DADABOT: An Introduction to Machinic Creolization
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July 1916: one year after creating the Cabaret Voltaire with his partner Emmy Hennings, Hugo Ball delivers the first public reading of his Dada Manifesto. He begins with an excursus on the "international" nature of the term[1], and ends by describing the power of words to define the world around us: "The word, gentlemen, is a public concern of the first importance." Through their consummate art of provocation, the adherents of Dadaism intended to subvert the norms of their epoch by liberating words and languages from their arbitrary assignations.

Sparta My Have

June 2012: the security team at the electronic commerce company Amazon.com discovers a type of unauthorized publication. It is neither a manipulation of user comments, nor is it promotional spam. The "problem" concerns a massive influx of books of an unfamiliar nature, absurd works written by digital programs. For four years, the software is flooded with such evocatively titled books as *Sparta My Have* by Loafrz Ipalizi, *Weird Song You Cute* by Timsest Pitigam, or *Alot Was Been Hard* by Janetlw Bauie. Each opus consists of short texts signed by a pseudonym. The statements read like transcripts from delirious conversations between adolescents sitting in front of a TV, rather than novels situated within a prizewinning literary canon.

As it turns out, they have been compiled from accumulated *Youtube* comments. Extracted by a software program, they are then reassembled into book form before being published — and sold — on Amazon. Some weeks later, the books were removed from the site, and the guilty parties were revealed to be the Austrian art collective TRAUMAWIEN and the German Bernhard Bauch. The authors of this intricate performance – called Ghost Writers – describe the result as a collection of e-books portraying the contemporary micro-dramas at play on community websites. For them, what is at issue is a new form of emergent literature produced by the users of the online video host. Halfway between literary experimentation and robot, these *quasi-random* modes of expression comprise the first characteristic of the "Dadabot".[2]

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[1] "Dada is a new tendency in art. One can tell this from the fact that until now nobody knew anything about it, and tomorrow everyone in Zurich will be talking about it. Dada comes from the dictionary. It is terribly simple. In French it means "hobby horse". In German it means "good-bye", "Get off my back", "Be seeing you sometime". In Romanian: "Yes, indeed, you are right, that's it. But of course, yes, definitely, right". And so forth. An International word. Just a word, and the word a movement." Hugo Ball, *Dada Manifesto*, 14 juillet 1916. Accessible here: http://en.wikisource.org/wiki/Dada_Manifesto_(1916,_Hugo_Ball)

[2] A portmanteau formed from the artistic movement *dada* and *bot,* the diminutive for *robot*.

July 2014: the Associated Press announces that its quarterly earnings articles will henceforth be handled automatically by a software written by the firm Automated Insights. By analyzing the economic datasets of Zacks Investment Research, the program instantly produces dispatches of between 150 and 300 words that are then circulated on nearly 150 Anglophone economic press websites. In an interview on the subject, Lou Ferrara explained that by allowing journalists to spend less time crunching financial numbers, the software frees them up to produce more penetrating coverage of social issues.[3] The same strategy was used by Narrative Science, a start-up that automatically compiles the outcomes of football and baseball games based on statistical data.[4] Seen in the light of this automatic writing of the present, the "ghost writers" of TRAUMAWIEN figure within an evolution of editorial practices that goes beyond mere schoolboy pranks. The principal literary trait of these books lies in the algorithmic procedures that determine their *agencement*. What do these automated combinations of heterogeneous content disclose? What is the aesthetic status of such productions? Who is the author?

These different examples demonstrate that a single logic is at work in the creation of this editorial material, in the online works as well as their print counterparts. Their production is "algorithmic", i.e. software instructions automate the research, assembly, and creation of content. Over the past few decades this functional model has surfaced in obvious and not so obvious ways within various sectors of cultural life. In the domain of radio, the automated management of content sent over antennae is a well-known practice. The personae of Max Headroom certainly contributed more than any other to the popularization in media of "bots", officiating over British Channel 4's *The Max Headroom Show* from 1984 onward. Since the technology at the time did not allow the creation of an entirely virtual personae, a human host still had to assume the appearance of a humanoid.

