

Code, Nintendo's *Super Mario* and Digital Legality

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Abstract

The rise of technology in controlling and performing legal processes has created a new digital legality, signalling a transformation of law from an analog paper-based interpretative activity to an autonomous system governed by the rigidity and speed of code. This emerging digital legality converts life and living to data to be processed and catalogued. This process is exemplified and normalised within video games making them import cultural artefacts through which to identify the features and anxieties of digital legality. While video games have so far gone unrepresented in cultural legal theory, this article uses the iconic video game franchise of Super Mario to unlock the emerging features and anxieties of digital legality as involving rigidity, speed and the normalisation of self as data.

Keywords:

Analog and Digital Legality; Cultural Legal Studies; Video Games; Super Mario Bros

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1 Introduction

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The demise of the world of paper and the rise of digital technologies signals a new era for law. Transformation of the media through which information is communicated and conceptualised transforms law from an analog activity into a digital one. This new legality brings new challenges and anxieties for law. The challenges of the digital revolve squarely around the possibilities that it offers over the analog: the rigidity of code, speed, and the normalisation of the self as data.

The attraction of using video games to observe and analyse these emerging anxieties for law is that law's shift from paper to screen is emulated by the experience of games. The confinement and opacity of code, the speed of communication, and the ease with which gamers slip into their avatars suggests the anxieties for law of the transformation from analog to digital: rigidity, speed of decision and self as data. While largely ignored by the field of cultural legal studies, video games - as highly visible and popular cultural artefacts - provide a valuable format for articulating and examining digital legality.

This article is in three sections. The first section addresses video games and cultural legal studies. It notes how the texts examined by cultural legal studies have expanded to include the popular televisual media of film and television. While video games have become a significant popular cultural force, cultural legal studies has yet to cross into this digital divide. The second section introduces the 'text' for this article; Nintendo's *Super Mario* franchise. The third section sketches the emerging features of digital legality through *Super Mario*. It shows the strangeness of digital legality to the traditional analog experience of law, the rigidity of code, speed, and the normalisation of the self as data.

2 Cultural Legal Studies and Video Games

The relationship between law and video games is an odd one. While the *Phoenix Wright: Ace Attorney* franchise [67], the Citadel Council in the *Mass Effect* series, [52-54] or the brutality of the Los Santos Police Department in *Grand Theft Auto V* [26], provide some overt experiences of legality, representations of law within video games is fairly limited. Computer gaming has become a significant industry generating more revenue in Western markets than cinema and music combined [10]. This financial success suggests that video games are significant cultural artefacts that hold meaning for many. However, the relationship between video games and law has yet to be explored.

Early interactions between the fields of culture and law revolved around representations of justice and law within works of literature [105]. However, the focus on print soon expanded to include wider formats of fiction [20, 9]. This expansion of texts to be analysed allowed for the birth of cultural legal studies, a field more accepting of the place of popular culture within law [43, 83]. The rising popularity of television and cinema as meaningful cultural artefacts made the progression from print to screen a logical ‘next step’ [78]. In the initial forays into cinematic media the concern was with the explicit representations of law and lawyering: representations of lawyers as bad professionals (and bad people), the impact that these images may have on public opinion [2], and the equal danger of portrayal of a lawyer’s technical proficiency as being akin to a superpower [27]. But over time, debate and discussion of law in the context of popular culture has shifted away from explicit portrayals of the legal profession, instead looking towards how popular culture reflects wider issues of legality [77]. This has led to a more involved analysis of the place of law in popular culture broadly conceived. Poetry has been used to process how women are transmitted in rape trials [110]. *Pride and Prejudice* has been read as a construction of property rights and entailment [46]. These readings of a deeper legality within texts allow popular culture to intersect more fully with legal spheres. A manifestation of this symbiosis is achieved by reading texts jurisprudentially, which teases out underlying subtextual suggestions of legality from texts that are not outwardly legalistic. In this way, William MacNeil uncovered the Law of Desire in *Buffy the Vampire Slayer* [45: 28-43, 44]. As a form of ‘pop law’, the ‘rethinking of the culture of law and the law of culture’ allows for a new accessibility in the way that scholars critique justice and legal norms [45: 2]. Following MacNeil, Robbie Skyes has identified in the music and performances of the 1990s Britpop band *Oasis* the last gasps of Hartian positivism [86], while Tim Peters has found a jurisprudential theology within *Batman Begins* [66], and Mitchell Travis has explored zombies as embodiments of *bare life* [98].

