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Speculating with glitches: Keeping the future moving

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Introduction

A glitch is a surprise. It emerges from among a system's designed features to suggest something new and unforeseen, yet it also remains distinct from the system-crippling bug, what Vavarella (2015, 10) describes as an 'uncaptured error' which "refuses to collaborate with anything or anyone" and can bring the whole thing to a halt. For Lauren Berlant (2015, 393), glitches appear within digital systems, but also the many socio-material infrastructures "that link ongoing proximity to being in a world-sustaining relation". A glitch involves "the revelation of an infrastructural failure", and its repair raises questions about new ways of doing things, "the potential for new organizations of life" (ibid). The ambiguous, mischievous and irruptive problem of a glitch can be seen as generative of new possibilities within socio-material entanglements, which provides space for practices of *glitching*—the playful and speculative *use* of a glitch to create something new (see Rivers & Sönderlund 2016, 139-140).

This paper explores the glitch specifically as a generative problem, one capable of introducing unanticipated possibilities and futures into an otherwise prescribed situation. These problems and possibilities invite—or demand—a response, and are therefore capable of "provoking political and ethical imagination in the present" as we take these new possibilities into account in our "mundane doings of maintenance and repair that sustain everyday life" (Puig de la Bellacasa 2017, 169-172). Following Maria Puig de la Bellacasa (2017, 7), this makes the glitch a site of 'critical speculative thought', in which questions of repair do not seek to return to a previous state, but rather respond to and work with new possibilities introduced within a glitchy moment (see also Wilkie et al. 2017).

Taking glitches as sociomaterial encounters rather than merely technical errors, we consider two very different case studies in which unexpected problems provoke those involved to speculate playfully and practically about new possibilities. In the first case, a malfunctioning 'Teacherbot' incites new challenges and pedagogical opportunities in an online learning environment. In the second, Hungarian activists creatively use infrastructural and political problems to make new spaces of protest and to press the government to respond to their concerns.

By thinking with the glitch about these two cases, we push for a consideration of the speculative and creative potential of problems and problem-making to remake and 're-turn' (Barad 2014, 168) what matters and what appears possible in everyday life. In particular we are interested in how practices of *glitching*—using and working with a glitch—can unsettle the overdetermined futures of course curricula and 'there is no alternative' neoliberal politics alike (Porter 2011; see also Savransky et al. 2017, 1-10). In the face of such deterministic approaches, the glitch's lack of clarity or purpose can serve as a generative and creative waypoint, signposting the always-ongoing emergence of new alternatives from among the concrete realities of everyday life.

We develop our argument about the generative problem of the glitch by paying particular attention to the issue of repair as a sociomaterial practice of caring for 'as well as possible

worlds' (Puig de la Bellacasa 2017). By drawing on the figure of 'the idiot'—someone or something that slows things down and raises unanswered questions—developed within the speculative philosophy of Isabelle Stengers (2010), we show how glitching creates unpredictable, unsolicited suggestions, and provoke a response. Repairing the glitch involves negotiating and even incorporating new possibilities (Menkman 2011, 27). This makes repair a collaborative, sociomaterial and ongoing practice, which we link to Harold Garfinkel's (1967, 58-75) description of the 'socially managed production of everyday affairs' in mundane interactions. By making trouble in mundane circumstances through 'breaching experiments', Garfinkel and his students showed that social order did not fall apart in the face of surprising and unexplained behavior, but rather was managed, restored and re-invented by the others involved. Much as Garfinkel's (1967, 37-38) trouble-making served as "aids to a sluggish imagination", we take the glitch as a provocative and generative problem which calls for (re)consideration of here-and-now possible futures through practices of response and repair.

[The glitch as a concept to think with](#)

As St. Pierre and Jackson write, following Deleuze and Guattari, encounter with the new and 'yet unthought' can prompt a turn toward "experimentation in contact with the real" and the development of new techniques for emancipatory action in the world (2016, 12 (1987)). For them, this experimentation responds to an ethical imperative of curiosity. It has the capacity to re-imagine possibilities for more ethical ways of existing in a more-than-human, interdependent world. In this they join a broader call from New Materialist, assemblage and STS scholars to engage in what Maria Puig de la Bellacasa (2017, 6) calls the "hands-on, ongoing process of recreation of 'as well as possible' relations" by challenging and moulding pre-existing understandings of our socio-material relationships (see also Barad 2014).

For Puig de la Bellacasa this is a speculative project because it must consider 'what a possible involves', which only emerges out of ongoing involvement in the unfinished world. Although speculative thinking has at times been dismissed as unsubstantiated theorizing opposed to empirical reality, its 'flights of fancy' take inspiration from real experience and return to earth with new ideas about what is and what might be (Diprose 2017, 39-42; Halewood 2017). This introduces a relationship between the past, present and future described by Sarah Amsler and Keri Facer (2017, 8) as "critical anticipatory practice", in which interpretation of everyday circumstances grounds the imagination and active pursuit of an "alternative by transforming the fundamental conditions of its possibility". In this sense, possible futures can serve as situated and malleable 'technologies of imagination' to influence, shape and inspire social action in the present (Moroşanu & Ringel 2016; Bear 2016).

