like to argue that a greater complexity of narration, which is associated with the degree of invention, is beneficial to the examination I will propose at the end of this article.

The constraints along timeframe, user group, and field of application forces the participants not to directly pursue their ideas from the first encounter and prevents the reproduction of conventional future imaginaries. The fact that the framework conditions often seem difficult to reconcile is an advantage according to Wolf’s categories: the obstacles challenge the participants to delve deeper into the world they are creating and to develop complex models of explanation in order to generate consistent and coherent versions of the world.

Not considering the degree of invention, as this tends to be more important for how interesting a world is classified, we consider world versions to be credible if they are coherent and do not contain logical errors. If we are dealing with world versions that are connected to our “real” world, there must also be a coherent link to this world. Deviations may only occur to an extent that appear possible within a plausible time frame or make the deviation otherwise rationally conceivable (Fischer and Mehnert, 2021, p. 29).

The group around Object 2 agreed in advance that their artifact had a mouthpiece (after a brief excursion in which they thought it was a very small milk carton), which must be connected to the breathing process. Because the group did not want to abandon this interpretation when their object was declared an artifact for creating art, they came up with a world in which breathing itself had been elevated to an art form. Along this narrative, the environmental progression of constantly increasing air pollution was then introduced as a link to the present.

Goodman phrases the matter as follows: “Rather – speaking loosely and without trying to answer either Pilate’s question or Tarski’s – a version is taken to be true when it offends no unyielding beliefs and none of its own precepts” (Goodman, 2013, p. 17).

It could be questioned whether credibility is an aspect that is of any importance at all within this investigation. I would like to argue that reaching a point of *willing suspension of disbelief*,³ which is only possible at a certain level of consistency, is necessary in order to create a world version along which further investigation can take

² A “socio-technical system” describes the interaction between social and technical aspects and their development (Ropohl, 2009). Accordingly, a socio-technical system, based on a new technological artifact, describes the influence of this artifact on the surrounding technical and social structure.

³ The term “willing suspension of disbelief” was coined by Samuel Taylor Coleridge and first used in 1817 in his work *Biographia Literaria*. Coleridge used it to describe the willingness of readers or viewers to accept supposedly unrealistic elements of a story in order to be able to immerse themselves within the narrative.



place. Otherwise, it is less a world version than a random pile of different elements without coherent and therefore debatable relations.

Fitting Together the Pieces

After developing a world version based on the fuzzy object and given constraints, participants are introduced to a new element to incorporate into their world.

The given tasks are based on questions relating to technology assessment and the idea of a *future mundane*⁴ developed by the Near Future Laboratory (Blecker et al., 2022, p. 116). The tasks intend to integrate the artifacts further into their socio-technical system and give their design more depth by raising questions that go beyond classic usage scenarios and framing the artifacts not as “perfect products” but as objects of use that are neither perfect nor unchangable. For instance, the group with Object 1 had to devise a frequently occurring malfunction, while the group with Object 2 was tasked with predicting the future evolution of their product.

Challenging the philosophical notion of truth, in *Reconceptions of Philosophy* Goodman and Elgin introduce the concept of rightness instead of truth to further elaborate on the use of symbol systems. They define “rightness” as “functioning of a symbol system” (Goodman and Elgin, 1988, p. 156) and as a question of “fitting and working” (p. 158). In the context of world making, “fitting” is neither a passive nor a unidirectional process. A new element for our world version is therefore not simply inserted into a static world version like fitting a new piece into a puzzle. Rather, the world version and the new element move towards each other and change their shapes until they form a unity.

By introducing the task to integrate a new element into the created world version, the game attempts to reproduce the aforementioned process of fitting together instead of fitting in.

In the documentation of the expedition groups, this development can be reconstructed:

The group around Object 3, for example, simply changes their narrative. After their adaptation of the device for children, the interpretation of the red element inside the device shifts:

Workshop facilitator: “*And what happened to the cherry?*”

Group member: “*It is now a piece of heart, you can feel the heartbeat through the membrane.*”

The group around Object 4, on the other hand, uses a narrative maneuver that seamlessly integrates their adaptation of the previous world version into the new narrative: “*During our second expedition, we realized that our object is technically more complex than we first assumed. We initially thought it was something esoteric, not*

⁴ The Near Future Laboratory uses the term “the future mundane” to contrast classical science fiction stories. Rather than looking at fantastic heroes the future mundane tries to imagine the day-to-day life of the average citizen, while focusing on the fact that future objects will neither be free of flaws, nor indestructible.



scientific in our sense, but we have now discovered that the whole process is much more physical than we first anticipated.”

