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Taking Playful Scholarship Seriously: Discursive Game Design as a Means of Tackling Intractable Controversies

STEFAN WERNING AND JASPER VAN VUGHT

In his prominent investigation of the rhetorics of play, Sutton-Smith argues that, alongside other types of players, there are “even playful scholars” (2006, p. 301). The books Sutton-Smith points to as evidence—e.g., Derrida’s *Archeology of the Frivolous* (1987) or Paul Feyerabend’s autobiography *Killing Time* (1996)—provide some hints on how to define playful scholarship. These include an appreciation of the grotesque, that which defies rationalization, a keen sense of self-reflexivity as well as playful use of language and other stylistic traits often associated with the genre of the academic essay; however, Sutton-Smith himself does not systematically expound his claim. More recently, Alison James proposed “making a case for the playful university” (2019, p. 1). Through exercises aimed at reinterpreting academic procedures through the lens of play, James shifts the focus from the individual researcher to exploring how play(fulness) may transform the university as an institution. The participants in James’s workshops reportedly “felt freed, inspired, energised, cheered, surprised” (James 2019, p. 3) by playful exercises, a spectrum of affective responses larger than that typically associated with academic work. James’s ‘manifesto’ is based on a series of exercises (e.g., conducting research outdoors), which characteristically unsettle “the ways and spaces in which we expect learning to occur, and the enduring place of play in both of these” (James 2019, p. 6) by augmenting the ‘media modalities’ of academic work.

While Sutton-Smith and James focus their attention on academic writing and education, this article addresses the question how playfulness might inform contemporary collaborative research practices, specifically addressing “intractable policy controversies,” in which “the contending parties hold conflicting frames” (Schön and Rein 1994, p. 23). As a case study, we are reporting on a one-year project exploring the contemporary discourse about the controlled legalization of MDMA and other drugs in the Netherlands. This case can be productively interpreted as an intractable controversy because it exhibits several incompatible framings, e.g., depending on whether one takes a regional, national, or international perspective, or interprets drug-related public health and safety concerns primarily as a problem of, among others, legal frameworks, law enforcement, health communication, or international relations. To operationalize the main research question, we formulated several sub-questions:

- How can we design playful collaborative research processes to creatively and constructively involve academic and societal partners?
- How can these processes facilitate perspective change, as well as help to identify and overcome conflicting frames?

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- How can humor and social spontaneity, both categories of playfulness according to Lieberman (2014), positively influence the encounters between academic and societal partners?
- And, finally, what are the limitations of playfulness in formal research collaborations?

To answer these questions, we developed two game prototypes, and invited participants to not only play but also co-design them with us in a series of workshops in order to (a) draw out preconceptions and frame conflicts between and even within different participating groups, (b) demonstrate the limitations of mono-disciplinary thinking about intractable problems, and (c) afford perspective change by asking participants to playfully express their interpretation of the other groups' perspectives through rule changes in and additions to the prototypes at hand.

This approach explores the premise of playful scholarship in two ways. First, while James primarily discusses singular interventions intended "to persuade those who are anti-play" (2019, p. 14), we aim to show how playfulness can enrich relations between academics and public partners from a more long-term perspective. Second, we posit that developments such as the increasing use of 'serious' games and educational 'versions' of commercial games[1] in academia—like the "postfunctional design" (Sicart 2014, p. 20) of contemporary software and digital devices—often primarily evoke the rhetoric rather than the spirit of play, and can thus—seemingly paradoxically—limit spaces for actually playful scholarship. On that note, an early study on gamifying academic courses tellingly focuses on how gamification techniques correlate with "perceived playfulness" (Codish and Ravid 2014, p. 133) rather than genuinely playful, and potentially appropriative or even transgressive behavior. According to Sicart, playfulness specifically refers to "the capacity to use play outside the context of play" (2014, p. 21)—i.e., the more scholarship 'looks' like a game, the less room for playfulness it arguably affords. This tension between playfulness and games, in academia or elsewhere, is already implied in Hans-Georg Gadamer's famous dictum that "the game masters the players," and that "whoever 'tries' is in fact the one who is tried" (quoted in Aarseth 2014, p. 180). To address these pitfalls, we asked participants to co-create the game prototypes (i.e., to 'be playful' with the game-as-model) as a means of avoiding 'being played' by the game itself (i.e., following its internal logic and the conceptual momentum of its model too closely).

Below, we first outline a theoretical framework to add more nuance to the idea of playful scholarship. This involves (a) defining the subject matter itself as an ecology of games, which can be interpreted and re-imagined in terms of play, and (b) identifying different aspects and implications of playfulness, which we systematically incorporated into our co-creation process. The actual case study is broken down into two phases; the first involved (co)creating a prototype 'from scratch,' while the second was based on the CIA training game *Collection Deck* (Clopper 2017). In the conclusion, we briefly summarize the key findings, acknowledging how societal polarization and, thus, intractable problems are becoming increasingly common, but also reflecting on the limitations of playful scholarship in practice.