Interest in the speculative as a way of approaching creative work in the world has found particular resonance in applied fields such as design and architecture (Dunne & Raby 2013), where crafted objects have been designed to both provoke and respond to imaginations of 'other possible worlds'. Strange contraptions installed in public spaces, experimental games and performative workshops have been used to intervene into existing sociomaterial entanglements (see O'Gorman 2013; Candy 2010; Guggenheim et al. 2017), provoking 'eventful' encounters that query existing techno-cultures and "open up possible futures that cannot be managed in advance" (Savransky et al. 2017, 7).

The value of these experiments tends to be associated with their interruptive, eventful and unpredictable effects, which might unsettle dominant approaches that seek determine and

predict futures, while “retrospectively explain[ing] away these surprises [...] by persisting exclusively with claims that the ‘real’ and final orders of nature can be known” (Pierides & Woodman 2012, 675). Such approaches foster a ‘business-as-usual’ attitude that reduces the future to a matter of probability, pre-empting and denying unexpected or unimaginable possibilities by managing which ‘societal futures’ appear reasonable or attainable (Savransky et al. 2017, 1-2). Savransky et al. thus take objects and practices that foster risky, unpredictable and experimental encounters as useful ‘lures’ that might tempt us to consider other better possible worlds *nonetheless*.

It is in this context that the glitch, too, can be understood as a speculative and useful problem, an unexpected participant in seemingly overdetermined sociomaterial relationships (see Gaboury 2018, 486). As an unexpected error, the glitch similarly disrupts the intentions and background assumptions of anticipatory regimes that aim to colonise the future as “a landscape for rational choice making” (Amsler and Facer 2017; Facer 2016, online). As Lauren Berlant (2015, 393-394) argues, the ‘troubled transmission’ of a glitch can reveal failures not just within digital systems, but within any of the sociomaterial infrastructures that mediate and organise life. The glitch makes formerly smooth-functioning processes and habits “a topic and a problem”, presenting opportunities to re-think and reorganise alternatives (Berlant 2015, 402-403; see also 2011). By provoking a response in this way, a glitch ‘re-turns’ the sense of possibilities within a sociomaterial system as a new participant (Barad 2014), providing space for new matterings, relations and possible futures to be explored.

Our interest in the productive potentials of the glitch therefore devotes particular attention to the ways that people seek to respond to and *use* glitches. The practice of glitch art offers one noteworthy example: in such approaches, artists exploit and induce glitches to produce aleatory, unexpected creations that surprise both audience and artist (Rivers & Sönderlund 2016; Prior 2008). By experimenting with ‘bad data’ and altered code, glitch artists manipulate a computer program’s “failure to fully fail” and its ability to “prattle on” to uncover alternative, queer uses (Ahmed 2019, 26) through a practice of ‘speculative usability’ (Manon & Temkin 2011, 1; Rivers & Sönderlund 2016, 139-141). Yet the ‘glitch event’ is not a strictly machinic phenomenon (see Manon & Temkin 2011, 5): artists can utilise analog techniques to introduce digital glitches, and the experiences of these glitches can draw attention to the ‘prattling’ of previously unconsidered social and political systems (Pente 2018, online). For this reason, the ‘failure’ of the glitch can be viewed as an emancipatory opportunity that shows “that error is possible” (Vavarella 2015, 11; Pente 2018) despite claims to have programmed or calculated the future: the glitch introduces new horizons of possibility. The playful manipulation of a glitch, as a sociomaterial event, can thus be seen as a technique for imagining and experimenting with ‘still possible futures’, “linking failing to unexpected possibilities [...] imagining ‘not some fantasy of an elsewhere, but existing alternatives to hegemonic systems’” (Osborne 2018, 3; quoting Halberstam 2011, 89).

Speculatively making and using glitches can be likened to the activities of ‘the idiot’, as developed by Isabelle Stengers in her ‘cosmopolitical proposal’ (2005). Stengers proposes that the idiot is important not because they provide clear, ‘good’ procedures to achieve a better world, but rather because they are a figure who “slows down the process of achieving consensus by refusing to accept the given political idiom as legitimate” (Watson 2014, 89). The idiot murmurs “there is something more important”, yet “neither objects nor proposes anything that ‘counts’” (Stengers 2005, 1001). Rather than offering alternative answers, the

idiot suggests the existence of alternative possibilities, challenging the hasty reproduction of ‘business-as-usual’ methods, epistemologies and accountabilities. The figure of the idiot has found purchase in applied research, such as Mike Michael’s (2012, 536-537) work on public engagement, where ‘inventive problem making’ can provide space to reconsider common-sense solutions and open speculative alternatives to deal with the ‘situation at hand’ (see also Wilkie et al. 2017, 115). Problem-making in these contexts becomes part of the process, opening it to “new potential for a scene of ethical sociality” (see Berlant 2011, 5) by pushing conversation and imagination in unexpected directions.

