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Improvisation in Disruptive Times

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Introduction: When "Disruption" Meets "Improvisation"

In the last few years, we have been told with increasing frequency that we live in an age of "disruption". This appellation has come to be used in variegated contexts. Start-up entrepreneurs regularly proselytise the "revolutionary" capacity of technological culture to "scale up" innovation, in ways that dramatically alter, or disrupt, established systemic modes of organisation at a global level. For example, one is liable to encounter references to the "disruption economy", or else the "gig economy", in relation to technology start-ups such as Uber and Airbnb. Meanwhile, beyond a strictly technological purview, one can also witness how recent shifts in the global political landscape have been given the disruption label – most dramatically with the election of the businessman and TV celebrity Donald Trump as the 45th President of the United States of America, in November, 2016.

In the case of technological culture, consider how Silicon Valley entrepreneurs tend to identify themselves as "disruptors" – a view encapsulated by Facebook founder and CEO Mark Zuckerberg's mantra that to innovate is to "move fast and break things" (Taplin 2017, viii). In terms of global politics, the unconventional circumstances that propelled Donald Trump from the campaign trail to the White House, alongside his own unorthodox and eminently unpredictable approach to office since the election, has led to him being described as a "disruptor-in-chief" (Friedman 2017, Chapter Nine). To muddy the waters, the contexts in which one encounters these disruption tropes often tend to bleed into each other. This is exemplified by the involvement of technological start-ups in the Republican primaries in the run-up to the November 2016 election, notably the London-based firm Cambridge Analytica, whose techniques of "behavioural microtargeting" via social media were mobilised to garner support for Republican candidate Ted

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Cruz and were subsequently used by Donald Trump as part of his election campaign (Sterne 2017, 253).[1]

The abundance of references to disruption in contemporary corporate, media and political discourse forces us to ask: what might meaningfully be understood by this term? Clearly there is no straightforward answer to this question. In the case of Silicon Valley tech culture, to disrupt is to interfere with existing systemic modes of accomplishing given tasks, on a global scale. In contemporary politics, celebrities-turned-politicians "disrupt" the established political order. Meanwhile, the term's reach continues to grow, across an expanding range of discourses, from anti-terrorist policing to popular culture. The rhetoric of disruption is evidently fungible and thus amenable to a range of diverse scenarios, the term itself scalable to a point where it is in danger of becoming an empty signifier.[2]

The contingent character of unforeseen events brings to mind one possible direction in which such a critical take on disruption might be directed – towards *improvisation*. After all, whatever one makes of the multiplying definitions of disruption, presumably they all share – whether for or against – a concern with unpredictability. As a mode of real-time engagement with the world, improvising consists in creating or responding to unforeseen events: "Improvisation" derives from the Latin word "*improviso*", meaning "unforeseen", an ablative of "*improvisus*", meaning "not foreseen, unexpected" (*Online Etymological Dictionary*). The term improvisation shares with disruption a tendency towards overdetermination. Despite this tendency, it is the gambit of this article to explore these two terms in tandem in order to shed light on their rhetorical and conceptual force.

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[1] It is also now alleged that Russian interventions involving social media have played a role in influencing public opinion regarding the candidates in the US election, as well as the campaigns for the UK's in-out referendum on membership of the European Union, in June the same year, colloquially known as the "Brexit" referendum. Allegations have also surfaced suggesting that Cambridge Analytica may have influenced the outcome of the referendum.

[2] The concept of the empty signifier was first expounded by Claude Lévi-Strauss – a propos the structuralist linguistics of Ferdinand de Saussure – to describe any signifier that carries a diversity of contents to such an extent that a "relationship of non-equivalence becomes established between signifier and signified" (1987, 56). While Lévi-Strauss focuses mainly on examples of words in comparative anthropological contexts (he is responding to the work of Marcel Mauss on the multiple uses of the term "*mana*" in the languages of Pacific Islanders), the phenomenon – or rather epiphenomenon – is a more broadly structural one that can be encountered at work in myriad linguistic contexts, for example also illustrated by the American English colloquialism "oomph", according to Lévi-Strauss (55). For a contemporary analysis of the role of empty, or "floating signifiers", in relation to media culture, see Groys, 2012.

"Yes, and"?

Let us revisit our two case-based points of departure, starting with corporate culture. Consider Bob Kulhan's 2017 book *Getting to "Yes And": The Art of Business Improv*. Kulhan's book is one of a growing number on the subject of "business improvisation". Kulhan's titular use of "improv" primarily derives from improvisation-based theatre and comedy. Kulhan – both a businessman and an amateur improv comic – contends in his book that improvisation, as he understands it, provides a nuanced way of responding to the emerging technological transformations currently liable to affect corporate culture in ways whose outcomes cannot be seen in advance. As one reviewer of the book puts the matter: '"*Getting to Yes And*" [...] book answers the question', 'How do individual workers prepare for a disruptive future if they don't practice improvising for it?' (Franklin, 2017)

Improv, sometimes also called "impro", emerged out of the theatrical experiments of Viola Spolin and Keith Johnstone, most notably "Theatre games" and "Theatresports". Spolin worked with the first generation of modern American theatrical improvisers in the St Louis and Chicago in the 1950s, as well as with The Second City Company, also based in Chicago. In the process, Spolin helped codify new approaches to scenario-based improvisation. Johnstone first started to explore improvisation in theatrical settings while working at the Royal Court Theatre in London in the late 1960s, which led him to set up his Theatre Machine Improvisation Group (with George Devine) towards the end of that decade, before moving to Canada and founding his impro-oriented theatre company – Loose Moose – in Calgary, Alberta, in the 1970s.

Spolin's scenario-driven theatre games revolve around techniques that actors use during performances in order to focus their attention, for example, by keeping one's eyes focused as if following a moving ball, in order to busy the performer's mind and keep their attention on the performance rather than on themselves. Johnstone's theatresports consists in a form of improvisational theatre involving teams who compete against each other to furnish the best responses to audience-suggested scenarios that only become known to the players during the performance. These kinds of techniques were highly influential on the subsequent generations of improv comedy performers – most notably those involved in Chicago's The Second City.

Building on the kinds of techniques developed by Spolin and Johnstone, comics at The Second City developed "Yes, and-ing" – a powerful tool that makes possible the improvisation of comedy scenarios between multiple players in the absence of a predetermined fixed script, by establishing a rule-based mode of real-time interaction based on "Yes, and" responses. If one follows the kinds of examples of this phenomenon described by R. Keith Sawyer one instantly witnesses how the ostensible simplicity of this approach belies its actual complexity:

> The single most important rule of improv is "Yes, and". In every line of dialogue, an actor should do two things: Accept the material introduced in the prior line, and add something new to the emerging drama. It's extremely important to accept the material introduced by the preceding actor. (2001, 16)

Sawyer views these kinds of improvised scenarios as dialogical in character:

> Improvised dialogues are created by the collaborative efforts of the entire ensemble. No single actor creates the performance; it emerges from the give and take of conversation. Improvised dialogue results in the creation of a dramatic frame, which includes all aspects of the performance: the characters enacted by each actor, the motives of those characters, the relationships among those characters, the joint activity in which they are engaged […]. (2003, 41)

Borrowing from the work of Mikhail Bakhtin, Sawyer shows how improvised dialogues consist in instances of what Bakhtin termed "dialogism".

In his ground-breaking work on the novel, Bakhtin forged a series of conceptual terms in order to lay hold of what he views as the social dimension of utterance, most famously *dialogism*. What is important here regarding this concept is that Bakhtin views the social character of utterance as something that novels borrow from everyday speech. For Bakhtin, dialogism is fundamentally defining of linguistic encounters as they occur in lived social contexts, the social provenance of spoken language making dialogue the primary modality of linguistic communication. While he does have a concept of "monological" utterance, Bakhtin views this kind of utterance as secondary when viewed from the perspective of language's social aspect. At one point in his work, Bakhtin describes how monological utterances oppose themselves to the "social event of verbal interaction" (1986, 164).

