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An independent academic psychologist, based in England, who has written extensively on different areas of psychology with an emphasis on the critical stance towards traditional ideas.

A complete listing of his writings at <http://psychologywritings.synthasite.com/>. See also material at <https://archive.org/details/orsett-psych>.

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## **1.1. FEAR OF BEING SINGLE**

Dating apps offer the opportunity of meeting a romantic partner from a massive choice of people. "However, dating apps are an environment of excessive options and might induce choice overload... Similar to cognitive information overload, choice overload denotes adverse outcomes of excessive choice such as decreased choice satisfaction... Reasons are that excessive partnering options increase the perceived risk of a wrong decision and are difficult to process... Thereby, more options might lead to less favourable outcomes, hence the idiom 'the agony of choice'" (Thomas et al 2022 p1).

Thomas et al (2022) outlined another problem - "fear of being single" (Spielmann et al 2013) - ie: "the perception that there is an abundance of potential partners available may increase the pressure that one has to find the perfect relationship and leaves no excuse for failing to... Thus, the concern of having no success in dating, may be greater under seemingly optimal conditions of partner abundance" (Thomas et al 2022 p1).

Thomas et al (2022) explored these ideas in two studies (a survey and an experiment).

### Study 1

This was an online survey of 667 adults in Austria in December 2019. Questions were asked about dating app use, as well as five items from "Spielmann's Fear of Being Single Scale" (Spielmann et al 2013) (eg: "If I end up [had ended up] alone in life, I will [would] probably

feel like there is something wrong with me"; "I feel anxious when I think about being [or having been] single forever"). Higher dating app use and perception of partner availability were related to fear of being single.

## Study 2

This was an experimental study with 248 Austrian students. The number of dating profiles was controlled by the researchers - low (n = 11), moderate (n = 31), or high (n = 91). The outcomes measures were fear of being single, and partner choice overload (measured by items like, "I am distracted by the excessive number of potential partners available to me"; "I feel that I have seen so many potential partners that I can barely process the information").

Comparing the high and low partner availability conditions, participants in the former reported significantly higher fear of being single, and higher partner choice overload.

Thomas et al (2022) commented that their findings showed "some pitfalls of autonomous choice... in a neoliberal cultural context which emphasises individual agency ('everybody is the architect of their own fortune') over situational influences. This philosophy implies individual responsibility for failure which can be detrimental if individuals blame themselves for failures while in reality, other contextual factors that individuals cannot influence are highly relevant to outcomes of dating app use... Under these circumstances, a limited amount of profiles (under 31) would be beneficial because it would first, not induce overload and second, allow users to blame unsuccessful dating app use on the circumstances" (p8).

## 1.2. PHUBBING AND PPHUBBING

Using a smartphone while in the physical presence of a friend or romantic partner is known as "phubbing" (a portmanteau of "phone" and "snubbing") (Broning and Wartberg 2022). More formally, Roberts and David (2016) defined it as "interruption of your conversation with someone when he or she attends to their cell phone or when you are in close proximity to another but they use their cell phone instead of communicating with you"

(quoted in Broning and Wartberg 2022). Whether the non-user feels bothered or ignored by phubbing varies between individuals.

Another term is "technoference" (McDaniel and Coyen 2016) (portmanteau of "technology" and "interference"), which describes "everyday interruptions in conversations, activities, and time spent with romantic partners due to smartphone use" (Broning and Wartberg 2022 p2). McDaniel and Coyne (2016) found an association between greater perceived technoference and lower relationship satisfaction among married women. Roberts and David (2016) developed the "Partner Phubbing Scale" to measure this (eg: item: "My partner glances at his/her cell phone when talking to me").

Phubbing is more likely among individuals who have a habit of frequently checking their phone, have a "fear of missing out" (FOMO), and a high need to promote themselves on social media, for example (Broning and Wartberg 2022).

Broning and Wartberg (2022) investigated phubbing perceptions among romantic couples (also called "Pphubbing" - partner phubbing) and relationship attachment styles. One hundred and sixty-three heterosexual couples were recruited at a university in Germany in late 2019 (mean age in their 40s). The relationship had to be at least ten years in duration.

