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# Trespass to the ‘person’ in the metaverse

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## ABSTRACT

The term ‘metaverse’ refers to a varied collection of internet-based virtual reality worlds in which, amongst other things, users across the globe can collaborate, socialise, trade, play games, access entertainment, or even work. Increasingly, technological innovations, such as high-resolution headsets and sensory (or ‘haptic’) clothing, are closing the experiential gap between such virtual environments and the ‘actual’ world, and broadening the scope of daily activities that the former can accommodate. Whilst this clearly presents opportunities, it also raises questions about the suitability and efficacy of existing legal rules for regulating user conduct within these platforms. Using English law as a case study, this paper specifically considers the various torts commonly referred to under the umbrella term of ‘trespass to the person’, evaluating the extent of their applicability within this novel context, and thereby illuminating issues that might, in time, require intervention from law and policy makers both within the case study context and beyond. It is argued that, as the qualitative difference between physical contact in the actual world and virtual contact in the metaverse becomes smaller, it will become increasingly difficult to justify applying the torts of trespass to the person differently in each context.

## KEYWORDS

Tort; metaverse; battery

## 1. Introduction

The hour is late. Only a handful of partygoers remain in the house. Charlie is one of them.<sup>1</sup> She is playing a game of darts with the host. His name is Dylan. Charlie has met Dylan a few times before. As they play, they talk about normal things: music, films, and holiday plans. When the game ends, Dylan tells Charlie he has something to show her. Charlie follows Dylan, and he leads her into a back room in the house. Dylan tells Charlie to wait, and he leaves the room, closing the door behind him. Charlie waits for ten minutes, but then decides to go and find Dylan. She tries to leave the room, but the door is locked, and so are the windows. She shouts for Dylan, but there is no reply. She looks at her watch. She is due at work soon.

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Another ten minutes pass, and then the door opens. It is Dylan, but something is not right. He has a menacing look on his face. He is carrying a baseball bat, and he taps it slowly into his left palm as he stares into her eyes. It seems like a threat. Charlie asks what Dylan is doing but he does not reply. Charlie tells Dylan she is leaving, and tries to walk past him, but he grabs hold of her left wrist. She can feel his grip. She shouts at him to let go, but still, he remains silent. Charlie feels fearful. She realises that she does not know Dylan that well at all. Dylan strikes the baseball bat across Charlie's back.

In most jurisdictions, Dylan's conduct will almost certainly attract both criminal and tortious liability, but the rules here are much less certain. Charlie and Dylan are interacting with each other in an online, virtual reality world. Dylan believes that Charlie has consented to interactions of this kind, either: explicitly under the terms of the End User Licence Agreement ('EULA') that they each agreed to as a precondition of access, which clarify that users enter this world at their own risk; or implicitly, given the nature of their meeting place. There is no *actual* harm, he contends, and violence is to be expected given the 'gaming' environment within which they interact, just as Super Mario expects Bowser to send fireballs his way. However, Charlie believes that Dylan has committed three wrongs, in respect of which she should be entitled to a remedy. First, her freedom of movement was restricted, then she was made to feel fearful, and finally, she was attacked. Whilst she did not suffer a physical or psychiatric injury as a result of this attack, the experience for her was very real. The graphics in this particular virtual world (specifically designed by its creators to trick the user's mind into believing what they see) were such high-resolution as to render this virtual environment almost indistinguishable from the world that Charlie's physical body inhabits. Indeed, in the moment, she was paralysed by fear, and the thought of removing her headset never even occurred to her. Similarly, the haptic clothing that she was wearing meant that she could indeed feel very real force being inflicted upon her physical body, albeit not with the kind of damage that the images before her eyes might otherwise lead her to believe. For Charlie, this virtual world is not a game at all. All her friends are here. She works here. She owns property here. It *is* her reality.

For the uninitiated reader, the foregoing illustration may feel like mere science fiction; as irrelevant to present-day legal scholars as a bill of rights for Klingons. However, increasingly authentic virtual worlds are emerging, and their popularity is predicted to rise dramatically in the coming years (Statista 2024). Many such worlds are designed purely for escapism, and dominated by gamers who are simply migrating from more primitive, predecessor platforms in search of a more authentic gaming experience; but many are not. A growing proportion of the users of these new virtual worlds are not here to play games at all (Statista 2022). For them, virtual worlds are extensions of the actual world.<sup>2</sup> They venture into a virtual city for many of the same reasons they might go to a physical city: to collaborate, to socialise, to trade, to learn, to be entertained, or even to work (Kalpokas and Kalpokien 2023, 53–75).

In 2022, psychotherapist Nina Jane Patel sparked debate when she reported that she had been 'gang raped' on the pioneering virtual reality platform created and owned by Meta (formerly Facebook) (Oppenheim 2022).<sup>3</sup> For some, such a claim might seem sensationalist, fanciful, or even conceptually impossible, and yet transformative technological advances are gradually facilitating ever-more immersive virtual reality worlds. Graphics are becoming increasingly lifelike, haptic clothing allows users to feel sensations in

their body that correspond to virtual contact, and emerging technologies have the potential to take this even further. Cheong (2022, 482) muses that: '... future avatars in the metaverse may become highly advanced to the extent that a neural link would be able to transmit physical pain experienced in the metaverse to the brain of the human person.' It is therefore becoming more and more important for law and policymakers to carefully consider the merits of claims relating to unwanted virtual contact, and how (if at all) they might fit within existing liability regimes.

The immersive virtual worlds referred to are collectively known as the 'metaverse', a term coined by science-fiction writer, Neal Stephenson, in his novel *Snow Crash* (1992). A technical definition of the now widely adopted term comes from Mystakidis (2022, 486), who writes:

The Metaverse is the post-reality universe, a perpetual and persistent multiuser environment merging physical reality with digital virtuality. It is based on the convergence of technologies that enable multisensory interactions with virtual environments, digital objects and people such as virtual reality (VR) and augmented reality (AR). Hence, the Metaverse is an interconnected web of social, networked immersive environments in persistent multiuser platforms. It enables seamless embodied user communication in real-time and dynamic interactions with digital artifacts.

