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The rise of digisexuality: therapeutic challenges and possibilities

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ABSTRACT

Radical new sexual technologies, which we term "digisexualities," are here. As these technologies advance, their adoption will grow, and many people may come to identify themselves as "digisexuals" – people whose primary sexual identity comes through the use of technology. Researchers have found that both lay people and clinicians have mixed feelings about digisexualities. Clinicians must be prepared for the challenges and benefits associated with the adoption of such sexual technologies. In order to remain ethical and viable, clinicians need to be prepared to work with clients participating in digisexualities. However, many practitioners are unfamiliar with such technologies, as well as the social, legal, and ethical implications. Guidelines for helping individuals and relational systems make informed choices regarding participation in technology-based activities of any kind, let alone ones of a sexual nature, are few and far between. Thus, a framework for understanding the nature of digisexuality and how to approach it is imperative.

Introduction

On 23 March 2016, the world's largest adult site, Pornhub, launched a free virtual reality (VR) streaming channel. Five days later, Oculus released its Oculus Rift VR headset. Now, just over a year later, the amount of pornographic content available for the Rift and its competitor, the HTC Vive, is large, and growing steadily. Beyond mere passive porn, users of VR headsets can access interactive VR games such as FemDomination, or they can enter massively multi-player online role-playing games such as 3dx Chat, where real people interact sexually with one another through avatars (see Witt, 2017).

Though VR is still at an early stage of its development, it is safe to say that the era of immersive virtual sex has arrived. VR represents the latest, and certainly not the last, development in what we are calling digisexuality: sexual experiences that are enabled or facilitated by digital technology (McArthur & Twist, 2016). In the coming years, sexual technology will become more sophisticated, immersive, and appealing. Many people will find that their experiences with this technology become integral to their sexual identity,

and some will come to prefer them to direct sexual interactions with humans. We propose to label those people who consider such experiences essential to their sexual identity, "digisexuals."

As digisexualities become more widespread, and as more people openly identify as digisexuals, the new technology will provoke both alarm and stigmatization among the media and the public. This is unfortunate. The purpose of this article is to help readers get a sense of the nature of such sexual technology, and its possible impacts. We hope that by understanding it better, people will come to see that many of the concerns are misplaced, and that neither digisexualties, nor a digisexual identity, should be stigmatized. We also hope to provide a framework for clinicians to use when working with individuals and relational systems around digisexual desires and problems (see Hertlein, Nakamura, Arguello, & Langin, this issue, for an additional review of a framework for working with clients in romantic relationships around technology-related concerns).

Literature review

Digisexuality is far from new. The growth of digital technology and its use for sexual purposes have been intimately interconnected throughout its history. We believe, however, that we are entering a new, distinct phase of this process. With this in mind, we define two distinct waves of sexual technology. The "first wave" has reached a state of relative maturity and stability, though it certainly continues to evolve, and revolutionary developments remain possible. The "second wave" is only now emerging, and, though certain trends are clear, it is difficult to make predictions about its direction.

First wave digisexualities

The defining feature of first wave digisexualities is that the technology mediates a connection with a human partner (McArthur & Twist, 2016; Twist, 2017a). Most first wave digisexualties serve to facilitate communication between human partners – though in the case of some of these technologies, such as traditional digital pornography, the human partner is technically not present to or even aware of the user. We should not imagine that the development of first wave digisexualities is complete. On the contrary, many of these technologies continue to develop, and new ones continue to emerge.

As we have said, traditional digital pornography belongs in the first wave, as do live camera and live sex chat sites. The first wave also includes direct communication technologies. There are many technologies such as Skype and Snapchat that are not specifically designed for sexual interaction, but which are frequently used for this purpose. In addition, there are numerous communication technologies designed specifically for sex, for instance those that allow for physical interaction between partners. There exist a number of "teledildonic" technologies that allow users to "feel" one another virtually, through sex toys that are controlled remotely by a partner or that are responsive to a partner's movements. Teledildonic devices exist now, though the technology continues to advance. They are being used not just by people in relationships, but also by sex workers who can use them to interact with clients virtually, from the safety of their homes.