As a dialogical instance of group improvisation that employs a version of the "yes, and" model the following example of a "genre game" scenario as documented by Sawyer:

> *Donald is the host, and it is Ellen's birthday. Donald enacts the role of Ellen's manservant, using a deferential and formal speech register that sounds like a British butler. She leaves to do some shopping, and Donald walks to the stage front and left to address the audience.*

1 Donald	Good, I thought she would never leave. I've planned a surprise party for Madame and I'm glad you all could make it. I've invited three very old friends of hers, unfortunately she doesn't know how they've changed over the years. <*Three actors walk on stage, stand in a line at stage left.*> See, they have each gone into an interesting profession and have developed an interesting quirk. What I need from you is an adjective and a profession, for each of these people. <*He points to the line, as the first actor raises her hand*>

2 Audience 1 Naked sociologist!

3 Donald A naked sociologist is our first guest. And then there is also the? <*Second actor raises her hand*>

4 Audience Masochistic Cher impersonator!

5 Donald Masochistic Cher impersonator. And finally I've invited the… <*Third actor raises his hand*>

6 Audience Flatulent newscaster! […]. (2003, 175)

Sawyer views this scenario as illustrative of what Bakhtin terms "heteroglossia", which is fundamentally related to his concept of dialogism, meaning "differentiated speech":

> Bakhtin explored how the heteroglossia of language reflected social structure, and how the set of available ways of speaking are characteristic of a given society. Only a certain kind of society has Cher impersonators, newscasters and sociologists; these voices are not found in the nineteenth century novels that Bakhtin studied. This game forces actors to exaggerate the speech style associated with the adjective and the occupation, to provide clues for the birthday boy or girl. And by doing this, it allows the ensemble to explore the stylistic and formal characteristics of that speech style. (177)

Thus the "yes, and' technique", as documented by Sawyer, resonates strongly with Bakhtin's conception of language in its social aspect as being dialogical, or heteroglossaic.[3]

Kulhan – himself reared on The Second City's improv comedy – holds a lot of store by this kind of improvisational technique, so much so in fact that he has included a reference to "yes, and" in the title of his book. Fittingly, the book is replete with references to this technique. However, what becomes apparent as the book progresses is that these references tend to be reductively schematic. The closest we get to an actual improvisational scenario along the lines described by Sawyer is a series of exercise suggestions, along the following lines:

> Have a three minute conversation with a colleague (or a stranger at a pub), starting every sentence with "Yes, but…". Focus internally by objectively looking at the language you use after "but" and focus externally at how the person across from you reacts throughout the course of the entire conversation.
>
> What did you notice?

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[3] This idea also relates to Bakhtin's late concept of "speech genres", which seeks to account for the ways in which spoken utterances share certain generic conditions and appeal to diverse kinds of linguistic competence. See Bakhtin, 2010b.

> Now have a three minute conversation with someone, starting every sentence with "Yes, and…". Keep focused internally on your language after "and" and externally on how the person across from you reacts throughout the course of the entire conversation.
>
> What did you notice? (2017, 43)

While such exercises are evidently indebted to the techniques associated with improv comedy and theatre – in this case attentional focusing and "yes, and-ing" – they prove limited in how much they actually show or say regarding what is singularly valuable about improvisation in the face of unforeseen contingencies. This in part is because the reliance on prescriptive valorisations of these techniques, with only occasional attention paid to their applicability in given concrete situations, tends to render them more *monological* than *dialogical*, in that they don't sufficiently attend to the social character of utterance.

For the most part, Kulhan's version of "yes, and-ing" substitutes a series of monological utterances for the kind of dialogical example we encounter in Sawyer's genre game. The goal of such exercises, according to Kulhan, is to enhance oneself as an individual by means of branding:

> For our purposes branding stems from one key attribute: awareness. Your brand is fashioned directly from a clear, honest awareness of your inner strengths (and weaknesses) as well as a focused awareness of your outward presence […]. (52)

While Kulhan retains improv's signature emphasis on attentional focus, his version of it places the individual at the centre of the activity, in such a way that they effectively become the author of their circumstances. As such, the dialogical character of improvisatory utterance is downgraded, in favour of a monological approach. Furthermore, Kulhan dilutes the role of attentional focus by indexing it to brand awareness.

"I'm with the brand": Improvisation, Dialogism and "Functional Stupidity"

In Kulhan's book, the tendency to employ the language of improvisation in such a unitary fashion only increases. In a chapter of the book entitled "I'm with the Brand", Kulhan reprises and embellishes his earlier remarks regarding the "yes, and" rule as follows:

> I've described the […] "Yes, and" as the bridge to your authentic perspective. Your brand is to a great extent the delivery system for your perspective. Your brand pulls together the unique way you have of looking at problems and opportunities, and the particular skill sets you have available to you in addressing those problems and opportunities. (2017, 53)

The main problem in this case is that Kulhan is seeking to yoke improvisation to the contemporary business phenomenon of "internal branding" – a corporate technique wielded in order to secure the investment of employees

within a company in a given brand by effectively demanding that they internalise it.

This kind of appeal to improvisation is equivalent to what Mats Alvesson and André Spicer describe as the tendency in contemporary corporate discourse towards "functional stupidity":

> For us functional stupidity is inability and/or unwillingness to use cognitive and reflective capacities in anything other than narrow and circumspect ways. It involves a lack of reflexivity, a disinclination to require or provide justification, and avoidance of substantive reasoning. (2016, 21)

As such, functional stupidity consists in affirming appearances without paying critical attention to the complexities of the concept in question. In the case of Kulhan, improvisation is the concept at issue. This brings us back to Bakhtin's distinction between dialogical and monological linguistic utterance: to engage dialogically is also to engage reflexively.

Following Bakhtin, a propos of Alvesson and Spicer, we might say dialogism has been replaced by internal branding. It is important to note here that the kind of functional stupidity represented by internal branding is not unique to start-up culture, or even corporate culture more broadly, with media and political culture also being major culprits. In fact, Alvesson and Spicer show that academia offers no exception when it comes to the dangers posed by functional stupidity and it is an academic illustration that they primarily rely on in order to demonstrate internal branding mechanisms. In fact, the main example of these mechanisms in Alvesson and Spicer's work is an advertising campaign for a UK higher education institution, based in England's Midlands, anonymised as the "University of Midshire":

> What if you were to work somewhere every day so different, you might never want to leave? Where lines of command were short and you were empowered to act on ideas, provided they were first class […]. So what if all these things existed in one place? We think they do: the University of Midshire. (161-2)

Alvesson and Spicer state: "All the clichés are there: look to the future, keep positive, sound uplifting, do the impossible, be proactive, and so on. But it all sounds very unrealistic, simplistic and – yes, quite stupid" (162). Such examples as this one, when they appeal to the language of "ideas", do so in only the most nebulous fashion, in ways that recall Gilles Deleuze and Félix Guattari's still-prescient statement that "marketing appropriates the concept and advertising puts itself forward as the conceiver par excellence, as the poet and thinker" (1994, 99).

It is important to add here that Alvesson and Spicer's account is not a wholesale disparagement of corporate culture. In fact, handled in the right way, a strategic mobilisation of novel business approaches can indeed be valuable. For example, they state that one technique that is useful for getting a company to meaningfully reflect on its activities is by enlisting an employee

in the role of "devil's advocate", as a means to "dispelling stupidity" (201). Significantly, while they don't employ the language of dialogism strictly speaking, Alvesson and Spicer do describe the need for "stupidity-disturbing dialogue" (89). The intervention of a devil's advocate thus necessitates a dialogical encounter:

> Sometimes it is tough to ask critical questions of yourself. Often our internal censor cuts them out. If this is the case, then you can appoint a professional critic – otherwise known as a devil's advocate (DA) [...] . A team could choose someone inside it as a devil's advocate – their job would be asking tough questions, poking holes in arguments and strategically undermining consensus. (202-3)

It is also worth adding in this context that Kulhan's reading of improvisation is not entirely reductive. There are certainly points in his book where he demonstrates a keen familiarity with some of the defining aspects of improvisation, in a range of practical and lived contexts. Kulhan also uses the example of the devil's advocate, albeit reluctantly, in a similar fashion to Alvesson and Spicer, to make his case for business improv:

> [...] for the purpose of turning 'Yes, and' into a leadership tool, getting your allies to take the role of devil's advocate to actually help you is important because you'll have to be able to handle yourself when you get into more uncontrollable, real world situations with people who consider it their job to say no. (Kulhan 2017, 209)

Unfortunately, however, Kulhan's proclivity for reductive schematisation prevails overall, to the detriment of his own pragmatic insights. Also, this tendency is not limited to Kulhan. One finds the same kind of situation arising in some of the other books dedicated to the topic of "business improv". Consider as a further case in point Val and Sarah Gee's book *Business Improv: Experiential Exercises to Train Employees to Handle Every Situation with Success* (2011). Like Kulhan, the authors of this book demonstrate that they are aware of the stakes of improvisation as a mode of practical activity. Also like Kulhan, they tend to focus quite heavily on comedy improv, and in particular the "yes, and" rule, in order to convey their message. However, the problems one encounters in Kulhan also arise here, albeit in a different guise. The main problem with this particular corporate appeal to improvisation is indicated by the book's subtitle – specifically the use of the words "every" and "success".