Presently, several leading platforms for this new virtual universe are emerging, and opportunities exist for the relevant providers to introduce safeguards to protect their users preemptively (Gucluturk 2023, 272). Indeed, following the incident reported by Ms Patel, Meta introduced a 'safe zone': a personal space boundary for each user, beyond which other users are not able to venture (Oppenheim 2022). However, in time, it seems likely that – as with the internet – a multiplicity of platforms and providers will emerge, with varying objectives, quality standards, and ethics. Even if a single platform provider were somehow to achieve dominance anywhere close to a monopoly, the scale of the design challenge means that any such provider would almost certainly need to crowd-source content creation, and delegate significant design rights accordingly (Ondrejka 2006). Ensuring such safeguards exist throughout an international, decentralised 'World Wide Metaverse' is therefore likely to be close to impossible.

In any event, personal space boundaries and equivalent design measures run directly counter to the ideology that is likely to be shared by metaverse users and developers alike, in the sense that such measures seek to *limit* inter-user interaction, and thereby the fullness of the reality that a platform can offer. Accordingly, it seems highly unlikely that it will be possible, or arguably even desirable, for metaverse engineers to completely design out authentic, virtual human contact. On the contrary, it seems more likely that the creators of many of these new worlds will continue to strive for an ever more authentic and immersive sensory experience, of which unrestricted human contact will be an essential ingredient. For example, it is not difficult to imagine how a virtual world might rapidly grow in popularity if it offered a genuinely authentic way for an isolated grandparent to hug their grandchildren, or a romantic couple to experience physical intimacy during a time of geographical separation.<sup>4</sup> For this reason, it is argued that design solutions on their own will never be enough, and – just as with *actual* human contact – there will always be a role for the law to play in helping to regulate *virtual* human contact.

This paper specifically explores the extent to which the trespass to the person torts might assist in deterring, and where necessary remediating, unwanted contact in these new worlds. It begins by situating the enquiry within the existing literature on metaverse regulation (Section 2), before providing a brief outline of the aims and functions of the existing trespass to the person torts (Section 3). Next, it analyses the application of the current law in the metaverse context, with specific reference where appropriate to the *Charlie v. Dylan* thought experiment outlined above (Section 4). In so doing, the paper evaluates the extent to which the existing legal framework sufficiently recognises and respects users' rights to bodily integrity in this new context, thereby illuminating issues that might, in time, require intervention from law and policy makers. Finally, it highlights the unique value of the trespass to the person torts in the context of alternative routes to a remedy that might also exist (Section 5).

Clearly, the matter at hand is complicated by challenges identifying the governing law that will apply to particular users in particular metaverse spaces. Virtual worlds are by their very nature international and cross-jurisdictional. Since its inception, the jurisdictional boundaries of the Internet have proved notoriously difficult to navigate (Allen and Lastra 2020; Schultz 2008; Wilske and Schiller 1997). In much the same way, the metaverse challenges jurisdictional boundaries by facilitating interactions between users across the globe. This makes a comprehensive analysis of the legal position in the metaverse close to impossible, and certainly beyond the scope of this paper, but complexity ought not to delay exploration of the relevant issues. Pragmatically therefore, this paper considers as a case study the application of English law, with the aim of offering broader insight, and as a mere starting point for raising awareness of a complex and multi-faceted problem that will require further attention.

It is argued that: as the qualitative difference between physical contact in the actual world and virtual contact in the metaverse becomes smaller, it will become increasingly difficult to justify applying the torts of trespass to the person differently in each context. Furthermore, whilst other areas of law are also relevant, the trespass to the person torts have an important role to play in this space.

## 2. Regulating virtual human contact in the metaverse

A growing body of literature on the topic of metaverse regulation is now emerging.<sup>5</sup> Key areas of focus include: virtual property (Chein 2006; Lastowka and Hunter 2006); user privacy (Rosenberg 2022); the legal status, rights and responsibilities of avatars (Cheong 2022; Coppo 2024; Mengual 2024; Noval and Maaruf 2024); and, more broadly, the limits of the constitutional power that should be afforded to virtual world creators, predominantly through EULAs (Balkin 2004; Fairfield 2005).

Some of this existing literature has at least tangential relevance to the present issues. For example, Balkin (2004) identifies the constitutional limits on liberty, freedom, and rights more generally that may exist within particular virtual environments, and explores the extent to which those limits may be legitimately determined at will by the particular platform provider, with explicit, contractual consent to those limits being a pre-condition of participation for its users. If Dylan's conduct falls within the 'rules of the game' (i.e. that which is envisaged by the platform and its users), a question arises as to whether it should then be possible for any potential liability arising from that conduct to be expressly

excluded by the EULA and/or for Dylan to argue (as is typically the case in sport)<sup>6</sup> that Charlie has consented, through her participation. Where metaverse users understand their virtual environment as facilitating some kind of game, of which they understand the rules and consent to play by them, then perhaps – absent conduct which can be said as a matter of fact to go substantially beyond the rules and therefore limits of the consent provided – they ought not to have a legal remedy, even if they have suffered actual harm as a result. Any such claim would arguably be anti-constitutional.

However, even if such exclusions may be appropriate in certain environments, it is evident that there will be other metaverse spaces where they are not. The legitimacy of any such contractual limits on user rights arguably becomes less secure as the metaverse grows beyond a purely gaming experience, into a more expansive, multipurpose virtual world, designed as a collaborative space that one might enter for a wide range of educational, social, or commercial reasons. Perhaps one should reasonably expect that one's avatar might be attacked with a virtual sword if seeking to advance across a virtual battlefield in a virtual quest for virtual gold, but it may be less acceptable if one's avatar were to be attacked with a virtual sword whilst trying on virtual clothing in a virtual department store, or whilst being lectured on the history of art in a virtual classroom.

On a similar theme, Crimmelman (2006) argues that, when united in support of a common aim, users of virtual worlds do wield some political power – by threatening to leave a world for good, they can in theory exert influence upon the world's designer(s) to change the computer code (and thus the rules) upon which the world operates. In this sense, in-world governance may have a significant role to play in regulating user conduct, and worlds do have some potential for self-regulation. However, self-regulation of this kind may not adequately protect minority interests, and in any event depends on users having genuine freedom to leave – if a small number of virtual worlds should become dominant, and/or users' investments in a particular world become sufficiently significant, then any collective threat to leave risks becoming empty.

To address this issue, Castronova (2006) calls for a formal legal framework pursuant to which individual virtual worlds, meeting certain legal requirements, can be granted their own unique legal status as self-contained and to some extent self-regulated spaces – a framework broadly analogous to the legal process of company incorporation. He coins the term 'interration' to describe such a process, presumably to emphasise its parallel with company incorporation, whilst at the same time explicitly referencing the fact that the process is concerned with how these new worlds will 'interrelate' with each other. He argues that, as the metaverse grows, it will be important to maintain some self-contained spaces of this kind, which are specifically reserved for gameplay, and in which the state will not interfere, provided that the rules of interreration are not broken. This may help resolve the 'gaming' defence that Dylan in the present example seeks to assert, by clarifying expectations for users about the nature of their new reality. However, this solution still leaves open the question of what rights to 'bodily' integrity, if any, a user and their avatar might have in a virtual world that is explicitly *not* intended for gaming purposes, and/or whether there might be scope for a claim in tort against a defendant who infringes any such rights.