Also, part of the first wave are networking technologies such as chat groups, social media, Internet dating sites and applications (apps), and virtual worlds such as Second

Life in which people can interact with one another. Most people have some acquaintance with first wave digisexualties. Though many of them seemed strange when they were first introduced, they have by now become widely adopted, and have been integrated into our relationships and our dating lives. They have certainly had an impact on how we approach our relationships, and this remains the subject of extensive study by scholars across disciplines like those in the area of couple and family technology (CFT) studies (Hertlein & Blumer, 2013). There are many (if conflicting) studies on the possible impact of Internet pornography, while Tinder's role in promoting hook-up culture is currently the subject of much debate. We still do not fully understand people's motivations in using Internet pornography or dating apps, and it will take time to obtain a clear picture of how these technologies affect people and their relationships (see Owens, Behun, Manning, & Reid, 2012; Sumter, Vandenbosch, & Ligtenberg, 2017). Less dramatically, anyone who attempted a long-distance relationship before Skype and FaceTime will attest to the difference such technologies make in these situations (see Peterson & Twist, this issue, for more on the role of technology in a long-distance romantic relationship).

However, we assess the impact of first wave digisexualties, we are unquestionably already a society in which technology is at the very least a member of our families and/or relationships (Blumer & Hertlein, 2015; Hertlein & Blumer, 2013), and for some may be a part of one's erotic orientation via a digisexual kink or fetish, for instance. However, our actual sexual experiences have not changed significantly as the result of first wave digisexualties. It remains something humans do together, or alone looking at pictures, just as they did in the analogue era. We believe, however, that this may be changing.

Second wave digisexualities

The defining feature of second wave digisexualities is their immersivity. Either no human partner is present, or if they are, their presence is not essential to the experience (McArthur & Twist, 2016; Twist, 2017a). Second wave digisexualties are at an early stage of development. They are advancing, however, and quickly. Right now, the most prominent second wave digisexualties are sex robots (sexbots) and VR sex. Each of these promises a sexual experience that is qualitatively different from that offered by first wave technologies.

Sex robots have attracted considerable attention from the popular media and have appeared extensively in recent films and television programmes, the Home Box Office series "Westworld" being a notable example. The first academic book devoted to the topic has recently appeared (Danaher & McArthur, 2017). However, realistic sexbots do not yet exist. Sex dolls are available, some of which offer basic speech and movement. Yet, we are some distance from a sexbot that can replicate to a reasonable degree the experience of partnered sex. But progress is underway, and we can say with some certainty that the invention of a realistic sexbot is not far in the future.

As it stands, people view the invention of sexbots with some trepidation. In February 2013, the firm YouGov conducted a poll, sponsored by the Huffington Post website, that asked people about their attitudes towards robots. It was a relatively large (one thousand adults) sample. One question asked: "If it were possible, would you ever have sex with a robot?" Only 9% responded in the affirmative (YouGov, 2013). Eleven percent replied with uncertainty, and the remaining 81% (figures were rounded by the polling firm) replied in the non-affirmative. Other surveys have produced similar results (see Lytton,

2014; Nixon, 2015). Overall, it would seem that the majority of people asked, consistently say they would not have sex with a robot. Despite such reservations, there is, as the media interest shows, clearly a fascination with such technologies, and research on them is moving forward. In particular, Matt McMullen, owner of RealDoll, is bringing a product to market imminently.

There is no question, then, that sexbots are coming. Our view is that they will represent a different sort of sexual experience from what existing technologies offer. First of all, people will form an intense connection with their robot companions. Sherry Turkle and others have done research on the intensity of the bond people tend to form with what she calls "relational artifacts" (Turkle, Taggar, Kidd, & Dasté, 2006). Turkle et al. (2006, p. 349) define relational artifacts as "… .non-living objects that are, or at least appear to be, sufficiently responsive that people naturally conceive themselves to be in a mutual relationship with them." Second, these robots will be tailor-made to meet people's desires, and will do things that human partners cannot or will not do (for more on the advantages and challenges of sexbots, see McArthur, 2017). For this reason, significant numbers of people will likely come to use robots as their primary mode of sexual experience. The social and psychological impacts of this development are uncertain, though a recent book offers different perspectives on what these might be (see Danaher & McArthur, 2017).