The participants individually completed online German versions of the Partner Phubbing Scale, and the "Experiences in Close Relationships-Revised Scale" (ECR-RD) (Brennan et al 1998). The ECR-RD assessed two aspects of attachment - attachment-related anxiety (eg: item: "I often worry that my partner doesn't really love me") and attachment-related avoidance (eg: item: "I prefer not to show a partner how I feel deep down").

Overall, Pphubbing levels were "comparably low"<sup>1</sup>, and their perception did not differ by sex. But Pphubbing was associated with lower relationship satisfaction in men, not in women. This association was mediated by attachment variables - ie: "attachment orientations were strongly connected with relationship satisfaction, with anxious or avoidant individuals feeling less satisfied than secure partners" (Broning and Wartberg 2022 p7).

This study involved long-term relationships, and Broning and Wartberg (2022) noted that "within

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<sup>1</sup> Broning and Wartberg (2022) stated: "The mean age of our participants may be responsible for this, as phubbing generally is found more in younger persons (in our sample and other research...). The fact that few 'generation Y users' (persons who grew up with digital media) and no 'generation Z users' (persons who grew up with portable digital media) were part of our sample..." (p6).

relationships of longer duration, partners have 'co-developed' over a long period of time. Couples with irresolvable differences and low relationship satisfaction may have separated and naturally are not part of our selective sample with an average relationship duration of 22 years" (p6).

### **1.3. FACEBOOK FRIENDS**

On Facebook, users receive friendship requests from unknown other users. How to decide to accept or deny? Common group membership is key (Belentschikow et al 2022).

Belentschikow et al (2022) studied 119 undergraduates in Germany who belonged to one of two theme-oriented closed online Facebook groups. The researchers created a fictional female student called "Anna Fischer" who joined the groups, and then sent individual friendship requests to a number of the participants. Overall, 44 of 53 accepted in one group, and 40 of 49 in the other (85% accepted in total). The participants subsequently were invited to focus groups about Facebook usage, and completed a quantitative questionnaire on the subject.

Nine categories of answer were given for accepting Anna as a friend in the questionnaire. These included "curiosity to look at profile", "networking", and "common interests". "We have something in common" emerged in the focus groups as a key reason/theme, as one participant said: "[It] was very important to me, not only that she belonged to our university, but directly to the group and the course of studies (...). I checked the group members and she was in the group and I knew very few from the whole study courses and thought, it cannot be wrong, simply to get to know people from the course" (p6).

Another theme from the focus groups was "Show me who you are", and visual cues were voiced as important. No photograph was provided on Anna's profile page.

Research on Facebook and social network sites tend by via surveys only with a high risk of social desirability bias. This study observed actual behaviour before questioning participants about their decisions. But there were ethical concerns about the use of a fictitious profile. The researchers justified themselves thus: "It was deemed necessary to confront the participants with their true online behaviour and not just asking them what they would have done under certain

circumstances to avoid an expected forced-exposure-situation and social desirability bias" (Belentschikow et al 2022 p4).

They continued: "In the current case, the deceitful access into the group can be regarded as a violation of the private sphere of the participants. We therefore relied solely on a confederate as soon as the experiment started and had no access to the profile of Anna Fischer. All following actions were conducted by the confederate who already was a regular member of the online study groups. Besides the statistical data, no privacy related data was available to us at all and to the confederate not more than already had been. As soon as the data collection was over, the group was informed about the hidden experiment and all preliminary results were shown prior to the group discussion, which was voluntary. Nevertheless, it must be mentioned that no ethical board was involved here" (Belentschikow et al 2022 p4).

Eynon et al (2008) have described the Internet as a "laboratory for the social sciences", but "ethics in online research methods can appear blurry since different research questions and contexts demand different ethical considerations", admitted Belentschikow et al (2022 p4).

#### **1.4. PARA-SOCIAL RELATIONSHIPS**

Horton and Wohl (1956) introduced the idea of para-social interactions and relationships to describe how viewers feel they have an intimate relationship with a television figure. Horton and Strauss (1957) emphasised the role of the media performer acknowledging the audience, like a singer at a large concert asking the audience how they feel to get a cheer response. There is "a felt reciprocity" (Hartmann and Goldhoorn 2011 quoted in Dibble et al 2016). Put simply, "the wishful friendly or intimate relationships that fans form with celebrities" (Xu et al 2023 p366). Xu et al (2023) continued that "the relationship is considered para-social because fans tend to be aware of the activities, anecdotes, and even personalities of their favourite celebrities, whereas celebrities barely know anything about their fans" (p367).