That is not to say that interpretations of texts dealing with strict portrayals of law and lawyers are no longer relevant.³ However, what can be seen emerging in contemporary cultural legal studies is a willingness to read seemingly non-judicial texts – poetry, film, television, music, comics – jurisprudentially to reveal the way that all texts are saturated with legality.

Regrettably, one obvious gap in cultural legal studies’ expansive purview has been the absence of the video game. The existing legal scholarship on video games has so far focused on games as a subject of critique, inevitably turning to issues of copyright, censorship or in-game regulation – either by user or by owners – in MMORPGs (Massively Multiplayer

³ See for example [99]. Naomi Mezey argues that legal narratives in popular culture are perpetually consumed to assuage the audience’s fear of the relationship that law holds to violence. See: [56].

Online Role-Playing Game) and MUDs (Multi-User Domain).⁴ Those few who deal with the actual content of these games still tether virtual life to non-virtual law when tackling the complexities of in-game injustices, such as the virtual theft of goods [36, 1]. While peripheral modes of legal analysis are incidental to the game itself, content related analysis of video games – including in-game elements of gameplay, narrative, meta-gaming and immersion – has not been the focus of legal scholarship.⁵

Given this expansion in texts to be studied and themes to be explored in contemporary cultural legal studies; the happenings between the joysticks of a PlayStation 4 controller should be seen as legitimate as the happenings in the pages of a book or by the glow of a cinema screen. In a global context where video games are the cultural pastime of choice for youth around the world [80, 81] it could be argued that continual ignorance of the cultural significance of video games would suggest that cultural legal studies is heading for a game over.

However, there is a much more significant reason for cultural legal studies to embrace the digital than just keeping up. Law and legal practice is at a point of an absolute transformation [51]. Modern law and jurisprudence was a paper activity full of the concerns of a paper-based information economy; concerns with interpretation, with determining authority, and questions of maintaining the archive [96, 97]. As Cornella Vismann explained, paper set the rhythm and the potential for modern law [102]. These paper concerns burn away when systems of law, justice and order migrate to a digital-based information economy. Questions of interpretation, of authority of the archive, transmogrify when data is released from sheets of paper fibres to become photon pulses in optic fibres. What can and cannot be done with the digital is different to what was possible in the analog universe of paper; ‘each new medium underpins a new world and a changed form of law’ [24: 3]. This is not to say that transformations of this magnitude have not previously occurred and the trauma and legacy from law’s transition from a specular and oral activity to an activity involving writing and reading with the maturing of modernity deserves attention [25].

However, the digital is not a speculative conjecture. It is present in everyday life, even the everyday life of the cultural legal academic as they watch television through Netflix, write about it in MS Word, email draft papers to colleagues, submit the manuscript through a

⁴ See Jonas Heidi Smith [87] for a discussion on social order and player interaction in MMORPGs; See Mel White, [106] for admin/user roles in administering justice throughout the *LambdaMOO* debacle in which a user sent a series of explicit messages to other players describing violent sexual acts. For more on the *LambdaMOO* incident see [107].

⁵ Scott Beattie has written on the legalities of paper and pencil Role Playing Games (RPG). Regrettably, it distances the insights from these forms of gaming from video games [4: 478].

publisher's portal, update their social media profile, and podcast a lecture. The maturing of a digital-based information economy is present; a world that is forever online, a world of big data, a world of avatars and of intelligent systems. The video game is this world at play. If law is being transformed by the digital then there is something to be learnt from the transformations in the past from the oral to the paper. However, there is something that also needs to be seen in the actuality of the present. Video games represent a maturing of the digital and present as an ideal vehicle through which to explore the emerging features and anxieties of digital legality.

3 'It's-A-Me, Mario!'⁶: The *Super Mario* Franchise

If cultural legal studies should turn to video games with the emerging of digital legality, the question that follows is which video game? The more specific and cult a text is, the less analysis of it can convince of wider legalities. Marett Leiboff expresses a concern that language and shared legal knowledge needed to decode legal meaning in pop culture texts is prone to different interpretations [40]. To avoid some of these concerns this article will focus on Nintendo's widely popular and very well-known *Super Mario* franchise. In the world of video games, no character has become more mainstream than Nintendo's ubiquitous character, Mario.

