Playful Diversions of the Webspace

Exploring how a webpage can be turned into a game

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Notes on formatting

To provide additional context, the year of creation will be specified after every first mention of a website. Brand websites or personal pages, because the elements for which they are cited were usually added long after they were first put online, will constitute exceptions. Their date of creation, as well as the date of consultation, can be found in the webography.

Some of the mentioned websites don't have a proper name and will be simply referred to by their URL. In these cases, I chose to treat the URL as a title and italicize it, as is often done by Internet artists themselves. Contrarily, since personal pages will be referred to by their creator's name, they won't be italicized.

Defunct websites will be referenced at an earlier, functional stage through the Internet Archive's *Wayback Machine* (2001).

Introduction

Creative diversion is a playful activity at its core. Diverting oneself, as in “diverting one's attention from ordinary life”, is a prevalent motive of play; but diverting something –manipulating a serious object and emphasizing its absurdity– is a more direct attack on seriousness. It transforms a small portion of reality into a liberated playground in which anything can be imagined and realized. Over the past century, from the collages and ready-mades of dadaist anti-art to the endless transformations of Internet memes, creative diversion has become an increasingly popular and widespread practice. It takes many forms, ranging from the most abstract fun to the most political forms of artivism. The concept of détournement, for instance, was conceived by the Situationists as a concrete and forthright form of satire, which largely inspired the anti-capitalist practice of culture jamming. Overall, creative diversion constitutes a field of experimentation, dialogue and confrontation at the crossroad of several boundaries separating reality from fiction, propaganda from resistance, advertising from art and seriousness from play.

Although an exact definition of play seems less and less conceivable or pertinent, this state is usually characterized by a handful of requirements, among which a set of rules and an imaginary situation seem to be the most inevitable. An easy and engaging way to come up with these required rules and situations is to use familiar ones, that is to say real ones. Thus, most games are at least partly mimetic. They allow to explore diversely serious situations without consequences, and with no constraint but the ones we choose to retain or add. But once the liberty of play has allowed for such re-inventions, should the original object remain unchanged? Why not use these creative and subversive resources to alter the actual thing? Play is commonly considered to happen within a separate, virtual reality. This distinction was the first element of Huizinga's definition of play: "a free activity standing quite consciously outside ‘ordinary’ life[1]". However, as they manipulate situations borrowed directly from this ordinary life, playful activities may affect our perception of them, thus altering them in a more or less direct or deliberate way.

The development of virtual spaces such as the Internet has allowed to further explore this interconnection of ordinary and playful realities. Because such spaces share similarities with the “magic circle” of play while also existing as very serious extensions of ordinary life, their exact status, like the status of activities happening within them, is often unclear. This makes them favorable environments for experimental works and borderline cases. Quite easily, within a digital interface, a sudden change can happen in the rules of interaction. A serious space can become playful, or contradictory signals can make an object completely undefined. Today, the large variety of such objects and experiments existing on the Internet offers an unprecedented insight into the unclear boundaries of play. The fundamental question raised by this corpus has several distinct aspects: within an already virtual space, what differentiates play from other experiences; how is it initiated, and where does it take place?

While the first part of this work will explore these questions theoretically and establish an inventory of prior experiments, the next two will constitute a practical test. Its objective will be to create a website which doesn't function the way it should. Looking like a familiar interface, it will divert its original functioning in a variety of ways, surprising its user and initiating a playful activity instead of serving its declared purpose. A corollary goal will be for me to discover web development tools and languages. These technical considerations, as well as the design intentions, will be detailed in part two, while part three will constitute a critical report on various aspects of this exercise.

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1 Johan Huizinga, *Homo Ludens: A Study of the Play-element in Culture*, Routledge & Kegan Paul, London, 1944, p. 13.

I. Antecedents and theoretical ground

1. Utilitarian and playful spaces

A. Identifying boundaries inside the virtual domain

A site is a spatial location, either identified by a built structure or by the occurrence of an event. It is an existing place which can be visited, be it for the purpose it serves or for the contemplation of what makes it remarkable. Websites are similar to other sites in both nature and function. What distinguishes them is the specific space they occupy, which is a virtual one. The distinction between virtual and concrete sites is not to be mixed up with the one that opposes fictional and existing places. While Tolkien's Middle Earth can only be described, imagined or represented, a website such as *Newgrounds.com* (1995) actually exists and can be visited directly. This fragile place is not a vision of something abstract: it is the ever-changing original, whereas the multiple interpretations of the Middle Earth which can be explored in various video game adaptations are not. This distinction isn't always perfectly clear, and the exact status of the *Geocities* (1994) neighborhoods named after earthly places is up for debate.

Numerous artworks hosted by *Newgrounds* depict fictional territories. Alternate versions of *Newgrounds* exist in some of these worlds[2], and such imaginary variations of the original website can be considered fictional. These intertwined degrees of reality are inherent to the web experience, and of course, postmodern self-referentiality thrives in such a versatile and indescribable environment. It is an ideal playground for ludic subversions, artistic détournements and reflexive cultural practices. Similarly to regular sites, websites can be dedicated to utilitarian or playful purposes, but a full specter of different experiences exists between these two imprecise notions. Hence, their opposition has frequently been challenged, as in *There is no Game* (2015), which depicts a sentient UI fighting its ludic nature and trying to pass for a serious object. In the same way environmental art and installations have explored the boundaries of serious and ludic sites in concrete space, software art, net art and video games have consistently investigated interstices between the different functions of digital interfaces.

Alternate reality games, which appeared as a result of the Internet's democratization[3], rely specifically on the ambiguity of these boundaries. A mystery is exposed; it spreads on different, seemingly unrelated medias; its status as a fiction and as a game is deliberately made uncertain. As a result, our entire reality seems to be part of it, and our investigation is perceived just as seriously as if the events it covers were genuine. The impossibility to contain such experiences is further demonstrated by the public's eagerness to create similar ones around a shared fictional environment. The Slenderman universe, for instance, is comprised of numerous alternate reality experiences inspired by the trailblazing *Marble Hornets* (2009). Another borderline case, *Petscop* (2017) is a horrific video series showing a staged Let's Play of an eponymous PS1 disc, which appears to exist exclusively through these Youtube videos. Therefore, this fictional object isn't an actual game. However, the webseries itself is often labeled as an ARG, since its mysteriousness usually causes the viewer to start an investigation about the object's true nature. The Internet brims with such undefined experiences. But although it's hard to tell whether *I TYPE NY* (2018) is an interactive animation, an experimental calligram or a promotional website, its effect, like that of most content designed for the web, is immediate, as it relies on the playful rerouting of something familiar.

2 There's actually an official collection of "*Newgrounds* parodies" on the website.

3 Among its first and most notable examples are the promotional works of Jordan Weisman & Elan Lee, such as *The Beast* (2001) for *A.I. Artificial Intelligence*. Their company 42 Entertainment is known for developing *I Love Bees* (2004) for *Halo*, *Year Zero* (2007) for *Nine Inch Nails*, and *Why so Serious?* (2007) for *The Dark Knight*.