Rubin et al (1985) developed the "Para-Social Interaction Scale" (PSI-Scale) (with ten or twenty items) to measure viewers' social interactions with television news presenters (eg: "When I'm watching the newscast, I feel as if I am part of their group"). More recently, Hartmann and Goldhoorn (2011) introduced a shorter (six



items) "Experience of Para-Social Interaction Scale" (EPSI-Scale) (eg: "While watching [name of celebrity], [name of celebrity] was was aware of me"; "...knew I was there").

Celebrity in the mass media has expanded since the original conceptualisation of para-social interactions and relationships, and even more so with social media in the 21st century (and "micro-celebrities" (Senft 2008); eg: "camgirls"; "beauty vloggers" <sup>2</sup>) (appendix 1A). Xu et al (2023) asked if para-social relationships differ between "mainstream celebrities in the mass media" and "micro-celebrities" (with the shares, comments, and feedback of social media). Data were collected from 402 Chinese students with an online questionnaire. Participants were asked which mainstream and micro-celebrities they followed on social media, and to apply the questions to their favourite one of each type. The questionnaire included the EPSI-Scale, and measures of perceived reciprocity, perceived authenticity, and perceived intimacy (table 1.1).

Overall, there was no difference in the EPSI-Scale scores for both types of celebrity. However, there was a significantly higher degree of perceived reciprocity for micro-celebrities than mainstream celebrities, but the opposite for perceived authenticity and perceived intimacy. The latter finding was contrary to the researchers' expectations. Xu et al (2023) suggested that the reason was specific to China, for example, that "female micro-celebrities are often criticised for their indistinguishable appearance ('wanghong face') as a result of cosmetic surgery" (p380).

One phenomenon of social media is "virtual influencers". These are fictional characters based on AI and CGI (computer generated image). As with real influencers on social media, followers can develop one-sided bonds called "para-social relationships".

Peter Bentley was clear: "The sole purpose [of virtual influencers] is to manipulate us, to generate feelings within us... Sometimes this may be useful. But sometimes virtual influencers might stir up other feelings in followers... like dissatisfaction with

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<sup>2</sup> "A micro-celebrity refers to an internet user whose fame is derived from the strategic maintenance of an interactive relationship with a group of fans on a social media platform... Micro-celebrities use social media for online self-presentation... and for direct interaction with their fans... They are self-motivated celebrities, who adopt unique forms of exhibition, bypass the strict control of a middleman, and interact intimately with fans, in order to become famous as a blogger, social media content producer, online gamer, etcetera" (Xu et al 2023 p369).

themselves" (quoted in Kuch 2022).

MEASURE	ITEMS
Reciprocity (10 items)	<ul style="list-style-type: none"> <li>• "[name of the celebrity] likes the content I/fans post"</li> <li>• "...replies to my/fans' comments"</li> <li>• "...leaves comments on my/fans' account(s)"</li> <li>• "...share my/fans' messages"</li> <li>• "...can chat with me/fans on social media"</li> </ul>
Authenticity (9 items)	<ul style="list-style-type: none"> <li>• "[name of the celebrity] is an authentic person"</li> <li>• "...is what he or she really is on social media"</li> <li>• "...doesn't pretend to be someone else when presenting him-/herself on social media"</li> <li>• "...behaves the same on social media as offline"</li> <li>• "...is not aware of followers"</li> <li>• "...thinks it is more important to be him-/herself than to be popular"</li> <li>• "...does what he/she says (believes)"</li> <li>• "...whose posts are not authored by a manager/assistant"</li> <li>• "...reveals his/her true self when interacting with fans"</li> </ul>
Intimacy (7 items)	<ul style="list-style-type: none"> <li>• "[name of the celebrity] When I am visiting celebrity's account, I feel s/he is accompanying me"</li> <li>• "...I would miss her/him when s/he is offline"</li> </ul>

Table 1.1 - Examples of items used by Xu et al (2023).

#### 1.4.1. Celebrity Worship

McCutcheon et al (2002) developed the "Celebrity Worship Scale" (CWS) to measure an extreme version of para-social relationships, namely "celebrity worship" (CW). Brooks (2021) described CW as "a form of almost obsessional involvement where individuals idolise their favourite celebrity to the point of 'worship'. Some authors liken the concept of CW to religious worship, with the celebrity reaching - in the fan's mind - the kind of status usually reserved for a deity, and fan behaviour often mimicking religious practices" (p865). The key element is making one's relationship with the favoured celebrity the most important focus of their life.