Playful Scholarship in Theory

Rethinking Intractable Controversies as 'Ecologies of Games'

In their definition of intractable controversies, Schön and Rein (1994) themselves use metaphors of play, arguing that we "can reflect on and learn about the game of policy making even as [we] play it," which also includes "reflecting in action on the frame conflicts that underlie controversies and account for their intractability" (1994, p. 37). Accordingly, we encouraged all participating groups, including criminologists, game scholars, and historians as well as Dutch law enforcement, health workers, and public institutions like the "drugs museum" Poppi in Amsterdam (see Poppi Amsterdam 2019), to think about the subject matter through the lens of game (co-) design. To conceptually motivate this negotiation of Dutch drug policies as 'rules of play,' we define the institutional context of these policies following Norton Long's ecology of games framework.

In Long's work, the term 'ecology of games' originally applies to municipality-level systems of governance and interprets domains like "banking, newspaper publishing, contracting [or] manufacturing" as interrelated sub-games that provide "structures, goals, roles, strategies, tactics, and publics to the players" (Long 1958, p. 251). As a sociological concept, it posits that understanding which games individuals play is more helpful in these situations than the traditional "rational, atomistic model of calculating individuals" (Long 1958, p. 252). Long defines "the social game" as a metagame as "success in each of the games can in varying degrees be cashed in for social acceptance" (1958, p. 261), a claim that in the more than 60 years after the publication of the original article has only become more intuitively plausible and even formalized through the datafication of online social networks. The ecology of games framework has been 'updated' and generalized to different scenarios of institutional complexity that "involve [...] multiple policy games operating simultaneously within a geographically defined policy arena" (Lubell 2013, p. 538). As a metaphor, it is adaptable to other domains which similarly do not exhibit a tightly enforced system of hierarchical control. In the case at hand, lawmakers (both on the regional and national level), law enforcement agencies and public health officials but also, for example, news media and drug traffickers play their own games, and while some interrelations between these games might be outwardly visible, others may only become apparent by explicitly framing them as (sub)games.

Defining the intractable problem as an ecology of interrelated subgames provides the conceptual foundation for addressing the situation from a game-maker's perspective—i.e., through game co-design as a playful practice. The characteristics of game design as a "playful process" (Werning 2021, p. 88) have been previously addressed (see also Majgaard 2014), though these may differ based on the level of professionalization. For example, a game creator needs to anticipate (and accommodate) different playing styles—i.e., routinely inhabit and enact different viewpoints. Moreover, game design tasks, like adapting existing mechanics and genre frameworks to a given subject matter, require and afford cognitive and social spontaneity (Lieberman 2014). Put differently, making games about a real-world phenomenon involves "appropriat[ing] a context that is not created or intended for play" (Sicart 2014, p. 27) and re-imagining it as if it were a game, finding a middle ground between mimetic realism and abstraction that provides a (not necessarily fun but) balanced play experience. For instance, participants in our co-design sessions

initially defined the relationship between police forces and drug lab operators as a 'cat-and-mouse game,' an allegedly personalized conflict based on covering one's tracks and triangulating information. Based on news coverage, characteristic elements (e.g., the role of neighbors or environmental consequences of disposing drug lab waste) were re-interpreted through the lens of previous game experience such as the hidden movement mechanic from iconic board game *Scotland Yard* (Burggraf et al. 1983). This approach led to a constant tension between concretizing situations—e.g., by adding, merging, or discarding game rules—and "reambiguat[ing] the world" in order to leave it "open to interpretation and wonder and manipulation" (Sicart 2014, p. 28). Defining the societal context of drug policies and mitigating drug-related health and security risks as an ecology of games thus provided the necessary epistemic foundation to disentangle and improve it by way of game (co-)design.

Game (Co-)Design as a Communicative Act

In the two case studies below, we draw on discursive game design (e.g., Werning 2020) as a methodological foundation. Design thinking is usually framed as "go[ing] into a dialogue with the design situation" (Johansson and Linde 2005, n.pag.), which includes a quasi-dialogical relationship with the material implied in the notion of the "bricoleur" (Antonijevic and Cahoy 2018, p. 6). Bricolage involves "a creative act of recombining elements" (2018, p. 54), not unlike improvisational, 'unscripted' discourse, in which the material can 'speak back' by resisting or affording specific combinations. Taking this idea a step further, we define game design as an ongoing discourse, with each utterance quoting, challenging or re-phrasing earlier contributions by modifying the shared prototype.

Indeed, play itself has been repeatedly defined as "a meta-communicative act" (Mäyrä 2012, p. 58). More recently, Mitchell argued that games operate as "spaces of translation" (2020, p. 1) and that playing games, like any other discourse, "relies on a shared understanding of social norms" (2020, p. 2). Consequently, discursive game design allows for investigating the rules of this translation process by repeatedly changing the shared game and observing how these changes affect the underlying norms as experienced by the players. The notion of game (co-)design as a translation process resonates with Paepcke-Hjeltness's suggestion that design thinking can "[f]acilitat[e] [c]onversations [a]cross [a]cademic [s]ilos" (2021, p. 1)—i.e., across disciplinary traditions and knowledge domains. This requires participants to "develop trust in ambiguity, to break out of habits and to ask 'what if' questions" (Paepcke-Hjeltness 2021, p. 2). For example, to structure academic collaboration across disciplines, Paepcke-Hjeltness reports on using "role cards" like "the doer," the "risk taker" or the "optimist" (2021, p. 6) to incentivize experimenting with unusual perspectives on the subject matter. While this approach relies on established design thinking methodology, the implicit connections to playfulness and games (e.g., character sheets in tabletop role-playing games) are immediately apparent. In our own approach, we asked participants to instead adopt the game-maker's perspective, which required interpreting the subject matter at hand in terms of games and play(ers).