Another area within the literature that has relevance to the present study relates to the issue of how metaverse victims, platform providers, and/or state actors might identify and

enforce actions against defendant users (whether in contract, tort, crime or otherwise) – which constitutes a significant challenge in the context of a decentralised World Wide Metaverse. On this, Cheong (2022) makes a case for individual avatars to be registered and given their own distinct legal personality (which could be directly sanctioned for wrongful and/or harmful conduct), but leaves open the possibility that a court might ‘pierce the veil’ to impose liability upon the human behind the avatar in appropriate circumstances, such as ‘... where crimes or torts had been committed’ (at 475), and Noval and Maaruf (2024, 92) similarly advocate for the use of a ‘digital passport’. Whether or not this is feasible remains to be seen. Centralised platform providers are likely to resist interoperability (i.e. the movement of avatars between platforms) (Mengual 2024, 109) and for such an arrangement to work it may be necessary to develop a single international law of the metaverse (Cheong 2022, 471), which would require an unprecedented degree of international political will and collaboration.

Putting enforcement issues to one side for a moment, the law of tort offers an established legal framework that may have some utility in the metaverse. To date, relatively little attention in the literature has been given to the specific question of when (if ever) and how unwanted, virtual human contact in the metaverse is or should be capable of giving rise to tortious liability – specifically under the trespass to the person torts. Indeed, Infantino and Bussani (2024, 293) note that ‘[t]ort law is seldom mentioned as a field that could be of any relevance to metaverse inhabitants’.

Where tortious liability has been considered, it has typically been discounted, perhaps because virtual harms are viewed as ‘... ‘not really real,’ as they are by their nature not physical, bodily harms’ (Franks 2011, 226), or perhaps because for scholars it pales in insignificance in the context of the almost insurmountable international enforcement issues. Either way, given the potential that the metaverse arguably has to reconceptualise the very notion of reality for societies of the future, the authors argue that tort law has a role to play in ensuring that this new technology does not inadvertently compromise the rights to bodily integrity that the law has traditionally treated as sacrosanct.<sup>7</sup>

### **3. The trespass to the person torts: aims, functions and the right to bodily integrity**

The normative justifications underpinning liability in the law of tort in general are contested, competing and contradictory, and some of the leading theories more easily justify some torts than others. A full discussion is beyond the scope of this paper.<sup>8</sup> However, where some consistency can be found is in the distinct aims or functions of tort law that judicial and academic commentators have tended to recognise, and these have had a significant influence on the development and justification of the law in recent years (Goukamp and Murphy 2015; Hedley 2016; Williams 1951).

Of these, perhaps the law of tort’s most obvious function is to compensate claimants for losses caused by a defendant’s wrong (Cane 1982, 34), and the aim of compensatory damages in tort is to put the claimant (as far as it is possible for money to do this) in the position that they were in before the tort was committed (*Livingstone v. Raywards Coal Co* 1880, 39). Most tort claimants do require monetary compensation for their losses or injuries, and any rules that systematically fail to achieve this outcome are arguably substantially deficient. In cases where harm (physical, psychiatric, or less commonly economic)



has been suffered by the claimant, the compensatory function of the law of tort, and its benefits for society, are plain to see. However, whilst a claimant may well be awarded compensatory damages in one of the trespass to the person torts, these torts are actionable *per se* (*Collins v. Wilcock* 1984) – that is to say, there is no *requirement* that a claimant has suffered *any* quantifiable loss or damage at all. It is necessary therefore to look beyond purely compensating claimants in order to find the *raison d'être* of the trespass to the person torts.

One possibility is the law of tort's concern with regulating interactions between individuals and achieving, as Aristotle first described it: corrective justice – meaning justice that deals with the fairness of those interactions between individuals (Aristotle 1934, 267). Thus, questions of justice are not answered by looking at individuals in isolation or at society as a whole (Beever 2008). Instead, because injustices are themselves interpersonal, justice concerns itself with interactions between individuals, and should be restorative in nature. As a result, tortious remedies must rest on individual responsibility – finding a wrongdoer personally responsible for their conduct and requiring the wrongdoer to do something to correct or make good any loss or harm suffered by a victim.<sup>9</sup> Jules Coleman explained it as the principle according to which individuals responsible for the wrongful losses of others have a duty to repair such losses (2001, 13–24). Accordingly, a tortfeasor is duty-bound to repair wrongful losses occasioned by wrongful conduct. This duty to repair losses rests on the normative notion of personal responsibility; both in a causal and moral sense. This means that only establishing a causal connection between a defendant's conduct and a victim's harm is normatively insufficient to justify the imposition of a duty to repair. Instead, there must be some moral connection and thus, 'if a person is morally responsible for an outcome, then it is morally appropriate to insist that that person be held accountable for that outcome' (Beever 2008, 479). However, whilst accountability may be a legitimate aim of the trespass to the person torts, corrective justice still has strong conceptual connections with the concepts of harm and compensation, which do not always apply to these torts.

Stronger justification is therefore arguably found in a third commonly articulated objective of tort law: deterrence. In other words, the mere existence of relevant legal rules in theory has the potential to prevent loss or other interference with rights altogether by deterring particular conduct on the part of a defendant. While tort litigation is predominantly a mechanism designed to secure compensation for claimants at the expense of responsible defendants, an oft-cited incidental benefit of the legal framework is that the threat of liability may disincentivise (and therefore prevent or reduce) tortious conduct (Polinsky, Mitchell, and Shavell 1998).<sup>10</sup>

Similarly, even where a claimant has suffered no loss (or perhaps has already been compensated for any loss suffered) some tortious claims may be permitted to continue purely for the purpose of achieving vindication. In *Ashley v. Chief Constable of Sussex* (2008), the defendant had already admitted liability and agreed to pay aggravated damages to the claimant – and yet the House of Lords allowed the claim to proceed. In justifying the decision, Lord Scott asked: '[h]ow is the deceased Mr Ashley's right not to be subjected to a violent and deadly attack to be vindicated if the claim ... is not allowed to proceed?' (para 22), and Lord Bingham noted that '... it is not the business of the court to monitor the motives of the parties in bringing and resisting what is, on the face of it, a well-recognised claim in tort' (para 4). These comments illustrate a



potential vindicatory function of the law of tort. The idea is that, quite apart from any loss that a claimant may or may not suffer, an infringement of their legal right may in some circumstances render them deserving of a remedy, even if only an award of nominal damages.