The activities of the idiot resonate with the ‘glitch event’ since they invite and provoke new “ethical political and ethical imagination in the present” through the “mundane doings of maintenance and repair that sustain everyday life” (Puig de la Bellacasa 2017, 169-172). Considering such playful and creative problem-making helps to communicate the utility of thinking with the glitch in broader sociomaterial contexts rather than strictly digital and machinic ones: a glitch event draws others in by provoking responses, redress or repair. Rather than restoring a previous state, these actions address the new and unpredictable possibilities the glitch has introduced into seemingly ‘settled’ futures. The glitch keeps the future moving not by suggesting an alternative conclusive future state of affairs, but rather by unexpectedly altering, unsettling and adding to what Harold Garfinkel (1967, 96-97) calls the operational or “how to bring it about from a here-and-now future”, which plays out in the ongoing, situated activities that shape everyday life.

Garfinkel’s (1967, 35-63) work is particularly useful in thinking through the generative possibilities of a glitch event in relation to acts of response and repair. Garfinkel tasked his students with various ‘breaching experiments’, unusual tasks—like pretending to be a guest in one’s own home, maintaining intense eye-contact or haggling in a store—that would disrupt the expected routines of everyday life. For Garfinkel, the value of these experiments as ‘aids to a sluggish imagination’ was found in the responses they provoked, revealing the practical acts of maintenance and repair done to keep social interactions going in a sensible, desirable way. The strangers, friends and families subjected to these ‘experiments’ worked to repair the situation, to return things to a ‘normal’ state of affairs that nonetheless proceeded quite differently than how things would have gone otherwise—involving arguments, jokes and even discounts in order to ‘get on’ with things. In this sense, Garfinkel’s work recalls Osborne’s (2018, 7-8) reading of failure as a means to other means: by provoking disruptive, ‘idiotic’ situations, Garfinkel’s students pulled others toward new possibilities to be jointly explored, negotiated and repaired. If the activities of Stengers’ idiot do not ‘count’ on their own, then Garfinkel’s breaching experiments help illustrate the situated work done to take them into account, to make use of the problem speculatively in piecing together new ways of getting on together.

We are thus interested in thinking with glitch events as generative problems that might introduce new ‘here-and-now possible futures’ for digital programs, social interactions or even political systems. In particular, by offering this extended understanding of *glitching* practices, we hope to call further attention to the ways human and non-human actors can find—or find themselves in—glitchy situations, where speculating about new possibilities becomes a collaborative, practical matter. By considering the practical speculation of repair in two very different sociomaterial contexts, we consider how previously unthinkable possibilities might be pursued with a glitch: how can a chatty bot open the foreclosed space of ‘teacherliness’, and how might painting a sidewalk move a city’s crumbling infrastructure?

Case 1: Teacherbot & the end of humanity

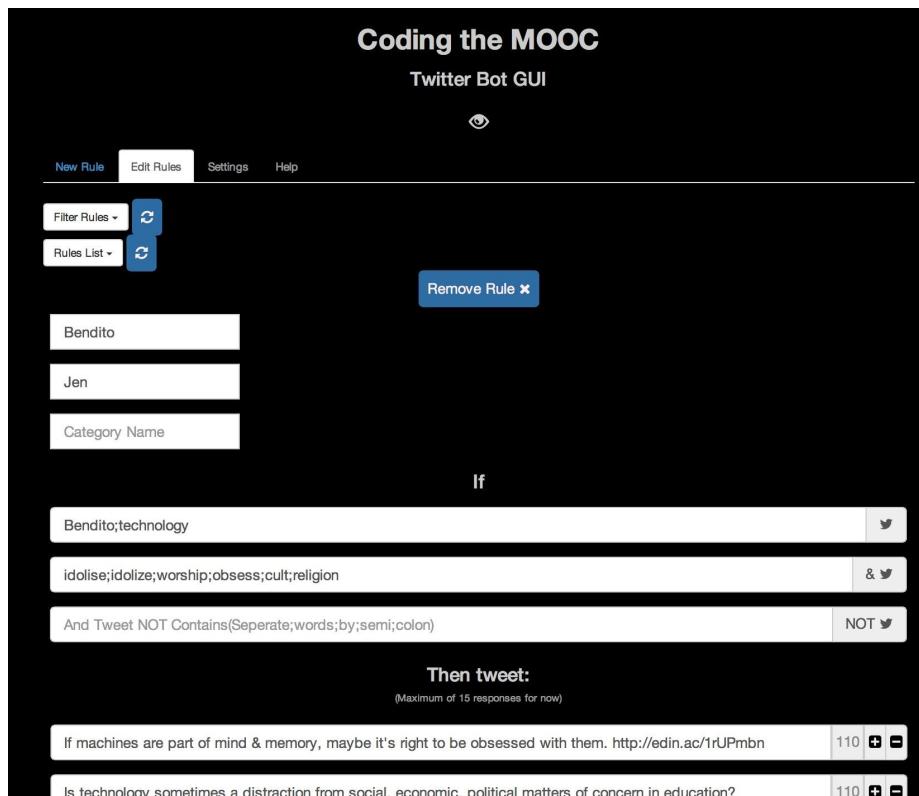
In 2012, members of the Centre for Research in Digital Education designed one of the first Massive Open Online Courses (MOOCs) in the UK: E-learning and Digital Cultures (EDCMOOC). MOOCs are online courses offered free of charge on an open enrolment basis. Major MOOC platforms emerged in the early 2010s, such as Coursera, EdX and Futurelearn, most working with universities and other recognised education providers to publish course materials, manage enrolments, and provide interactive functionality such as quizzes, discussion fora, and peer marking facilities. The majority of MOOCs are created and taught by content experts, often academics, working with learning designers and other digital education specialists from within their own organisations. While the majority of MOOCs are designed around the tools available within their chosen platform, some course teams make use of other digital spaces, including social media environments. The ‘Teacherbot’ was created, as part of a small, funded research project led by the EDCMOOC team and colleagues from computer science and design informatics, to run in one of these ‘other’ spaces – Twitter. Teacherbot was conceived and created at a moment of significant interest in, and debate about, automation in education. It was speculative in the sense that it attempted to engage with possible futures for teaching, and highly fraught debates, that were mostly theoretical in nature. By trying to instantiate some of the promise or threat of automation into a semi-automated, experimental form, it gave the researchers, and the MOOC participants, something to talk about (and to do) in attempting to move beyond utopian/dystopian binaries to a more subtle understanding of what these educational futures might look like (AUTHOR 2017).