A veteran of the coin operated arcade machine from the early 1980s,⁷ the energetic plumber came into his own in a quest to save his kidnap-prone girlfriend, Princess Peach, from Bowser, King of the Koopas in the original *Super Mario Bros.* released on the Nintendo Entertainment System (NES) in 1985 [90]. Designed by Shigeru Miyamoto, the intention of the *Mario* games was for the player to recreate the wonder of childhood exploration and the stumbling upon of unexpected treasures [35: 18]. The absurdity of a rather short and podgy New York plumber of Italian origin (complete with overalls, large nose and moustache) rescuing Princess Peach of the Mushroom Kingdom from a race of magic wielding turtles certainly resonates with a child-like imagination and *Super Mario Bros.* soon became a sensation [76]. This game cemented Mario's (and Nintendo's) place within the video game industry and its culture. *Super Mario Bros.* sold a total of 40.23 million copies holding the Guinness World Record for the Best-Selling Video game until 2009 [72: 110-11]. The success of Mario resulted in his starring in upwards of 200 games including many sequels of

⁶ 'It's-A-Me, Mario!' has become Mario's most common catch phrase.

⁷ Mario began as 'Jumpman' in the *Donkey Kong* (1981) [17] arcade game before getting his own arcade game two years later, *Mario Bros.* (1983) [48].

the original game, multiple spin-off games, two different cartoon series [30, 73], and a (less talked about the better) live action film starring Bob Hoskins [58].

Super Mario Bros. defined what has become known as the 2D (two dimensional) side-scrolling platformer genre. In this genre the camera is trained on the main character and the world scrolls past as the character moves left or right. It was within this 2D framework that key aspects of *Super Mario* – such as jumping on top of enemy characters to kill them, collecting 100 coins to get a 1-UP (extra life), or the use of power-ups which make you grow, shrink, turn invincible, fly or shoot fireballs – were introduced to the franchise [71]. These abilities remained in the subsequent reincarnations of the *Super Mario Bros.* scrolling platformer.

Mario is, undoubtedly, Nintendo's biggest triumph even with the success of their other creations: the *Pokémon* franchise and the *Legend of Zelda* series.⁸ Indeed, Mario has been adopted by Nintendo as its corporate icon [35: 115]. While Mario's journey from the NES to Nintendo's latest generation console, the Wii U, is marked by substantial improvements in graphics, at its essence, the *Super Mario* games never really deviate from their overarching narrative: save the princess, win the game. At its most basic level, the story of Mario is one of conserving justice within a simple moral universe. Mario's primary objective justifies any violence he must do to achieve his end; there is no ethical ambiguity to rescuing Princess Peach from the villainous Bowser. For players, 'there is no moral risk in *New Super Mario Bros.* because the "violence" is cartoonish', [85: 193] and this distances the player from the 'real' consequences of their actions [85:193-4]. Perhaps even more so because the 'bad guys' in Mario are quite literally bad to the bone; an association made obvious with Dry Bones, the version of the turtle-like race of the Koopas that patrol Bowser's castle appearing post-mortem in a skeletal form.

In fact, the game allows no other option but to destroy Mario's enemies in order to progress. Mario must defeat the boss of each world in order to advance to the next but is additionally rewarded for causing mayhem along the way. In most *Super Mario* games, hurting enemies consecutively will chain together points. After the eighth time damage is dealt to an enemy, each following enemy damaged will give Mario a 1-up until the chain is broken. Although points, much like coins, are rarely used in the *Mario* universe, the very act of giving points

⁸ *Pokémon Red* [70] and *Pokémon Blue* debuted in 1996 on Nintendo Gameboy; new versions have continued to be made with the latest title being *Pokémon Omega Ruby* [69] and *Pokémon Alpha Sapphire* [68] on Nintendo 3DS. *The Legend of Zelda* [38] was first released in 1986, the most recent game is *The Legend of Zelda: A Link Between Worlds* [39] for Nintendo 3DS.

and lives for obliterating enemies reinforces to the player that these acts are ‘good’ or at least worthwhile.

While the aesthetics are surreal and absurd, the narrative of good and evil within the *Super Mario* universe is charming but nothing special. The story of good guy Mario saving Princess Peach and defeating bad guy Bowser is one that could equally be gleaned from any number of books or films. However, it is the distinctive properties that *Super Mario* offers as a video game that ought to be taken advantage of in analysing its content. Embracing the coded interactivity of the video game involves going beyond traditional plot/character/aesthetics analysis of cultural legal studies and provides an opportunity to examine the features and anxieties of digital legality. Given the diversity of games that Mario has appeared in beyond the 2D platformer style that *Super Mario Bros.* pioneered there needs to be some further precision concerning terms. In this article ‘*Super Mario*’ will refer specifically to the 2D side-scrolling platformer style games (*Super Mario Bros.* and its sequels)⁹ whereas the term ‘*Mario*’ will refer to the franchise as a whole – including spin-off titles *Mario Kart*, *Mario Party*, *Mario Olympics* to name a few.¹⁰ We reserve the name ‘Mario’ to when we are referring to the character, the onscreen avatar that the player controls.