The other major second wave technology that exists right now is VR sex. VR is "a three-dimensional, computer generated environment which can be explored and interacted with by a person" (Virtual Reality Society, n.d.). VR is qualitatively different from other forms of digital experience thanks to what experts call the "sense of presence" it creates. As one expert explains, "If an implementation of VR manages to get the combination of hardware, software and sensory synchronicity just right it achieves something known as a sense of presence. Where the subject really feels like they are present in that environment" (Virtual Reality Society, n.d.).

In a lecture at the Virtual Futures Forum, Dr Sylvia Xueni Pan explained the immersive nature of VR technology. It creates what she describes as a placement and plausibility illusion within the human brain. As a result of its real-time positioning, 3D stereo display, and its total field of view, the user's brain comes to believe that the user is really present. As she says: "If situations and events that happen in VR actually correlates to your actions and relates personally to you, then you react towards these events as if they were real" (see Lewis, 2016). Once again, we can see that this creates the possibility for people to experience entirely new, immersive forms of sex. In addition to VR pornography, immersive virtual worlds, and multi-player environments can also be created that offer people intense sexual experiences that the real world possibly never could.

Emerging digisexual identity

The future of second wave digisexualities cannot be predicted. Developments in artificial intelligence, virtual worlds, and enhanced reality are all bound to open up new possibilities. We do not propose to offer any speculation about the future of sexual technology, about which we have no particular expertise. We are concerned rather with the social and therapeutic implications, about which we do believe something can be said. In addition, we do believe that, due to the immersive nature of second wave digisexualities, technology may very well move from being a member of our relational systems, or a kink or fetish, to

becoming the basis for a distinctive form of sexual identity – a digisexual identity (McArthur & Twist, 2016).

We draw a distinction between digisexualities, the technologies that allow for sexual experiences, and what we called digisexuals, people who see themselves as possessing a distinctive form of sexual identity. We can think of the distinction between those who merely use digisexual technologies on the one hand, and digisexuals as an identity-group on the other, according to analogies with other sexuality-based identities like those of an erotic orientation (e.g. kinky, fetishest, dominatrix, submissive, sadist, masochist, etc.), relational orientation (e.g. polyamorous, monogamous, polygamous, monogamish, etc.), and sexual orientation (e.g. gay, lesbian, bisexual, asexual, etc.). Many people engage in kinky, non-monogamous, or same-sex behaviour, but only a certain percentage of such people actually link their sexual identity to this behaviour. Thus, we can imagine a future, following the further development of second wave digisexualities, where people identify along a digisexuality continuum, with those at an extreme end considering digisexualities as an integral part of their sexual identity and not as a mere fetish or kink. Such people would identify digisexual experiences as their preferred method of sexual experience and expression, and would often come to see themselves as members of a community of like-minded people. This would make them distinct from those who simply use or have a kink for digisexual technologies, which does not make them digisexuals. Already we can see signs of an emerging digisexual identity among some individuals, as in the case of Zheng Jiajia, who married a robot of his own creation (see The Guardian, 2017).

This development is likely to provoke considerable alarm among social commentators, who will worry about the disappearance of large number of people from the romance market, and about their retreat into a world of digital-only sexual experiences. There has already been much discussion of the Japanese men who allegedly prefer the romantic companionship of video game characters to humans (see Glascock, 2015; Rani, 2013). Digisexuals will undoubtedly face a certain amount of stigma for their identity and related practices, in the way that those with minoritized sexualities and identities inevitably have (see Twist, Belous, Maier, & Bergdall, this issue, for more on the effect of stigmatization on lesbian, gay, and bisexual individuals and on their partnered relationships). However, this stigmatization must be recognized and combated. We believe that we will have a responsibility to respect the identities of digisexuals, and to ensure that these people do not become marginalized as a result of their sexuality and related practices.