Taste Disorders

Algorithmic logics are not always so spectacular. A program such as DAD, designed to manage radio content, can vary playlists so as to avoid artists from the same decade, or play only English rock or Eurodance according to selected settings or the type of station. Pandora, Spotify and Netflix all utilize algorithms select suggested viewing and listening choices, as does Amazon with its recommendations. These services rely to an enormous extent on the role of "suggestions" to direct users towards automated choices of cultural products.

In addition to such mechanisms of suggestion, the contents themselves may come to be influenced by the very digital programs that give birth to them. In the early 90's, the group Oval explored the aesthetic potential of noises and other cracks, notably in their

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[3] "As we begin using automation technology in July [2014], we will check each automatically generated report and then publish to the AP wire. As we work out any problems, we hope to move to a model of more fully automating the reports and spot-checking the feed for quality control." Colford, Paul (2014). "A Leap Forward in Quarterly Earnings Stories", *Associated Press Blog*. Accessible here: http://blog.ap.org/2014/06/30/a-leap-forward-in-quarterly-earnings-stories

[4] Bachman, Justin, (2010). "Are Sportswriters Really Necessary?", *Business Week*. Accessible here: http://www.businessweek.com/magazine/content/10_19/b4177037188386.htm

repurposed use of CD's. By simple gestures such as using CD readers as instruments, they contributed to laying the sonic foundations that would give rise to *glitch*. From noise to *musique concrète*, contemporary variants of such initiated music have rendered the border between musical production and sonic nuisance ever more porous. With their flat bass and their metallic high notes, the little samples of sound made by smartphones these days unmistakably indicate their MP3 compression and the presence of autotuning. As for the written word, the consultation of e-books is accompanied by a series of innovations as discreet as they are determinant for our way of accessing information. It is today possible to synchronize the viewing of a single document across multiple reading apparatuses, to annotate the text, underline contents, or export the data to your profile. Yet the strangest novelty comes from the possibility of viewing things underlined by others, and of seeing how many of these others have done the same.

Algorithmic Culture

Such examples testify to the increasing impact of software functions in the diffusion and production of new cultural content. In other words, we are witnessing the appearance of an "algorithmic culture"[5], one reflecting the increasing influence of the digital and of computer programming in the production and diffusion of cultural products. By "culture", we understand the ensemble of practices affecting domains as diverse as music, literature, cinema, sculpture, journalism, photography, gastronomy, fashion, etc. The term "algorithmic", used here as an adjective, points to the motor of computing, that is, to the use of coded processes in programs that make possible the organization, compression, assembly, sifting, comparing, and classifying of information, on the basis of preexisting coordinates. The software used in our day-to-day management of information is composed of a multitude of algorithms permitting the execution of tasks for which they have been designed. This can mean, on the one hand, furnishing productive tools to users, for example the possibility of creating a virtual world in 3D with a program called Unity. On the other hand, enabling one to access and modify preexisting content in a more or less exhaustive manner.

At the same time, the use of bots has been generalized. This shortening of the word "robot" refers to an automatic or semi-automatic program capable of interacting with computer servers. These programs are typically employed at the point where the rapidity of the action becomes a prevalent criteria. In the world of finance it is the case everywhere, and above all in *high frequency trading*, where bots buy, sell, and negotiate market exchanges in microseconds. Likewise, sites like eBay make use of bidding robots named Auction Sniper or eSniper that enable automated bidding during the last seconds of an online auction.

The exploration of this "algorithmic culture" reveals the determining influence of computation on cultural content itself. In certain cases, this can give rise to its own

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[5] *Video games are games, yes, but more importantly they are software systems; this must always remain in the forefront of one's analysis. In blunt terms, the video game Dope Wars has more in common with the finance software Quicken than it does with traditional games like chess, roulette, or billiards. Thus it is from the perspective of informatic software, of algorithmic cultural objects, that this book unfolds*" Alexander Galloway (2006). *Gaming Essays on Algorithmic Culture*, University of Minnesota press.

specific aesthetic, as in the case of *chiptune*[6] music or the *glitch*[7] current. In other cases, it can give rise to "augmented" practices or experiences of reality. Video games present a type of content intrinsically related to algorithms implemented within digital technologies, and which enable the creation of virtual universes in which users can carry out actions whose effects are visually registered on a screen. Lastly, the notion of algorithmic culture can just as easily produce an effect of hierarchization in the selection and suggestion of certain content rather than others, the most familiar of which are the product suggestions displayed on Amazon.com following the selection of any object.