4 Jumping through the Features and Anxieties of Digital Legality

Law as an analog activity consisted of masses of papers, in libraries, files and archives needing to be located, interpreted and organised [96: 292].¹¹ Law as analog concerned the identification of relevant rules in documents, interpretation of those rules often with the assistance of other documents such as records of past decisions, policies or protocols, the shifting through the material records of an event to identify ‘facts’ and then the application of the interpreted rule to the determined facts through the process of writing a further document. Bruno Latour has used the provocative image of ‘stacks’ to give a physicality to this process; the decision-maker has a ‘stack’ of documents on their desk of legal material, another stack of evidential material and then writes a decision that ‘bridges’ these stacks [37: 86-89]. The human as processors of these papers was paramount – the law was dead letters on parchment,

⁹ *Super Mario World* [91] on Super Nintendo Entertainment System, *New Super Mario Bros.* [60] for Nintendo DS, *New Super Mario Bros Wii* [63] for Wii; *New Super Mario Bros. 2* [61] for 3DS and *New Super Mario Bros. U* [62] for Wii U.

¹⁰ The newest releases of the more notable spin-off series are: *Mario Kart 8* [49] for Wii U; *Mario Party: Island Tour* [50] for Nintendo 3DS; *Mario & Sonic at the Sochi 2014 Olympic Winter Games* [47] for Wii U.

¹¹ We do note Maarten Henket’s concern with postulating a distinction between digital and analog for legal information [31, 288]. However, we persist with the distinction. We accept Henket’s statement that information that was created through analog processes (music, writing on paper) can be reproduced within digital systems. It is the inclusion of the terms ‘created’ and ‘reproduced’ that allow us to perceive legitimacy to the distinction. The analog and the digital have different processes of creation and reproduction. It is these conditions of materiality that we are focusing on, rather than Henket’s concern to demonstrate the possibilities for digital legality.

as the realists reminded, until an officer gave it life through drafting a decision [42: 448-50]. Analog legality with its paper remained a human enterprise; there was always the opportunity for a novel interpretation of a rule, the identification of an exception, a moulding of a decision to the uniqueness of the facts, appeals to a higher law and logic [34: 475]. The physicality of paper made analog processes slow – dependent on physical circulation of files, the search for missing documents, the speed of the post, the time it takes to draft, write and type a further document – and as such there was the appearance, if not the reality, of wise pondering before a decision. Further, paper as the primary media through which analog law learnt of facts provided a less immersive experience. Facts require extraction, verification, argument; there was always demarcation that the facts in a file are just that and not a true and complete capturing of a person’s life. It is these characteristics of legality – discretion, speed and the relation between ‘life’ and fact – are the very characteristics that are being transformed by the digital.⁹

To some extent, recognising these transformations has been masked by a conservative tendency to make emerging technologies conform to familiar and established modalities. Importing the familiar aspects of older media into new ones makes technology easier to adapt to, and encourages the feeling that nothing has really changed. The comfortable nostalgia that *Mario* games produce, right down to the iconic theme tune and in-game sounds, colours, shapes, all come at the price of being tethered to the past. *New Super Mario Bros. 2* for 3DS [61] (Nintendo’s current handheld, mobile platform) markets itself as being ‘new’ in its very title yet the gameplay is astoundingly close to the original NES *Super Mario Bros.* [90] released nearly 30 years prior and even closer to its immediate predecessor, *New Super Mario Bros.* for DS [60]. Despite law’s transition from analog to digital, the very terminology of technology (such as ‘documents’ and ‘folders’) is ‘designed to remind users seated before the screen of the familiar world of files’ [102: 163,]. Notwithstanding this inertia, the impact of the digital in law is becoming more obvious. In litigation files during discovery are now quantified in bytes, *not* pages and identified by e-discovery algorithms [3: 44, 101]. It can be seen in the incursions of the audio-visual into trial documented by Richard Sherwin [84: 75-82] in the mundane use of bots to generate hypertext and summaries within legal documents [79] and the automation of regulatory processes through web-based portals and smartphone apps [12, 93, 7]. If digital legality is beginning to break through the accretions of analog legality what are its features and anxieties? It is here that *Mario* is a highly illuminative example. And the starting point is not its simplistic plot, cartoon characters or absurd aesthetics. Rather it must begin with what *Mario* in all his manifestations is; code operated by a computer that interacts with a user.