Some of the characteristics elaborated above similarly apply to 'indigenous game design' (e.g., Laiti 2021 and LaPensée 2019), a speculative design approach, which

has been receiving more and more attention with the increasing awareness of indigenous epistemologies and the need to preserve them. The different parties influencing Dutch drug policies (e.g., local politicians but also different branches of law enforcement) arguably exhibit similarly 'indigenous' knowledges, not necessarily native to a place but to a specific socio-cultural environment; thus, indigenous game design can be useful as an additional frame of reference in the co-creation exercises. For example, collaborative design with indigenous communities includes "playful humor to remind players of their actions and how these did or did not align with the community's values" (LaPensée 2019, p. 7). Moreover, LaPensée emphasizes that "community members should be directly involved in the process of adapting their culture to a game" (2019, p. 18) due to the politics of representation. This focus on the community can be adapted to the collaborative situation in our project. That is, taking these issues into account, the project aims to similarly translate 'indigenous' knowledge of different "cultures of work organizations" (Trice and Beyer 1993, n.pag.)—rather than ethnically and/or geographically defined communities—into the language of games.

Elements of Playfulness

As a basic frame of reference, Lieberman's categories of playfulness—i.e., physical, cognitive, and social spontaneity as well as humor and "manifest joy" (2014, p. 27)—point to important and still relevant traits that we observed in multiple guises during the (co-)design sessions. Despite dating back to the 1970s and being derived from observing preschool children, these categories are largely congruent with later taxonomies like the "adult playfulness scale" (Glynn and Webster 1992, p. 84), which assesses "playfulness in the workplace" (Glynn and Webster 1992, p. 83) and relies on related dichotomies like "frivolous/productive" or "adventurous/purposeful" (Glynn and Webster 1992, p. 103). Even more recently, Shen (2020) presented a similar, psychologically informed perspective on playfulness, which—despite also aiming to metricize playfulness—provides several useful conceptual cues for the case studies below. Most importantly, Shen takes an "interactionist approach" rather than a "traditional trait approach" (2020, p. 2), suggesting a procedural focus that acknowledges how playfulness unfolds 'by doing' rather than constituting a latent property of a person. Accordingly, "psychological situations for play" (Shen 2020, p. 6)—rather than people—are defined by "stimulating factors" like "novelty, complexity, responsiveness, and dissonance" as well as "staging factors" that can afford or constrain a "free, uninhibited mental state" (Shen 2020, p. 7) required for playful interaction and expression. Consequently, "playful states" experienced in these situations are characterized by a sense of "immersion" (Shen 2020, p. 8), "mastery," "activeness" and "positive affect" (Shen 2020, p. 9). In the case studies, we aimed to implement discursive game design in such a way as to create these situations.

A distinct challenge in the design of playful situations involved distinguishing between expectations that the game itself should 'produce' new insights[2] and, as Sicart recommends, more "carnivalesque" (2014, p. 23) attempts at resisting 'utilitarian' play by, for example, exploring ideas that would be ruled out by conventional wisdom as optional in-game scenarios or events. A carnivalesque approach allows for (temporarily) defamiliarizing the object of study or the research process itself. Both may appear counterintuitive in an academic context, but as, for example, Eef Masson

suggests, “one of the great merits of digital [research] tools is their capacity for ostranenie: for ‘making strange’ [...] our objects of study – and by the same token, for calling into question our most profound assumptions about them” (2017, p. 33). In the case studies, we consider the ever-changing prototype such a tool, which encourages participants “to try out alternative perspectives on the same objects” (Masson 2017, p. 34).

Playful Engagement with Game Prototypes as Boundary Objects

These suggestions to (temporarily) embrace a more carnivalesque perspective in collaborative research processes are consistent with the aforementioned notion of bricolage, specifically the “‘inefficient’ and ‘unruly’ bricolage practices” (Antonijevic and Cahoy 2018, p. 61) that Antonijevic and Cahoy refer to. Our game prototypes were similarly designed to facilitate bricolage, with game rules and information from our domain experts formulated as easily re-combinable ‘modules’ and were intended to demonstrate whether and how ideas—almost like building blocks—fit together or not. That is, every content-related suggestion needs to be formulated as game rules that do not break the internal consistency and balancing of the existing rule system—or needs a good reason to do so, which helped with identifying and negotiating the various incongruous frames that characterize Dutch drug policies as an intractable problem.