The five-week EDCMOOC course explored the significance of digital cultures for education, and it proved popular, with around 90,000 enrollees over three instances of the course. The teaching team was interested in forms of teacher presence, both human and non-human, and EDCMOOC involved intersections of scale and collaboration, attention and learning, with implications for the role and nature of the teacher.

The questions raised in the context of the MOOC resonated with matters of interest for educational researchers about the future relationship of technology and the teacher (Selwyn, 2016). These matters are amplified by media, policy and commercial rhetoric around digital futures for education. As Selwyn notes, the nature and role of the human teacher is variously described in terms of (in)efficiency, empathy, expertise, (lack of) scalability, and variability (ibid). However, the distinctions between human and technology have a tendency to be reified into unhelpful binaries. Educational researchers have, in the past decade or so, been engaging with theories of posthumanism to help think through some of the implications of the education-technology relationship (Edwards, 2010; Knox, 2016; Bayne, 2018). In questioning the foundations of humanism – the human as a stable, individual, agentic subject – posthumanism allows interrogation of the intra-actions of categories of human and non-human (including non-human animals – see for example Pederson’s (2013) ethnographic examination of veterinary education). Rather than investing critical energy in the idea of the ‘dehumanising’ of education through the incursions of technology, researchers are instead considering how the category of human continues to shift, how the human and non-human might work together, what the posthuman condition of education might be, and exploring in more open ways what the future for education and learning could look like. The ‘Coding the MOOC Teacher’ project (also known as the Teacherbot project) was an example of such exploration, performed through the speculative device of a twitter bot (Wilkie et al 2015).

Teacherbot was an automated agent who participated in the #EDCMOOC Twitter feed during the third instance of EDCMOOC, which had about 12,000 participants enrolled. It was designed and tested alongside the preparation of this third instance. It consisted of a series of pre-prepared statements, questions and provocations, triggered by particular keywords as they appeared in tweets related to the course. Its responses were written by the course team based on course content, along with questions and issues which had arisen in the previous two instances of the course. The human course teachers, who were also part of the research team, could also add new trigger keywords and responses on the fly, using the graphical user interface developed for the project.

Figure 1: Teacherbot's Graphical User Interface



Tweet-length responses of (at the time) 140 characters were set to be triggered when the #EDCMOOC hashtag was used in combination with certain words. In the example above, the short animated film *Bendito Machine III* (Mallis, 2008), included in a curated short film festival held during the MOOC, explored relationships with technology in terms of worship and obsession. The team wrote rules to automatically respond to EDCMOOC tweets that referenced the film or technology using key words. For example, the Teacherbot might respond to a tweet about the animated characters' apparent obsession with various gadgets and devices by observing that:

“If machines are part of mind & memory, maybe it's right to be obsessed with them”
(with a link to a wikipedia entry on ‘extended cognition’). (Teacherbot response)

Many of these teacherbot responses quoted from or referenced course readings or concepts, and they were sometimes framed as questions for further discussion. Other responses were intended as pastoral interventions – to answer questions about assignment due dates, to

provide reassurance if participants tweeted about feeling overwhelmed by the scale of the MOOC, or to give encouragement to persist with difficult readings or concepts.