"Hollander (2010) suggests the motivations for CW are attempts to identify with someone who possesses attributes which are lacking in the life of the

worshipper; insecurity about social status and uncertainty about what qualities are worthy of admiration; and social isolation resulting in a desire to find vicarious meaning in the lives of others" (Brooks 2021 p865).

Items on the CWS include, "I enjoy watching, reading, or listening to my favourite celebrity because it means a good time", "I am obsessed by details of my favourite celebrity's life", "When something good happens to my favourite celebrity I feel like it happened to me", and "'I often feel compelled to learn the personal habits of my favourite celebrity" (McCutcheon et al 2002).

The CWS measures three dimensions of CW - "entertainment-social" (enjoying the entertainment of celebrities and talking about them with others), "intense-personal" (the individual begins to exist in and for the celebrity that is adored"; Redmond 2016 quoted in Brooks 2021), and "borderline-pathological" ("typified by over-identification with the celebrity, willingness to do almost anything to please them, and delusional fantasies about them"; Brooks 2021 p865). A fourth factor has been suggested (eg: North and Hargreaves 2005) - namely, "deleterious imitation" (ie: imitating the licentious behaviour of the celebrity) (Brooks 2021).

Brooks (2021) performed a literature review on CW, and found sixty-two relevant academic papers. A number of core themes emerged about individuals who show CW, including:

a) The demographics of CW - More likely to be adolescents, possibly female (though the studies were divided), and there were cultural differences (with no clear pattern). There was variation in the findings due to the different measures of CW used.

b) Personality traits - No pattern on the main theories of personality, but possibly high neuroticism.

c) Behaviours - High fantasy proneness, and obsessive-compulsive behaviours, while inconsistent results about high or low self-esteem. Some cognitive differences to the general population (eg: intolerance of ambiguity and rigidity of thinking).

d) Relationships - eg: attachment anxiety; parental absence during childhood. CW "appears to be associated with poor-quality intimate relationships and difficulty coping with conflicts" (Brooks 2021 p880).

e) Body and eating - Poor body image, and disordered eating attitudes.

f) Mental health - Poorer psychological well-being, but mostly correlational studies.

"Overall, CW as a 'substitute', or compensation for something lacking, appears to be a recurring theme. There is much evidence to suggest that people lacking in internal resources (such as self-concept or self-esteem) may use CW as a way of seeking external stimulation and gratification in an attempt to compensate for these deficits... This is supported by He and Feng's (2002) analysis of fan-mail which found that whatever attributes the letter-writers lacked, or felt were insufficient, in their own lives tended to be the things they particularly liked about their idol" (Brooks 2021 p880).

There was great variety between the studies in the review which limited the firmness of the conclusions or the definite patterns around CW. Key methodological issues included the measurement of CW (which psychometric questionnaire or another method - eg: fan-mail), and the means of scoring other behaviours. There is a wider issue of how to conceptualise CW - for example, as a continuum from "healthy" admiration to pathological CW. On the other hand, there are individuals with high scores of CW measures who do not show pathological behaviours. "If it is not the level of CW which determines whether CW has a negative impact, it may well be the case that it is the motivation behind CW which is important. Perhaps fans whose interest in their favourite celebrity stems from self-suppression are those most likely to have their well-being negatively impacted" (Brooks 2021 p882).

### **1.5. ROMANTIC ANTHROPOMORPHISM**

"Virtual agents" include programmes like "Alexa" and "Siri", as well as characters in "romantic video games" (RVG). "As virtual agents become increasingly complex and interactive, we may come to view them as essentially like other humans (anthropomorphism) (appendix 1B). If so, then our relationships with these virtual agents might feel real and authentic, leading to positive emotions and a desire to continue the relationship" (Koike et al 2023 p601).

The "SEEK model" (Epley et al 2007) of anthropomorphism involves three factors: "Effectance motivation, the motivation to explain and understand the

behaviour of other agents; Elicited agent Knowledge, the accessibility and applicability of anthropocentric knowledge; and... Sociality motivation, the desire for social contact and affiliation" (Koike et al 2023 p601).