B. On browser games and their different degrees of integration

Even after the discontinuation of Flash, and despite severe performance limitations, web browsers remain a favored platform for games. The main appeal of browser games is how accessible they are: no purchase, download, installation or need for a dedicated device. These experiences can be accessed casually, without any ritual, and there's no hard delimitation between playtime and non-playful browsing. However, most of them are immediately identifiable as games. From the user's point of view, traditional Flash or Shockwave programs usually appeared as self-contained canvases which didn't seem to communicate with the rest of the website. Today, WebGL builds made with an engine such as Unity also look like this, and there's a huge variety of tools allowing to create similar programs[4]. A few of them, such as PuzzleScript (2013), Wick (2016), Bitsy (2017), Flicksy (2018), Script-8 (2019) or Tuesday (2020) even offer browser-based editors.

It's quite natural that these game-making tools produce clearly delimited objects. Nevertheless, there are exceptions: narrative experiences created with Twine, like Zoe Quinn's *Depression Quest* (2013) or Anna Anthropy's *Queers in Love at the End of the World* (2016), can look exactly like any website written in plain HTML and CSS: one navigates through them by clicking hypertext links and accessing new pages. Of course, this seamless integration is easier to achieve when the game is primarily designed using web development tools instead of game-specific ones. This is especially true for hypertext fiction, which has been exploring playful web browsing since Mark America's *Grammatron* (1997) and Darcey Steinke's *blindspot* (1998), but not only. For instance, Withering Systems' *inflorescence.city* (2015) is a webpage functioning as such, but its poetic distancing from the conventional content and use of a webpage suffices to make its experience playful.

In 2004, David Münnich's *Notpron* popularized a web-exclusive genre which could be described as the browser riddle: each page of the website is a puzzle, and its solution leads to the next page's URL address. *Notpron* has attracted over 20 million visitors as of July 2021 and was followed by the likes of *Ouverture Facile* (2005), *God Tower* (2005), *The Python Challenge* (2005) or *This is not Tom* (2009). What made the genre successful is the intrusion of a ludic complexity in what had become a simple and familiar activity: web browsing. Sometimes exploiting advanced features or separate softwares such as sound editors, browser puzzles were also a way to test and improve our mastery of the digital interfaces they diverted.

Although not always as reflexive as these, there's also a wide variety of non-puzzle games developed as webpages. Then again, their appearance is more or less ostensibly ludic. While the fine pixel art and juicy feedbacks of *Cookie Clicker* (2013) strengthens the frantic bakery's seduction, the austere interface of *Universal Paperclips* (2017) participates in its absurd depiction of automated work and productivism. In the HTML5 era, that kind of minimalism isn't dictated by constraint anymore. From *Agar.io*'s massively multiplayer experience to *The Eyezen Challenge*'s 3D eyetracker-controlled rail shooter, browser games have already proven that they could do practically anything. If most of them continue to look technically simple, it's mostly because it makes them accessible and interesting.

C. Games within the serious space

The advantage of browser games over those developed for dedicated platforms is their ability to meddle with non-ludic spaces and exist within them. When offline, Google Chrome famously displays its *Dinosaur Game* (2014), an error screen which can be played. There's also a secret surfing game inside the Edge browser since 2020 and a unicorn pong hidden inside Firefox's settings. In December 2020, ClayLoam managed to make their online RPG *Familiars.io* (2020)

4 For a comprehensive list of such tools, see Everest Pipkin's tinytools.directory.

playable inside a tweet, which attracted much more players than the initial, more conventional version did. This transgression of the social media's austerity was particularly remarkable, in part because of the game's complexity, but in the abundant world of personal pages, smaller games and playful interactions intertwined with serious content were already commonplace. Ornamental examples include the RGB toy which changes the colors of The Happening's website, the interactive version of *Pixels Fighting* (2012) displayed by Ecotone's, and the colored variation on Conway's *Game of Life* featured on Son La Pham's. But some of these have a more direct influence on the browsing experience: Lynne Carty's organizes its thumbnails in an organic, interactive group of cells, bo en's gradually appears as we draw paths for its small pedestrians to walk on, and Ian McLarty's morphs into a gradually disintegrating tunnel as we scroll beyond its informative content.

The main purpose of these playful additions is seemingly to add surprise and immersion to the visitor's navigation. This can be achieved very simply, as in Sam Skinner's website or Moonsick Gang's, by displaying their past itinerary, underlining and encouraging their exploratory effort. But more importantly, the traditional ideal of an effective and seamless user experience can be replaced with a more organic one. This is what Cicada Marionette's accomplishes by combining figurative thumbnails, red herrings, contemplative pages and unusual architecture to bring an imaginary space to life. Even more playful, Melon King's can lead imprudent visitors into an hypertext narrative adventure, Olia Lialina's is a vast space of which only a tiny part is occupied by content, In The City's is a mysterious architecture visited through 2D movement rather than hypertext links, and Nathalie Lawhead's is a chaotic environment presented through a talking playable character. Several art projects explore similar combinations of play and information browsing. Examples include *A Virtual Space* (2017) by Pedro Sanches, a thesis on virtual reality in the form of a 3D walking simulator, or *Permaculture Network* (2019) by Gary Zhexi Zhang & Agnes Cameron, which documents the landscape surrounding the Sakiya academy in Palestine using procedural dialogue and a map comprised of clickable special characters.

D. Playful imitation of non-playful interfaces

Numerous personal websites have opted for a more reflexive way of making their browsing playful: the mimicry of another digital interface. Borrowing the most recognizable features of familiar GUIs such as the desktop environment, webpages take advantage of their clarity (users are already used to them) while also benefiting from an ironic and retro aesthetic. Some interpretations stick to the look of existing operating systems, like Lumiset's website or Simone (syx)'s, while others, such as Mariano Pascual's or Nirrius', have their own visual identity. Sometimes, the illusion is a shortcut towards extreme minimalism, as in the page of the "Witnessing" exhibition (2017), which looks like its server's folders are accessed directly. But this one isn't a personal page and its style is more of an exception, as most examples are rather intimate and expressive. Hillary Churchill's demonstrates it directly by making its creator communicate with us via a self-writing text file while we're visiting the page. A computer environment, although most of its main features are shared by its whole userbase, can be an extremely personal space. We use it as an extension of our memory, as an intermediate between our brain and many of our thoughts or actions, and we organize it in a way which fits and reflects how we function personally. That's why Nathalie Lawhead uses digital interfaces as windows through intimate feelings and emotional states in many of their creations, from *Everything is going to be OK* to *A_DESKTOP_LOVE_STORY* (2018).