Improvisation's attendant unforeseeability means that no instance of its enactment can be guaranteed to be successful in advance. Digging a little deeper, this problem is highlighted in this text by the indexing of improvisation to profit-motive:

> Every business improv exercise is designed to give the learner one key element. It could be, for example, the "yes, and" exercise, which is a key component in creating a profitable discussion with another person. A *prof-*

> *itable* discussion is one in which both parties feel they have been heard and are empowered to move forward with a project. (Gee and Gee, 2011, 7. Emphasis in original)

Ostensibly this seems a pretty innocuous definition of improv, again exemplified the "yes, and" rule. However, as anyone party to a comedy improv performance, or indeed any kind of improvised performance is liable to witness, some scenarios are more successful than others, and that this variability is baked into improvisation. The Gees want their readers and followers to have their improv-baked cake and consume it without ever having to taste the bitterness of failure. As such, their indexing of improvisation to economic imperatives renders their invocation of the former at best ineffectual and, at worst, disingenuous.

Trumped Up Claims in the Name of "Improvisation"

Having considered business culture's take on improvisation, vis-a-vis corporate versions of disruption, now let us consider how media and political discourse have mobilised improvisation with regard to "disruptor-in-chief" Trump. On the eve of the November 2016 US election, journalist Gillian Tett, writing for *The Financial Times*, was given access to the locations where the anticipated victory parties of each of the candidates were due to take place – The Javits Centre for the Clinton campaigners the Hilton Hotel for the Trump campaigners. According to Tett: "The Clinton event was organised with a slick hyper-efficiency. The party had clearly been planned for months and it wreaked of professional stage management [...]. The Trump event, by contrast, felt chaotic and improvised" (Tett, 2016).

While Tett might have been the first out of the blocks in the immediate aftermath of the election result to make the connection, she wasn't the first to have placed the words "Trump" and "improvised" side by side in a journalistic context. During the campaign period, numerous pieces appeared in print and in online media suggesting that Donald Trump's approach to the stump was in part or in sum a matter of improvisation. Consider the following blog piece from an online edition of *The Huffington Post*:

> As a politician, Trump's improvisation has translated into his unique speaking style. Trump free-associates. When he is unbound by the likes of teleprompters (and even then in irresistible asides), Trump moves from topic A to topic B improvisationally. He often seems to have a list in front of him—topics he wants to talk about. Or better, he wants to riff about. And, via what looks like free association, one riff can lead to another. And another. And another. (Rosenthal, 2016)

Consider also this similar example published around the same time in *Slate*:

> Donald Trump likes to freestyle. In his overheated, screwball way, he's a master of the form. His improvisational skills are pretty much the core of his appeal – he's not scripted, he's good television. (Foer, 2016)

These last two articles are interesting to the extent that their authors are willing to concede that improvisation might not be completely anathema to the formality of presidential politics and may even in some cases may constitute an asset, yet in both cases one witnesses a high level of simplification. Collectively, these accounts characterise the various positions taken by the media regarding Trump and improvisation to date, adopting a largely negative, reductive and usually simplistic conception of improvisation.

What is not in dispute is that – prior to Trump's campaign for the White House – there was very little in the way of reference to improvisation to be encountered in media accounts of political events, at least in the last few years, whereas such references have subsequently abounded, almost always in relation to Trump. In a certain sense, improvisation *qua* unforeseenness seems apt as a means to grappling with the undeniably singular rhetorical approach to political speaking adopted by Trump – it is certainly the case that many of his utterances proceed without any clear sense of purpose or goal. However, once one attends more closely and critically to the ways in which the rhetoric of improvisation is itself employed in relation to Trump by the media, the claim that his approach is improvisational becomes somewhat meaningless – at least in terms of what can be said of improvisation as a mode of comportment, which, as we have already seen, presupposes some practical rules of engagement, whereas Trump's utterances usually seem unguided by such rules of thumb.

Herein lay a particular problem with the media descriptions of Trump as an improviser. In general, they tend to view his words and actions as idiotic or imbecilic, but rather than describe them as such, they describe them as improvised. That is to say, they use a term that implies more value-neutrality, which critical scrutiny shows up as mere appearance. An online keyword search for "Trump" and "improvisation" using Google's news filter shows from the time that Trump became the presumptive nominee for the Republican Party in May, 2016, a steady and relatively regular stream of news stories started to appear online characterising Trump an improviser. Not insignificantly, as has already been indicated, these stories often tended to be published in online news media/blog outlets. It is true to say that not all of the stories were negatively slanted, although it is the case that the majority were – in most instances equating improvisation with ad-hocery and in one novel case with "adhocracy".[4]

As news consumption increasingly takes place online and on mobile devices – in particular on social media sites – journalistic reportage is no longer in a position to function independently of the war for attention by means of which these digital platforms operate. Given the exponential increase in available news sources since the rise of the internet, competition between

[4] See Kahl and Brands, 2017 and Haass, 2017.

news providers has grown fierce. Add to this that the very way in which news is consumed has changed due to the advent of digital networked technologies. With the advent of social media platforms, the circulation of news tends to rely heavily on recirculated content, in particular news which gets reposted using Facebook's propriety "like" function.

This new way of consuming news is part and parcel of a new gestural economy that has emerged in the context of "algorithmic governmentality". This expression was coined by Thomas Berns and Antoinette Rouvroy to describe how digital networked culture mobilises increasingly powerful algorithmic processing technologies in order to pre-emptively manage behaviour on a mass-to-global scale (2013, 163-196). Derived from the late work of Michel Foucault, the concept of "governmentality" describes the ways in which power is not merely enacted by agents of the state or any given institution, but is distributed across the social field and functions micro- as well as macro-politically (2014). This is to say that governmentality operates at the level of subjectivity as well at the level of the social.

From the 1970s until his death in 1984, Foucault's work consisted in a networked, multivalent conception of power which has made it highly amenable to the critical examination of power's functioning in the age of the internet and – in particular – since its corporatisation in the 2000s (see Foucault, 1977; 1978). Not only this, but the novelty of Foucault's conception of "*gouvernmentalité*", rendered in the original French, carries with it an association with "*mentalité*", whose connotations in English include "mentality", "attitudes" and "world-views", such that these "governmentalities" become vehicles for the consolidation of power, as well as potentially providing a locus for the critique of power, by means of "self-governance" (2014).