Specifically for romantic relationships, Koike et al (2023) distinguished two types of anthropomorphism - "relationship authenticity", and a desire for a real-world relationship. The former "involves fostering a genuine and intimate romantic connection with the virtual agent (eg: I feel this agent cares for me), while the latter "involves an imaginary 'if/then' type relationship (eg: If this agent were real, then I would want to be in a relationship with them), which refers to the desire to have a real-world relationship with the virtual agent" (Koike et al 2023 p602).

Koike et al (2023) researched this topic with three laboratory studies and heterosexual female participants playing a RVG. In the first study (Study 1a) (and the second (Study 1b), which was a replication), sixty-one participants (and 104 in the replication) played a RVG ("Castaway" or "Choices: Stories You Play") (table 1.2).

- "Castaway" - "We're stranded here, aren't we? You are a journalist hired onto a special cruise ship by a reclusive millionaire with unknown motivations. You think everything is going great, but when the weather takes a turn for the worse, your dream job becomes your worst nightmare! Now you're stranded on a tropical island with nothing but your wits and 5 sexy strangers. You're trying to focus on survival, but things start to get heated... are these feelings real or is the island sun getting to you?".
- "Choices: Stories You Play" - "'Welcome to Hartfeld University! You'll make friends for life, and maybe even find true love. YOU control what happens next!'.... Chris (a male virtual agent) as a romantic target... [and] female participants' protagonist (a female character in the game) flirts and interacts romantically and sexually with Chris".

(Source: Koike et al 2023 p605)

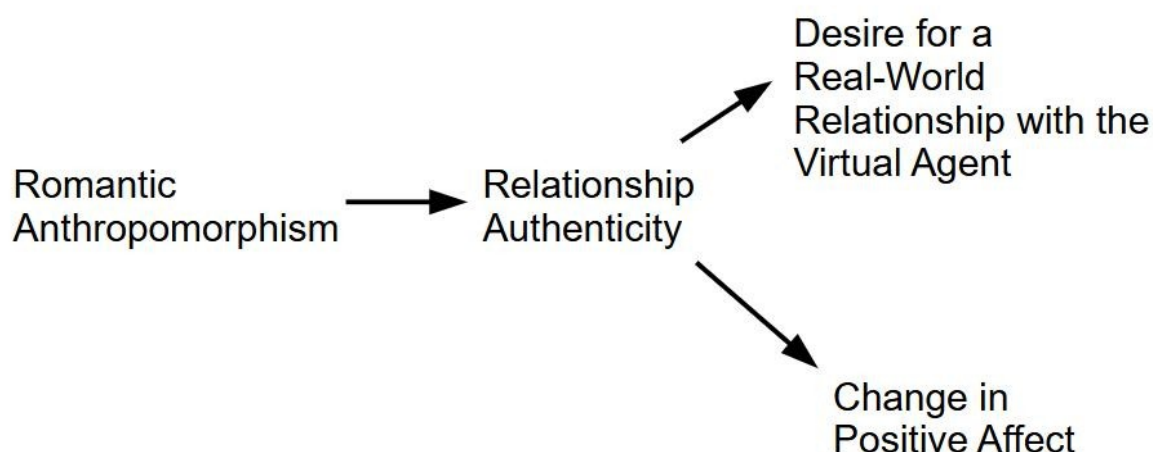
Table 1.2 - Opening premise of two RVGs.

After playing for one hour the participants completed a number of measures:

- Romantic anthropomorphism - eg: "[name of agent] is capable of conveying thoughts and feelings to others".

- Relationship authenticity - eg: "I feel that [name of agent] and I connected in the game".
- Desire for a real-world relationship with the virtual agent - eg: "If [name of agent] was a real person, he would make me a very happy girlfriend".
- Positive affect (PA) and negative affect (NA) - eight of each, completed before and after the gameplay (eg: excited; anxious).

Both studies found that "greater romantic anthropomorphism was linked to greater feelings of relationship authenticity with the virtual agent, which then predicted more desire for a relationship with the virtual agent in the real world and an increase in PA" (Koike et al 2023 p605). There was no change in NA linked to these variables (figure 1.1).



(Based on figure 1 p606 Koike et al 2023)

Figure 1.1 - Significant relationships between variables.