In this respect we may distinguish between algorithms whose purpose is to aid in the *selection/diffusion* of cultural goods and algorithms of *production*. It is their productive function that interests us here. In an epoch in which computer programs take charge more and more of what previously figured as properly human activities, the increasing automation of creative processes constitutes a pertinent point of reference from which to grasp the automation of algorithmic processes in our society. It is not a question here of restoring the primacy of the author in the creative process. It is a matter rather of putting into perspective the specter of productions and human-machine collaborations engendered by these sorts of hybridizations. The aesthetics and the coherence that spring from these productions can never be fully foreseen, for they are always the fruit of a generative process that is never completely random.

The Language of New Media

In his book *The Language of New Media*, Lev Manovich introduces the notion of new media objects[8] to describe the content produced by digital technologies. What interests him are the principles governing their functioning. The first such principle concerns the presence of a digital representation. A photograph taken on Instagram, a piece of music on Soundcloud, a GIF found on Tumblr, a Tweet, etc.—all of these cultural elements are encoded in a numeric format. A second important characteristic lies in the modularity of digital objects, the way in which they tend to be imbricated in one another. Whether it be a piece of music, a YouTube video, a PDF text, etc., every "media object" consists of an assemblage of blocks that can take various forms. These different blocks can be combined amongst themselves and this is the exact logic at work in the books produced by the Ghost Writers bots. They function as aleatory *media objects*, of textual commentaries and visuals extracted from YouTube, the outcome of which can then be considered independently. The selection criteria and *agencement* of this heterogeneous content is accessible and "readable" only by means of the potentialities defined within the program in question.

However, despite their smooth and integral character, not all digital objects are composed of bricks of the same nature. For example, Google Earth is composed of photographs, satellite imagery, and 3D models or navigation tools. This type of "media

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[6] Nova, N: (2014). *8-bit Reggae: Collision and Creolization*, Editions Volumique.

[7] Menkman, R. (2011). *The Glitch Moment(um),* Institute Of Network Cultures.

[8] « A new media object may be a still digital image, a digitally composited film, a virtual 3D environment, a computer game, a self-contained hypermedia DVD, a hypermedia Web site, or the Web as a whole. » Manovich, L. (2001). Language of New Media, MIT Press.

hybrid"[9] is common among the online and mobile services that we use everyday, such as the most basic sites compiling text articles, videos, weather maps and a search function accessing a database. In each case, we encounter digital objects of distinct natures, combined with the aim of creating a coherent experience.

More and more designers and artists are taking advantage of this hybrid rhetoric, developing increasingly advanced projects. Consider James Bridle's *A Ship Adrift* (2013). Using a website updated on a daily basic, Bridle reconstructs the journey of a navigator adrift. The virtual movement of the boat follows the speed and force of winds detected by sensors situated in the statue of a boat placed on the roof of the Southbank Centre in London. In parallel, a program tracking geolocated content such as Tweets, Wikipedia entries, or ads posted online on bulletin boards are linked to places and events situated in the vicinity of the supposed position of the boat. Each day, data is selected and posted to the site. This project reveals another characteristic of digital objects: photos, videos, sound extracts and texts are accompanied by "metadata"[10]. Photographs carry with them the date, time, camera model and settings, as well as the geolocation at which they were taken. James Bridle's project functions specifically through the usage of geographical metadata which serve as a point of reference in relation to which diverse and daily cultural elements can be reassembled.

Various sociological theories allow us to account for such phenomena. Owing to its decentering of Western themes, Basil Zimmermann's work[11] on the role of technical objects in the creation of electronic music in China opens particularly fruitful paths for such purposes. In his research on memes[12], Zimmermann outlines an atomic approach to "culture". Observing how "Western" content can circulate inside China by means of electronic music samples, he proposes the notion of a "cultural element". The latter refers to the way in which every content or cultural object—including Manovich's new media objects—can be composed of subordinate unities.[13] For example, we could say that the Ghost Writers of TRAUMAWIEN or James Bridle's *A Ship Adrift* combine diverse cultural elements in order to produce a new artistic work. As we have seen, by encoding content of distinct natures in a common fashion, new media objects are intrinsically hybrid.

From Remix to Hauntology

February 24, 2004 was a watershed moment in this history: the day Danger Mouse's *Grey Album* was circulated online by fans across the world after being banned by EMI.