As it pertains to media culture, this issue has recently been highlighted by Yves Citton, as one of confronting our age of "mediocracy", by way of improvisational responses to the machinations of power that currently predominate by means of media technology. Appealing to a radical conception of "gesturality", Citton invites his readers to consider exploring the possibility of developing improvised responses to the mass-coordinated functionalisation of gestures currently being engendered by means of technological interfaces, as exemplified by Facebook's "like" function. Citton's aim is to show how improvisation can potentially help overcome the tendency promulgated by these functionalised uses of contemporary media technology by drawing a distinction between "discourse" and "dialogue":

> A "discourse" can be broadcast and remain largely indifferent to the reactions it engenders in its listeners [...]. On the other hand, a "dialogue" only moves forward thanks to micro-gestures of encouragement, sympathy, prevention, precaution and reassurance – thanks, in other words, to the many different kinds of "attention" that each participant directs towards the other so as to maintain good emotional resonance between them. (2017, 86)

This fostering of attention along these lines falls back on improvisation insofar as the latter consists in *paying attention to attention*: "IMPROVISATIONAL PRACTICES […] necessarily call for […] *showing yourself attentive to the attention of the other*." (2017, 87. Emphases in original).[5]

Advocates of technological disruption are generally far more interested in imagining the future in order to manage it than affirming its unforeseen contingency. Consider former Google "design ethicist" Tristan Harris's statement regarding the corporate dominance of internet technology: "If you control the menu, you control the choices" (quoted in Taplin, 2017). Regarding Trump's "disruptive" victory, Taplin writes "We […] passed through an election campaign where the issues of the future were never even raised" (13). These views echo that of Antoinette Rouvroy when she describes algorithmic governmentality's "target" as the "unrealised part of the future".[6] For theorists such as Citton, this state of affairs urgently needs to be countered, and this countering must enlist improvisation as a means to challenging the forces that have engendered it. What differentiates the kind of account given of improvisation by Citton from those of Kulhan, the Gees, Tett, Rosenthal and Foer, is that it makes attention the focus and goal of itself, rather than the demands of profitability or "mediocracy". It now remains for us to consider how it might be possible to move beyond the partial accounts of improvisation's relationship to disruption that have predominated so far, with a mind to situating more meaningfully the potential role of improvisation in an age whose complexity and uncertainty are belied by these simplistic "disruption" mantras. In the process, questions of comportment, dialogue and technological mediation will necessarily remain to the fore.

Our "Improvisational Condition": From Hurricane Katrina to Contemporary Creative Machines

George E. Lewis has undertaken one of the most sustained explorations of the richness and complexity of improvisational comportment to date. His background as an improvising musician and composer active for the last five decades has led him to write extensively on the role that improvisative comportment can be found to play in the realm of aesthetic activity. In recent years his academic activities have led him to critically and analytically explore improvisation beyond the purview of musical aesthetics to consider the role it plays in everyday life. Additionally, his extensive experience as a technologist and computer programmer has led him to consider the all-important intersection of technology and improvisation.

Lewis has drawn attention to the rhetorical simplifications of improvisation of the kind examined above. In the process he has shown how both political and intellectual domains of public discourse have tended to slant improvisation negatively:

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[5] For an exploration of gesturality in relation to improvisation, in the context of "mediocracy", see Citton, 2016, 160-181.

[6] Rouvroy and Stiegler, 2016, 10.

> In these domains, improvisation is most commonly invoked in a pejorative or negative sense, as in "Condoleeza Rice's improvised foreign policy", or the Bush administration's military improvisations in Iraq, which have lately been obliged to find answers to the threats posed by […] deadly IEDs […], "Improvised Explosive Devices". (2007a).

The media and political discourse around improvised explosive devices, or "IEDs" has done much in recent years to promote negative treatment of improvisation. While Lewis draws attention to this issue, rather than make it his main focus, he opts instead to explore a different example of how establishment responses to real-world events fell short in their consideration of the role played by improvisation - the media and political responses to Hurricane Katrina, which devastated the US city of New Orleans, in 2005.[7]

Lewis shows how representatives of the media and the political establishment presented an egregiously negative set of responses to this calamity, epitomised by the "moribund racialising distinction" between black "looters" and whites "simply 'trying to find food and water'", broadcast from a safe distance in wilful ignorance of the plight of the residents having to face this devastating event *in situ* (2007). What Lewis shows is that the media's presumptive and pejorative – not to mention ethnically specious – conception of improvisation disavows the possibility of reading the *active* response of the citizens of New Orleans to Katrina as effectively definable in terms of improvisation. This kind of speciousness as it pertains to improvisation has been highlighted by a number of other scholars working in critical improvisation studies. For example, Rob Wallace writes:

> Like – and because of its connections to – jazz, improvisation has been alternately lauded and damned for its supposedly unplanned and thus irrational, unscientific, primitive and suspiciously "ethnic" origins. (2016, 80)

Challenging these kinds of assumption, Lewis adopts a formulation from political scientist and anthropologist James Scott, to argue that the victims of Katrina actually mobilised improvisation as a means to countering the shortcomings that accompanying institutional response to the disaster. Lewis writes, a propos Scott: "The improvisations of Katrina victims may be read as one of a potentially infinite number of 'forms of public declared resistance'" (2007).[8]

[7] This phenomenon is closely related to the concerns of this article, vis-à-vis the connection between improvisation and disruption, but unfortunately its complexity exceeds the scope of this discussion.

[8] In an edited collection of articles on Katrina and improvisation entitled *Second Line Rescue: Improvised Responses to Katrina and Rita* (Ancelet et al. 2013) various contributors illustrate how the responses to the hurricane consisted in modes of improvisational comportment redolent of the city's "second line parades" on Mardi Gras each year – the citizen parades that traditionally follow the "first line" of musicians and performers.

What is here being described is improvisation as a mode of quotidian comportment. Comportment is a term that has been used in a variety of different yet often related ways by philosophers – in particular among those associated with phenomenology – to account for human behavioural dispositions towards the world. For example, Martin Heidegger developed a conception of comportment under the rubric of the German term *Verhalten*, which translates as human "ways of relating" (1988). For Maurice Merleau-Ponty, writing in French, the word is "*comportement*", sometimes translated as "comportment" and at other times, "behaviour" (1963). Writing on the work of Merleau-Ponty, Elizabeth Behnke argues that his conception of comportment can be thought of as improvisational, to the extent that it requires that one go beyond one's habitual bodily relations to the world, in order that something "new" might emerge out of them (1999, 96).

She cites Merleau-Ponty as follows:

> Ahead of what I see and perceive, there is, it is true, nothing more actually visible, but my world is carried forward by lines of intentionality which trace out in advance at least the style of what is to come (although we are always on the watch, perhaps to the day of our death, for the appearance of *something else*). (quoted in Behnke, 96)

This description mobilises the phenomenological concept of "intentionality" to argue that the beyond of our perception at any give moment, for all that it cannot be rendered knowable in advance, can nevertheless be intended towards, or grasped after. The concept of intentionality, as it is being used here, originally derives from the work of Franz Brentano (2012) and Edmund Husserl (2012). Intentionality, for Husserl, describes how a given consciousness orients itself towards experiential or mental objects, how it *intends* towards them. It is important to bear in mind here that Husserl is not describing conscious intention as such, but rather how consciousness effectively comes to know itself in its relationship with objects through the structure of intention, which marks out or conditions what we consciously or knowingly perceive (2012).

Revisiting Behnke's reference to phenomenology and its relationship with improvisation, we can say that the "lines" she describes are those that mark out the virtual structure of intentionality. Mapping this set of observations back onto the case of Katrina, we might say that the victims had to send out lines of intentionality into a future whose outcome at the time was profoundly unknowable. This mental and empirical activity was not undertaken by means of conscious rational deliberation – there was insufficient time for this – but rather consisted in a mode of phenomenologically situated reflection. These virtual lines intending towards the future provided the means by which the citizens of New Orleans were able to comport themselves in the face of the grave uncertainty that confronted them in the minutes and hours after the levees broke.

Another reason why Lewis's academic work on improvisation is important is in how it draws attention to improvisation's *ubiquity*. Most of the

existing scholarship on improvisation has tended to emphasise its role in aesthetic modes of activity, which then in some cases becomes a vehicle by means of which improvisation is then thought about more broadly. That is to say there is a tendency for scholarship on improvisation to fan out from its aesthetic manifestations towards a more general understanding of improvisational comportment. While initially focused mainly on improvisation's aesthetic dimension, Lewis's work in recent years has emphasised improvisation's general character, with aesthetic instances of its enactment constituting one area of improvisational activity – albeit a crucial one.

Lewis states that:

> [I]mprovisation is the ubiquitous practice of everyday life, a primary method of meaning exchange in any interaction […] fundamental to the existence and survival of every human formation, from the individual to the community, through the post-national body to the species itself – as close to universal as contemporary critical method could responsibly entertain'. (2007b, 186)

With regard to Hurricane Katrina, he similarly writes: "The 'condition' of improvisation is indeed open to everybody – as a human birthright that was, for example, expressed precisely in the real-time plight of Hurricane Katrina's levee-smashing onslaught" (2007a). Hence, rather than think of improvisation as always cycling outward from its primarily aesthetic manifestations, Lewis maintains that aesthetic performance is a facet of improvisation's ubiquity: "On this view, if anything, improvisation's ubiquity becomes the modality through which performance is articulated" (2007a).