In that sense, the prototypes in their contingent stages of development act as boundary objects (Leigh Star 2010)—i.e., as lenses to establish ground rules for a common discourse between very different groups (criminologists, law enforcement, health workers, historians, game designers, etc.) without requiring an a priori consensus on key terms and concepts. As boundary objects, the prototypes furthermore make the intractable controversy, which often appears elusive due to the incompatibility of competing frames, seemingly ‘tangible’ and symbolically manipulatable. This has a notable empowering effect, particularly while discussing controversial issues like interdepartmental competition within the same agency. Regarding serious games tackling “climate (change) uncertainties” (Van Pelt et al. 2015, p. 41), Van Pelt and colleagues argue that (simulation) games can be understood as boundary objects because they enable collaboration without preemptively resolving uncertainties. Koskinen emphasizes the role of “metaphors in the creation of [and as] boundary objects” in organizational contexts, describing the process as “making and solving puzzles, thereby elaborating and refining the vocabulary that embody them” (2005, p. 328). This game-like terminology similarly applies to our use of game prototypes, which act as procedural metaphors that are tested and refined through continuous puzzle-solving.

Playful Scholarship in Practice: A Tale of Two Prototypes

Before delving into the first case study, we would like to emphasize that ethnographic observations from the co-design sessions will be limited to illustrating the theoretical proposition—that an intractable problem like drug policy discourse can be understood as an ecology of games and addressed by incorporating aspects of playful

collaborative scholarship—because providing a systematic ethnographic account of the process would transcend the scope of this article.

Prototype A

Over the course of six months, we regularly met with a team of academics and were occasionally accompanied by NGO workers, journalists, and police officers. The academic team alone consisted of historians, a neurobiologist, media scholars, a criminologist, and computer scientists. While many of us had a specific interest/expertise in drug use and policy, the transdisciplinary composition of the group required us to find a common language to define and tackle the drug-related challenges at hand. As explained, we attempted to find that common language in the design, playing, and modification of our own games, which thereby functioned as boundary objects in terms of both their material structures as well as their functional mechanics (Leigh Star 2010).

However, before we could get there, we needed to introduce the group to some general game design principles. We first introduced a variety of existing drug-related board games to the group. These consisted of games warning about drug use such as *Just Say No!* (Olah 1987) (endorsed by Nancy Reagan's national Just Say No Foundation and part of Ronald Reagan's 'war on drugs') or *Downward Spiral* (Czruchry et al. 1998); educational games about drug recovery such as *Drug Recovery Game* (Saunder 2017); games about growing a drug cartel such as *After Pablo* (Hayden 2010) or *Drugopoly* (L. L. Brainwashed 2004); and the drug smuggling game *Contraband* (Steinham 1979). These games functioned first and foremost to show the group the levels at which drug-related content has been approached in board games and to introduce some common game mechanics.

Using these games as reference points, we continued to further explore these and other board-game mechanics by creating hypothetical games to outline the interconnectedness of drug related stakeholders, their dominant strategies, and various 'victory conditions.' For example, we explored area control as a useful mechanic to visualize the ways in which drug dealers and police officials may be vying for control over districts. This mechanic highlighted how drug-crime prevention requires a cross-district and even cross-border approach and thereby collaboration between different 'police players' but also other stakeholders like local governments and community workers. We also explored deck building to create increasingly concrete strategies towards victory conditions for different drug-related stakeholders such as drug users looking for a 'fix' or drug dealers looking to sell their supplies. Exploring this mechanic highlighted the limitations of pre-deciding a range of effective strategy questions in light of the random events that are often decisive in the lives of drug users (a lucky score or a tragedy) as well as drug dealers (an accidental bust).

What was interesting about these thought experiments was that, rather than *playing* a game with these mechanics and thereby subjecting ourselves to the game's rule system, the mechanics became a resource for a more *playful* exploration of drug-related issues. By not becoming a player who is under the spell of the game (Aarseth 2014) we avoided empathizing with a specific character position and furthering that character's agenda. Instead, we only adopted a playful perspective in the ideation stage of game (co-)creation which allowed for (a) a more balanced understanding of and accounting for different drug stakeholder positions, and (b) an ongoing dialogue

with the different game mechanics and their applicability. In other words, as game designers, we had to think about a balanced environment that would provide viable procedures for (the interconnectedness of) different 'players' with different 'playing styles' and different 'victory conditions.' And because we had not yet confined ourselves to getting the simulation working within a specific prototype, we could easily reflect on the limitations of the mechanics in simulating drug situations and switch, add, or change mechanics.

Here, the appropriative and disruptive characteristics of playfulness (Sicart 2014, pp. 27–29) led to a different type of knowledge creation. First, the inductive or iterative scholarly process of mapping the on-the-ground drug situations was not framed by knowledge of previous research (or at least not solely). Instead, the game mechanics became the dominant framing device, disrupting the conventional research process by challenging us to think about drug dealers/producers, drug users, healthcare/ community workers, and police officers as 'players' with certain strategies and motivations in competition or cooperation with one another. It forced us to reflect on the rule system upholding the interrelationship of these different stakeholders and the way in which we, as designers, could manipulate this system (i.e., make policy changes) that would, for instance, give the upper hand to certain players without endangering other ones. Second, rather than departing from a problem that needed to be solved, problems arose in the process of playful appropriation. This turned us into bricoleurs (Antonijevic and Cahoy 2018), combining domain expertise with available game mechanics to lay bare new perspectives on the interrelationships, motivations, strategies, and goals of the different drug stakeholders.