This intimacy of virtual spaces has already been explored in many video games, such as Kyle Seeley's *Emily is Away*, Sam Barlow's *Her Story* and *Telling Lies*, Mathilde Park's Arc Symphony (2017) or Accidental Queens' *Lost Phone* series. Although it doesn't directly emulate a digital interface, Cassie McQuater's browser game *Black Room* (2017), which she describes as “a narrative game about an insomniac falling asleep on their computer, on the internet“, is also a remarkable exploration of such themes. Additionally, after *Cart Life* and *Papers, please* paved the

way for narrative simulations using work-related interfaces and tools, less personal interpretations of the desktop environment such as the browser game *Fais pas genre* (2021) have also appeared in games. However, most of them, including the *Orwell* series, *Mainlining* and *Justice.exe*, focus on the surveillance of individual lives, and as such, explore notions of privacy.

E. Play as an exploratory practice

As the possibilities offered by the Internet are gradually discovered, most of them are immediately put to the test through experiments which are usually quite playful, even when they're not directly labeled as games. Some have to do with mass behavior, such as the multiplayer online spiritism board *Ouija 2000* (1998), the crowd-sourced music video *Do not Touch* (2013), the record-breaking *Twitch plays Pokemon* (2014), the visualization of Internet culture *Reddit Place* (2017) and its precursor *Poietic Generator* (1986), or Agnes Cameron & Gary Zhexi Zhang's *The First 10,000 Years* (2020), an online catastrophe insurance marketplace. Others concern our contact with artificial intelligence. Before virtual assistants appeared on many commercial websites, chatbots like *A.L.I.C.E* (1995), *Jabberwacky*[5] (1997) and the guessing game *Akinator* (2007) were available for users to play with. Nowadays, one can even play *Pictionary* with a bot in *Quick, Draw!* (2016) or try to tell if their interlocutor is one in Foreign Objects's *Bot or not?* (2019).

The web is a favorable place for free play and toys relying on casual experimentation. Some of them, like *Cat Bounce* (2012) or *Staggering Beauty* (2012), are just absurd fun. Their main value lies in the amused surprise of finding such a pointless and unconventional use of a web browser's features. As indicators of the Internet's unpredictability and vast randomness, they form a crucial part of its ecosystem. But like the mouse-controlled video *eelslap.com* (2012) or the 3D sandbox Constellation (2017), they can also surprise users by revealing rarely used capacities of our browsers. Finally, such toys can invite visitors to get involved creatively. This possibility made *Line Rider* (2006) immensely popular, and it spurred a profusion of sandbox experiences. The most iconic of these is probably *World of Sand* (2005), of which countless enhanced versions have been produced. Max Bittker's *Sandspiel* (2018) is a remarkable one in that it includes community features for sharing creations, but his *Orb.Farm* (2020), a virtual ecosystem with similar features, is perhaps an even more compelling descendant. Outside the falling sand genre, examples of soothing and playful web experiences are manifold. Alec McEachran's *Automata* (2015) is an extended version of Conway's *Game of Life*, Withering Systems' *flower game* (2018) is both a game and a drawing toy, Jono and Lullatone's *Patatap* (2014) and *Typatone* (2015) are synesthetic kits for toying around with visual music, Ben Moren's *drawing.garden* (2020) is a soothing audiovisual toy, and Harm van der Dopel's *Hybrid Vigor* (2017) is a procedural algae evolution simulation driven by hypertext clicks. Several websites even offer to carelessly create pastiches of renowned visual artists like Pollock (2001) and Mondrian (2021), or a constructivism-inspired fantasy with *Fragments in Space* (2016) or *simplify.thatsh.it* (2014).

More elaborate platforms have famously gathered vast communities and prompted long-term creative activities. The online 3D chat *Worlds* (1995), a precursor to *Second Life*, allows its users to customize their avatar and create their own virtual space. The children-oriented *Neopets* (1999), although it combines many different types of interaction and play, also enables personal spaces, heavy customization, and is known for its extremely creative community. Many kids who ended up learning coding skills to improve their profile page are now full-fledged developers creating tools inspired by the 1.0 web such as the virtual pet editor *Gify Pet* (2016), which generates personalized widgets for websites. This way, the loop seems to close and continue its spin: playful activities develop inside the serious web, callings are heard and practical skills are learned through the hard work put into these by users, and such competences allow for the development of more and more playgrounds inside this ever-expanding environment.

5 This project later became even more popular with the varient *Cleverbot* (2008).

2. Digital subversion : from piracy to game design

A. Hijacked interaction and malicious software

Most of the early attempts at tricking users by secretly changing the effects of a computing interaction were, unsurprisingly, malicious. Because worms and viruses need an unaware authorization to enter networks and computers, they're hidden inside other programs, mails, webpages or shared folders, and activate when these elements are interacted with. Some malwares even disguise themselves as helpful applications, and were thus named Trojan horses. But not all worms and viruses were developed with malevolent intentions. Some, like the pioneering Creeper and the infamous Morris worm were merely innocent experiments, and many more were playful but sometimes disastrous attempts at spreading joy. Some well-known examples are MacMag, which displayed a “universal message of peace” but unintentionally caused damage to infected devices, or the festive greetings Father Christmas and Happy99. Like the latter, which displayed impressive fireworks, numerous viruses, dangerous and inoffensive alike, used to include some sort of visual demonstration in their payload[6]. Selectronic displayed an animation of death walking and a “countdown to extinction” on Friday 13th, Lichen simulated the growth of moss on the screen when detecting inactivity, Vanitas played a superb geometric animation, Ithaqua gradually covered the screen with falling snow and PingPong displayed a fast bouncing dot.

Some viruses directly alter the computer's interface in a more or less playful way: Cookie Monster required the user to type the word “cookie” before any process resumed, Billiard messed with the text and colored it, LoveDOS replaced command prompt responses with flirtatious ones, Leningrad beautifully corrupted the display, Skulls replaced every icon and title of Nokia's Symbian OS with skulls, Marburg spawned error icons everywhere, HPS flipped bitmap files, including those Windows uses as the boot and shutdown screens, and a few scarewares like Dark Drive or the advertisement campaign for *Virus: The Game* simulated the destruction of the computer's files. Evidently, although the development of such programs is often described as a playful activity and as a logical game by their writers[7], they're not always that much fun on the user's side. PlayGame seems to be an exception, since it launched a short game at boot (on December only), and there exists a few borderline examples such as Zach Gage's *Lose/Lose*, which is more dangerous than most of the viruses listed here although it isn't one (since the game attaches a system file to each of its aliens, it may destroy the player's computer each time they defeat an enemy). Nonetheless, computer viruses overall are extremely different from games in their intent and effects. But their potential for causing surprise, their reflexive re-invention of familiar interactions and their ability to make the computer environment feel stranger has understandably inspired game developers and software artists alike, while also contributing to mythologizing our cultural perception of computers.