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[9] Cf. the recent work of Lev Manovich, *Software Takes Command* (2013).

[10] Metadata is data serving to define or describe other data. The most familiar example would be the GPS coordinates recorded inscribed within a digital photograph.

[11] Zimmerman, 2015

[12] "*An idea, behavior, or style that spreads from person to person within a culture.* » "Meme" in Wikipedia (16.11.14). Applied to digital culture, a meme constitutes a unity, typically an image, passed between individuals in a viral manner. Zimmermann abandons this notion, preferring the larger concept of a cultural element.

[13] "What we are missing with "culture" is an appropriate concept for its "atoms:" lower-level elements, located sometimes in artifacts, sometimes in human beings, and sometimes traveling from one to another. […] I will call these lower-level elements cultural elements." Basile Zimmermann, 2010.

Bridging Jay Z's rhythms with the Beatles, Danger Mouse showed the public a new form of telescoping made possible by digital music production. When the affiliated record labels largely decided to drop their charges, this contributed to the recognition of a practice that was already widespread in dance music circles in the form of remixes and club versions. Certain other artists pushed this logic of multiple and automatic reference to its extreme limits. Girl Talk is the most emblematic of this tendency. Definitively turning his back on a certain artistic ideal of authenticity and uniqueness, each of his albums or live performances is awash in reams of samples, *All Day* using 373 in total, stitched together with a frenetic energy[14]. This inclination toward impromptu associations is found no less in the visuals accompanying these productions. The latter often contain willfully coarse cut-ups combining extremes or *détourning* symbols, composing accidental aesthetics.

The principle of *hybridization* comes out of a long tradition in musical, audiovisual, and literary fields. The tendency underwent a popular explosion in the 2000's due to the newfound usage of digital mixing software as well as the unprecedented availability of material provided by the internet, and in particular of specialized blogs. Old and new samples, serious and kitsch versions, hard rock, disco, folk, hip-hop, house, or pop music offer infinite repositories of genres on the basis of which new aesthetic directions can be redefined. This tendency for "remixing" can be traced back to Jamaican sound systems[15] and, at the turn of the century, has been particularly significant with the production of *bootlegs*, also known as *mashups*. A mashup consists of two or more samples which are combined to form a new sample. Regardless of period or genre—the old and the new, the kitsch and the serious, the riffs and the kicks, folk, hip-hop, house, etc.—everything can potentially be combined and generate a new aesthetic direction.

The term mashup has progressively migrated from the musical to the field of Web design, notably with the Web 2.0 culture emerging in the mid 2000's[16]. In this context, it refers to applications remixing heterogeneous content: the superimposition of two images or the combination of sonic and visual objects in an internet meme, or a site aggregating content originating from other sources, etc. Collecting, extracting, combining, archiving, etc., the new digital software has transformed the art of sampling into a veritable form of engineering. The algorithms that make up this software have increased the possibilities of rearrangements tenfold, with the new media objects presenting a repository of primary material readily available online.

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[14] "Most people wouldn't mix the rhymes of Notorious B.I.G. with the melody of Elton John's Tiny Dancer and expect an ear-pleasing result. But then again, most people don't have an ear like Pittsburgh native Gregg Gillis, better known as the one-man band, Girl Talk. The musical misfit and laptop magician broke into the mainstream with his 2006 hit album Night Ripper, whose 16 tracks sampled more than 150 artists, from Abba to 2 Live Crew to Aerosmith." M.J. Stephey in: *The Time,* 22.10.08

[15] *"*Sound system culture redefines the meaning of the term performance by separating the input of the artists who originally made the recording from the equally important work of those who adapt and rework is so that it directly expresses the moment in which it is being consumed". P. Gilroy in: The Black Atlantic, pp. 217-218, 2002 (1987).

[16] O'Reilly and Doughertly, 2006.

At the heart of this logic of hybridization, lies the persistence of past cultural elements. Derrida describes this phenomenon as hauntology[17], the accumulation and resurgence within the creative process of fantasmatic traces from the past. Said differently, a "virtual presence"[18] characterizes those "'absent' actors with whom users collaborate through the mediation of technology"[19]. For example, a recognizable guitar sample captured in a digital content can give the impression that the musician in fact participated in its creation[20]. The cultural element of a "guitar sample" circulates thus from piece to piece through the mediation of machines. Internet memes and musical mashups constitute interesting examples of processes of hybridization at work in contemporary creation. However, things are advancing further still, since it often happens that these recombinatory operations take place as an effect of the digital programs themselves, without even being consciously intended by their authors.