Once we had explored (a combination of) multiple game mechanics in hypothetical games, we continued to further concretize a few of these thought experiments by creating small prototypes. We started off creating a small role-playing game. After we had all created a micronarrative around an archetypal character (drug user, healthcare/community worker, law enforcement agent, and drug producer), we used a *D&D*-like character sheet to translate these micronarratives into game mechanics, filling out name, societal position, as well as certain strengths and weaknesses. We then used the software tool VUE (Tufts University 2020) to visualize a character loop with different core actions the character would take on the path to 'victory,' the victory condition(s) and fail state(s) of the character, rewards and punishments, as well as different modifying loops (see Figure 1).

Once the characters and their general action loops were in place, we started role playing specific scenarios (like the festival scenario in Figure 1). This role-play exercise allowed for perspective swapping, whereby for instance police officers or criminologists took on the role of drug users, drug producers, or healthcare workers. This perspective change seemed to lead to a kind of mirroring whereby the players were positioned as their own audience and explicitly made aware of the actions and motivations of their character (Stenros and Sihvonen 2020). In that same process, the light was also turned back onto the players performing the activity whereby a kind of defamiliarization (Masson 2017) took place and the players started to see themselves and their own preconceptions on the situation in a new light. Here, role-play, as Stenros and Sihvonen explain it in relationship to solitary role-playing games, is "an activity that both shows the player their own image (through direct

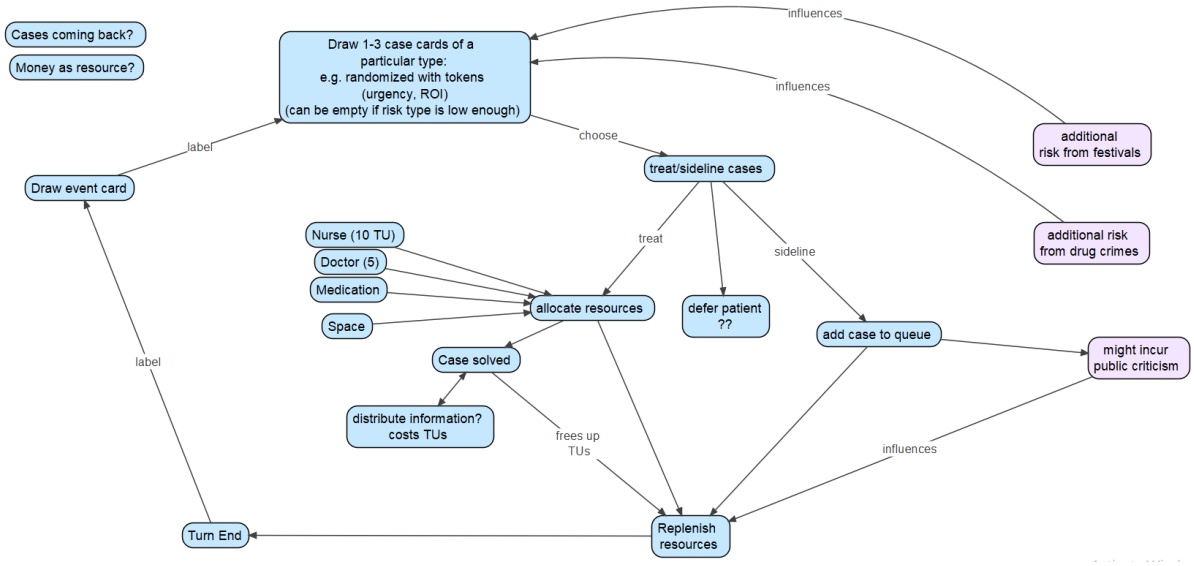

Figure 1: Example of healthcare worker character loop.

avatar action) and makes them into something unknown, strange, and norm-questioning (or 'queer') to themself (through performing a role)" (2020, n.pag.). In this simulation gap (Bogost 2006) between the role played and the players' preconceptions on the challenges and motivations of the other stakeholders in the situation, players started to reflect on the complexity of the choices that the other stakeholders had to make in terms of resource management or seeking collaborations with other stakeholders. For example, role-playing a healthcare worker forced us to decide when to allocate space and time to treat patients with drug related disorders and/or provide information on responsible drug use (choices that were often mutually exclusive). Similarly, role-playing a law enforcement agent, made us keenly aware of the external (e.g., political) forces impacting decisions on where and how to spend resources and also made us aware that while drug crime inevitably requires collaboration across districts, local police units were often in competition for reputation and funding.

Once we had the different characters in place, we started to create a variety of different board games from different stakeholder perspectives (see Figure 2). Using a range of at-hand materials like printed maps, dried pasta, a glass, dice, and game tokens, we started to flesh out some spatial mechanics like area control, pick-up-and-deliver, and network building for each stakeholder. Here we noticed how our playful attitude transformed many day-to-day objects into 'toys' (Sicart 2014, pp. 38–40), whose materiality, in turn, started to structure the action possibilities in the prototype. For example, we used the pressing of a glass to simulate police interference in an area with drug-waste dumping-grounds to show how drug waste sites and other potential drug related activities would move to neighboring districts once police started pressing down too much in one area. Similarly, we used dried pasta as markers for social distance between the different nodes in a drug-crime network whereby different pasta lengths started to determine the different types of social connections (professional, cultural, and family).