The deterrence and vindicatory functions of the trespass to the person torts are underpinned by the rights-based theory of tort law, which posits that the law ought to protect a claimant from interference with their rights, howsoever infringed (Honoré 1995). As such, liability depends on the actions of a tortfeasor that result in interference, and not necessarily on whether any quantifiable harm has been caused. Two points must be made on the scope of rights that this model is concerned with. First, only *legal* rights come under consideration in this model (i.e. the right to bodily integrity) – not moral, political, or fundamental rights (Cane 1982). Second, while the rights-based theory of tort law acknowledges the complexity of rights, it takes a conservative rather than an idealistic approach. As such, the theory is unconcerned with contesting any particular pattern of rights distribution in society. Instead, it focuses on correcting illegitimate interferences to recognised legal rights (Nozick 1974, 153–160).

There can be no doubt that the right to bodily integrity is presently recognised as one such legal right in English law. Indeed, Lady Justice Hale described it (albeit in a dissenting judgment) as ‘the most important of civil rights’ (*Regina (west) v. Parole Board* 2002, para 49). Admittedly, some scholars have begun to challenge the contemporary relevance of these torts in the context of a significant broadening of the scope of the tort of negligence (Beuermann 2017; Trindale 1982), and there is a growing trend towards dealing with cases in negligence which might previously have been dealt with in trespass (Beuermann 2019). However, trespass to the person claims remain common and – as long as the courts continue to recognise these torts in relation to conduct in the actual world – the possibility of these torts being extended to the virtual world remains worthy of exploration.

The value of exploring this possibility to some extent also depends upon the proper conception of ‘the body’ and the right to ‘bodily integrity’. Herring (2017, 570) argues that the English courts have not always been clear or consistent in their conceptualisation of these rights, and have sometimes blurred an important distinction between ‘bodily integrity’ and ‘bodily autonomy’. For example, a right to refuse medical treatment is to be respected, whilst a right to demand treatment need not be – for Herring, the principal distinction lies in the fact that whilst both scenarios are concerned with a patient’s *autonomy*, only the former is protected by the patient’s right to bodily integrity (at 568). He goes on to conceptualise the body as ‘... the point of integration between a person’s subjectivity and the remainder of the objective world ...’ (at 576). Consequently, he explains (at 580–581) the right to bodily integrity, and its value, in the following terms:

The right [to bodily integrity] gives a person exclusive use of, and control over, their body on the basis that the body is the site, location, or focal point of their subjectivity (however understood and constituted). It is because the body is where we experience states of well-being, it is the way in which we flourish as humans, it is the medium through which we interact with others, and it is the way in which we execute our agency, that we have such a broad and all-encompassing right over our own bodies ... [bodily] interactions, touches and exchanges gain their value and meaning largely through being chosen, valued and cherished by an individual. It is the right to exclude and the decision to include that give value to the touching that is wanted and desired. This explains why the same act, say sexual intercourse, could be

life-enhancing when desired, but soul-destroying when not chosen. If there was no right to bodily integrity and so no right to exclude, the right to invite would lose its value.

On this conception, whilst the body and the corresponding right to bodily integrity are plainly closely connected to one's physiological systems, they are not limited to them – and the legal right protected by the trespass to the person torts carries significant normative weight that arguably ought to transcend the physical and virtual worlds that one inhabits. The authors argue that, as the metaverse increasingly contributes to and constitutes users' subjective experience, protection of bodily integrity in this context correspondingly becomes more important.

## 4. The current law

In this section, the current law on trespass to person torts will be explored to identify the extent to which the existing legal framework already regulates metaverse activity.

### 4.1. The tort of battery

The tort of battery is committed where there is 'the least touching of another in anger' (*Cole v. Turner* 1704, 108), though 'anger' in this context is not to be interpreted literally; even placing a hand on somebody to assert superiority could be a battery (*Ashton v. Jennings* 1674), or kissing somebody without consent (*R v. Chief Constable of Devon and Cornwall* 1982). Indeed, it has been said that 'no one in Britain, no one, can justify deliberately touching even a hair on [a claimant's] head' (Weir 2004, 322).

At times it has appeared that the scope of the tort of battery may have been somewhat narrowing, but the direction of travel in the case law has not always been clear. In *Letang v. Cooper* (1965), Lord Denning argued that the defendant must have intended to injure the claimant in order for the claimant to succeed on a claim (at 239-240). This was rejected in *Wilson v. Pringle* (1987) where it was established that, in battery, '... intention to injure is not essential ...' (at 249), though '... there must be something in the nature of hostility' (at 250). Tony Weir (2004, 109) then went on to say that the hostility requirement in *Wilson v. Pringle* was 'nonsense', and in *Re F* (1990, 73), Lord Goff also disapproved of the requirement, adding 'I respectfully doubt whether that is correct.'

What is clear is that the tort of battery remains broad in scope, and the threshold is low. Although the courts have not always explicitly acknowledged this, the authors contend that this has to do with the instinctive, normative weight of the right to bodily integrity – a right that has for some time been recognised as protected under the European Convention on Human Rights (*R (on the application of DJ) v. Mental Health Review Tribunal* 2005, para 132). It is a right, the infringement of which clashes violently with 'folk morality' (Weaver 2016, 1), and the tort of battery exists not only to offer a remedy in appropriate cases but, as importantly, to pre-emptively deter conduct that might interfere with it.

Another key ingredient in the tort of battery is that the contact must be the *direct* consequence of the defendant's positive act, though again the term 'direct' has been interpreted broadly by the courts. In *Scott v. Shepherd* (1773), a defendant threw a firework into a marketplace and – despite the fact that two stallholders caught it and threw it away – the defendant was still liable for battery to the plaintiff, who was injured when the firework eventually exploded. Similarly, in *DPP v. K (A Minor)* (1990), a schoolboy was found liable for the injuries

of another pupil when he put acid into a hand-drying machine. In both cases, there is arguably in fact no direct contact between the defendant and the claimant at all, and yet the courts have relied upon the foreseeable consequences of the defendant's actions in satisfying this requirement. In *Letang v. Cooper* (1965, 239), Lord Denning argued that the direct requirement should be replaced with a consideration of whether the consequences of the defendant's actions were intended or not. Some jurisdictions have even gone so far as to gradually, and perhaps unconsciously, remove the requirement of directness altogether (Trindale 1982, 217). As such, there is arguably considerable scope within the existing case law for the 'direct' requirement to evolve along with the technology.