The Advent of the Bots

We are all used to modifying photographs, or adding a soundtrack to a video with digital programs. These are fairly straightforward cases of hybridization. However, it is increasingly common for these processes to be automated. For example, we use software whose algorithms gather and optimize the contrasts and contours of faces in photographs that we take on our smartphones. Once launched by their users, such software automatically calculates the optimal levels according to preset parameters put in place by their programmers.

In the field of culture, "software automation" is used more and more to carry out repetitive tasks, which can thus be accelerated. Sometimes, they operate in a highly discreet manner, as in the case of Wikipedia, where they carry out an increasingly variegated set of typographical, syntactical and semantic modifications. Hence the updates and links between articles that continually augment the collaborative encyclopedia[21]. Even if these sorts of interventions into contents may appear elementary, the progress made in the automatic generation of text is palpable. Reports prepared by the bots are longer and more precise all the time. Their applications extend far beyond financial statistics, and

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[17] Derrida, 1993, The word is derived from the French term « hanter » (to haunt), referring to the imaginary of phantoms, « anthologie », which decribes a collection of selected literary or musical samples, and « ontologie », the metaphysical study of « existence ». See also Reynolds (2011) or the work of musicians such as Burial or The Caretaker.

[18] Zimmermann, 2006.

[19] "People's decisions, choices, mistakes, whatever we choose to call them, are stored within the technology. In turn, users, among them artists, are collaborating with the virtual presence of the (often many) people whose actions have been embodied, temporarily or permanently, inside the tools.", Zimmerman, (2005)

[20] As formulated by Daniel Lopatin (aka *Oneotrix Point Never*) : "The machines of the past contain prenatal patterns and unborn mythologies that eagerly await for their next chance. And when they storm back from the abyss of history, they are never the same. Action/adventure jams come back as devotional dirges. Mantras re-animated as new ageinal horizons" (http://skulltheft.tumblr.com/post/131570505/synthemas-and-notes-1)

[21] "Early bots trawled through articles, fixing simple grammatical or stylistic errors – like capitalizing certain unique proper nouns. At present, some of the most active bots are those that review every edit made in real time, using sophisticated heuristics to revert blatant incidents of spam and vandalism". in Geiger and Ribes (2010).

we are presently witnessing the appearance of more in-depth analysis, particularly in the domain of sports. This integral automation of content production constitutes the second defining mechanism of dadabots.

Bot progamming language

Twitterbots, the conversational agents[22] used in the social networking site, offer yet another even more current example. Numerous accounts on the social network generate absurd, comedic, or poetic messages. The term "Weird Twitter" is generally used to refer to the vast ensemble of accounts that toy with typographical and syntactical microblogging codes[23]. Occasionally it even happens that multiple bots enter into conversation amongst themselves. Tom Armitage realized as much when he created four bots based on characters from the game *Left for Dead*[24]. Unfolding before the reader's eyes is the text version of a sort of strange play in which the characters express themselves, help each other out or are wounded just as they are in the game.

This logic of bot programming extends to many other ventures beyond just Twitter. *The Death of the Authors* by Constant V Z W (2013) is a combinatory literature project that automatically generates novels based on the texts of James Joyce, Henri Bergson, or Virginia Wolff. With a single click on their website one can generate phrase combinations drawn from these classic works. Multiple musical projects are also moving in this direction. To mention just one, Dadabot[25] selects pieces automatically generated on the basis of preexisting cultural elements.

In the field of photography, *Every Face in the Americans*[26] by Dafydd Hughes (2010) modifies the work of Robert Frank, extracting from it only the faces detectable by iPhoto's facial recognition system, which incidentally results in the disappearance of several of the portraits. In Ed Key and David Kanaga's video game *Proteus,* a subjective point of view explores a richly colored island in which each component of the universe as well as the movement of the creatures deployed therein is generated piecemeal in an randomly fashion by a program, including even the soundtrack, which is assembled following the movements of the protagonist. The experience it generates is singular, and more contemplative than rhythmic.