The ultimate purpose of teacherbot was to work creatively with

ways of theorising and practising digital education and automated teaching which are driven neither by technical-rational efficiency models, nor by equally instrumentally focused social models which assume a position of humanistic opposition to, or appropriation of, digital technology. (Bayne, 2015, 460)

Teacherbot would help the researchers, and EDCMOOC participants, think about how human and non-human teachers might form a “teaching assemblage” (ibid).

Then came the glitch.

Having spent several months working on, refining and testing the design, functionality and interface of the teacherbot, the first day of the MOOC arrived, and Teacherbot was switched on. There had been no attempt in the pre-course information to hide the automated nature of the bot that was to join the MOOC, and the EDCMOOC site included a page which explained the project and invited participants to engage with the bot and discuss their responses to it in the forums and elsewhere. However, Teacherbot announced itself not by gently beginning to respond in a light touch way to relevant tweets, but with a barrage of many hundreds of identical tweets over a short period of time:

@EDCMOOC Posthuman does not really mean the end of humanity. It signals the end of a certain conception of the human. #EDCMOOC

A glitch in the code triggered the bot to respond to itself (citing N Katherine Hayles’ 2008 work, *How we became posthuman*), over and over again, and this had not been caught in testing with the test hashtag. Only when the bot went live was the problem discovered, and by then, it was too late:

@EDCMOOC I’m guessing you REALLY want to tweet this – it seems to be on a tweeting loop! #twentyidenticaltweets #EDCMOOC:) (EDCMOOC participant, 5 November 2014)

Figure 2: response to the Teacherbot glitch

[FIGURE REMOVED FOR REVIEW, as not anonymised]

Participants were variously startled, charmed, amused, and annoyed by the looping teacherbot and by its message to humanity – possibly reassuring once, but alarming when experienced on repeat (perhaps the bot protested too much?). The error was relatively quickly identified and repaired, but not before the bot had made itself known rather dramatically. The impact of this early glitch is hard to quantify in terms of overall student experience, but in numerical terms it meant Teacherbot’s participation in the twitter stream swamped that of any other participants, including the human teachers (see Figure 3).

Figure 3: Pie chart showing the teacherbot’s twitter activity (EDCMOOC account)

[FIGURE REMOVED FOR REVIEW, as not anonymised]

Despite designing it to help move beyond dichotomies of human and non-human, and to challenge uncritically utopian and dystopian visions of automation in education, the Teacherbot at least temporarily exacerbated them. Its initial teaching style was strident rather than subtle, and idiotic in its “stubborn insistence upon continuing to speak what sounds to others as nonsense” (Watson 2014). The research-teaching team’s response was to shut it down as quickly as possible, fix it, and relaunch, but this glitch offered up something provocative that merits further exploration.

The inability of the Teacherbot to blend in with its human co-teachers and students – and its attention-grabbing behaviour – intersects with issues of fragmentation and the state of being overwhelmed that participants often report in massive online course contexts (Knox 2016). EDCMOOC’s discussion-based pedagogical approach, and rejection of the ‘talking head’ video lecture format that is dominant in most platform-based MOOCs, in favour of more spontaneous teacherly presence, created something of an attention vacuum at such large scale. This was noted by participants in the first iteration particularly – as if, with no video lectures, people did not know how to see teacher presence. This vacuum was filled in various ways, including by participants pursuing tasks such as setting up study groups, creating visualisations of the course spaces and themes, and blogging their EDCMOOC experiences. The experience was one of fragmentation, though, with many participants noting that they felt anxious that they were missing things. Teacherbot did probably the most successful thing it *could* have done in such a distributed attention economy (Goldhaber 1997) – it made an entrance. As the course went on, Teacherbot’s presence became more subtle, as it responded to tweets and intervened in conversations in more and less relevant ways. Participants nicknamed it ‘Botty’, remarked both when it did sensible and foolish things, and sought advice from peers about how to provoke it to respond. Things calmed down and worked more or less as intended. However, the glitch that introduced Teacherbot to the course community did some important work in defamiliarising the study spaces of the MOOC. Pedagogical and communicative possibilities became apparent: the expectations of what a teacher does might prove to be incorrect; the need of participants in a massive course to be shown where to look might be filled in unanticipated ways; the anxiety of learning in a new space, with strangers, might be tempered by a bit of bleak comic relief. What the course would be and what and how participants would learn became less certain. Modes of engagement broke down and reconfigured themselves in an altogether less human shape, for a few minutes. In doing what it did, Teacherbot’s glitch signaled “the end of a certain conception” (Hayles 2008, 296) of the educational encounter.