4.1 Rigidity of Code

Every game that Mario has appeared in has been at essence a code that is read and operated by various Nintendo computer systems. All that is possible in the game is predetermined by code. There is an illusion of choice given to the player. To make Mario jump at a specific time, or move left or right, the control button must be pressed. But these choices are highly circumscribed. The player needs to make the correct series of button pushes to navigate Mario through a level. Failure to do so results in either a loss of a life and the respawning of Mario at an earlier checkpoint, or Mario does not move. The code is absolute. Mario can only jump where the code permits it; a player can depress the jump button until a blister appears but if Mario is in a section of a level that does not allow jumping (i.e. a narrow passageway with rocks directly above Mario's head) nothing will happen until the timer for the level expires. However, players do not experience this directly. They are not seeing the code scroll through the CPU. Rather they are experiencing the *effects* or *manifestations* of the code. They are not participating in the code itself rather the player is subject to its operation.

It is this rigidity and subjectification of code that is the immediate feature of digital legality. Law's transition from parchment to pixel means that it is code, rather than law that enacts, regulates and performs legal acts [103, 93: 293-4]. The anxiety of this feature is that interpretive discretion, a defining feature of analog legality, is lost to the rigid restrictions afforded by code.

In the world of the digital, it is no longer law but code that reigns supreme. However, the embedded nature of code in digital processes obscures its operation as a source of law [31: 290]. While analog legality has a long-standing tradition of needing law to be promulgated in order to be effective [22: 50], in the digital the words of law are invisible. Much like a novice *Super Mario* player who does not know whether Mario can jump until they try, a subject of digital legality must push code to its limits in order to identify the limit: 'Code is often invisible to the uninitiated' [8: 781].¹²

Code's ability to automate legal processes and prevent unauthorised acts (at least for those not skilled in coding or hacking) has been heralded by Lawrence Lessig as the 'start to the perfect technology of justice' [41: 1408]. Nonetheless, any appearance of code performing law, any 'justice' done by these technologies, is ultimately illusory. For within digital legality, 'justice' is performed through a sophisticated series of algorithms that respond to data input to lead to programmed outcomes. Justice, in a sense of the incalculable determining of what

¹² The brilliant satirical game, *The Stanley Parable* [109] pokes fun at the player's inability to jump with an achievement aptly called 'You can't jump' which requires the player to press the space bar (default jump button on PC games) several hundred times despite the fact that this button does absolutely nothing in-game.

is right in this immediate and unique situation [16] has nothing to do with technological process: machines simply follow their programming. Barring any technical fault, digital legality can provide consistent application and interpretation of rules, which in a positivist sense is sufficient to give a just ‘legal’ outcome. This is justice as process where the overarching goal is the treatment of like alike. If the ‘human’ has been the component within analog legality that allowed the possibility of ‘justice’ as something incalculable – providing for an novel interpretation in the hard case, or an particular exercise of discretion, or a pause to find additional facts – then its replacement with code in digital legality represents the banishment of justice as understood as something more than treating like cases alike from law. Digital legality requires trust that legal intention will be accurately achieved through the algorithm [82: 458, [11, 1271].

Super Mario demonstrates law as code but not justice. In *Super Mario* ‘restorative justice’ is not just a plot setup but a requirement of progress; the player must actively follow the predestination of the coded narrative of vanquishing Koopas and rescuing the princess to win the game. As Seb Franklin explains: ‘we are never thinking about being Mario and rescuing the princess when we are negotiating a series of awkward and demanding jumps for the twentieth time, but the game world in some way maintains that we are’ [19: 164-5]. Progression of the narrative and success in completing the game are eventuated by the skill level of the player, but more importantly their willingness to embrace the coded reality of the game: ‘To play the game means to play the code of the game. To win means to know the system. And thus to interpret a game means to interpret its algorithm’ [23: 90-1]. The just outcome is no longer the analog issue of rightness within the unique and specific circumstances but the narrow question of correct operation of code [29: 1732].