Generative Culture

Whether scheming, cryptic or mischievous, though these projects may not always be coherent, they are emblematic of a digital culture constructed from the fragments of pre-

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[22] « Conversational agents» simulate human reactions in instant messages, social networks, or automatic answering machines, and are in general rather frustrating.

[23] The majority of these Twitter accounts is engineered by bots. However, users are sometimes fall victim to such mystifications as well, as we saw during the controversy around the @horse-ebook account, which turned out to be managed by a human.

[24] http://infovore.org/archives/2008/12/29/twit-4-dead/

[25] Whence this article draws its title.

[26] "iPhoto's looking out for us. It knows just how many pictures we're taking these days, how much information we have to contend with, and it wants to help. In fact, it's so eager to help that it doesn't wait to be asked". http://www.everyfaceintheamericans.ca/

existing cultural elements. Regardless of their beauty or harmony, such explorations serve above all to highlight the place of processes and tools of chance in the production and diffusion phases. Such experimentation figures routinely in generative art, i.e. content produced automatically by digital programs[27]. Think, for example, of Brian Eno's *Generative Music 1 with SSEYO Koan Software*, the title of which makes mention of the program used to produce it. The same is true of texts automatically generated by French author Jean-Pierre Balpe, whether they be novels (*Trajectoires*), operas (*Trois mythologies et un poète aveugle*), or poems (*Technopoèmes*[28]). The algorithmic musical programs designed by David Cope allow one to analyze recurrent motifs within existing compositions and to use them as a base for modeling new symphonic compositions. Although a wide array of such works have appeared over the past forty years[29], the main difference today lies in the profusion of data accessible through digital networks. The latter forms a potentially infinite matrix from which it is possible to randomly and indefinitely generate new contents.

Variability

Another characteristic of these algorithmic cultures, and in particular those of new media, derives from the fact that every cultural object can potentially undergo an array of modifications[30]. Depending on the cultural field in question, the author, the designer, the composer, the graphic designer, the architect or even the user can modify cultural elements. Changing the words to a song or the colors of a painting, speeding-up a musical sample, adjusting filters on Instagram, etc. is possible thanks to the precision of the algorithms handling the processing, presentation, and manipulation of complex data. Even where these operations are activated by a human user, this presence is obsolete, since each operation can be effectuated independently of the user's request. Automatic focus on digital cameras, suppression of "red eye" or the centering of a face detected in the captured scene are familiar examples of this implicit automation.

Remediation

In addition to those changes voluntarily implemented by the user, machines and software employed by users can also influence the content itself[31]. Technical objects

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[27] For Philip Galanter (2003) generative art "refers to any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art". It should also be pointed out that this creative logic has long been present in the history of art, in particular amongst artists such as fluxus or Sol Lewitt (1971) who proposed precise instructions.

[28] Published on Arte Radio.

[29] Multiple digital languages have been specially developed to facilitate such generative creations. *Design by Numbers* (DBN), by graphic designer John Maeda, *Processing*, by Ben Fry et Casey Reas, or SuperCollider, a programming environment and language used for improvised interactive programming during performances.

[30] Manovich, 2001.

[31] This is what Lev Manovich has called (2013) *cultural transcoding* : "Since new media is created on computers, distributed via computers, stored and archived on computer, the logic of a computer can be expected to have a significant influence on the traditional cultural logic of media. [...] The result of this composite is the new computer culture: a blend of human and computer

convey cultural elements or ethnocentric components that directly affect the creative process. For example, Jace Clayton, a.k.a. DJ Rupture, developed Sufi Plug-ins as a means of questioning and subverting the latent ethnocentrism of electronic music. He thus conceived of an interface designed specifically for musical traditions emerging from Maghreb and the Middle East. For Clayton, this desire to alter the functions of digital softwares pursues the same ambition that once animated the pioneers of hip hop or techno when they re-appropriated machines to invent musical patterns.