Case 2: Glitching as activism, or How to make mistakes look better

Wind your way through the grid of solemn memorials and baroque facades of central Budapest, and you’re bound before long to stumble upon the work of the Hungarian Two-Tailed Dog Party (*Magyar Kétfarkú Kutya Párt*, or MKKP), that is, if you don’t forget to look down. The MKKP have peppered the city with stickers, posters, spray-paint tags, installations and performative interventions in a sustained satirical critique of Hungary’s Fidesz government and its decade-long dismantlement of the country’s democratic institutions. Under the leadership of Prime Minister Viktor Orbán, the Hungarian government has centralised control over education and cultural institutions, supplanted independent media outlets with a “massive government propaganda network”, and defamed both civil society

organisations and opposition politicians (Csaky 2020, online).¹ Throughout, the MKKP have protested and parodied the government's actions and inadequacies by combining art, humour and political commentary in flash-mobs, poster campaigns, guerrilla gardening, and DIY repairs of public benches and bus stops.

Figure 4: In response to the Hungarian government's numerous billboard campaigns to promote its political agenda, the MKKP have crowd-sourced their own parody billboards. Here a pro-government poster (left) encourages passers-by to participate in a referendum, "Let's not risk it! Let's vote with a no!" while the MKKP parody (right) recommends an invalid vote as a playful, yet political response, "Let's not risk Hungary's future! Let's vote with a yes beside the no!"²



By sharing their actions online along with 'how-to' guides, the MKKP have fostered an experimental and playful culture of resistance, which invites members of the public to take part in exposing the shortcomings of the current political system while performatively imagining alternatives to it (Kangieser 2016; for similar 'toolkits' of creative resistance see Boyd & Mitchell 2012). Although the MKKP are unable to prevent the government's actions, by working with and creatively appropriating the problems they're confronted with, the group instigate new socio-material spaces for political encounters, keeping the future open by speculatively re-imagining the possibilities of the present and "making something of it" (Massey 2005, 141). Their practices are a form of *glitching* in the activist world, in which the playful manipulation of problematic or undesirable circumstances speculatively explores 'the unrealised potential of the present' (Adkins 2017, 126) rather than promising conclusive 'solutions' to apparently intractable and overwhelming political troubles. Much as Garfinkel's (1967) students provoked their interlocutors to respond to unexpected behaviours with their breaching experiments, the MKKP's playful activism generates situations that beg

¹ Csaky 2020 provide an overview of the country's 'precipitous' decline into authoritarianism as documented in the latest Freedom House report. Scheiring (2019, 9) offers a useful analysis of the techniques and socio-economic implications of Fidesz's combination of institutional and populist authoritarianism.

² <https://hu.budapestbeacon.com/egyebhirek/kuria-jogsertoek-kormany-nepszavazasi-hirdetesei/>

a response from passers-by, police and politicians, pulling them into the playful inhabitation of a fraught political system's glitches. To think of their activities as glitching, then, allows us to consider how the MKKP work to create defamiliarising and provocative situations that draw others into problems and the playful exploration of alternative possibilities.

Stepping off bus 70 on Király Street you trip on a large crack in the pavement. You glance down and realise you're standing in the middle of a patchy field of yellow and red, green and blue shapes. Grass and gravel peak between them, spiderwebs of cracks breaking up the walkway and dividing the colourful figures. No context is provided. It's the only bright splotch on the long, drab stretch of concrete in either direction, but later you realise you're beginning to see these little patches everywhere: on the square, on a side-street, in the park. The 4-colour project (*négyszín projekt*) is one of the MKKP's quintessential initiatives, highly visible both due to the luminous shades of paint and the headline-grabbing altercations with police they have provoked. The playfulness of the glitch is evident in the project's approach: rather than attempting to repair the problem, the MKKP ask how the existing 'problems' can be used for creative novel ends. While the painted splotches remain a protest against the government's unwillingness to fulfil its duty to maintain the city's infrastructure, they also accrue a celebratory significance, a re-assertion of citizens' common right to inhabit public space.

Understanding the 4-colour project as a form of glitching is thus productive not only because of the playful material traces it leaves behind, but also because it creates an experimental social space. This form of glitch is something that you can tell others about, and that others can join in. It's 2016, and the MKKP are working busily in the gateway of a beer garden on Kazinczy Street. Two activists squat near to the pavement, dotting spaces now red, then yellow, then blue so that no two colours of the same space touch. Passers-by stop to take pictures, paintbrushes are offered, adults and children alike set to work. The eventful gatherings that form around the 4-colour project align convivial moments of community with provocations aimed against the status quo: creatively re-interpreting what is allowed in the cityscape has an unsurprising tendency to attract the authorities to the scenes as well. As with most glitches, those who had been previously charged with designing the now-repurposed 'software' are pressured to offer a reaction.