B. Revolt against the utilitarian interface

When the desktop GUI's grammar started feeling solidified, with its metaphors almost forgotten and its appearance rather constant from OS to OS, innocuously rebellious urges naturally appeared against it. Desktop Games, a software which offered to visually destroy this environment using various weapons, remained popular for years. It now has its web browser counterpart, and similar stress-relieving experiences such as *Smash The Walls* (2020) have appeared across the Internet. In a similar fashion, in 2006, the first of the viral *Animator VS Animation* video series depicted a stick figure fighting its creator inside a computer's interface, using its features in

6 For a visual archive of such demos, see the "Virus Attack!" exhibition curated by *Espacio Byte*.

7 See this interview of GriYo, writer of Marburg and HPS, from 1998.

unexpected ways and destroying it in the process. The visual and logical elements which composed the OS and its major softwares were now familiar and iconic enough for artists to use in détournements or appropriations.

Then again, individual websites were an ideal place to display such reflexive works, and many websites were designed as absurd variations of known interfaces: *The Restart Page* (2011) features a collection of interactable restart messages (which can trigger an accurate reboot animation) from a wide variety of operative systems, Delirum Magazin's homepage (2013) and *blankwindows.com* (2016) flood the screen with windows (an infinite number of blank ones in the latter's case), Max Bittker's page utilizes HTML form elements in a gratuitous way, and Sebastian Ly Serena's uses them to emulate a Rube Goldberg machine whose animation serves as a needlessly slow loading time for displaying his email address. Several browser games, such as Pippin Barr's *It is as if you were making love* (2018) or Nathalie Lawhead's *Mackerelmedia Fish* (2020) also subvert familiar interfaces, diverting their purpose and mode of operation in the first case, and making them absurdly unusable in the second. Finally, multiple works of Mark Napier succeed in deconstructing the web's functioning: *The Digital Landfill* (1998) is an ever-evolving compost of dismissed files, *The Shredder* (1998) offers an "alternative browsing experience" by spectacularly corrupting any visited website, and *Riot* (1999) creates pages by merging the content of those recently browsed by all of its users.

Such alterations allow for a complete derailing of the rules and logic that usually underlie web and software development. This goal is achieved by several websites consisting in variations of existing programs, pages or specific interactions whose purpose has been replaced with an absurd one or completely removed in a "web for its own sake" approach[8]. Cory Arcangel's *Dooogle* (2004) is a search engine which invariably returns results for the keywords "Doogie Howser", *patience-is-a-virtue.org* (2012) is (seemingly) an infinite loading screen and *PaP* (2013) is a very rude, perpetually unsatisfied password-checking bot existing by itself on a website which doesn't require any password. The superior level of this disintegration is a digital equivalent of monochrome paintings or dadaist anti-art: *Sometimes Red, Sometimes Blue* (2007) is a plain colored page, *ismycomputeron.com* (2008) simply displays a comforting "YES" with no formatting, *cant-not-tweet-this.com* (2014) is merely a persuasive "share" button existing for its own sake, and *anideafora.website* (2019) presents the procedurally generated description of a website.

Although some of these objects were merely designed as playful and potentially viral humor by developers who don't always identify as artists, they all qualify as pieces of net art. The term, while it can encompass every work of art created and shared in a digital context, also describes a specific approach exemplified by the likes of Annette Weintraub, Suzanne Treister, VNS Matrix or Eva & Franco Mattes. Its main feature is the détournement or distortion of web-related objects, usually giving playful, absurdist and chaotic results. More often than not, though, it is also thoroughly engineered and strongly political, as were the hacktivism and strategic media of groups such as ®™ark or net.art, which deliberately attempted to disrupt and distort the browsing experience. Another similar group, etoy, is notably known for conducting the *digital hijack* (1996) which held over 600 000 users hostages on its webpage.

In an effort to make the Internet a free, surprising and expressive space, several independent web galleries have been imagined, from the well-established *Rhizome* (2001) to the awaited *Archetype.cc*. Most of them involve specific attempts at exploring new forms of exhibition, curation and creation, not only in opposition to traditional galleries, but also against the dominant principles of the mercantile and utilitarian web. Tools have also been created specifically for browser art, including the Processing equivalent p5.js (2014). As Internet art can take many forms, it is hard to define and impossible to contain. Like environmental art, it can blend in any space, reflecting it and

8 This trend is significant enough to have its own informal curating platform: *The Useless Web* (2012).

transforming it. And although it can completely subvert a browsing experience, it isn't invariably distinguishable from other websites. Even the distinction between artworks hosted on a page and pages constituting artworks isn't always relevant, as demonstrated by *cachemonet.com* (2013), a gallery generating and displaying one piece of procedural art at a time.

C. Reflexiveness and mythologization: from glitch art to the retro web

While the distortion of digital environments is a political statement when manipulated by net.art members, it has also been embraced as a deliciously decadent and mostly apolitical aesthetic by several post-internet-inspired subcultures. When vaporwave matches retro digital iconography with ancient Greek statues, it concomitantly celebrates its status as a myth and its anticipated decay. This decomposition is mostly suggested through intentional glitches, which became a recurrent visual topos during the early 21st century. In video games, this form of self-referentiality usually involves a fictional interface: the *Simulacra* series uses abandoned devices similarly to *A Normal Lost Phone, Quirkaglitch* takes place inside an abandoned game project, *There is No Game: Wrong Dimension* makes its own interface an antagonist, *Memory of a Broken Dimension* presents an "emulator of obscure research hardware", *Broken Reality* and *Hypnospace Outlaw* are both alternative, parodic versions of the web, and the latter is perceived by its playable character through a VR set. Imagining fictional systems is a way of reflecting upon the ones we actually use. By systematically making them dysfunctional, we make them feel less predictable, as if they had a will of their own which contradicted the rational instructions they receive. This perception of computers as otherness isn't recent, and artists have manipulated digitized information to create glitch art long before the Internet or the vaporwave microgenre appeared. The pioneering analog works of Nam June Paik or Jamie Fenton in the seventies predated the data visualization of Ant Scott, compression artifacts of Rosa Menkman, rom corruption of Sabato Visconti, video editing of Mathieu Saint-Pierre and online tools of Ted Davis. For decades now, all sorts of distortions applied accidentally by computers have been observed, reproduced and cultivated. Glitch art is a way of containing this virtual alterity, sustaining this feeling of otherness while also domesticating it. On a more political level, when a computer outputs a flawed result, it seems to escape work, logic and norm. Deliberately asking it for these flawed results is an attempt at escaping these constraints as well.