Khalid Al Gharaballi and Fatima Al Qadiri's comic *Mahma Kan Althaman* [*Whatever the Price*][32] published in *Bidoun Magazine* presents yet another example of the influence of digital logic on cultural content. Part photo-novel, part collage of faces, it comprises a series of images overlaid with dialogues in the form of speech bubbles, and composed in non-standard Arabic. The Arabic employed is of a mixed sort—an "Arabix", as Fatima Al-Qadiri has dubbed it—one transcribed into a Latin alphabet. Formed of both numbers and letters, it resembles the jargon that circulates amongst mobile phone and social media users. Finding it impossible to use Arabic within the technical interface, such users have been compelled of necessity to invent their own idiom. In an article devoted to such cultural transformations, Fatima Al-Qadiri theorizes the existence of these alphabetic "transgressions", and their persistence in cultural content to come (Al-Qadiri, 2013).

Put otherwise, technical objects — hardware and software — can transport cultural elements and logics that steer the creative process. In other word, they remediate cultural elements (Bolter and Grusin, 2000). Following in the footsteps of Basile Zimmermann, who demonstrated this insight in numerous cultural fields, one of the present authors took up another case of this machinic influence, mainly that of 8-bit reggae. The latter consists of reggae music that has been remixed and recomposed on 8-bit video game consoles such as Game Boy and Commodore 64 (Nova, 2014). Musical productions in this genre are singular, given that reggae and video games combine to produce a quite specific aesthetic entirely different from their original creations[33].

Towards a Machinic Creolization?

The examples described above demonstrate that we have surpassed the simplistic logic of the remix and the mashup. Even if these practices continue to persist, the originality of algorithmic cultures resides in the potentialities emerging from the processes of automation taking place between ever more active bots. Additionally, the cultural

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meanings, of traditional ways human culture modeled the world and computer's own ways to represent it. [...] in new media lingo, to 'transcode' something is to translate it into another format. The computerization of culture gradually accomplishes similar transcoding in relation to all cultural categories and concepts."

[32] *Bidoun Magazine*, #20 (2010).

[33] In part because some melodies cannot be reproduced per se, due to the reduction of possible tonalities in such machines; or else, because the sounds are altered by the programs written for these machines (the speed of the processor can modify the sound effects); or finally, because these machines tend to suffer various hardware and software bugs, which generate surprising and strange aspects to the samples.

elements widely available online, form a massive and novel material resource for such programs. In a parallel fashion, the logic of modification brought about by algorithms and the machines that execute them shows that the cultural forms they produce are more than a mere reorganization of existing cultural elements. Their constituent elements are transformed in and through these mixtures, producing new and singular contributions. Put otherwise, it is like listening to a remix whose samples were transformed *organically* in the course of the playback under the influence of the algorithms of the program.

Such a dynamic evokes a cultural phenomenon well-known to linguists, anthropologists and poets, mainly that of creolization. As Edouard Glissant describes it, the term refers to the "meeting of multiple cultures, or at least of multiple elements from distinct cultures, in a single place in the world, resulting in the emergence of something new and totally unforeseeable when considered only as the sum or synthesis of its elements."[34] Without delving into the complex history of the word creolization, we may simply recall that the notion derives from the use of the word "creole" which, during the 16th century, served to designate those individuals born from the collision and mixture of populations in the American and Caribbean New World. Over the course of time, the word "creolization" came to refer to the process of intercultural exchange giving rise to a new language, one influenced by the original maternal languages of the people in question (Mühlhäusler, 1997). Such is the case with Haitian Creole and Jamaican Patois. The term creolization has since been used by historians and anthropologists to describe and understand the intercultural exchanges that go beyond simple linguistic matters, as in the intermixing of alimentary or musical traditions arising through a logic of mutual entanglement and transformation of constituent elements. The term creolization may be defined as a conjoint process of hybridization and transformation of cultural elements leading to the production of a new and unforeseeable result. The notion is employed by anthropologists precisely in order to overcome the simple logic of the remix or combination of existing forms[35].

Yet, as we have seen, given their reliance on computers and the omnipresence of algorithms therein, current uses of digital technology add yet another layer of supplementary complexity to "creolizing" situations. We are aware that such a transposition of the term is not uncontroversial. Are we really dealing with the same process? Any application outside of its original postcolonial context is potentially problematic and it remains an open question. And yet the very idea of creolization suggests that the analysis of current cultural productions is not confined to the customary analytic tools endorsed by the Western canon. Whether it be the omnipresence of samples and mashups, the influence of presets and autotune, the circulation of glitches and memes, the strange humor of Twitterbots, etc., the algorithmic mechanisms at work in all of these projects outstrip the common idea of hybridization. The notion of creolization seems to us better adapted to evoke this "emergence of something new and totally unforeseeable" through the use of machines in the creative process today.