For *Super Mario* and digital legality there is nothing outside of the realm of code. The placement of ‘hidden’ blocks or secret areas within the *Super Mario* games may give the illusion of something beyond code but ultimately these secrets have been deliberately designed to be found. Exploration of coded spaces is always ‘restricted by the intention of the original author’ [33: 63]. Using code to perform law allows no room for discretion, the mechanical application of law to facts (or code to data) renders legal decision-making a purely algorithmic exercise [18: 190-1]. While Joseph Fulda has argued that coded machines (such as robots) could more fully engage in specific legal functions, such as lower level criminal trials, than judges or juries [21: 330-2] code’s inability to distinguish between *what is right* and *what is permissible* puts in a new context the tensions between what is lawful and what is just. In the recent *Super Mario 3D World* [89] a bug in the code of the game allowed a player to gain a massive speed boost, jumping over entire sections of a level should they

successfully fulfil the requirements. To exploit the bug, a player must be playing as either Toad or Peach, be wearing a Cat Suit and crouch repeatedly over a section of ice (such as in World 3-1, or World 6-5).¹³ Exploits and bugs, such as this speed boost, were not intended to be included as tools to finish the level. However, as the player is not interacting in a way prevented by the code itself, such actions are permitted, even if they are not ‘proper’ gameplay. Within the realm of code there is no higher legality that can determine whether a technically permissible act was lawful according to an analog process of interpretation. Failure of a programmer to pre-empt the misuse of an item or in-game state displaces the moral blame from the player to the programmer, as the flaws in the code *technically allowed* the act to happen. Likewise, with code, bugs that allow actions that could be seen as counter to the programmer’s intention remain legitimate [13: 589, [29: 1740].

The substitution of law with code signals a transformation from an analog to a digital legality, and a changed form of law. While technology is now easily procured and programmed, the very nature of code obscures legal function, making law something to be *experienced* and not understood. In digital legality, law loses the analog ability to appeal to a sensibility higher than code resulting in a faith that automated application of law to facts (or code to data input) will produce a legally just outcome.

However, this loss of discretion in the rigidity of code is not the only feature (and anxiety) of digital legality. Code is quick. Decision speed time is ultimately determined by the physicality of processing power. This is the next feature of digital legality – speed.

4.2 Speed

A perennial feature of *Super Mario* has been its speed. The game moves rapidly. Mario is forever threatened in the immediate with an oncoming Koopa, a swinging platform or some other threat. On top of that every level is timed (usually 300 to 500 seconds); if a player exceeds the designated time than it is an instant game over. A player does not have time to reflect or strategise. The game is immediate and reactive. This inherent rapidity in platformers was emphasised by then Nintendo rival Sega which released its own *Super Mario* inspired platformer featuring the extra fast character Sonic the Hedgehog.¹⁴ In this speed, immediacy and reactivity of *Mario* there can be identified another feature and associate anxiety of digital legality.

¹³ See [14] for an excellent demonstration of this bug.

¹⁴ Sonic first appeared in *Sonic the Hedgehog* [88] for the Sega Mega Drive in 1991. Like Mario Sonic has gone on to found a franchise comprising 2D and 3D platformers and racing games.

A hallmark of the transformation from analog to digital legality has been the rise of big data [95, 5, 6]. Codified spaces have migrated from the screens and servers and into the real. Integration of digital spaces into the physical lives of humans has led to individuals shedding data like a second skin in both online and offline environments, regardless of their awareness or intention to do so [59].

There has been growing anxiety around the question of how to regulate the vast quantities of data produced by the denizens of real and virtual worlds [64, 94]. Participation in life and living, even without an intention to create data, still results in the recording, sharing and analysing of that data [15: 715-6]. For example, in *Mario Kart 8* for Wii U, once a player has been entered into a race they will be transformed into data even without any active input. The player can refuse to move a single virtual inch from the starting point of the race but will still be scored (even if that score is 0), ranked, given the ability to post their time online, and offered replay footage of the race. Even with no input from the player, participation in the most minimal sense still generates data that is recorded and shared. While participation in digital spaces is largely discretionary, for physical spaces ruled by code (like an intersection with a red light camera) all choice is removed and participation is mandatory.¹⁵

It has become an article of faith that the traditional processes of analog legality are unable to regulate the influx of big data [74, 28]. Instead, regulation must be performed by digital technologies capable of processing this data as quickly as it is produced. However, as has been identified the anxieties of code has meant that systems incorporate human decision-makers. This means that to be decision-maker within digital legality is to be wired into a system that operates at an *inhuman* speed. This augmented human decision-maker becomes a node within a digital network, a cybernetic component providing a token of highly constrained discretion and human oversight. Decision-makers must deal with a persistent barrage of data and quickly make decisions with lasting consequences. This instantaneousness mimics the reflexive gameplay of the *Super Mario* games.