In his capacity as a technologist and programmer, as well as composer and improviser, Lewis has undertaken explorations of the relationship between technology and improvisation, with a mind its critical as well as creative deployments. Lewis is in fact one of the pioneers of research in this area, having designed his own software for computer-aided improvisation as early as the 1970s. His interest in this connection primarily consists in the desire to to mobilise the potential offered by software to foster improvisative human-machine comportments, most notably using his own *Voyager* software:

> *Voyager* (1.2) is a nonhierarchical, interactive musical environment that privileges improvisation. In *Voyager*, improvisors engage in dialogue with a computer-driven, interactive "virtual improvising orchestra". (2000, 33)

Voyager functions by analysing performances in order to facilitate improvisational dialogues between humans and machines, with a mind to better understanding the dynamics – social as well as aesthetic – that characterise the improvisatory encounter, in all its complexity. Indeed, the question of dialogic as propounded by Bakhtin continues to be an important one, for Lewis, even when discussing human-machine interactions.

To the extent that any dialogical encounter can be said to consist in a relationship to an other, a "creative machine", for Lewis, can play the role of

this other: "Such a machine, incorporating a dialogic imagination in which, as Rimbaud once put it, '*Je suis une autre* [I am an other]', [...] forc[es] a reconsideration of a machine's aesthetic and musical-structural agency" (2007b, 109). While Lewis explicitly cites the French poet Rimbaud here, rather than the literary theorist Bakhtin, he nevertheless falls back on Bakhtin's concept of the "dialogic imagination", in order to make his point. In doing so, Lewis alludes to the title of a book of essays by Bakhtin, in which the literary theorist develops many of his key concepts, including dialogism and heteroglossia (Bakhtin, 2010a).[9]

On this basis, it is possible for a machine to participate in the negotiation of dialogical meaning, in ways that demand that the human who participates in the negotiation respond to the machine's outputs. The machine does not have to literally speak to partake of dialogue in this sense. For Lewis, such a dialogue involves both human and machine participants in an agency-generating play of improvisation. As such, human-machine cooperation or co-creation trades on the same dialogical capacities as human-human interactions *qua* the mutual construction of intelligibility. Lucy Suchmann, who Lewis cites, puts the matter as follows: "human interaction succeeds [...] due not simply to the abilities of any one participant to construct meaningfulness but also the possibility of mutually constituting intelligibility, in and through interaction" (quoted in 2007b, 110).

Through an interpretation of improvisation as consisting in modes of phenomenological comportment – at once aesthetic, social, technological and dialogical in character – Lewis demonstrates that improvisation is "as close to universal as contemporary critical method could responsibly entertain". In stating this, Lewis is not propounding a naive or simplistic conception of universality – as evidenced by the all-important inclusion of the word "responsibly" here. Rather, he is wanting to show how situated, specific instances of the improvisational negotiation of meaning and intelligibility can themselves be said to speak critically to social, cultural, ethical and political questions that go beyond any given example, while still always requiring that localised examples are given in order to grasp how improvisation actually operates *in situ*.[10]

Automation, Improvisation and "The End of Theory"

In *The Automatic Society Volume 1: The Future of Work*, Bernard Stiegler also mobilises the resources of phenomenology as well as post-phenomenological philosophy and theory to undertake a detailed analysis of one of the most urgent contemporary manifestations of real-world technological disruption:

[9] It is therefore reasonable to argue that Lewis is at least implicitly working with Bakhtin's concept of dialogism here, expanding it's remit into the realm of cybernetics.

[10] For a more detailed critical exploration of Lewis's work in this area, see Benjamin Piekut's contribution to this issue of *Liminalities*.

generalised automation. Stiegler launches into a critical exploration of automation by way of an infamous article published in the technology magazine *Wired* in 2008, entitled "The End of Theory: The Data Deluge Makes Scientific Method Obsolete", written by the magazine's former editor-in-chief Chris Anderson. Anderson's article argues that the use of advanced algorithmic technologies to analyse data on a supermassive scale – a technique colloquially nominalised as "big data" – will equip computers with the processing power to model scientific findings in such a way as to render traditional scientific methodology redundant.

Anderson's point of departure is a statement made by the statistician George Box in the late 1970s: "All models are wrong, but some are useful" (quoted in Anderson, 2008). Anderson concurs with this statement before rhetorically responding as follows:

> But what choice did we have? Only models, from cosmological equations to theories of human behaviour seemed to be able to consistently, if imperfectly, explain the world around us. Until now. Today companies like Google, which have grown up in an era of massively abundant data, don't have to settle for wrong models. Indeed, they don't have to settle for models at all. (2008)

For Stiegler, Anderson's claim amounts to little more than a form of ideological "storytelling":

> Anderson's storytelling belongs to a new ideology the goal of which is to hide (from itself) the fact that with total automatisation a new explosion of generalized insolvency is readying itself […]: [T]he next ten years will, according to numerous studies, predictions and "economic assessments", be dominated by automation. (Stiegler, 2016a, 4)

One of the studies considered by Stiegler is the one undertaken by Carl Frey and Michael Osborne – co-directors of the Oxford Martin Programme on Technology and Employment – in 2013, entitled "The Future of Employment: How Susceptible are Jobs to Computerisation?", which shows the extent to which the existing model of work deriving from Fordist-Taylorist "capitalisation" stands to be impacted in the coming decades by the encroachments of generalised automation through computerisation and artificial intelligence, across all sectors, extending from low-level manual and service sector jobs to professions involving "cognitive" labour.

As Frey and Osborn explain:

> Although the capitalisation effect has been predominant historically, our discovery of means of economising the use of labour can outrun the pace at which we can find new uses for labour, as [economist John Maynard] Keynes […] pointed out. The reason why human labour has prevailed relates to its ability to adopt and acquire new skills by means of education […]. Yet as computerisation enters more cognitive domains this will become increasingly challenging […]. (2013, 13)

The entry of computerisation into the domains of cognition heralds a major shift in the political economy of late capitalism, towards what Stiegler calls "generalized proletarianization" (2015a, 188).

In what might be described as the inaugural disruption of industrial modernity, Karl Marx famously described the mass de-skilling of workers during the formative period of the industrial revolution during the nineteenth century as having created a new class of wage-earning labourers, which he called the proletariat (Marx and Engels, 2013). Stiegler argues that this development was merely the first phase in a three-fold process of proletarianisation that commenced with the decline in "*savoir-faire* [knowing how to make or do]" due to the technological advent of machine-tools, which continued with the second phase in the twentieth century due to the the loss of "*savoir-vivre* [knowing how to live]" wrought by mass consumption, culminating in the threat to "*savoir-théorique* [knowing how to theorise]" in the current century, due to the automation of cognitive processes (2010, 7). The problem that Stiegler highlights in the kind of celebrationist account of automation propounded by Anderson and his techno-utopian compatriots is one of generalised proletarianisation, whereby all spheres of human endeavour are subject to a loss of know-how.

In his 2016 book *Dans la disruption: Comment ne pas devenir fou?* [*In Disruption: How not to go mad?*], Stiegler has undertaken an extensive theoretical investigation of what he views as the urgent predicament that confronts us with regard to this situation. In this work, rather than having to contend with disruption as if from beyond or without the course of everyday life, Stiegler argues that we are "*in disruption* [*dans la disruption*]", inhabiting a state of affairs marked out by an epochal shift defined by perpetual technological innovation and acceleration – an epoch "without epoch [*sans epoch*]", according to Stiegler.