Contrarily, embracing constraints which aren't needed anymore is also a recurring aspect of reflexive digital works of art. While glitch art is trying to capture a certain essence of the digital experience by re-creating what feels like an autonomous expression of the system, other approaches focus on early digital design, of which every aspect was conditioned by technical constraints. Websites such as the *Geocities* compendium *Cameron's World* (2015) or the simulated desktop and parodic software collection *Windows 93* (2016) use ancient assets, technologies or aesthetics in a playful and humorous way, combining an accurate visual recreation with a contemporary, reflexive architecture. Nathalie Lawhead's *Tetrageddon Games* (2016[9]), a reflection upon the web experience, is perhaps the most complex, chaotic and ludic of such creations, capable as it is to escape both its website and the browser itself. These objects participate in reinforcing the cultural impact of the experiences they evoke. But a less critical mythologization is also at work on the web: some famous retro websites like *Spacejam*'s official page (1996) are being preserved as museum pieces, and they are now imitated again, including for commercial purposes as in *Captain Marvel*'s official page (2019). This last example, although it's subversive in regard of contemporary webdesign, is quite conventional in its retro imitation. More innovative and independent approaches to design inspired by the 1.0 web exist, such as the ones comprising Emilie M. Reed's *LOW TECH WEBRING*, which focuses on alternative tools and ecological impact. While pure nostalgia may endanger virtual environments by idealizing and sacralizing fixated forms, reflexive and subversive approaches exemplified by net art, glitch art or hacktivism allow for a more conscious use of their possibilities. Economic interests have been continuously reshaping the web since it started building

9 Browser-based version created in 2021.

up, and a critical form of development is what allowed for some webspaces to follow a variety of different and more sustainable directions in spite of this powerful current.

D. Rerouting the rules of interaction

An interactive program is usually designed around a consistent functioning which is clearly spelled out or demonstrated when the user first discovers it. If such programs involve fiction, this onboarding process may also introduce their fictional environment and the lens through which its is perceived, as these elements are closely related. That's why any infringement to the initial narrative contract might also disrupt the rules of interaction. In *Moon: Remix RPG Adventure*, we are playing an RPG through the eyes of a child sitting before his Playstation. When his mother sends him to sleep, we enter his dream, which is an adventure game taking place in a distorted version of the RPG's environment. In *The Beginner's Guide*, an unreliable narrator guides us through several games and prototypes which are more and more experimental in their design, and thus regularly surprise us. In *Depict1* (2010), an even less trustworthy guide consistently deceives us, giving false indications about the game's functioning, which happens to subvert the usual principles of the platformer genre. Finally, in *ROM CHECK FAIL (2008)*, we're using a fictional ROM which appears to be corrupted. This causes the game's environment and rules to change continuously, blending together elements from different classics of early gaming history. All these examples are extremely self-referential games which reflect on various aspects of their reception: how playing habits shape our perception of space, which efforts are required for our imagination to picture a fictional environment, etc. A twisted rule always constitutes a commentary on the system it subverts. It also bears an experimental value, as it explores another way of interaction and questions how this new system relates to the original.

Most rules aren't introduced by the program itself: they preexist it and constitute a shared set of design instructions for all applications within a genre or platform. This is especially true for websites, which rarely include instructions and usually rely on very basic computing principles. The functioning of the cursor, for instance, rarely varies: there's one cursor on the computer screen. It indicates a position on this 2D space and we can move it around to interact with elements which usually stay in place so that we can meet them. Yet, in Ben West's website, the cursor is static and our mouse controls the movements of the page around it; in David Lieberman's, nothing stays in place because the whole page collapses; in *Mouse Pointer* (2013), there's a second cursor following ours in a playful manner, and in Jodi's *MouseAttack* (2014), our cursor's shape continuously changes while a bunch of inanimate ones is thrown in its direction. Such shifts in the rules of computer interaction are so unusual they immediately elicit surprise, amusement, and can initiate an unexpectedly playful experience.

E. Absurdity as a tool for game design

Unusual rules, by arousing our desire to put them to the test, easily encourage playful behaviors. When *Pointer Pointer* (2012) displays a picture of someone pointing at our cursor, this is an invitation to try different positions and see how the website handles them until our interest wears out. Such rules can become more or less ludic depending on how they're introduced. Websites with an infinite scroll, for instance, can be be an expressive piece of conceptual art like *One Long Scream* (2018), an interactive joke like *endless.horse* (2016), a virtual tidbit like Scroll-o-Meter (2015) or an idle game like *Long Doge Challenge* (2021). The playful premise of these different experiences is the same: the subversion of a familiar interaction. Scrolling is usually a way to get from one point to another, but we're now scrolling into the void. This mechanical change isn't even needed to make an interaction playful. Olia Lialina's *GRAVITY* (2003) features a classic scroll, but diverts its use in a metaphorical way: instead of taking us down the page, it makes a space rocket go up. Most of Rafaël Rozendaal's websites, such as *papertoilet.com* (2006),

coldvoid.com (2008) or *leduchamp.com* (2008), fall into this category. Finally, removing an action's purpose while introducing the perspective of its completion can transform it into a soothing play, as in *The Zen Zone* (2018) which notably allows to activate pointless digital switches, *buildshruggie.com* (2017) which makes us put together a letter-based emoji as in a development toy for toddlers, or *Lacquer Lacquer* (2012), which lets us paint our fingernails over and over again without the usual constraint of waiting for the polish to dry.

While these websites rely on our attraction to easy, satisfying activities, an opposite branch of playful webdesign introduces frustration and difficulty into traditional browsing to make it more stimulating. These deconstructed pages present varying degrees of chaos and interactivity. In Tristan Chambers' website, one has to find the actual written content within a piecemeal wall of random characters. Hand.Gallery's homepage (2018), which is comprised of perpetually and frenetically displaced or resized elements, is even more challenging. Absurd humorous websites like *The Hardest Online Shop* (2017) and *User Inyerface* (2018) were design to parody and collect bad design choices or practices. Finally, websites featuring an apparently incoherent architecture and cryptic content can be perceived as track games or ARGs, whether they were actually designed as such or not. The best-known examples of this case are Jodi's website (1995) and Ben Benjamin's *Superbad* (1997). Both regarded as trailblazers of Internet art, they were followed by similarly chaotic works such as Eva & Franco Mattes' random HMTL collage *Hybrids* (1998).

Finally, the most unexpected and seemingly absurd form of playful deflection within web browsers may be un-gamified games. Similarly to the malware payloads which played in front of a helpless user, some webpages feature games playing themselves. Examples include the checkers of *movenowthinklater.com* (2012) or the Hanoi towers of *Modicum* (2020). But games aren't the only interactive practices affected by this automation: Lucas Medina's *Wiki* (2017) browses *Wikipedia* (2001) by itself, following the first link of each page, and Ezekiel Aquino's *Undulations in C* (2020) plays generative piano sheets. This last example reveals how such programs may not be absurd at all, instead constituting either aesthetic, informative or humorous performances. Other un-gamifications, such as the inactive video game levels of *noclip.website* (2019), offer new possibilities for exploration. This specific website replaces the primary gameplay of well-known games by a free three-dimensional navigation. The resulting object can still be regarded as a game in some way, but it is mostly a tool, as well as a curated collection of level art, an encyclopedic resource and a curiosity. As usual in web development, what looks like an absurd premise is merely the necessary subversion which allows for a very coherent but unusual object to appear.