In the metaverse context, it is possible to conceive of an argument to the effect that the direct requirement of the tort of battery might be satisfied by *virtually triggered* contact, particularly given the increasing realism that technological advances are able to achieve. There already exists haptic clothing, which can '... convey haptic sensations, which represent the presence of [virtual objects] through physical contact, to the user' (Furukawa et al. 2019, 49), and 'a VR add-on for headsets that can deliver ultrasound waves to the mouth, allowing users to feel sensations in the lips and teeth' (Noval and Maaruf 2024, 89). This technology will inevitably become more advanced with time, to deliver an increasingly multi-sensory experience (Harley et al. 2018). If it is possible to smell, touch and taste in a virtual reality setting, this will surely increase an individual's capacity to anticipate, fear, and experience pain in that context, and under such conditions the rationale for distinguishing between virtually triggered touching and that caused by more direct, physical means is difficult to identify.

Indeed, there would appear to be no meaningful distinction between throwing a physical object at a person (*Scott v. Shepherd* 1773), removing a chair from behind a person with the aim of causing them to fall (*Dodwell v. Burford* 1670), and operating an electronic device to intentionally trigger the communication of code over the Internet in such a way as will cause a person to experience unwanted physical sensations, or even pain. Reports of physical harm caused by digital means of this kind are already starting to emerge (Duncan 2019) and, as such, it is not difficult to envisage a time in the future when such an argument might reach the courts in the context of a claim such as Charlie's.

For Dylan's actions to give rise to the tort of battery, a court would need to be persuaded either: that virtually inflicted unlawful force upon an actual person (for example, via haptic clothing) was sufficiently direct for the purposes of the tort; or, alternatively and even more controversially, that the infliction of unlawful force upon the virtual representation of a person was equivalent to the infliction of unlawful force upon an actual person – a sort of 'trespass to avatar' (Coppo 2024, 86).

On the former, Coppo argues that there may be room for a remedy when '... the level of immersivity offered by the metaverse platform is pushed so far as to transfer the sensations felt by the avatar to the player's body, as enabled by certain impulse-based technologies ...' (Coppo 2024, 96); but this is surely a question of degree. At one end of the spectrum, if the most significant sensation that Charlie feels is something analogous to the vibration of a handheld controller, it may be difficult to persuade a court that her right to bodily integrity has been infringed by Dylan's contact. Game consoles have featured this kind of technology for many years, and by holding a controller, a user almost certainly anticipates and consents to sensations of this kind at any point, whether triggered by another user or not. At the other end of

the spectrum, if Charlie has a neural link implant in her brain that enables her to control her avatar with her mind and to experience the metaverse as if it *is* her reality, perhaps even experiencing pain on impact, then it becomes almost impossible to distinguish between Dylan's contact and contact made in the physical world, particularly given the threshold for contact is so low.

Of course, many possibilities exist between these two extremes. Haptic clothing, ultrasound headsets, and other similar physical attachments, give the user the potential to simulate physical reality to a greater or lesser extent, and the extent of that simulation is within the user's control. But it cannot be said that a user simply consents to experience such sensations as the wearable technology they have chosen can facilitate, any more than a decision to wear a revealing outfit in the physical world indicates consent to sexual contact.

The tort of battery does exclude from its scope actions that are acceptable in the ordinary conduct of life (*Wainwright v. Home Office* 2003), and the question of consent in Charlie and Dylan's case surely depends heavily on whether Dylan's conduct is deemed to be acceptable in the context of the aims and purposes of the particular metaverse environment within which they are interacting. If, for example, virtual combat was a normal and widely anticipated feature of this space, it would be much more difficult to establish the tort than if the virtual world more closely resembled everyday life, or perhaps had explicit rules prohibiting violence.

Another key question must be whether or not Dylan appreciated that any virtual contact would trigger physical sensations for Charlie, since the tort requires that the defendant intended to apply force or was at least careless in this respect (*Fowler v. Lanning* 1959). Though proving this as a matter of fact may not be straightforward, if a court was persuaded Dylan knew or ought reasonably to have known that striking his virtual bat across the back of Charlie's avatar would deliver significant physical sensations that Charlie did not consent to, the authors argue that this should be capable of giving rise to the tort of battery.

In the absence of haptic clothing or similar technology, where a user experiences no physical sensations at all, the prospect of establishing the tort of battery seems very remote indeed. However, there is at least the theoretical possibility of an argument that the virtual representation of a person in the metaverse (their avatar) is the '... site, location, or focal point ...' of the user's subjectivity and thus should in and of itself be protected by the right to bodily integrity (Herring 2017, 570). Mengual (2024, 126) notes that users may 'develop emotional attachment for their avatars', and Coppo (2024, 89-91) explores the extent to which one or more avatars may become part of a user's identity.

Of course, not all users in all metaverse contexts will identify with their avatars to the same extent, and indeed – as has been the case for many years with predecessor Internet communities (Hu, Zhao and Huang 2015) – some may be attracted to the metaverse precisely because it allows them to adopt a distinct identity that is far removed from their own, physical identity (Steiner, 2025/1993) or even because it is more temporal, and allows them to continually begin life anew. Whether or not an avatar has become a key part of a user's subjectivity or identity may therefore be a question of fact to be determined in a given case. However, in any event, the authors argue that the question of whether or not battery can be committed in the metaverse without any physical sensation in the actual world is likely to be moot, since a user who wishes to argue that

their avatar has become part of their subjective experience is also highly likely to be a user of immersive, sensory technology.

#### 4.2. The tort of assault

Assault is 'an act which causes another person to apprehend the infliction of immediate, unlawful force on his person' (*Collins v. Wilcock* 1984, 1177). Perhaps least controversially then, where metaverse technology serves merely as an electronic communication method, which is used by one user to in some way invoke such apprehension in another, then this has the potential to give rise to tortious liability.<sup>11</sup> Consider for example the possibility that one metaverse user (the defendant) indicates to another (the claimant), through audible speech, written text, and/or some other visual representation, that they are about to break into their *actual* home and cause them some kind of *actual*, physical harm. In this example, the use of metaverse technology by the defendant is merely incidental to, rather than an instrumental part of, the tort. The new technology constitutes only a further 'mode[] of violation' (Coppo 2024, 82), and existing principles can be applied with relative ease.