Stiegler's formulation "*epoch sans epoch*", in English "epoch without epoch", is complex in what it describes. In its most straightforward sense, the term "epoch" functions as a periodising descriptor, as we might encounter it as part of everyday parlance. As a conceptual term, "epoch" derives from phenomenology, and in particular the "reduction" that is key to phenomenological method in the Husserlian tradition, by means of which philosophical knowledge is arrived at, for Husserl, beyond the "natural attitude" that characterises everyday knowledge of the world. For Stiegler, because knowledge always consists in a relationship to technics, such a process of knowledge acquisition can only take place through the successful adoption of technics. Yet because the rate of acceleration of contemporary technology generally outstrips our capacity to adopt its innovations before they become once more irrevocably transformed, Stiegler has coined the conceptual formulation "epoch without epoch", the first and second iterations of "epoch" respectively denoting the term's periodising and phenomenological senses.[11]

[11] See Stiegler, 2014. For a detailed account of Stiegler's engagements with phenomenology, see Stiegler, 1994; 2009.

Furthermore, the current global scale of digital reticulated networks makes it possible for technological corporations and political institutions to take advantage of the disruptive potential of these technologies in unforeseeable and potentially catastrophic ways:

> Th[is] automatic power of reticular disintegration spreads across the Earth through what in the last few years has been called *disruption*. Digital reticulation penetrates, invades, parasites and eventually annihilates social relations at a destructive speed [...] [*Ce pouvoir automatique de désintégration réticulaire s'etend sur la Terre à travers ce que l'on appelle depuis quelques années la* disruption. *La réticulation numerique pénètre, envahit, parasite et finalement anéantit les relations sociales à vitesse foudroyante* [...]. (Stiegler, 2016: 22-3). Author's translation. Emphasis in original).

This situation, which has become exacerbated in the last few decades through a combination of neoliberal economic policy and advances in digital technology, has reached a point where the kinds of theoretical technics that themselves might otherwise be mobilised in order to analyse and critique these developments are being declared outmoded, or obsolete, in the name of scalable technological innovation. It is for this reason that Stiegler states that contemporary technological "states of shock", by forcing us always to adapt rather than adopt them, aim "to paralyse thinking and nip any alternative possibilities in the bud" (2015a).

Improvised Dialogues, or How Not to Go Mad

Stiegler dialogically distinguishes between technics as the *adoption* of tools as vehicles of knowledge production – a *therapeutic* mobilisation of technics – from the the forcible *adaptation* of humanity to the agendas imposed upon it by vested interests with the aid of technology. Reprising one of his key concepts – *pharmacology* – Stiegler writes:

> Adoption is the condition of individuation of the pharmacological being – so that the poison can become remedy. Adaptation, on the contrary, which destroys pharmacological knowledge, spreads toxicity. To adapt is to [...] deprive of knowledge those who must submit to that to which they are adapting themselves. (2013, 130)

Stiegler's concept of pharmacology derives from Plato's dialogue entitled *Phaedrus*. In this dialogue, Plato's protagonist Socrates enters into a discussion with his interlocutor Phaedrus on the matter of writing. Unenamoured of the written word, Socrates contends that if rhetoric is to accede to the status of reasoned discourse, it must consist in spoken rather than written utterances, and that writing is therefore anathema to philosophical knowledge. Phaedrus, for his part, seeks to extol what he sees as the virtues of writing, bringing some examples along for the pair to discuss.

This matter of writing and its purported drawbacks hinge on the Greek word "*pharmakon*", understood variously in terms of "poison" and also "remedy".[12] As Socrates states:

> [Y]ou seem to have found the prescription [*pharmakon*] to get me out [of Athens]. Just like people who lead hungry animals on by shaking a branch or some vegetable in front of them, so you seem capable of leading me around all Attica and wherever else you please by proferring me speeches (*logoi*) in books in this way (1986, 27).

As Jacques Derrida writes in his reading of Plato's *Phaedrus*:

> Socrates compares the written texts of Phaedrus to a drug (*pharmakon*). This *pharmakon*, this "medicine" [...] which acts as both remedy and poison, already introduces itself into the body of the discourse with all its ambivalence. This charm [...] can be – alternatively or simultaneously – beneficient or maleficient (1981, 75).

Derrida shows how the more positive connotations associated with the *pharmakon* that are disavowed by Plato nevertheless supplement the latter's negative slanting of the term. By drawing attention to the ways in which Plato's valorisation of speech relies on the supplement of writing – as attested to by the fact that Plato's dialogue is itself a written artefact – Derrida expands the definition of writing in the strict sense to incorporate inscriptions of linguistic traces more broadly, which go beyond the distinction between speech and writing. "Arche-writing", for Derrida, a form of "generalized writing" by means of which the relations between speech and writing *sensu stricto*, as in Plato's *Phaedrus*, can be deconstructed (Derrida, 1976).

Stiegler takes Derrida's reading of *Phaedrus* as a launching point for his own reading of the concept of the *pharmakon*. Yet in doing so he goes beyond the understanding of the *pharmakon qua* arche-writing, to situate it more broadly in relation to technics, which would include linguistic inscriptions, alongside all other kinds of inscription whereby memory is materially inscribed, or placed outside the individual organism by means of "exteriorization".[13] In the context of *Phaedrus*, one can witness the characterisation of

[12] There is a further sense in which the word "*pharmakon*" can be used, in order to mean "scapegoat". Stiegler has explored this sense of the term at some length in another as of yet untranslated work, *Pharmacologie du Front national* (2013b) – an all-important contribution to the current debate surrounding resurgence of authoritarian populism, which aims to show that this problem is also one of technics.

[13] Stiegler derives the concept of exteriorisation from the work of André Leroi-Gourhan who, working in the 1960s, explored the ways in which human evolution consisted in the advent of material inscription. Leroi-Gourhan posited that the diverse instances of material inscription that can be found to accompany the advent of hominisation are key to understanding what defines the human in terms of how its organic being crosshatches with its technical being. In his work *Gesture and Speech* (1964), Leroi-Gourhan shows how the human fabricates a memory for itself that

technics (in this case writing) as *pharmakon* qua poison. At the same time, Plato's philosophy remains incumbent on the technical supports by means of which he records it in order to bequeath it to future generations and to this extent consists in an ameliorative relationship to the *pharmakon* which the dialogue itself seeks to disavow (see Stiegler, 2010a).

Stiegler argues that, in twenty-first century technologically advanced societies, pharmacological toxicity has reached unsustainable levels. The potential these technologies of reticulation possess for scaling up innovation from local to planetary levels of operation has also reached a point where handful of entities (state or corporate actors) have the potential to irrevocably transform the technological and social organisation of life, with the the possibility of any prospective mobilisation of technology as an ameliorative force receding from view. In this context, he maintains that automation – qua pharmacology – needs to be analysed in terms of a play of "automaticity", or "automatization", and "disautomatization":

> The question is a relation between automaticity and disautomatization. [...] Auto is the common root of two words which are opposite in the philosophical tradition: automata and autonomy [...]. And I disagree with that. I believe that this point of view, which is a very classical, metaphysical point of view, is completely wrong, because in reality, to become really autonomous you must integrate a lot of automatisms. (2015, 16)

In an interview on *The Automatic Society* conducted with Anaïs Nony, Stiegler draws a music-based analogy: learning to play the piano. Stiegler explains that learning the piano, like any musical instrument, involves a complex interplay of automatisms – actions performed without conscious thought or intention – and disautomatisation: "[I]f you want to become an autonomous pianist you must transform your body into such a think like the piano. But this is the case for all your knowledge, and knowledge is a set of automatisms incorporated in the body" (16). While Stiegler doesn't mention improvisation in this context, it is evident that improvisation as a mode of musical activity fundamentally illustrates the process of disautomatisation that Stiegler here describes.[14]

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resides outside of and therefore outlasts the organism. Gestures consist in elementary "programs", according to Leroi-Gourhan. See Leroi-Gourhan, 1964.