From games to creative resources, personal pages to riddles and ARGs to net art pieces, the web doesn't seem to set any hard boundary. Its culture of systematic exploration, subversion and transformation results in a remarkable interpenetration of these domains. Completely undefined objects keep appearing, and their nature doesn't have to be questioned before they're adopted. Web users, although they haven't lost their ability to feel surprise or perplexity, are used to these frequent changes in the rules. In fact, change has always been the major rule. The web environment is globally perceived as a very flexible and versatile one, to the point that writing about web experiments or games seems like a Sisyphean task: these are all around it, taking an ever-expanding number of forms. The Internet is experimental and playful at its core, or as Nathalie Lawhead put it, “the browser is a creative playground[10]”. What the variety of successful and stimulating experiences already developed seems to indicate is that web design should never be thought of as a set of best practices, standards and rules, but instead as an open and self-expanding collection of experimental tools. Coincidentally, game design applied to the web environment shouldn't be envisioned separately from web design. There's no need to delineate a narrow and artificially isolated area for a game to take place in. The whole playground is open, offering an abundance of possibilities.

10 Nathalie Lawhead, 'Talk transcript: The web is a creative playground', *http://www.nathalielawhead.com*, 2021, http://www.nathalielawhead.com/candybox/talk-transcript-the-browser-is-a-creative-playground (16/08/21).

II. Experimental project

1. Technical possibilities and chosen tools

A. Definitions

A website is a collection of webpages identified by a domain name and published on a web server. Webpages are hypertext documents, which means they can reference each other using their specific URLs (uniform resource locators). A web browser (or client) allows a user's device to communicate with the web server, requesting access to the pages and displaying them. They are typically written in HTML (hypertext markup language), a grammar which allows to annotate information so that the browser can present it in the desired way. These instructions can be assisted by CSS (cascading style sheets) which specify the presentation rules to apply. The structure of HTML pages is a logical tree called the DOM (document object model).

For a more lively experience, the DOM can be edited dynamically using JavaScript, a cross-platform scripting language currently used by 97.5% of all websites[11]. Directly executed by the user's browser, JavaScript facilitates client-side interactivity. It also has server-side uses, notably through the Node.js runtime environment, but I won't explore them in this assignment. JavaScript communicates with programs such as the browser through a set of APIs (application programming interfaces) which can fulfill different purposes. Finally, there is a variety of different frameworks to develop JavaScript applications with. Frameworks have an influence on the overall structure and behavior of the resulting application. They're usually targeted at a specific use or platform. They also contain their own sets of APIs and libraries. Libraries, which are organized packages of pre-written code intended for specific tasks, can also be found separately.

B. Interaction with HTML & CSS

The possibilities offered by markup languages without script are not to be understated. In the low-tech sphere and communities such as the *1MB club* (2020), JavaScript is actually quite unpopular, and many developers avoid it as much as possible. The main reasons are its usual toll on accessibility, performance, and on the page's download size, which makes most of the web inaccessible in many areas and greatly increases its environmental impact. JavaScript is often used unnecessarily, which is rightfully regarded as bad practice. Finally, its numerous and heavy dependencies often require more dependencies themselves, which involves a growing number of weaknesses in the final code. Articles detailing these points and offering alternative tools or guidelines for responsible JavaScript use include Ben Hoyt's "The small web is beautiful" (2021), Russ Cox's "Our software dependency problem" (2019), Dan Luu's "The modern web on a slow connection" (2017) and Aaron Gustafson's "Understanding progressive enhancement" (2008).

So, what are the possibilities offered by plain HTML and CSS for game designers? The most obvious and powerful one might be the hypertext link. It is sufficient to build several forms of interactive fiction and text-based adventure, as well as very interesting puzzles, including alternate reality games. The <form> elements for user input, from text boxes to buttons, radio buttons, ranges, checkboxes and dropdown lists also offer a vast array of possible interactions. Combined with the <math> element, these could be used to build extremely rudimentary management games or abstract RPGs. CSS selectors such as :visited or :hover allow to detect present or past contact of the mouse with an object, while :in-range can be used to check distances and define areas. Finally,

11 W3 Techs, 'Usage statistics of JavaScript as client-side programming language on websites', *w3techs.com*, 2009-2021, https://w3techs.com/technologies/details/cp-javascript/ (16/08/21).

many interactive UI elements can be built without script, as demonstrated by ekrof, and the graphic possibilities offered by simple stylesheets is extremely wide, as demonstrated by Lynn Disher's *A Single Div* (2014). But there are limitations, and while they can be negligible in many cases, they're quite critical when it comes to games. In particular, there can be little to no real-time treatment of any information with plain HTML/CSS, which makes immediate interaction extremely limited.

C. Interaction with client-side JavaScript

Client-side script allows for smoother interactions: it's not necessary to go back to the server and reload/change the page in order to respond to an input anymore. It's even possible to manipulate the DOM, making elements appear, disappear or change dynamically, still without pulling any server request. Event handlers allow to track a wider variety of user actions, and they can also detect automatic changes within the browser. JavaScript and JSON (JavaScript object notation) are also extremely useful when it comes to saving information like the current status of a game. The language's potential is most easily harnessed through libraries, which make advanced functions available in an ordered, convenient and accessible way. They usually explore a specific feature: Three.js specializes in 3D effects, Hammer.js in touchscreen input, Vivus.js in SVG drawing, Blotter.js in text animation, Tone.js in interactive music, RxJS in the use of observables, Anime.js in smooth transitions, Lettercrap in ASCII art, and Parallax.js is self-explanatory. Yet, some broader, more generic libraries such as Underscore.js or jQuery are also very popular. Finally, for large websites with extensive data handling, frameworks like Angular, Vue or React become unavoidable.

There's little limit to what can now be achieved on a web browser. Not only can we visit the whole world within a single page, but we can also listen to the local radios of each place while doing so on *Radio Garden* (2020). The spectrum of available effects which can be combined with user input is extremely large. Using various localized data, Relative Fiction (2016) adapts dynamic narrative experiences to the user's situation. Using the scroll input, Nick Jones' website associates zoom and rotation, Julia Volkmar's applies a 3D effect to its text and *The Boat* (2015) applies various animations to an interactive comic. Using the mouse's position, *Indirect Flights* (2015) is a collage animated by parallax, *FEEDBACK_X* (2014) is a sandbox tool for video feedback effects, ertdfgcvb's applies spectacular ASCII effects to its text on hover, *remoji.com* (2013) displays an unusual cursor trail, Xárene Eskandar's applies a moving crystal-shaped distortion, TIGHT's homepage (2020) morphs and dissolves its images into one another and the Google Fonts + Korean showcase (2018) offers a variety of astounding effects. And although they aren't interactive, the infinite zoom of the classic *Zoomquilt* (2014), the animated patterns of Nicolas Sassoon's and the merging texts of *Schemas of Uncertainty* (2021) offer more glimpses of workable possibilities. This overflowing abundance leaves designers and developers with only one painful problem to resolve: what does our current project actually need?