Indeed, there is no requirement in the tort of assault that the defendant and the claimant are physically present in the same location. In the criminal case of *R v. Ireland* (1998), which is often cited in tortious claims, the defendant was found guilty of assault committed against three women, following a series of late-night, silent, phone calls that he had made to them. It was held that even this silent, distant communication was sufficient to invoke in the victims the apprehension of the immediate infliction of unlawful force upon their person. The defendant's use of the victims' landline telephones meant that he was able to be sure that they were at home, and – as far as the victims were concerned – the defendant could quite conceivably have been located nearby, providing the requisite degree of imminence to the implicit threat.

It seems therefore that in order for the tort of assault to be established in circumstances where the metaverse is used as a means of communication of the threat only, the victim would need to demonstrate that there was a similar degree of proximity. Since, unlike the landline phone call in *R v. Ireland*, users are able to access metaverse spaces from anywhere in the world and will often enjoy a degree of anonymity in doing so, this may be a not insignificant hurdle for a victim to overcome. It is well-established that the tort of assault will not be committed where the claimant knew that the defendant did not have the means of carrying out any such threat (*Stephens v. Myers* 1830, *Mbasogo v. Logo Ltd* (No 1) 2007). In *Thomas v. National Union of Miners (South Wales Area)* (1986), claimant miners who crossed a picket line in the face of verbal abuse from striking colleagues had their claims for assault denied on the basis that they crossed the picket line under police guard, and that the defendants therefore had no means of carrying out their threats at that time, and thus there was no risk of *immediate* harm. As such, one could argue that it will only be in the limited circumstance where the metaverse victim is personally known to the perpetrator, and/or their current location is otherwise identifiable, that the tort of assault may provide a remedy for the perpetrator's threat.

However, with some imagination, it is possible to see how the opposite argument could be made. Firstly, under the existing case law, there is no requirement that the threat actually be carried out (*R v. St George* 1840), or indeed that the perpetrator even

necessarily has the *means* of carrying out their threat (it would be sufficient that the claimant believed that they did so (*Stephens v. Myers* 1830)). Since there is a theoretical possibility that a user with the requisite know-how might be able to trace another user's physical location through the technology that they are using, whether or not a defendant in fact *has* this knowledge is arguably moot, and threats of violence in the metaverse may have the requisite immediacy after all. Therefore, in this limited sense at least, it appears that the tort of assault can be committed in the metaverse, when a threat is reasonably interpreted as being a threat to the user's physical body, and the victim has some reasonable grounds for believing that the perpetrator is able to establish the physical location of the victim.

Whether or not the tort of assault might be committed when the threat is to the claimant's *virtual* presence only, is less certain, and depends upon the issues discussed above in relation to the tort of battery. Nevertheless, if a court were to be persuaded that by tapping his virtual baseball bat into his virtual palm, Dylan intended Charlie to apprehend the actual infliction of unlawful force (i.e. he was aware that Charlie was wearing technology that would allow her to experience physical sensations that she did not consent to), or was at least careless in this regard (*Bici v. Ministry of Defence* 2004), this may be sufficient to give rise to the tort of assault.

#### **4.3. The tort of false imprisonment**

False imprisonment is defined in *Collins v. Wilcock* (1984, 1177) as 'the unlawful imposition of constraint on another's freedom of movement from a particular place'. This broad definition envisages that any conduct on the part of a defendant, which in any way interferes with a claimant's right to freely move about as they please, might give rise to the tort, and that its application is not limited merely to situations in which the claimant is locked up within a single room or prison cell. A person can even be imprisoned without knowing it (*Meering v. Grahame-White Aviation Co* 1919, 53-54).

However, the tort is subject to some tight restrictions. For example: *Bird v. Jones* (1845) stipulates that any constraint on a claimant's freedom of movement must constitute a *complete* restriction; *Iqbal v. Prison Officers Association* (2009) confirms that the defendant's conduct must have been intentional; and *Austin v. Commissioner of Police for the Metropolis* (2009) demonstrates that the tort will not be established where the court considers that the defendant had a lawful excuse for restricting the claimant's movement. On intention, it is worth noting that whilst the defendant needs to have intended to restrict the victim's freedom of movement (or at least have been subjectively reckless in this regard), they do not need to have intended to do so unlawfully. For example, in *R v. Governor of Brockhill Prison (No 2)* (2001), a prison governor held an inmate for longer than intended due to a miscalculation of the length of the claimant's prison sentence – the claim for false imprisonment was successful even though the governor did not intend to hold the claimant for longer than the sentence awarded.

Another requirement of the tort, is that the claimant must not have had a reasonable means of escape (*Bird v. Jones* 1845), though *Walker v. The Commissioner of the Police of the Metropolis* (2014) demonstrates that even a momentary confinement will be sufficient – in that case the Court of Appeal found that a claimant had been technically falsely imprisoned in a doorway for a few seconds prior to arrest. As with battery then, it is evident that



even the most modest unlawful infringement of the right to bodily integrity will be protected by the tort of false imprisonment. Blocking another's path for just a moment may not instinctively feel like imprisonment, but the courts are willing to accept that it meets the requirements of the tort.

If Charlie and Dylan's interaction had taken place in the *actual* world, a claim for false imprisonment would seem to be straightforward. Dylan self-evidently intended to restrict Charlie's movement by locking the door as he left the room, and he had no obvious lawful excuse for doing so. Additionally, ten minutes would certainly have been sufficient to constitute a constraint on Charlie's freedom, and the fact that the windows and doors were locked would satisfy the requirement that Charlie had no means of escape.

However, for the tort to be made out in the virtual context, Charlie would need to argue that the restriction of her freedom of movement was *complete*, and this is likely to be a very significant hurdle. The fact that Charlie could, in theory, have removed her headset, or perhaps even simply exited the particular application that she was using, would seem to fatally undermine any such argument.

The prospect of a claimant overcoming this hurdle in a relevant claim in the immediate future would seem to be slim. Such arguments depend upon new conceptions of reality, freedom, and rights to bodily integrity, which would likely stretch the existing law further than would feel comfortable for even the most progressive of judges. However, as the technology and its use continue to develop, it is not inconceivable that a claim could be brought on this basis, and the existing law would appear to provide a suitable foundation for such a claim. In increasingly immersive and pervasive virtual worlds, and particularly in the light of Herring's broad conceptions of 'the body' and 'bodily integrity', it is at least arguable that the law should also recognise an individual's right to move around virtually on the same basis, and offer a remedy in circumstances where *deliberate* action is taken by a third party to restrict that right. If, as it has for Charlie, the metaverse environment becomes so pervasive as to come close to substantially constituting the site, location, or focal point of a user's subjectivity, then the rationale for distinguishing between a virtual restriction of this kind and a physical restriction of the kind envisaged by the tort, becomes weaker. The case for applying the tort in these circumstances arguably becomes even more compelling in circumstances where – for example for reasons of disability – the claimant's freedom of movement in the *actual* world is already severely inhibited.