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[34] Glissant, E. (1997). Traité du Tout Monde, Gallimard, Paris, p.37.

[35] T Toninato, P. and Cohen, R.. (2010) *The creolization reader : studies in mixed identities and cultures*. Routledge Student Readers (No.5). London.

None of the aforementioned projects are a perfect fit for the notion of creolization. Nonetheless, they testify to the presence of a logic within algorithmic cultures, and offer some paths along which its evolution within automated production may potentially be understood. This can take the form of fictions produced by bots that reassemble and transform fragments of events or dialogues into a new and coherent narrative, or books created on the basis of actions carried out in a video game, from the passages in spoken languages to turns of phrase and syntactical mistakes generated by algorithmic productions, etc.[36] What is at issue is a turning point in contemporary culture. We thus propose the hypothesis of a "machinic creolization", that is, the constant automation of hybridized and altered cultural elements. With this term, we wish to underline the fact that "creolizing" processes of creation can be carried out by machines and algorithms entirely on their own. This is a globally novel situation.

These phenomena by no means imply the disappearance of earlier forms of cultural production. What we are instead witnessing is the advent of projects that transgress and intensify the sorts of collaboration possible between human and non-human entities. We are also seeing new forms of coexistence between automated and non-automated modes of creation. What physical and symbolic forms will this take in the future? Without offering an answer here, the projects presented in this publication should feed the debate by offering a singular perspective upon the transitory state of creation in the 21th century.

Translated by Kieran Aarons

References

Al Qadiri, F. (2013). Future fictions, FRIEZE, 156.
Bolter, J.D. and Grusin, R. (2000). *Remediation : Understanding New Media*, Cambridge : MIT press.
Derrida, J. (1993). *Specters of Marx*, New York : Routledge.
Galanter, P. (2003). What is Generative Art? Complexity Theory as a Context for Art Theory, in *Generative Art Proceedings*, Milan 2003.
Galloway, A. (2006). *Gaming Essays on Algorithmic Culture*, University of Minnesota press.
Geiger, R.S. and Ribes, D. (2010). The Work of Sustaining Order in Wikipedia: The Banning of a Vandal, *Proceedings of the 2010 ACM conference on Computer Supported Cooperative Work*, Savannah, USA, pp. 117-126.
Glissant, E. (1997). *Traité du Tout Monde*, Gallimard, Paris.
Kaplan, F. (2014). La question de la langue à l'époque de Google. In Stiegler, B. (ed), *Digital Studies : Organologie des savoirs et technologies de la connaissance*, Fyp, Limoges.
Manovich, L. (2001). *The Language of New Media*, MIT Press.
Menkman, R. (2011). *The Glitch Studies Manifesto*, Institute Of Network Cultures.

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[36] This is Frédéric Kaplan's claim in *Digital Humanities* (2014), when he observes that the algorithms of the Google search engine tend to evolve our language by creolizing it.

Mühlhäusler, P. (1997). *Pidgin and Creole Linguistics*, London: Battlebridge.

Navas, E. (2012). *Remix Theory. The Aesthetics of Samping*, Wien : Springer-Verlag.

Nova, N. (2014). 8-*bit Reggae : Collizion and Creolization*, Paris : Editions Volumique.

Reynold, S. (2011). Pop Culture's Addiction to Its Own Past, London : Faber & Faber.

Toninato, P. and Cohen, R.. (2010) *The creolization reader : studies in mixed identities and cultures*, London : Routledge Student Readers (No.5).

Zimmermann, B. (2015). *Waves and Forms: Electronic Music Devices and Computer Encodings in Chin*a, Cambridge : MIT Press.

Zimmermann, B. (2010). Redesigning Culture: Chinese Characters in Alphabet-Encoded Networks, *Design and Culture*, 2(1), pp.27-43.

Zimmermann, B. (2006). De l'impact de la technologie occidentale sur la culture chinoise : les pratiques des musiciens électroniques à Pékin comme terrain d'observation de la relation entre objets techniques et création artistique, Thèse de doctorat : Univ. Genève, 2006 - L. 602.

Zimmermann, B. (2005). Technology is Culture: Two Paradigms, *Leonardo Music Journal* 15, pp. 53-57.