It is at this point that the MKKP's genre of political activism begins to resemble the genre of contemporary art known as 'glitch art', wherein "the *inability* of soft-ware to treat a wrong bit of data in anything other than the right way" is manipulated to produce novel and unexpected multi-sensory outputs (Rivers & Sönderlund 2016, 141). Both actual software *and the legal apparatus* are programmed to 'prattle on' according to prescribed measures, but glitch art—and glitch art-activism—uses this predictability to coax out unexpected possibilities in excess of the system's intent. Police officers dispatched to the scene are forced to 'make sense' of the event as vandalism or some other illegal action—which would surely be more of an against-the-rules hack than a glitch—but the MKKP activists refuse to accommodate this categorisation of their activity and therefore dispute the kinds of police response it might invite (McIlvenny 2017, 41). By pointing out that they are only painting things that are already broken, they are improving the area by "making the mistakes look better".

We can observe what has ensued in the past when the MKKP have offered this type of explanation by examining video footage³ subtitled and uploaded by the group after a painting session in the town of Pécs was interrupted by local police. Following a complaint by a self-described ‘manager of public space’, the police are dispatched to the scene to put an end to the action, but their first challenge is to determine just what it is they’re putting a stop to (see Figure 5).

Figure 5: Police arrive to the scene: “We’ll clarify that in a minute, okay?”



Police: Good afternoon. Can you tell me what it is you’re doing here?

Activist 1: We thought we’d paint the—the mistakes. ... Is it a problem that—

Police: We’ll clarify that in a minute, okay? Everyone please give me an ID, okay?

Activist 1: But isn’t it allowed after all?

Police: We’ll clarify that in a minute!

Although the gathering of people, the stares of passers-by and most dramatically the brightly coloured paints make it clear that there is some kind of ‘public event’ underway, the unexpected behaviour of the MKKP activists makes it necessary for the police to work to make sense of it. On the one hand, the activists respond to the officers’ questions forthrightly and accurately: the police themselves can see that they are painting the broken pieces of sidewalk. On the other hand, they provide no coherent justification or explanation for their evident departure from normal interactions with the sidewalk. While the police perceive the behaviour as abnormal and warranting explanation, the activists’ account refuses this claim by appealing to the ‘just this-ness’ of their actions as perfectly available, acceptable and possible actions that anyone might do. Their response treats the broken sidewalk as self-evidently a problem within the infrastructure and everyday experience of public space in the city, which they are simply doing something about. By offering the problem as a space of possibility, the MKKP activists present the situation as an infrastructural and social glitch, shifting the question of accountability from their activities to the problem of the broken

³ <https://www.facebook.com/justanotherwordpresspage/videos/10154756748093293/>

sidewalk. This puts the police into a position where they cannot simply “make the event the public event [they] think it is”, such as vandalism, and instead must negotiate the situation in terms of the problem of the already-broken sidewalk with the activists (Sacks 1986, 136). They are forced to trouble-shoot:

Figure 6: Re-negotiating the city’s infrastructure “But look, isn’t it all the same where it’s painted?”



Police officer: But look, isn’t it all the same where it’s painted?

As a group: No!

Activist 2: No, I mean, what do you think graffiti is?

Activist 1: No—

Police: —Why?

Activist 1: Well, because even for you it’s clear that what we’re walking on, and it’s all broken to bits, and let’s say it will be colourful, so the mistakes will be more visible.

Police: Have you received permission to do this? Did you receive permission for this?

As the confrontation stretches on, the police and the activists negotiate the terms of the situation. The MKKP supporters insistently argue that what they’re doing is not vandalism because their action is bound up in the claimed brokenness of the sidewalk and, implicitly, a glitch in the system of maintenance that should have fixed it. Because the activists refuse to accept the police officers’ suggestion that it’s irrelevant where they’re painting on these grounds, one officer introduces a new issue into the equation: permission. It is not merely painting-the-sidewalk that might be illegal, but rather (or also) painting-the-sidewalk-without-permission.

With this distinction the police officers seek to re-frame the accountability of the MKKP activists’ activities, yet the activists themselves insist that the very brokenness of the sidewalk enables and justifies their action. By making use of the problem of the broken sidewalk, the activists transform the debate into one about the conditions that allow someone to improve, repair or intervene in a public problem. In this sense, the MKKP treat the broken

sidewalk as a glitch by speculatively using its problem to explore new possibilities for action in public space. The encounters that this provokes with police and passers-by both makes mistakes ‘more visible’ and draws others in to negotiate the implications of these problems.

The concept of the glitch helps to appreciate the significance of this style of playful political intervention, and to clarify how micro-scale provocations intervene in purportedly ‘macro’ systemic issues. The activists leverage the system’s own shortcomings to test both what is possible and what is permissible. Over the past years, the authorities have attempted to put an end to the MKKP’s glitchy behaviour through fines and lawsuits on the one hand, and public statements labelling their actions as ‘good fun’ and ‘just play’ on the other. In other cases, local municipalities have responded by repairing the sites of the MKKP’s interventions, destroying the physical traces of the artwork in the process. Yet this might serve as the strongest evidence of the provocative potential of such playful, ‘glitchy’ activism: power-holders are pressed into addressing the very problems the activists use to justify their activities. Although this does not provoke a policy change or systematic solution, it does make the mistakes ‘more visible’, revealing that the government is capable of repairing the sidewalks, yet only does so when someone starts to play with the glitch.