[14] Piano-playing is something of a recurring refrain in Stiegler's work. See for example his early lecture "*La lutherie électronique et la main du pianiste*" (1989), as is the concept of electronic or digital "lutherie" – a term that is traditionally used to describe the practice of making stringed musical instruments, but which Stiegler expands in order to apply it to diverse hand-instrument comportments, that even extend beyond music. In his *Préface* in Stiegler, 2013b, he states "[T]his book is an instrument [*Cet ouvrage est un instrument*]", which solicits a mode of practical as well as intellectual comportment towards the world akin to those engendered by the fabrications of musical lutherie, for example, the piano (which is itself of course a stringed instrument), to the extent that one must also "practice" it [*il faut le pratiquer*] (8). This reference implicitly also recalls the ancient Greek and Hellenic conception of the philosophical

For his own part, in particular in his activist projects, Stiegler has engaged at some length with the theme of improvisation in relation to automation and has gone as far as to posit a new mode of theoretical knowledge that he has termed "improvisational thinking [*penser-improviser*]." In 2014-15 he co-organised (with the jazz musician Bernard Lubat) the fifth annual "Festival of the Unexpected [Encounters] [*Les (rencontres) inattendues*]", which took place in the Belgian city of Tournai in August 2015. This outing of the festival represented the culmination of a year-long project which started with the first of a series of improvisational workshops, or "unexpected meetings [*ateliers inattendues*]" in October, 2014 – each meeting scheduled to take place in a different location in the Flanders regions of Belgium and France, culminating in a "summer school [*academie d'été*]" prior to the festival. The organisers of the events interpreted the festival theme of unexpected encounters primarily regarding the relationship between philosophy and improvisation.[15]

These meetings were conceived in terms of what the organisers called an "itinerant school [*école itinerante*]", whose stated aim was to bring musicians, philosophers, artists, writers and improvising performers of diverse persuasions together with members of the public, in order to establish a "critical space [*espace critique*]" in and through which it might be possible to foster a dialogical relationship between critical engagement and improvisation. The goal of these endeavours was to explore the critical imbrications of improvisation, thought and disautomatisation:

> Thinking and practicing improvisation offers the opportunity for an interrogation of the relationships between automatisms that we acquire in all domains of existence – behavioural [*comportementaux*] as well as mental automatisms – and the possibility of exceeding them: to disautomatize [*Penser et pratiquer l'improvisation offre l'opportunité de s'interroger sur les rapports entre les automatismes que l'on acquiert dans tous les domaines de l'existence – les automatismes comportementaux aussi bien que mentaux – et la possibilité de dépasser ces automatismes : de se désautomatiser*]. (2015b. Author's translation)

Central to these endeavours was the software application called *ImproteK*. Developed by the Centre for Analysis and Social Mathematics (CAMS), based at the School for Advanced Studies in the Social Sciences (EHESS) in Paris, *ImproteK*. *ImproteK* uses digital algorithms to stylistically model im-

"manual", exemplified by the Greek Stoic philosopher Epictetus's *Enchiridion*, literally "that which is held in the hand [*Ἐγχειρίδιον*]". While Stiegler's practical projects involving technology have broached the relationship of these kinds of instrument-making and using practices in relation to improvisation (some remarks on which are to follow), this connection is yet to be explored at any great length in his writing. For a recent exploration of the theory and practice of digital lutherie that specifically focuses on improvisation, see Puig, 2005.

[15] The fruits of this series of events have thus far yielded one document available in English, a translation of a conversation between Stiegler and the actor Denis Podalydès, which is featured elsewhere in this issue of *Liminalities*.

provising musicians' performances and generate real-time patterns in response to these performances, with a mind to engendering a form of 'machine co-improvisation', akin to that described by George Lewis, and exemplified by his own *Voyager* software.

The aim of *ImproteK* is not so much to generate complex responses to musicians' inputs, but in fact to generate machinic responses, which – rather than eschew automation – in fact foreground it. The idea here is that the musicians must respond using improvisation to the machine-generated responses in turn, in order to engender an improvised musical dialogue with processes of automation. *ImproteK* software uses an audiovisual timeline, akin to the 'piano roll' that one encounters in most non-linear digital audio workstations (DAWs), once again with the caveat that the purpose for which the software has been conceived and designed differs somewhat from that of the more mainstream propriety software platforms, not least in its network-based, open source, public-oriented trajectory.

The mission statement for the workshops of the unexpected/unexpected workshops commences with the following description vis-a-vis *ImproteK*:

> Improvised music is not written, but rather unfolds on the basis of repetition and differentiation in repetition. Thus jazz was able to develop through repetition and variation of standards benefiting from the analog recording and the engraving of discs: this is exemplified by the re-listening to slowed-down recordings of Lester Young that Charlie Parker used to aid his playing […]. Using *ImproteK* is in our case to implement new recording and editing possibilities offered by digital technologies — both to open new practice of play for musicians and to open new listening practices for spectators. [*La musique improvisée n'est pas écrite, mais elle se développe sur la base de répétitions et de différenciation dans la répétition. Ainsi le jazz a-t-il pu se développer par la répétition et la variation de standards en bénéficiant de l'enregistrement analogique et de la gravure sur disque : c'est par exemple en réécoutant au ralenti les enregistrements de Lester Young que Charlie Parker a développé son jeu. […]. L'utilisation d'ImproteK consiste dans notre cas à mettre en œuvre les possibilités nouvelles d'enregistrement et d'éditorialisation offertes par les technologies numériques – tant pour ouvrir de nouvelles pratiques de jeu pour les musiciens que pour ouvrir de nouvelles pratiques d'écoute pour les spectateurs*]. (2015b. Author's translation)

For the performers and spectators alike, the stakes of such an enterprise are not to be underestimated. Left to its own devices, automation in its functionalist manifestations only stands to massively increase what Stiegler has termed "symbolic misery", as a result of the threats posed to the social fabric of advanced capitalist societies by technological ubiquity:

> By symbolic misery I mean […] the loss of individuation that results from *the loss of participation* in the *production of symbols*. Symbols here being as much the fruits of intellectual life (concepts, ideas, theorems, knowledge) as of sensible life (arts, know-how, mores). (2014, 10. Emphases in original)

If symbolic misery is to be attenuated, to the extent that it will necessarily involve a relationship to technology, it will require disautomatisation, and this disautomatisation will necessarily involve a shift in the ways theoretical and conceptual frameworks are mobilised. In a video conversation with actor and scriptwriter Denis Podalydès, conducted for the series of events in Tournai, Stiegler states: "[T]he aim [of the festival] [was] to publicly encourage the idea that if we do not place automatization in the service of disautomatization we will not produce the automatic apparatus [*dispositif automatique*] which will allow people to disautomate themselves which will lead to disaster" (Podalydès and Stiegler, conversation in current issue of *Liminalities*).

In *Symbolic Misery: The Katastrophé of the Sensible*, Stiegler draws attention to the ways in which the technological transformations wrought during the early part of the twentieth century associated with Fordism and Taylorism, as well as the emergence of mass consumption, epitomised by the early public relations experiments of Freud's nephew Edward Bernays, impacted on *savoir-faire* and *savoir-vivre*.[16] Yet he also shows how these developments were in some cases met with critical cultural responses. It is here that Stiegler theoretically elaborates on those relating to the use jazz musicians made of gramophone recording and playback technologies just encountered by way of his practical projects:

> Charlie Parker invent[ed] be-bop by listening to Lester Young's refrains on the phonograph [which he slowed so he could break down what the saxophonist was playing […]". (2015c, 15)

This technique thus constitutes an instance of the adoption of technics in industrial modernity, as a means to resisting the imperative to forcibly adapt oneself to technology's "revolutionising" impetus. In a study of African-American jazz music and dance culture between the Wars, Joel Dinerstein similarly describes this process and at one point in his book does so in a nod to Bakhtin, under the auspice of the "techno-dialogic":

> The "techno-dialogic" is my term for revealing how the presence (or "voice") of machinery became integral to the cultural production of African-American storytellers, dancers, blues singers and, jazz musicians. […] (Dinerstein, 126).

Dinerstein primarily focuses on the cultural and semiotic mobilisations of transport and travel tropes that found their way into jazz culture in the inter-War period courtesy of the migrations from the Southern to Northern United States by many African-Americans during this period, in order to escape "Jim Crow" racialised segregration and to seek gainful employment in the Northern industrial metropolises, once agricultural work in the South start-

[16] See in particular Stiegler, 2010b.

ed to be automated.[17] For example, with regard to the insertion of transport and travel-related tropes into swing-based jazz in this period, Dinerstein writes:

> By putting the train into music, musicians enabled listeners and dancers to "wear" their cultural identity through an embrace of technology, optimism, speed, and power in the form of big-band swing. (73)

Dinerstein expands on Bakhtin's concept of dialogism to explore the vernacular mobilisation of a diversity of idioms, for example when he states that "[t]he techno-dialogic contains West African rhythms, the industrial soundscape, European song structures, and African-American musical practices [...]" (117).[18] As Dinerstein shows, this practice was as existential as it was aesthetic, adapting writer Albert Murray's trope of "survival technology" into a critical term to analyse how the cultural mobilisation of modernity by African-Americans made possible a form of existential affirmation (22).