Figure 1: Examples of board game prototypes.

We would argue, in line with Lieberman (2014), that the physical spontaneity with which we incorporated off-the-shelf materials promoted a kind of divergent thinking, which exhibits all three of Paul Torrance's characteristics of creativity—i.e., "fluency [or: finding alternative uses of an objects], flexibility [or: switching between approaches] and originality [or: transcending routines and habits]" (quoted in Bateson and Martin 2013, p. 56). Specifically, the dried pasta stood out as a "playful trigger" as suggested by Akama and Ivanka, referring to "playful, everyday objects that [are] explored to facilitate co-creation and communication of local knowledge […] through visualisation" (Akama and Ivanka 2010, p. 12). It is exactly in the making and remaking of maps, networks, stakeholders, resources, score counters, etc. that new ideas arose. In relation to sustainability issues, which themselves are often intractable controversies, Bendor (2019, p. 132) argues that interactions with media like these can become worldmaking interactions that challenge the crisis of social, economic, and political imaginaries and instead have us imagine alternative futures through new policies. In other words, the spontaneous rummaging through drawers and cupboards to find materials to play with kept us from sticking to familiar problem-solving patterns and instead sparked more unconventional ideas.

Here, failure also played an important role. As Juul (2013) explains, failure is incredibly important in the learning process since it requires us to search for new strategies which, in a safe space with little tangible punishment, can become more experimental and divergent. As such, the many different prototypes we built over the course of this project were all successful in their failure to simulate the complexities of the Dutch drug situation and effective policy changes. In every attempt to have domain experts playtest prototypes and check their working against plausible scenarios or known cases, the games fell flat, often leading the experts to ridicule the simplicity of the rule systems. Here, laughter and joking functioned as playful forms of communication in alleviating anxieties that come with entering unfamiliar disciplinary grounds in transdisciplinary collaborations (the fear of saying something stupid) (Mäyrä 2012, pp. 57–58). As such, the frictions between the game and the situation it was trying to model became productive irritations, inviting experts to laugh away any inadequate design and keep redesigning the prototypes. This kept the co-design process open-ended, autotelic, and thereby playful in itself.

Figure 3: The design document of Collection Deck *(Clopper 2017).*

Prototype B

While the first case study involved creating games 'from scratch,' the second derived its 'base game' from the CIA-developed card game *Collection Deck* (CIA 2017). As the design document was released in response to a FOIA request in 2017 in an unclassified form, with numerous cards redacted, it already incentivized several developers to 'fill in the gaps' and produce their own versions (see, e.g., Masnick 2019). *Collection Deck* simulates intelligence work by drawing on "classic card games like *Bridge*, *Hearts* and *Whist* and collectible card games like *Magic: The Gathering* and *Pokémon*" (Clopper 2017, p. 4; Clopper 2017 offers the redacted, publicly released design document), symbolizing intelligence problems and collection techniques as well as 'reality checks' (i.e., external circumstances) as cards that need to be matched to be successful (see Figure 3). It is played with three to five teams of two or three players sharing the same hand of cards and exhibits its own distinct procedural rhetorical frames and biases. For example, the finite list of 'problem' scenarios inherently elevates the chosen 'problems'—such as "Pakistan Nuclear Security"—to seemingly archetypal, recurring crisis situations. Moreover, players alternately act as intelligence agents and "'the system'" (Clopper 2017, p. 7), trying to thwart other teams' strategies through strategic reality checks; while not 'realistic,' this design choice incentivizes repeated perspective change, as finding faults with other players' collection strategies informs players' own strategic positioning. The internal consistency of the game rules also exposes a few ambiguous design choices. For example, if a team cannot solve an intelligence problem, their technique cards remain in play and the next team may add to them to solve the problem and claim the points. This may point to a coopetitive element, in which teams compete for recognition despite being part of the same institution; however, since the relationship between teams is not formalized otherwise, this rule

leaves room for different interpretations. Regarding playfulness, it is worth addressing the balance of *ludus* and *paidia*—i.e., rule-based and free-form, improvisational play respectively as defined by Caillois (1955)—in the game. While most elements are formalized—e.g., problems requiring an exact amount of technique cards to solve—the "collection manager challenge" (Clopper 2017, p. 5) requires players to explain how their strategy would work "in the real world" (Clopper 2017, p. 6), leaving more room for playful self-expression.

Figure 4: Prototype cards based on Collection Deck *(Clopper 2017).*

In four playtesting sessions with Dutch law enforcement and health workers between October 2018 and August 2019, we iteratively played the game with self-modifying rules, allowing participants themselves to engage in "playful design" (Flanagan 2014), changing, adding, or removing rules to identify where the game-as-model deviated from their lived experience (and how they might translate their experiences into the 'language' of the game). Similar to the collection manager challenges above, we added cards that would allow players to intervene in the rule system by overwriting (through stickers), removing or adding cards as well as additional components (see Figure 4); this could be limited to adjusting individual parameters and icons or provide more creative freedom to players. By tying these co-design activities to the rule system—rather than just giving participants the opportunity to change anything any time—we aimed to weave together more intricately the experience of playing and co-designing, giving more 'weight' to every design choice

but also incentivizing a more frequent switching back and forth between player and designer mentality. Moreover, this process ensured the overall coherence of the play experience, which is important for the prototype to function as a boundary object that is materially stable but affords semantic flexibility.