Therefore, whilst Dylan's actions may not on the current law give rise to the tort of imprisonment, the scenario provides some food for thought, and the authors can envisage a time in the (admittedly somewhat distant) future when the argument for extending the law in this way cannot be easily ignored.

#### **4.4. The tort in *Wilkinson v. Downton***

*Wilkinson v. Downton* (1897) established that harm (physical or psychiatric) that is inflicted indirectly but nevertheless intentionally, may give rise to tortious liability. Here the defendant falsely told the claimant that her husband had been involved in an accident and had been seriously injured. The defendant later claimed this had been a joke. As a result of the defendant's actions, the claimant suffered physical and psychological reactions. Mr Justice Wright outlined three elements that must be satisfied to establish what has become



known as the tort in *Wilkinson v. Downton*; the tort requires: (1) a wilful act; (2) calculated to cause physical harm; and which (3) does in fact cause physical harm.

However, the precise scope of the tort is unclear and Lord Hoffmann has argued that it 'should be allowed to disappear beneath the surface of the law of negligence' (*Wilkinson v. Downton* 1897, para 41). In *Khorasandjian v. Bush* (1993) it was established that wrongful conduct must cause physical injury or recognisable psychiatric harm – as distinct from mere emotional distress – and *Wainwright v. Home Office* (2003) suggested, on the question of intent, that the defendant must, at the very least, have been reckless as to whether they might cause harm. More recently, the Supreme Court in *Rhodes v. OPO (by his litigation friend BHM) & another* (2015) has clarified that a defendant must have intended to cause some physical harm, or severe mental distress, and that recklessness is not sufficient, albeit their Lordships were not united on this point. Whether or not Charlie would be able to satisfy these conditions is unknown, but it does at least provide another potential route to liability in this new context.

## 5. Alternative routes to a remedy

The foregoing section outlined the circumstances in which a metaverse user might now or in the future be able to advance an argument that unwanted human contact in the metaverse gives rise to a claim in one or more of the trespass to the person torts. Clearly, however, these torts are not the only means by which a user might obtain a remedy in respect of unwanted virtual human contact, and this raises a question as to whether the application of these torts in this new context is strictly necessary. This section briefly considers some of the alternative options that might be available to such claimants.

In cases where contact is an undeniable breach of the platform provider's own rules, and these are validly incorporated within the EULA, there may exist the possibility of a contractual claim by one user against another, on the basis that mutual obligations may have been created through the common agreements that they have entered into with the provider.<sup>12</sup> Alternatively, where this is possible, bringing a breach of the EULA to the platform provider's attention in the hope that it might enforce a virtual penalty of some kind on the offending user would have obvious time and cost advantages as compared with legal action (Coppo 2024, 95). However, given the potential for a multiplicity of largely user-created metaverses, it is likely that there will be many users who find little in the platform's terms to support such a claim, and in any event a provider may simply be unable and/or unwilling to come to a user's aid. Inter-party contractual and/or in-world remedies therefore cannot offer a complete solution.

In some cases, it may be possible to seek a remedy from the third-party platform provider itself, on the basis that it has failed to take appropriate steps to prevent the unwanted contact. However, Infantino and Bussani (2024) evaluated the EULAs of nine leading providers, and found them to be laden with obstacles for users seeking a remedy from the platform, ranging from exclusions or limitations of liability, through to jurisdiction and governing law clauses that make proving and enforcing any claim against the platform provider very difficult indeed, particularly given that many platform providers are domiciled in the United States, where enforcement is notoriously challenging. As they put it (at 300):

... companies are very careful to specify that, although they may control what users do, they are under no duty to do it, and consequently they are not liable for any content and behaviour by users or third parties ... they cannot be held liable to users, whether in contract, warranty, tort, product liability, strict liability or any other theory, for any damages arising out of the use of the website, platform or service.

Chawki, Basu and Choi (2024, 20) have argued that platforms ought to play a more active role in regulating user interactions, and develop appropriate systems of moderation to ensure users are kept safe whilst using their platforms, and the Online Safety Act 2023 does suggest that there is some political will domestically in the UK to try to make online service providers take more responsibility in this way. One distinct advantage that platform providers will have in this respect is immediate access to valuable evidence (for example transcripts or even recordings of the actual user interactions) that might help the provider to determine whether rules have been broken and/or rights infringed – though this carries with it significant data privacy concerns that may also warrant additional regulation (Kalpokas and Kalpokien 2023, 98-100).

More recently, however, Meta announced that Facebook and Instagram would be removing moderators who have responsibility for fact-checking posts on these social media sites in the interests of free speech (McMahon, Kleinman and Subramanian 2025). Whilst this is moderation of a different kind to that under discussion in this paper, it is a move that indicates that large, international platform providers may be resistant to taking on more responsibility in this space. Either way, at the time of writing, a victim of unwanted virtual human contact is unlikely to receive much support from the provider of the relevant platform.

Another potential option for victims, particularly where virtual contact in the metaverse is obviously deliberately malicious and/or sexual in nature, is to explore routes to *criminal* liability,<sup>13</sup> and the victims of any associated crime may in some cases obtain compensation for the harm that they suffer, for example through a criminal compensation order.<sup>14</sup> It is acknowledged, therefore, that there may be some cases of unwanted virtual human contact in the metaverse where the victim is able to obtain sufficient justice through the criminal law alone. In the context of sexual crimes specifically, Chawki, Basu and Choi (2024) provide a useful and detailed analysis of some of the relevant legal issues.

However, the purposes of the criminal law (most obviously the punishment of offenders) differ from the purposes of tort law, and as a result the criminal justice process on its own arguably does not sufficiently safeguard the rights to bodily integrity that all citizens enjoy. For example, since the severe consequences of criminal liability quite properly require the prosecution to prove 'beyond reasonable doubt' that the defendant is guilty (*Woolmington v. DPP* 1935, 481), there are likely to be a great many victims whose cases do not lead to criminal prosecution, but who are nevertheless deserving of a remedy. The trespass to the person torts operate under a lower standard of proof,<sup>15</sup> and recognise a broader range of harms, thereby making remedies accessible to a broader range of victims, encouraging a culture of responsibility, and ultimately securing all-important rights to bodily integrity. Additionally, the *mens rea* requirement of most criminal offences requires the prosecution to prove that the defendant intended the consequences of his or her actions, which

similarly constitutes a significant practical difficulty as compared with the trespass to the person torts, being actionable *per se*. As such, criminal law is not a panacea for victims like Charlie.