We are not advocating a lack of awareness to the risks posed by new and existing digi-sexualties. However, there is a reason to believe that the net effect of these technologies will be positive. They will make it possible for people to experience more sexual pleasure, and to have new sexual experiences. They will also provide access to sexual pleasure for people who have trouble finding human partners. This includes people who are disabled, who live in environments with uneven sex ratios, who live in places where similar-gendered, bondange/discipline-dominance/submission-sadomasochism (BDSM)/kinky, and/or multi-partnered relationships are discouraged or forbidden, and/or those who have psychological issues or a history of sexual trauma that make human relationships difficult (McArthur, 2017). They may also aid people in relationships, by enhancing their sex lives and by giving them access to experiences that make them less likely to engage in non-consensual non-monogamy (or infidelity) (Twist, 2017b; see Hertlein, Dulley, Cloud, Leon, & Chang; and Moyano, Sánchez-Fuentes, Chiriboga, & Flórez, this issue, for more on non-

consensual non-monogamy in romantic relationships). For reasons such as these, we submit that the development of digisexualties and the emergence of digisexuality as an identity are to be welcomed. Next, we offer a clinical framework that can be used to meet some of the challenges they may present.

Clinical implications

It is evident that first wave digisexualties are already here, and ones of a second wave nature are emerging. It is also clear that there are benefits and challenges that individuals and relational systems face in relation to these technologies. Despite the mixed feelings that both clinical providers and lay people may have in relation to digisexualties – this does not make them disappear. For clinicians, this means they need to be prepared to address both the challenges and benefits in the adoption of such sexual technologies (McArthur & Twist, 2016). In order to remain ethical and viable, clinicians need to be prepared to work with clients engaging in digisexualities (Hertlein, 2010; Hertlein & Blumer, 2013). Yet, many practitioners are unfamiliar with such technologies, let alone how to help clients manage them (Blumer, Hertlein, Smith, & Allen, 2014). Thus, what follows are guidelines via the CFT Framework, which was created based on empirical literature and study, to help individuals and relational systems make informed choices and better manage technology-based activities in their lives (Hertlein, 2012; Hertlein & Blumer, 2013). Thus, this is a framework that can be useful in helping clients manage technologies in their individual and relational lives, including digisexualities.

Identifying problematic digisexualities

As with any other problem with which clients present, having a clear problem definition is important in order to effectively work on what needs to be changed. So, what do we mean by problematic digisexualities? It is helpful to break this down on a client-by-client basis, but having a general idea is also helpful, because clients may not present with clarity regarding what they think is a technology-based problem. Digisexualities can become a problem when participation is to the exclusion of one's primary relationship and/or when one's engagement with another person via digisexualiteis is not one's primary partner (Hertlein, 2010; McArthur & Twist, 2016; Twist, 2017a). What is a problem can mean a variety of things, but frequently includes things like digi-based non-consensual non-monogamy (Twist, 2017a), out of control digisexuality behaviours, illegal and/or unethical engagement in digisexualies (McArthur & Twist, 2016). The costs to such digisexual technology-based problems can be to one's primary relationship(s) like as a contributing factor to dissolution, divorce, or distance in the relationship(s), and/or the costs can be to one's individual psyche like eliciting feelings of shame, guilt, and other complicated emotions (Hertlein & Blumer, 2013; McArthur & Twist, 2016). What is most important to consider in relational and sex therapy around problematic digisexualities is whether the behaviour disrupts the intimacy of the primary couple's relationship regardless of how it manifests (Hertlein, 2010; McArthur & Twist, 2016). Thus, our definition of problematic digisexualities involves any disruption to a couple's intimacy that is facilitated, to some degree, by technology-based sexual activities or behaviours (McArthur & Twist, 2016).