Towards the end of *Dans la disruption*, Stiegler writes regarding how his own philosophical vocation has consisted in an ongoing process of "recording", that he finds akin to the use of recorded music made by jazz musicians as just described. We might hereby think of Stiegler's philosophical version of documentary practice as a mode of techno-dialogic. To understand the import of this analogy it is crucial to recognise that Stiegler's relationship to his vocation did not proceed by the standard route of academic tenure, but by a wayward path. During the 1970s, when he was the proprietor of a jazz bar – *L'Écume des jours*, (the title of a Boris Vian novel of 1947, translated as *Froth on the Daydream*) – Stiegler became involved in a series of bank robberies when his club fell into debt (actions also reflective of his formative engagements with radical left-wing politics), leading to his capture and incarceration between 1978 and 1983, first at Saint-Michel prison in Toulouse, then at Muret detention centre. It was during his incarceration that Stiegler turned his attention to philosophy – as a set of tools for interpreting his situation and as a means to surviving it. He describes how the "passage to the act [*passer l'acte*]" that led to his conviction and detention could be retrospectively interpreted in light of another passage to an act – reading and writing philosophy – which furnished him with the conceptual resources that made this retrospective interpretation possible (including expressions like "passage to the act"):

> My incarceration in Saint Michel prison, result of a passage to the act, will have been the suspension of my acts and the interruption of my ac-

[17] This phenomenon tellingly presaged subsequent developments in the automation of work, including the current ones pertaining to generalised automation. For a more detailed exploration of how industrial technology has been mobilised culturally and artistically in African-American vernacular cultural contexts as a "techno-dialogic", see Swiboda, 2015.

> tions: such is the function of prison. But *interruption* and *suspension,* which are also the beginning of philosophy [...] were for myself the *occasion* of a reflection on what is *the passage to the act* in *general – and* a recollection of *all the acts which brought me there.* (2006)

In a chapter of *Dans la disruption* entitled "*Trente-huit ans après* [Thirty-Eight Years After]", Stiegler undertakes a more detailed attempt to account for these passages to the act, from the perspective of our current epoch (without epoch), and he does so once more with recourse to the language of recording. For example, he describes how his readings of philosophy while in prison were documented by means of writing exercises, in ways that "spatialised the time" of his reading [*qui spatialisaient le temps de mes lectures*], while his act of reading consisted in "temporalising the space and the volume of letters as read" comprising writing [*temporalisant l'espace et la volume des lettres lues*] (303. Author's translation). Stiegler considers these spatialisations of time and temporalisations of space through writing and reading as examples of what he elsewhere terms "organology", a concept that correlates to that of pharmacology, in such a way as to draw connections between human organs, machines and the social body, with an emphasis on how their conjuncture bequeathes "individuation".[19]

It is in this regard that Stiegler draws an analogy between his documentary practice of writing in prison and the mobilisation of gramophone records by jazz musicians – not least in how these also consist in a technological spatialisation of time (recording) and temporalisation of space (playback). By way of such an analogy, Stiegler claims that his own "recordings" of his philosophical ideas have, in the passage of time, or more accurately in the passage to action that consists in time's spatialisation and space's temporalisation, placed him in a "dialogue" with his erstwhile self [*dialogue avec moi-même*], in a tacit echo of Lewis's reference to Rimbaud's "I am an other" ["*je suis une autre*"], in the context of the latter's own conception of the human-machine dialogic, in ways Stiegler finds akin to a (re)recording by the jazz pianist Bill Evans:

[19] Stiegler's concept of "individuation" derives from the work of Gilbert Simondon, and in particular the latter's *L'individuation psychique et collective* [*Psychic and Collective Individuation* – yet to be made available in English translation], the 2007 reissue of which contains a Preface by Stiegler. Simondon's work using this concept primarily focuses on the processes by means of which myriad entities – including organic ones – take their form, which, for Simondon, takes place by means of these processes, which he describes as processes of individuation. Stiegler's work on "organology" reflects his turn in recent years towards the work of Gilles Deleuze and Félix Guattari (both of whose work was also indebted to Simondon) and in particular their materialist genealogy of psychic, social and historical formations in *Anti-Oedipus: Capitalism and Schizophrenia* (1984). Unfortunately, there is insufficient space available to discuss Stiegler's concept of organology in how it relates to these other authors' works in the current article.

> Across my readings, temporalising space and the volume of the letters read, and the writings that I was starting to draw from these readings, as one might draw a line in industrial design and spatialising the time of my readings as literal retentions themselves, without my realising it clearly, I engaged in a dialogue with myself – practicing in the manner of Bill Evans [...] a sort of *re-recording*. [*À travers les lectures, temporalisant l'espace et le volume de lettres lues, et les écritures que je commençais à* tirer *de ces lectures, comme on tire une ligne en dessin industriel, et qui* spatialisaent *le temps de mes lectures comme rétentions elles- mêmes littérales, engageant ainsi sans m'en apercevoir encore clairment un dialogue avec moi-même – pratiquant à la façon de Bill Evans [...] une sorte de* re-recording].[20] (303. Author's translation. Emphasis in original)

By his own account, Stiegler's organological and pharmacological mobilisations of philosophical technics thus comprise a mode of adoption that parallels those to be enountered in other idioms, for example, in the musical idiom of jazz – for example with reference to Evans's recorded "conversation" with himself. For Stiegler, to the extent that it helped him mentally survive his experience of incarceration, this "dialogue" with "himself" was crucial, and by retrospectively parsing it through subsequent life and his vocation, Stiegler retroactively transforms his passage to a criminal act, along with the acts that led up to it, by means of a philosophical one.[21] In this book, Stiegler argues that the ability to meaningfully pass to acts without succumbing to the symbolic misery that increasingly characterises our time "in disruption" is now becoming a general societal requirement, in order "to not go mad [*ne pas devenir fou*]".[22]

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[20] The recording that Stiegler is referring to is an album made by Bill Evans entitled *Conversations with Myself*, originally released in 1963 – an experimental record for jazz at the time because it involved the use of overdubbing techniques that had been made possible by advances in studio recording technology. A controversial technique in jazz – given what purists of the idiom often perceive as the inherent tension between recording and improvised life performance – these overdubbings consisted in multiple piano parts all being played by Evans, whereby he would accompany himself – "comp" in jazz parlance – in the fabrication of a recorded musical dialogue. NB. Stiegler's use of the term "retention" here derives from his reading of Husserl's phenomenological concept of "internal time consciousness". See Husserl, 2012b; Stiegler, 2009).

[21] One might hereby be given to think that this argument has fallen foul of contradiction, vis-à-vis the earlier critique of "monologism", given how Stiegler's "conversation" is one with himself, as much as if not more than it is with others. Such an assumption would be misguided, however, in that Bakhtin's conception of dialogism extends to internal monologue, to the extent that one finds an implicit dialogue taking place in an internal monologue, which is also incumbent on the social character of language. For an account of this, see Todorov's reading of Bakhtin's concept, see Todorov, 1984, 63.

[22] One recent appraisal of *Dan la disruption* goes so far as to claim that, as well as being what led to his incarceration, jazz was also key to saving Bernard Stiegler from going mad. See Dussutour, 2016.

Evidently, theoretical knowledge still has a major role to play, in spite of contentions to the contrary, in attending meaningfully to the three-fold contemporary predicament of functional stupidity, algorithmic governmentality and generalised automation, so long as its proponents are willing to heed the lessons of improvisational and dialogical modes of social as well as aesthetic comportment towards the world. Perhaps improvisation might also help foster the recognition that theory as a mode of knowledge practice (*savoir-theorique*) invariably exists in an imbricated relationship with the modes of knowledge corresponding to life (*savoir-vivre*) and work (*savoir-faire*) – a recognition that might aid the preservation of knowledge practice more broadly and prevent its reductive schematisation or appropriation at the hands of our twenty-first century "disruptors".

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