2. Project outline

A. Chosen tools

As previously mentioned, I won't be using any engine or game development tool. The website will be written directly in HTML, CSS and JavaScript. As lightweight as I'd like the result to be, scripting seems unavoidable for what I hope to do. However, as I intend to develop a small website, I chose not to use a framework, and I will even exclude jQuery. I think it would have unnecessarily weighed pages down. Additionally, learning how to use a specific framework takes time, and this development probably won't last long enough for the tool's convenience to compensate these days spent practicing. I won't exactly be using vanilla JavaScript though, since a few libraries have caught my eye. First, I will be using Nathalie Lawhead's

AnimatedWebCursors.js. Its retro feeling will match that of Jordan Scale's css library 98.css and its extension XP.css. For parallax effects, after some hesitation, I opted for Tobias Reich's BasicScroll because of its lightness, wide compatibility and recent updates. Finally, I will develop directly on JSFiddle for as long as possible, and when the time comes I will use FileZilla to upload the files on my Hostinger server.

B. Intentions

Before I start imagining the final object I would like to create for this assignment, I have to keep in mind the two purposes its development process in itself must fulfill. Design-wise, it should allow me to explore some of the principles, methods and aesthetics described in part one, but on a technical level it should also serve as a way to experiment with as many JavaScript functionalities and tools as possible. Luckily, these goals seem compatible, as they both involve a diverse range of different things combined into a coherent whole. This idea of an eclectic collage also happens to match the postmodern aesthetic which characterizes most of my models.

The resulting website, as I picture it, should look as serious and functional as possible at first sight and gradually deviate from its announced purpose as we use it. This change in purpose should accompany a change in functionality (things go wrong or take an unexpected course) and in the means of interaction. The resulting experience should be playful without being immediately identifiable as a game. To make it look more serious and reinforce the immediate surprise while also drawing attention to the website's reflexive nature, I plan to imitate a familiar interface, both visually and mechanically. This will presumably make the unfamiliar behaviors feel even stranger. To keep the user interested and make these malfunctions feel playful instead of accidental and frustrating, I will probably write the pages' text as if they were pronounced by a sentient UI taking responsibility for what happens. These could feel like regular greetings at first (softwares often address us colloquially, in the second person), but as the text would adjust to the unexpected events, it would feel more and more lively, characterized and possibly uncanny.

C. Design plan

As I have chosen to follow an iterative process, there's no specific architecture at this point. But I tried to delineate a series of guidelines to keep the project oriented throughout this development and set a global direction to follow when I'll be testing features. These are as follows:

- The website will present itself as a personality test
- Its functioning will be altered in a variety of ways, effectively disrupting its original purpose
- Its interface will be modeled after Windows 98's and it will only use classic UI elements
- Its environment will feel sentient and there will be a form of dialogue taking place
- It will not use any engine, framework, the jQuery library or the JavaScript canvas feature
- Is will be fully compatible with all major desktop browsers (no smartphone version planned)

As for the website's structure, I intend to design as I learn and learn as I design: following a few basic JavaScript tutorials and parsing documentation should provide me with a few ideas and enough technical knowledge to imagine more. Trying to develop and combine these ideas should force me to reach a deeper familiarity with the language. In the process, I will iterate on the website's design, observe which combinations give results and which don't, and a general structure should gradually emerge.

III. Final account

1. Result

The resulting website, “Which Office Assistant Are You?”, consists in a series of small tests and surprises ultimately leading to the expected result (which isn't expected anymore at this point). Although the homepage announces a personality quiz, only the first steps fit this description. The whole website is contained within a single page, with windows appearing and disappearing at each step. Its architecture is linear:

- Its homepage presents the personality quiz and offers a text space for the user to enter their name, which will be used in several dialogs throughout the experience.
- The actual personality quiz begins. These two pages feature five overly specific questions with four answers each. Their absurdity hints at what is coming.
- As an anti-bot measure, the user must answer a question by choosing between 24 identical responses. A hint allows them to notice that the page became scrollable. Scrolling makes the window rotate surprisingly, but it also reveals the correct answer by inflating it slowly.
- Office Assistants are trying to infiltrate the page. The user must find and count them. The first three fade in gradually as the page is scrolled down. There is one hidden at the very bottom, and an horizontal scroll reveals four more behind him.
- When hovered over, the next window abruptly expands towards the right, making the “Next” button unreachable. The user can either click fast or move the window to the left.
- A range button controls the display of 16 gratuitous radio buttons offered to the user as a way to release pressure. Each step of the range also changes the current answer to the displayed question “How much fun am I having?”. Clicking every available button grants the user an encouraging message and an animated GIF.
- The next step isn't “ready” when the user accesses it. Three windows containing absurd GIFs are scattered around the page and the “Next” button, replaced with gibberish, doesn't work. A new icon appeared on the window's title bar. It sets the window on movement and the radio buttons on it allow to control its direction. When the window leaves, another one appears behind it with a functional “Next” button.
- A set of 24 radio buttons appears, similar to the identical answers of step 3. This time, all the answers are different, and the user must remember what the correct name was.
- An error message indicates that a specific program is missing. An “Update to XP” button changes the page's appearance and makes the “Next” button available.
- The user is asked to describe the “secret treasure”. From the beginning, the “Help” button of each window's title bar allowed to display an animated GIF labeled as such.
- A talking window with animated eyes and mouth congratulates the user, reassuring them about their personality and explaining why they don't need the validation of an online quiz.
- A result is displayed anyway. It is chosen randomly between 12 available Office Assistants.

An “about” window is accessible at any time. The animated GIFs, whether they're labeled as treasures, rewards or garbage, can be upheld throughout the navigation. Every window can be moved around as in regular operating systems, at the exception of the 8th, which is manipulated differently. The page also features an animated gradient background and several different animated cursors depending on what the mouse overflies. Including libraries, images and animated cursors, the total content of the website weights half a megabyte.

List of developed features

- Animations:
  - Moving elements around
  - Scaling elements
  - Animating the content of a text area
- Scroll-related:
  - Rotating elements
  - Scaling elements
  - Fading elements in/out
  - Moving elements around
  - Switching from vertical to horizontal scroll
- Mouse position-related:
  - Moving elements around
  - Scaling elements
  - Displaying different animated cursors
- Forms & Text:
  - Checking the value or status of an input field
  - Including user input in texts
  - Displaying a different message each time a text element is shown
  - Controlling the display of an array of elements using a range input
- Style:
  - Switching from one style sheet to another
  - Displaying an animated gradient

2. Execution and chronology

On July 27th, I start to delve into the syntax and possibilities of client-side JavaScript. After a few days dedicated to basic reads and tutorials, I permanently switch to my personal project on July 30st. I create it using JSFIddle and start by learning how to install the libraries I want to use. Then, I implement one by one the features I'm interested in. I usually copy pieces of code, modify them to understand how they work, adapt them to my needs, and finally combine them into a single webpage which becomes a sample for the final project. Once the elements are assembled, I try to harmonize and simplify them as much as I can. On August 1st, once this sample page has allowed me to develop every needed feature, I save each of their individual functions and variables, clear the whole code and start building the actual structure from a blank page. I still don't know exactly how many steps it will contain. I continue incrementally, trying to reach a “final” version of each step before adding the next one. Most of the design decisions are taken during this stage, because I now have a sufficient knowledge of the available technical possibilities, a first-hand experience of my different features, and an increasingly precise vision of the overall structure. On August 4th, the talking window part is developed, making the website complete for the first time. However, I will keep on working until August 8th, adding features, correcting bugs, cleaning the code and adjusting the UI or gamefeel. The whole “Office Assistant” theme also appeared during this period, giving the website its uniting coherence. Minor changes will be applied from time to time as friends test the website and come across bugs, struggles or errors.