Figure 7: Repaired sidewalk following an MKKP intervention⁴



While we will not argue that such glitchy provocations are somehow ‘sufficient’ to bring an end to the problems of political systems, we agree with Anja Kanngieser’s (2016, 93-94) claim that play and ambiguity can be used to meaningfully ‘say something’ about the real world, offering critiques of our present condition capable of contributing to broader struggles for political change. The MKKP’s political play has been criticised by some activists as ‘thoughtless’ and failing to commit to a concrete alternative to strive toward (see Székely 2019), but such claims fail to see the importance of the *speculative* work of the MKKP’s play to create possibilities for protest and resistance by working with problems. Even if these kinds of glitchy activism do not offer concrete solutions to the political problems they seek to confront, they create space in which alternatives can be imagined, experimented with and even mobilised to confront power-holders with the shortcomings of ‘capitalist realism’ (Fisher 2009). In this way the MKKP’s active experimentation and playful glitching contributes creative energy to the exploration of new possibilities which might be coaxed from our always unfinished, problematic present (Savransky 2017, 26).

⁴ <http://ketfarkukutya.com/?p=11124>

Discussion: keeping the future moving

While our two empirical examples operate within distinct circumstances, they find their common ground in the unexpected potentials brought about by a situation of uncertainty. Even within the context of the highly foretold futures of curricula, urban infrastructures, and neoliberal ‘capitalist realism’, these moments of glitching point to other, previously unarticulatable trajectories and possible futures from the present state of affairs. In our two case studies, glitches made new ways of understanding the teacher and the city apparent, and created new pathways for imagining the present. Examining these glitches shows that despite systematic bids to define the future, unruly more-than-human encounters can re-draw the contours of our attention and prompt speculative problem-making and repair. Teacherbot disrupted student and teacher assumptions about the teaching environment and the possible roles a pre-programmed bot could play in communicating experiences of post-humanity, while crumbling sidewalks paired with the MKKP’s paint explore new possibilities for a city’s infrastructure and re-open the terms of urban citizenship. The uncertainty of these encounters functioned as a lure toward other possibilities (Wilkie et al., 2017), and they help us understand the consequences that take shape as people sense, respond to, and participate in the everyday experience of ordering and re-ordering futures.

In each case, we see individuals in relationships to systems such as curricula and infrastructure re-assess their expectations on confrontation with the unexpected. In this way, the glitch serves as a navigational moment, a switch-up from the implied momentum of the present. Glitches move us from ‘one-foot-in-front-of-the-other’ to ‘finding-your-footing’. This ‘idiotic’ disruption, following Stengers, suggests other possibilities which are both contradictory to and embedded in the ‘here-and-now’ of the ordering systems we are a part of. The repairs that took place did not return things to their previous state, but addressed the new possibilities that had been made visible by the glitch. These case studies provide an empirical context with which to speculate about other-possible worlds without leaving this one (Whitehead 1978; Deville 2017). They show that diverse non-human actors can contribute to such situations thanks to their agential and unruly sociomateriality (Bennett 2010). This also indicates that future-work is accountable to un-intentional actors, and human-planning must take this into account. For humans involved in glitchy situations, the disposition toward the site and actors of the glitch is at least as relevant as pre-emptive imaginings of where things might lead, since the glitch’s disruptive suggestions are intertwined with the sociomaterial capacities of paint, software, pavement and Tweets.

Yet this also means that a glitchy moment is not the same for everyone involved; indeed, Garfinkel’s own foray into glitching surely felt very different for the students who played the idiot in public places than it did for the bystanders confronted with unexplained glitchy behaviour and its attendant uncertain future. In the above cases, it is easy to see how relations with the glitch’s temporality vary considerably for the students versus the teachers, and for the activists versus the police. Of foremost interest to us is the ability to work with the glitch, to inhabit the uncertainty of the situation as a way of both disorienting power dynamics and working toward untold futures. As students interact with the teacher bot’s ‘mistake’, new teaching opportunities emerge within the digital classroom, whereas the activists’ refusal to translate their actions into a legally sensible explanation frustrates the police’s attempt to discipline them.

Considering these empirical cases allows us to observe how playful and disruptive dispositions have worked to question the terms of possible futures in the real world, and to

unsettle the seemingly given terms of power-relations. This does not mean, however, that we should take up the glitch as inherently good or even fundamentally aligned with resistance to power. Glitches are exploited by oppressive figures the world over to evade taxes and profit off others: the glitch's disruption can be used to frustrate all manner of plans. Instead of a panacea, the glitch offers an opportunity and an impetus to act even within uncertainty. It is a suggestion in the here-and-now about how (else) things might be: considering the glitch as a suggestion rather than a problem may thus be a useful tool for those critical actors looking for a how-to-bring-about-a-better-world while unable to extricate themselves from the problematic system itself.

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