The inspiration to incorporate co-creation into the design of the prototype-as-object—in this case via self-modifying rules—stems from indigenous game design. For example, LaPensée notes that, in her case study, the "guide book [of the game] includ[ed] blank pages for players to write in the food and medicine names in their own language" (2019, p. 7), thereby marking core components as material for appropriation. Instead of understanding the aforementioned "mastery" (Shen 2020, p. 9) literally, we interpreted it as having control over the (framing of) the situation. The self-modifying rules were instrumental in this regard, affording both the embodied experience of personally 'reframing' the situation (e.g., by changing how problem and technique cards work) as well as the symbolic control provided by the rule system of the game. Being able to change the game partially counters the frustration caused by intractable problems, in which the 'right' strategy is seemingly obvious but still infeasible without "reframing" (Schön and Rein 1994, p. 777) the issue at hand. At the same time, it marks each change as inherently contingent because it may be further modified at any moment and organically addresses problems with 'issue ownership,' which arise if participants consider parts of the game a material 'extension' of their own position in the discourse.

As participants from different domains played the game prototypes, they gradually began to interpret their role in the Dutch drug policy debate in terms of an ecology of games (Lubell 2013). This included playing strategies that point to coopetitive 'game mechanics' at work, like the ones identified in the original design of *Collection Deck* above. While all parties involved worked towards mitigating the environmental and public safety implications of drug production and trafficking, limited budgets required framing the problem as primarily related to one's own domain (legal frameworks, police presence, health services, information campaigns, etc.) and claim any publicly visible progress as one's own. This "coopetitive mindset" (Potangaroa 2016, p. 154) is characteristic of intractable problems and may be particularly 'rewarding' if known to and accepted by all parties involved. Potangaroa's case, a multi-stakeholder attempt at organizing post-disaster reconstruction, also demonstrates how pervasive game metaphors are in the management of intractable problems. For example, one established systems-thinking approach involves "changing the 'Rules of the Game' rather than accepting the 'Game' you are given" (Potangaroa 2016, p. 153)—i.e., "to be a 'Game Maker rather than a Game Taker'" and "to see the whole game" (Potangaroa 2016, p. 154) instead of only the rules that immediately apply to oneself.[3] In this case, game-making and "changing the game" (Potangaroa 2016, p.155) are metaphors, but game co-creation can help participants embody that experience. Analogue games like *Collection Deck* or the corresponding prototype afford a dynamic blend of competition and cooperation (Rogerson et al. 2018)—i.e., both types of interaction are inherently experienced as temporary and contingent. Moreover, by noticing which game design inspiration they fall back on, participants could more easily identify frame conflicts in the underlying subject matter itself. Some of the suggested mechanics directly reflect the logic of existing game mechanics. For example, the world state representation—i.e., representing the political environment of in-game drug policies either as a one-dimensional spectrum (from liberal to

conservative) or a two-dimensional 'map' combining political orientation and available funding—directly evoked the 'tug of war' mechanic (BoardGameGeek n.d.) popularized by board games like *7 Wonders: Duel* (Bauza and Cathala 2015) or *Watergate* (Cramer 2019).

It should be noted that, according to categories of fidelity and mimetic realism—i.e., a game-as-model that reliably describes or even anticipates real-world developments—*Collective Deck* arguably falls short by radically simplifying a highly complex subject matter. However—as became apparent by 'playing with the game'—the formulaic nature of *Collection Deck* actually facilitated 'thinking through' the game-as-model about the underlying issues. The deliberately simple nature of the prototype and the incongruities it produced when juxtaposed with the complexity of participants' lived experience repeatedly presented opportunities for humor as a means of "playful communication" (Mäyrä 2012, p. 55). Far from a less-than-serious approach to the subject manner, creating space for humor proved to be productive in more ways than one. Mäyrä points out that "shared humor is also an expression of social contract" (2012, p. 58); in the co-design sessions, it allowed for defusing tensions that arise when participants aimed to express their—inevitably lacking—understanding of each other's professional epistemologies through game rules. Mäyrä further defines humor in playful communication as a "[meta]game that players only play successfully when they both understand and follow the rules" (2012, p. 58)—i.e., the 'successful' use of humor creates a sense of connectedness by reaffirming that all participants make efforts to understand and follow the 'rules of engagement.' In that regard, the limitations of the *Collection Deck* prototype as a 'game' created a fertile ground for emergent playfulness.

Figure 5: The second prototype in Tabletop Simulator (Berserk Games 2015).