The couple and family technology framework

Once a clear definition of what constitutes problematic digisexualities is established, then the way in which the problem is disrupting both the structure and process of a relational system can be explored via the CFT Framework (Hertlein & Blumer, 2013). The CFT Framework is the only framework to date that is rooted in a systemic understanding of human-technology relationships and draws from interdisciplinary scholarship via the fields of family studies, relational and family therapy, computer technology, information systems, media studies, psychology, and communication studies (Hertlein, 2012; Hertlein & Blumer, 2013). The CFT Framework was designed to investigate the effects of technology on the relationships of individuals, couples, families, and relational systems of all kinds (Hertlein, 2012; Hertlein & Blumer, 2013). Through this framework, clinicians can highlight how the ecological elements of digisexualities affect the structure (roles, rules, and boundaries) and process (developmental phase of the relationship, intimacy) of relationships in both beneficial and potentially detrimental ways.

The ecological elements include any element related to technology that influences the structure and process of relationships (see Hertlein, Nakamura, Arguello, & Langin; and Twist, Belous, Maier, & Bergdall, this issue, for more information on managing technology-based ecological elements in relationships). There are seven ecological elements related to technology; namely: acceptability, anonymity, accessibility, affordability, approximation, accommodation, and ambiguity (Hertlein & Stevenson, 2010). If these elements are left unaddressed they can leave relational systems vulnerable to technological harm through damage to the structure and process to said systems (Hertlein & Blumer, 2013). If adequately addressed, however, these elements can be managed in a way that leads to technological exchanges characterized by informed, ethical, and intimacy-enhancing interactions to both the structure and process of relational systems (Hertlein & Blumer, 2013). Thus, clinicians need to be aware of each of the elements and how to address each one in relation to problematic digisexualities as experienced by individuals, and relational client systems. What follows then are examples of digisexualities that are currently problematic, and digisexualities that might become so in the future, in relation to each element.

Accessibility

Accessibility refers to the ease with which one has opportunities and access to technologies for various sexual functions on a daily and unlimited basis from an array of locations (Hertlein & Blumer, 2013; McArthur & Twist, 2016). In the present time, technological access is virtually unlimited from almost any location – homes, workplaces, eateries, planes, schools, hospitals, etc. (Cooper, 2002). Despite such vast access to digisexualities from virtually anywhere at any time, engaging with such technologies in public is not usually socially and/or legally allowed.

Affordability

Affordability refers to the degree to which technologies for various functions are accessible (or not) based on income (Cooper, 2002). The costs can be both direct (e.g. paying for the technology itself) and/or indirect (e.g. paying to learn to use the technology, having the necessary environment to use and store the technology) (Hertlein & Blumer, 2013; McArthur & Twist, 2016). In terms of digisexualities, this can include both the cost of a sexbot or sexdoll

(direct cost) and the training to use such devices and/or the maintenance to continue the use of such technologies (indirect cost). The direct cost alone for a high-end RealDoll is currently between $4000 and $15,000 USD (RealDoll, 2017). Thus, for many average-income earning people, digisexualities such as these are not necessarily affordable in the present time.

Anonymity

Anonymity (see Courtice & Krystelle Shaughnessy; Hertlein, Nakamura, Arguello, & Langin; and Peterson & Twist, this issue, for more on the role of online anonymity in relationships) refers to the ways in which users of technologies for various sexual functions can present themselves in any way they want and are protected from being identified (Hertlein & Sendak, 2007; McArthur & Twist, 2016). This technology-based ecological element "… enhances one's ability to promote any chosen identity" (Hertlein & Sendak, 2007, p. 4). This element can be problematic when the user decides to hide pertinent aspects of themselves in order to pursue a relationship (Cooper, 2002). Anonymity already presents problems in the current time, and in a future of second wave digisexualities problems will most likely continue. For instance, we have robots (in the form of software) already that pretend to be humans online in a first wave digisexualities context, and in a second wave digisexualities context this will most likely continue, but will not merely be contained to online realities, and instead will include ones of an offline reality including in interacting with robots.