The group thus explains a change in their previous narrative by saying that they had not yet found out certain things on their first expedition, but that these facts already existed at the time. Their new version of the world therefore is not a change in their world itself, but represents an “updated state of science,” so to speak.

The incorporation of a new element into the world version and the by Goodman and Elgin mentioned process of “fitting together” could be traced through the participants creations.

Being able to witness the process of “fitting together” underlines the idea of a constructed worldview opposed to a perception of reality. If we were to simply perceive the world around us instead of constructing it, subsequent changes would be inconceivable.

IS THERE ANY USE IN THIS EXPERIMENT?

You could say that this investigation may be a nice Sunday evening entertainment, but that its usefulness is questionable. What do we gain from being able to experience world construction? Is there any benefit in making something tangible that, if the theory holds true, happens all the time anyway, without us being able to do anything about it?

I would like to argue that the possibility of experiencing world construction, as opposed to merely theorizing about it, opens up a potential for sharing knowledge that can be effective beyond disciplinary boundaries and intellectual abilities. The understanding that our presumed descriptions of reality are constructions and therefore contingent, facilitates a different perception of the world. Supposedly unchangeable realities can be understood as alternative and changeable.

In addition, the world versions that are created during the practical investigation can serve as a basis for further examination. As described, the developed world versions represent delineated and undiluted assignments of meaning that can be directly traced back to their creators and respectively their inherited assumptions and values. The world versions are therefore enriched with those values and assumptions. Sometimes they can be easily identified:

The group around Object 1 got the instructions to create a version of the world in which their device would be used by men. The group was so entrenched in the view that there could (or should) be no gender-stereotyping technology in the future, that they were almost incapable of developing any world version under those restrictions.

Over the first 20 minutes of the experiment the group constantly circled around the topic of male gender:

P1: “*Will there still be men in 50 years' time?*”

P1 “*What will be typical male fields of activity in 50 years' time?*”

P2 “*Quite a delicate subject...* ” [...]



P1 *“I actually find this gender attribution difficult...”* [...]

P1 *“What are reasons to move?” “Vacation, work, ...”*

P3: *“But none of these are typically male reasons”* [...]

Workshop facilitator: *“So... how are you doing?”*

P3: *“We have a hard time with men as the user group.”* [...]

P2: *“Maybe it's a sex toy? I mean, the primary sexual organs won't have changed yet.”* [...]

P1: *“The question that the ‘male‘ card raises is actually, why is there a gender boundary?”*

P2: *“The card is so strong, it prevents us from telling the whole story.”*

P1: *“Maybe we leave it out for now and say men, women, whatever people. What could it be if we put that aside for now?”*

In most cases, however, the assumptions projected in world versions are less dominant and remain implicit. Methodologically, an analysis of these assumptions and values can then be developed based on the Causal Layered Analysis (CLA). Therefore, directly produced statements and their causes are first considered in order to further reveal the underlying worldviews and discourses, as well as their underlying collective archetypes (Inayatullah, 2009, pp. 9-11).

I would like to argue that these different levels can be thought of as coherent to the stability of different world elements across iterative world versions. As we move deeper into the CLA levels, associated elements have been maintained and naturalized through various iterations of the world. Making these elements visible and thus open for discussion allows us a different perspective in the sense of a critical examination. It thus opens up alternative possibilities of world making beyond our previous *“Denkrahen”*⁵ (frames of reasoning).

Translating Goodman's theoretical considerations into practice thus offers a direct benefit in terms of understandability across disciplines and may also serve as a basis for the development of alternative world creations. Apart from that, there's nothing wrong with enjoying a nice Sunday evening.

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⁵ Fischer uses the term *“Denkrahen”* to describe the network of meanings that are assumed as unmediated, unconstructed access to the world, as *“that's the way it is”* and thus prefigures how the world is constructed (Fischer, 2023, p. 23). In order to actually create alternative descriptions of the world, previously used frames of reasoning must be deconstructed and shifted.



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