3. Technical observations

The main hardship I faced during this development was the window manipulation. At first, only the “secret treasure” GIF could be moved around like a regular operating system window.

Applying this feature to a single and simple object wasn't a challenging task, but when I chose to make every GIF movable, I had to find a way to store the current position of each one and retrieve it when this specific object is manipulated. As a person who learned game development comfortably using Unity's Gameobjects, I struggled to figure out how variables could be associated with a DOM element. Things got even worse when I decided to extend the feature and make even the complex windows movable. First, making a child element (the title bar) control a parent element (the window) raised problems. But applying a listener to this specific element without making the other components of the window draggable too was an other issue. At one point, anything from text to buttons could be grabbed and moved around individually, which was quite fun but would have quickly made the page unusable.

I also faced some issues when I applied the same scroll-related effects to multiple elements using different parameters. Having to store these elements in an array and partially automate their creation helped me learn more about JavaScript's logic and syntax. But surprisingly, scripting wasn't always the most confusing part of this development process. I often had a hard time figuring out the exact functioning of CSS properties. There are different ways of influencing an element's appearance, which can cause conflicts. Depending on the element's or its parents' other parameters, some of these instructions may not operate. Finally, how and when a property overrides another is not always clear. Being able to play around with JSFiddle and get immediate results has been a tremendous help in understanding how things work, not only with HS, but also with HTML & CSS.

4. Design observations

The design plan for this website was deliberately imprecise and left room for experimentation, and many changes in its logic and structure happened throughout its development. In particular, its original pretext evolved to become a little less absurd. The personality test was originally named “Which GUI window are you” and played on the humanization of the actual windows on which it was taking place. The talking window of the ending is a remainder of this stage. At some point, I felt that this absurdity was too gratuitous. It didn't look like a test someone could actually want to take. That's why I pivoted towards Office Assistants, which still felt robotic enough but were much more anthropomorphic and characterized, in addition to having exactly the retro/ironic aura I was interested in. I felt this change would make the first minutes on the website much more compelling, and the illusion of a serious purpose more credible.

This point has been a serious preoccupation throughout the development: I wanted the experience to be lightheartedly absurd and relatively inconsequential, but at the same time it had to maintain the user's interest with sufficient stakes and coherence. This is something I don't think I've completely managed to achieve for now. The website currently lacks both coherence and fun in my opinion, but it improved gradually. Hopefully, so did I. In following projects, I may go further into gamification and go after an actual gamefeel instead of the conceptual interactions I developed here. Finally, I observed through this experiment how hard it is to design or write indications which can lead the user towards something unexpected without defusing the surprise. This was an interesting aspect of this exercise, as it consisted in transforming a functional UI into a puzzle. I didn't run proper playtests, but the few experiences I witnessed have taught me a lot about how people react to this kind of content. Concerning the reactions to this website in particular, getting users to use the scrolling although it wasn't active when they first discovered the page was especially hard, but the rest of the interactions were usually understood quite fast, and elicited the amused surprise I was hoping for. Although there's always room for improvement in design, a development process has to end at some point, and time is running out. I must accept the current state of this website, which seems to meet the requirements I had set. There are many more aspects of web development I'd like to explore in details, such as accessibility, mobile compatibility or SEO, and these will be my next points of interest when this specific work is done.

Conclusion

Within a virtual space, what differentiates play from other experiences? Of course, its degree of autonomy varies, ranging from self-contained games to completely integrated toys. But even in this reduced form, it always constitutes an interruption, be it discreet and brief, of smooth navigation. Browsing, like any other activity, is no longer optimized when performed in a playful way, because its purpose is momentarily replaced by a more gratuitous, intrinsic, short-term one. How is such an interruption initiated? Twisting the rules of interaction isn't sufficient; they should be twisted in a way that leads us to forget the environment's original use. Once this primary objective is relinquished, if some tension, surprise or mystery maintains our interest, we can engage playfully with the new rules. This way, we follow the deflection of the original object. It was diverted; now we are too. Additionally, our attitude towards it has changed: we rightfully perceived this virtual environment as real; it now hosts a small area of ludic make-believe within which what happens belongs to imagination and fiction. But this shift isn't permanent. It can happen in a fleeting way, fast and unnoticed, and it may be reversed repeatedly, taking us in and out the “magic circle” of play. That's why small games or playful interactions can coexist with serious content on a same page or even serve as substitutes for elements constituting an otherwise serious navigation, as in many personal pages. This answers the third part of our question: where does play take place? Technically, it can be initiated anywhere, and in terms of meaning and coherence, its forms and effects are varied enough not to alter this answer significantly.

Play always exists within a non-playful environment and must relate to it in some way. This rapport, the condition for play to stem from seriousness and communicate with it, is creative diversion. The less self-contained a game is, the more engaged it is in this communication. If it isn't surrounded by an explicit fictional setting, it momentarily makes its environment fictional, borrowing its components and re-imagining them. This is what makes mimicry, détournement, parody and mythologization so common in integrated play. Its environment isn't a standalone fantasy but an exploration of reality. Although it can be more or less critical towards this reality, it systematically subverts its seriousness and part of its logic. Absurd, rebellious, radical, the result always bears a signification. It constitutes a commentary on the diverted reality. As a highly versatile, ever-changing environment, the Internet brims with such critical and reflexive experiments since its early days. They likely played a defining role in maintaining its diversity, radicality and movement in spite of active corporate efforts to centralize and standardize it.

Developing “Which Office Assistant Are You?” seemed like a natural continuity of such reflections. The history of these web experiments exemplifies a remarkable interchangeability of users and developers, creation and experience, critic and practice. Discourse either takes a creative form or leads to it. Users engaging in playful activities sooner or later become creators. On the Internet, just as there's no delimitation between playful and serious content, nothing separates the public from the makers. Reversely, the creation of a reflexive work seemed to call for a thorough survey of what was available to reflect upon. And as the theoretical step identified the effects playful diversion could produce, the practical one revealed the challenges it poses. When designing interactive experiences, conciliating surprise and coherence requires specific attention. A form of intuitiveness is needed for a content to be accessible, but what if this content must be unexpected? This is where the exact precision of satire and détournement is needed: what is known should help revealing what is not. To make this active discovery possible, it is essential to encourage a subversive and exploratory user behavior. In other words, the designer should make the experience accessible without restricting it, because creative perception and input are essential traits of a playful activity. Designing iteratively, during development, can be an appropriate process in this regard, as it helps renouncing total control, accepting the organic structure and evolution of an environment, envisioning it as a living playground rather than a finite, self-contained object.

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