Finally, as the COVID-19-related restrictions prohibited physical co-creation sessions, we also implemented this second prototype digitally in *Tabletop Simulator* (Berserk Games 2015), an accessible authoring tool that allows for collaboratively creating analogue games in a virtual environment (see Figure 5). We were particularly interested in how this digital environment would affect the envisioned playful collaboration. Based on a few test runs, *Tabletop Simulator*'s capacity for networked play works rather seamlessly, but partially stymied some aspects of playfulness like social spontaneity and carnivalesque play. However, the tool allows for circumventing some of these limitations and provides new opportunities to be playful. For example, the persistent physics engine allows for reclaiming physical spontaneity,[4] but also 'unruliness' and humor. Having access to a larger selection of virtual components, which can be copied and pasted at leisure, affords new forms of cognitive spontaneity such as finding uncommon uses for ready-made digital playthings like chess pieces, bowls, and custom dice, similar to the repurposing of physical everyday objects as playful triggers (Akama and Ivanka 2010) as elaborated above.

Conclusion and Outlook

Coming back to the main research question, the co-design processes around the two prototypes indeed provided ample anecdotal evidence suggesting that facilitating different facets of playfulness can help identify and reconcile conflicting frames in intractable controversies, in our case in the Dutch drug policy discourse, which otherwise often lead to discursive entrenchment. One important foundation for this type of approach has been the ecology of games framework. On the one hand, as proposed by Norton Long, it allows for rationalizing the behavior of 'players' in different games. Yet, on the other hand, it also helps participants from different disciplines think about a topic like drug policies as 'game rules,' which produce their own procedural bias but can be changed to accommodate different player behavior. No less importantly, we define inclusive game co-creation processes such as discursive game design and indigenous game design as inherently playful, and the sample project explored different strategies, from object play and bricolage to carnivalesque play and humor, to challenge the 'conventional wisdom' of participating groups and to incentivize perspective change. Finally, we believe that a long-term perspective on playful scholarship as in the sample project is important, but comes with its own characteristic challenges. For example, we noticed the tendency for playfulness to shift into more routine types of play over time. While this may be desirable at times (e.g., to consolidate a new idea or perspective), switching between different types of playfulness (e.g., Lieberman's modes or Shen's triggers), was necessary to avoid preemptive closure (which was, among other things, due to external expectations to produce 'results').

Thus, despite its potential as a mode of collaborative practice, it is important to also clearly acknowledge the limitations of playful scholarship. For example, James already tentatively conceded that "play divides tertiary educators" (2019, p. 2) and that academia still exhibits an overall "fear of free play" (2019, p. 12)—i.e., the epistemic gap between academic and play needs to be actively negotiated rather than avoided. In our prototype co-creation session, several partners were initially reticent to think about the Dutch situation regarding MDMA and other drugs as an

ecology of games, considering it too frivolous in light of the urgency of the problem or simply too unfamiliar. Others first thought of analogue games as a supposedly 'outmoded' technological apparatus, becoming more receptive to the idea after learning that the CIA is using games like *Collection Deck* in actual training contexts. Moreover, the 'outcomes' of playful scholarship can prove difficult to measure, let alone compare with more traditional approaches. The increasing openness towards "game-based learning" and "gamification in higher education" (Subhash and Cudney 2018, p. 192) goes hand in hand with—and arguably even fuels—the increasing metricization of academic performance across all disciplines, with, for example, research time being allotted based on a scholar's number of publications in traditional, peer-reviewed journals, which leaves less room for 'immaterial' playfulness and transgressive play. Thus, a tension remains between facilitating playful research processes and 'translating' them into widely accepted and reviewable forms of scholarly output.

Maybe the most promising finding, however, has been that playful scholarship as outlined in this chapter—i.e., 'thinking like a game designer' rather than like a player—might help overcome the characteristic entrenchment of intractable controversies, many of which are becoming increasingly urgent (consider, e.g., debates on the climate crises, urban decline due to economic transformations, or, more recently, the global challenge posed by SARS-CoV-2). As a player—as opposed to simply 'being playful'—one needs to empathize with a position and further its agenda. In contrast, the goal as a game (co-)creator is to create a balanced environment that provides viable procedures for different 'playing styles' (e.g., more liberal or conservative positions on drug policies). Making this perspective more accessible to scholars and societal partners may therefore help with disentangling intractable controversies and rekindling productive discourse on the urgent challenges of our time.

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Notes

[1] Consider, for example, the educational tours created on the basis of recent games in the *Assassin's Creed* franchise (Peters 2020) or the *Minecraft: Education Editions* (Mojang Games 2016). The latter example is particularly relevant given the complex role of companies like Microsoft, publisher of *Minecraft* (Mojang Studios 2011), in the political economy of higher education.

[2] For example, Mitchell diagnoses a "dominance of business culture over the opportunity for play" in how games are being viewed in the context of business education, which requires that "everyone's time must be efficiently spent" (2020, p. 4).

[3] As for the ‘whole game,’ consider, e.g., the switching between intelligence agents and “the system” (Clopper 2017, p. 7) in *Collection Deck* above, which broadens the scope of what ‘the game’ entails.

[4] In fact, being able to flip the table, which was added as an iconic feature early on (kimikat 2014), affords a tongue-in-cheek way of venting frustration but is also appealing because it allows for observing the numerous physically modelled interactions between game components.