The low latency between pushing a button and watching Mario react on screen, the synchronisation between game time and real time induces a flow state in the player that encourages identification with the icon and immersion within the game world [32: 142-3]. Given that this flow state remains uninterrupted by game time distortions, such as cutscenes,

¹⁵ On red light cameras see [57].

the player is embedded into the game with a frenzy of reflexive button mashing.¹⁶ The speed of the game and the constant attention that the game demands effectively forces the player to engage in purely reactionary play with little opportunity for reflection upon mistakes or strategy until all the lives are used up and it is game over.

The impermanency of death in video games transforms death from the end of all things to a learning experience for the player. Upon respawning at the checkpoint the player now has foreknowledge of the upcoming challenges of the level. Unlike older *Super Mario* games, where frequent deaths would inevitably result in a game over, newer *Super Mario* games strive to ensure that not even death stands in the way of progress. If a player loses five lives in a single level, a White Tanooki Power-Up becomes available for use. This noob-friendly¹⁷ power-up makes the player invincible from all enemies for the rest of the level. In these recent games, death is no escape from the immersive flow-state that is so controlling to the player, but so innocuous to the observer [85: 193].

With the rise of big data there is an increase in speed. Like the increasing tempo in the music in *Super Mario* when the player is down to the few remaining seconds to complete a level. The speed with which life is converted into raw data pushes the cybernetic augmented decision-maker to act reflexively in data input/legal output with little pause for thought. The danger for digital legality is that, regrettably, the game world and the real world are not one in the same. Unlike *Super Mario* any errors by digital legality will not prompt a respawn at the most recent checkpoint. Rather, any mistakes in input will result in an erroneous output with legal weight and real-world consequences. The old programmer term GIGO (garbage in-garbage out) remains highly apt: code cannot differentiate between legitimate, intended input and accidental input from a cat walking over the controller, it merely responds to the stimulus given. However, there is a further anxiety.

The endless stream of data produced, and the speed of digital decision-making creates a context for thoughtless input. This tendency to thoughtlessness is coupled with the observed distance of code where the traditional transparency of the justice system has been replaced by experiencing coded decision-making. Within this context, with such vast amounts of data being processed, mistakes in input or errors in code are likely to go unnoticed. The immersive

¹⁶ The term ‘button mashing’ is a colloquialism that gamers use to describe a style of game play. Generally, it refers to a gamer who presses buttons mindlessly without any understanding of how the game is properly played with the hope that the right combination of buttons will magically be pressed and the game furthered.

¹⁷ ‘Noob’ is a gaming term derived from ‘newbie’ used to describe an unskilled video gamer. It is usually used in a derogative manner. A noob is a player who is not only not very good but often has an inflated opinion of their own expertise. See [100].

experience of technology, inducing a frantic flow-state sacrifices careful deliberation and broader considerations in favour of the speed of a digital legality.

However, big data does not only emphasise the increasing speed of digital legality, but in the totality of the emerging data gathering, recording, and processing network there is the growing feature of not just the avatar of humans within the digital but a condensing of the avatar to the human.

4.3 Self as Data

The game experience in *Mario* involves an abstraction of the self. To play the game involves forgetting the bodily self and identifying with Mario. The player blurs from the human interacting with the controller to the avatar jumping and dodging on the screen. The immersive experience of video games like *Mario* naturalises this conversion through the low latency of physical input to digital output, and the requirement to abstract oneself in order to play.

The primary function of graphics in *Mario* is to provide constant accurate visual feedback to the player and according to Simon Penny, it is this persistent feedback ‘between these representations and the embodied behaviour of the user that makes such images more than images.’ [65: 83] It is this interactivity through abstraction between player and the game environment, the slippage occurring between image and player that allows video games to transform the players themselves into data through a pseudo-lacanian mirroring [108: 52]. As the player uses Mario to navigate and interact with images on-screen, Mario, in turn, becomes a surrogate for the player [108: 60]. While few are likely to identify as a pixelated Italian American plumber questing within a Japanese fantasy world, the strong affinity between person and icon trains and encourages players to embrace their conversion to data. The frequency and fluidity of abstraction occurring within games, such as switching from Mario to Kirby between fights in *Super Smash Bros.* [92], normalises a person’s understanding of themselves as little more than data input.