Acceptability

The practice of using technologies for various sexual functions once deemed inappropriate in society, but have now become accepted practices are what is meant by the ecological element of acceptability (King, 1999; McArthur & Twist, 2016). In terms of digisexualities, for instance, at one time using an online avatar within an interactive cybersexual environment was not necessarily an acceptable activity, and in the last few years has grown more common and more acceptable, which may one day be similar to engaging in sexual activity with a robot.

Approximation

Approximation refers to the quality with which technologies for various sexual functions approximate offline, real-world situations (Hertlein & Blumer, 2013; McArthur & Twist, 2016). Oftentimes this can mean a blurring of the lines between fantasy and reality (Ross & Kauth, 2002; Tikkanen & Ross, 2003). For instance, in the future, a person who feels compelled to engage in sexual activity with an animal may be able to approximate this activity by engaging in sexual activity with a robotic version of an animal. Approximating this activity with a robot is preferable to having sex with an actual animal (to majority of people across cultures) – as there are not inherently the same issues of consent nor illegality.

Accommodation

Accommodation refers to greater opportunity for one to act a certain way in "real time," but have a different persona when it comes to participation and engagement with technologies for various sexual functions (Hertlein & Stevenson, 2010; McArthur & Twist, 2016). In terms of digisexualities, this may mean that in the future, offline one may not be "out"

about their digisexual identity, but online they may be nothing but their digisexual identity. The management and accommodation between one's offline and online persona in these future contexts will be an ongoing example of what is now termed "electronic visibility" or "e-invisibility" (see Twist, Belous, Maier, & Bergdall, this issue, for more on electronic visibility management in lesbian, gay, and bisexual individuals, and partnered relationships). E-visibility is defined as the need for one, as a sexual minority, to manage the task of monitoring their sexual identity, as well as their relationships online and offline, in the context of a society that is discriminating against them (Twist, Bergdall, Belous, & Maier, 2017). We believe the need to practice such visibility will most likely be one that continues in the near future for sexual minorities like digisexuals as it has and does for sexual minorities of today (i.e. lesbian, gay, bisexual, kinky, polyamorous-identifying people, etc.).

Ambiguity

The difficulty with which one has defining digisexual behaviours and/or activities as problematic is what is meant by the technology-based ecological element of ambiguity (Hertlein & Stevenson, 2010; McArthur & Twist, 2016). In first wave digisexualities there is already ambiguity around what constitutes cheating or non-consensual non-monogamy. For instance, in a recent study of 810 partnered adults, 50% reported that watching online pornography counted as cheating (Thompson & O'Sullivan, 2016), which means that while half of the participants believed viewing adult film content was cheating the other half did not – meaning there is ambiguity around this first wave digisexual activity.

This ambiguity is likely to remain with second wave digisexualities. For instance, returning to the YouGov poll, when respondents were asked, "If it were possible for humans to have sex with robots, do you think that a person in an exclusive relationship who had sex with a robot would be cheating?" 42% said "yes" and 26% said they were "not sure." Only 31% said "no." Again, about half of the respondents believe that sex with a robot will constitute cheating, while the other half do not – meaning there is likely to be ambiguity around this second wave digisexual activity.

Conclusion

To conclude, we believe first wave digisexuality is here, and the second wave is on the horizon. One implication of this is that some consumers of such technologies may come to identify themselves as digisexuals. This prospect notwithstanding, researchers have found that many people have mixed feelings about both current and future digisexualities, and about how they will impact themselves and others, including their romantic partners. Thus, clinicians need to be prepared for the challenges and benefits that come with the adoption of such sexual technologies, so that they may ethically and effectively meet the needs of their clinical co-participants, who may present with problematic digisexualities. To assist clinicians in this process, we offered a brief overview of a framework – the CFT Framework – to help providers guide client systems in making more informed choices regarding participation in technology-based activities of any kind, whether they be digisexual in nature or not.

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