As such, whilst other routes to a remedy exist, the trespass to the person torts still have an important role to play in protecting the right to bodily integrity, howsoever conceived.

## 6. Conclusions and recommendations

It appears then that in a wide range of situations, even on the current law, metaverse activity may give rise to at least the germ of an argument for a claimant within the trespass to the person torts and – as the technology and its use develops – the volume, credibility and persuasive force of such arguments are likely to increase. Arguments of this kind raise philosophical and empirical questions about the nature of reality, the human experience, and bodily integrity, as well as normative questions about the extent to which the law of tort should offer a remedy in these novel circumstances.

The authors envisage a future in which the normative justifications for the trespass to the person torts apply as strongly in the *virtual* world as they do in the *actual* world. Generally speaking, the torts are actionable *per se* and depend on a rights-based model of tort, which already recognises and gives protection from even the most modest interference (Honoré 1995), including that which is arguably far less impactful than the virtual contact described in this paper has the potential to be. Therefore, absent any dilution of the right to bodily integrity more broadly, the eventual extension of that right to the virtual domain seems almost inevitable – and the right to bodily integrity appears to be here to stay. In *Parkinson v. St James and Seacroft University Hospital NHS Trust* (2002, para 56), Lady Hale described it as ‘... the first and most important of the interests protected by the law of tort.’ It must arguably therefore be carefully and purposefully protected from erosion as the human experience evolves with the technology.

As virtual worlds become increasingly compelling, the distinction between actual bodily integrity and virtual bodily integrity fades, and the need to address the new technology intensifies (Ligon 2022). What makes a virtual world compelling though is not necessarily how closely its sensory experience resembles the actual world, but whether it gives its users meaning – and such meaning is likely to be created through collaborative, goal-oriented projects, completed with other users (Golub 2010, 39). In this sense, even a virtual world that is designed to look very different (and therefore which is easily distinguishable) from the actual world, could still be the venue for harmful and invasive contact. As users begin to engage with the metaverse across multiple aspects of their lives, they are increasingly likely to feel a sense of ‘home’ within the virtual domain (Ramshaw 2020), and thus require protection of their subjective experience within that space.

Furthermore, many examples of *virtual* contact are capable of causing *actual* harm (Lipton 2011, 1112-1113). Neural links and haptic clothing are the most obvious *physical* weapons, but beyond these technologies exists the possibility of a personal and emotional attachment to one’s avatar capable of leading to very real suffering when the avatar itself is threatened or harmed (Wolfendale 2007, 118). Additionally, users may become unable to easily distinguish between the actual and the virtual (Dedezade 2021), and may find it difficult to switch off a system when it is the only system that

they know. The potential for lasting, psychiatric harm in this context is therefore also highly significant, and increasing.

As metaverse use expands, so too will the opportunity for infringements of the right to bodily integrity of the kind discussed in this paper. Not only does corrective justice demand that the perpetrators of such harm be the ones to remedy it, but the authors contend that the case for compensating victims where they suffer genuine loss, and providing a route to be vindicated in any event, applies equally to contact triggered virtually as physically. Crucially, tortious remedies may also go some way to deterring potential defendants from acting in ways that might deliberately or even inadvertently interfere with the right to bodily integrity. It is therefore necessary to keep under review the sufficiency of existing legal rules in this context, and to keep an open mind about additional law and policy developments that may be needed to ensure that individuals are sufficiently protected.

At the time of writing, the issues raised in this paper may seem somewhat fantastical, and there can be no doubt that there will be significant evidential and enforcement challenges associated with the cross-jurisdictional nature of the environment. Speaking in the context of criminal law, Lastowka and Hunter (2006, 135) argue that law should be kept 'at a safe distance' from virtual worlds, because law and policymakers rarely understand those worlds and may not fully appreciate the impact of any regulatory intervention. However, the credibility of such a position may not last much longer, and the trespass to the person torts provide one example of the multiplicity of issues soon likely to find their way to the courts. These torts exist to protect individuals' rights to bodily integrity, and as the qualitative difference between physical contact in the actual world and virtual contact in the metaverse becomes smaller, it will become increasingly difficult to deny that the same rights should also be extended to those who live and experience their lives in a predominantly virtual space.

## Notes

1. The authors would like to thank Dr David Pearce for his helpful comments on an earlier draft of this article. Errors and omissions remain the authors' own.
2. On the case for conceptualising the physical world (as opposed to the virtual world) as the "actual" world, rather than the "real" world, see Boellstorff (2008, 63).
3. It should be noted that this incident was not the first or even most infamous of its kind, but merely a recent example. For a much earlier example, when the "reality" of the virtual world was far less authentic than it is today, see Dibbell (2005).
4. See Liberati (2017).
5. See, for example, Cheng (2023), Gucluturk (2023) and Kalpokas and Kalpokien (2023).
6. Though note that even this defence has its limits, and will not apply where conduct goes beyond what could reasonably be expected to have been consented to. See *R v. Barnes* (2004).
7. On the significance and importance of these rights in English law, see Herring (2017).
8. Cane (1982) provides a full discussion.
9. In modern times, doubt has been cast on whether corrective justice remains an aim of tort law, given the widespread insurance protection from which many categories of defendants benefit (Atiyah 1996).
10. Whether the law of tort does in fact achieve this effect is contested (Cardi, Penfield, and Yoon 2012).

11. The same could be said of the tort of harassment (see s.3 of the Protection from Harassment Act 1997) where a defendant uses a metaverse platform to bestow unwanted attention upon a claimant, in a way that feels conceptually indistinguishable from (say) sending persistent text messages, or even letters, with sufficiently disturbing content.
12. For example, see *Clarke v. Dunraven* (1897).
13. In the UK context see for example the Malicious Communications Act 1988, the Sexual Offences Act 2003, and more recently the Online Safety HL Bill (2022-2023), para 87.
14. Again, in the UK context see the Sentencing Act 2020, s 133.
15. See Lord Reid's formulation in *Bonnington Castings Ltd v. Wardlaw* (1956, 619).

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