Video games, as a medium driven by input, are most immersive when the tool of this input is relatively invisible. Penny heralds gameplay mechanics as ‘the holy grail of total immersion’ [65: 80]. Familiar and intuitive gameplay mechanics assists the player in their ‘corporeal immersion with technology’ [75: 4], the controller, as an extension of the physical body, anchors the transformation of self to data. Nintendo is well-known for its intuitive gameplay mechanics, moving from the NES, to Nintendo 64 to the 3DS has not impaired Mario’s immersive properties as the control scheme remains familiar to players. Although, the latest

instalment in the *Super Mario* franchise: *Super Mario 3D World* for Wii U [89], does occasionally struggle with this aspect. The Wii U Gamepad, the primary controller of the Wii U, has an in-built touchscreen. In attempting to use this new technology within the game, some of the levels prompt the player to touch or blow on the Gamepad to influence the in-game environment. Despite the novelty of these innovations, forcing the player to change screens during gameplay disrupts the immersion within the game. Moving between screens temporarily breaks the visual feedback loop, and forces acknowledgment of the controller, not as prosthetic extension of the physical self but as an awkward tool. This rupture of the player/avatar unity is only temporary as player refocuses on the primary screen and the immediacy of the action.

What *Mario* does show is the ease through which the self becomes regarded as a source of data. This is not just a cyborg hybridity that earlier theorists of technology were concerned with of a physical melding of human and machine. It is a process where the body and physical has been forgotten and all that matters is a self as the data. The human as an embodied creature of flesh within the material world has evaporated. What remains is a being whose role it is to generate data to be used by pre-coded pathways. This is a new form of de-humanisation. It is not the stripping away of rights to leave *bare life* but removal of the body itself; the Cartesian dualism as a technological reality. While analog legality has always, to some extent, de-humanised its subjects – relegating them to facts and case names – the extent that this has become accepted and, perhaps, *expected* has become a feature of digital legality.

Unlike the analog past where each citizen's identity was established by a few official pieces of paper such as birth certificates and passports, the digital has allowed a new era of self-invention. Trained to see self as data by video games, the essence of social media is that it allows active fashioning of one digital persona [55: 2006]. The Janus-faced nature of contemporary living of physical and digital worlds is not just imposed through the leakage of data about a real body into a second 'data double' through big data systems but is actively embraced. The creation of these personas in a digital reality makes people *aware* that they will be catalogued and organised by search engines. As a result, the creation of raw data from life is no longer merely a side-effect but for many has become an action.¹⁸

Saturation of real life with digital technologies such as games, computers and phones all encourages humans to look through the screens, not at them: to become their input. The immersive experience of technology, seen best in the *Mario* franchise and social media, naturalises submission to digital demands, reducing resistance to being processed and

¹⁸ See the discussion of personality types and their use of social media in Wagstaff and Tranter [104: 172-176].

catalogued as data by code. Even when the conversion of self from physical to digital is made explicit – the EU licence agreement, the click this box if you do not want your details stored – acknowledgment of this datafication is of little consequence to a human culture that so readily embraces their digital personas. The de-humanising tendencies in analog legality can be seen as accelerating and becoming absolute with digital legality. Diffusion and de-centring of the legal self from the biological self is what the player experiences in *Mario* and reflects the datafication of the self by technology at large. This movement away from bodies and things in the real world to avatars and input in the digital transforms not only the subject of law into data to be processed quickly by code but has rendered this process *natural*. The avatar replaces the human in digital decision-making and this is not seen as oppressive or unjust but inevitable, indeed desirable, to a culture that through its games and its social media has accepted the self as data. Analog legality's concern that the information in a file could never replace the lived human becomes eclipsed by an acceptance that the avatar has become the human. The subject of law loses its bodily self entirely allowing digital legality to be accepted in its use of avatars and big data to make decisions.

5 Conclusion

This article has identified three features of emerging digital legality; the rigidity of code, speed and the normalisation of the self as data. It also identified that there are anxieties with these features as they express a legality that is different to the familiar processes of analog legality. First, the rigidity of code leaves no space for interpretation, discretion and ultimately justice. Second, the speed of digital legality means that decision-makers become part of the system rapidly making decisions in reactive flow state. Third, seeing the self as nothing else but data gathered and held by the system, and not the fleshly reflection of that data in the real world, as the proper subject of law. These features and anxieties were identified through a cultural legal study of the *Super Mario* franchise. It was argued that while video games have gone unrepresented in cultural legal theory, video games, as the digital at play, provide significant opportunity to reflect on the transformation of law occurring in the change from a paper to a digital information economy.

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