The final study (Study 2) recruited only single female university students (n = 78) to play "Choices: Stories You Play". After playing the game the participants had a one-to-one five-minute interview with an attractive male confederate about the game. The aim was to see whether romantic anthropomorphism influenced a real-world interaction. There was no relationship between

the ratings of the male confederate (eg: attractiveness), and the scores on the measures of romantic anthropomorphism for the virtual agent.

Overall, the studies showed that "judging a target (virtual agent) to be 'human-like' is associated with judging a relationship with that target to feel more 'real' and authentic" (Koike et al 2023 p611). Feeling an authentic connection with the agent was more important than romantic anthropomorphism.

The studies involved only female participants (table 1.3), and the measures used a limited number of statements. All participants were naive to the RVGs.

STUDY	Asian/ Caucasian	Source	Not single	Age range (yrs)	Mean age (yrs)
1a	42/19	Volunteer, student	23	19-39	24
1b	21/83	Volunteer, student	39	18-36	21
2	19/59	Student	0	18-33	23

Table 1.3 - Key characteristics of the samples in Koike et al (2023).

### 1.6. MIMICRY LOOKING AT SMARTPHONE

Maglieri et al (2021) found that observers mimic an individual who looks at their smartphone. This is an example of the "chameleon effect" (Chartrand and Bargh 1999), which is "the passive and unintentional behavioural matching between two or more subjects in a given social situation" (Maglieri et al 2021 p288). Mimicry of expressions, gestures, and postures, for example, has been reported in social situations.

Maglieri et al (2021) observed 184 people in their natural settings in Italy in May-September 2020. Two types of behaviour were used as the trigger, called the "experimental condition" (EC) and the "control condition" (CC). Maglieri et al (2021) explained: "During the EC, we considered as trigger the person who took, kept in hands, and manipulated his/her smartphone (eg: fiddling and swiping) and looked at the screen for at least 5 s. During the CC, we considered as trigger the person who took, kept in hands, and manipulated his/her smartphone (eg: fiddling and swiping) for at least 5 s without looking at the screen. In both conditions, the screen of

the device had to be visible and not covered by any cover" (p289). A male and a female researcher performed the triggers during their daily activities in the presence of others. Mimicry was coded as present or absent in the three minutes after the trigger. The participants were strangers, acquaintances, friends, and kin to the two researchers performing the triggers, and were unaware of the experiment.

The mimicry response was observed 28 times higher in the EC than in the CC, "thus indicating that people were more susceptible to use smartphones when the triggers focussed their attention on the screen of their devices compared to when they were simply manipulating them" (Maglieri et al 2021 p290). The vast majority of mimicry responses (90%) occurred less than thirty seconds after the trigger.

### **1.7. APPENDIX 1A - LIFESTYLE GURUS**

In 2009 Belle Gibson rose to prominence as she "beat" terminal brain cancer through a healthy lifestyle that rejected conventional medicine. She became a "wellness guru" with many social media followers. In 2015 journalists revealed that she had never had cancer at all (Baker and Rojek 2020).

Baker and Rojek (2020) focused on this case as a cautionary tale, but also as an exemplar of "the growing cultural phenomenon of lifestyle gurus in the 21st century. Lifestyle gurus define themselves in opposition to professional cultures. Selectively and instrumentally, they mix elements from positive thinking, esoteric systems of knowledge and mediate them through folk culture. The advice given, that often comes at a commercial premium, makes its immediate and final appeal to the court of plain speaking and common sense. Echoing the archetypal myth of the hero's journey, the stories that lifestyle gurus present online typically document a journey of self-discovery from illness to recovery, triumph in the face of adversity. An individual overhauls their lifestyle and diet, so the story goes, after experiencing illness or disease. Disillusioned with mainstream science and medicine, they begin to experiment with alternative medicine and take their health into their own hands. They then document their journey publicly, blogging about their new lifestyle and sharing attractive images on social media that testify to its perceived benefits, accumulating a huge online following in the process of people eager to learn more about how to



emulate the lifestyle of their guru" (p390). The attention gathered translates into income for the "lifestyle guru".

Baker and Rojek (2020) explained: "In a saturated market of aspiring lifestyle gurus competing for visibility and attention on social media, success rests on presenting an inspirational and compelling persona and narrative. Gibson was an inspiration to those who followed her. She inspired not only those cancer sufferers for whom conventional treatments had been ineffective, but also those who sought to improve their general health and well-being" (p390).

There are a number of "defining features of contemporary liberal democracies" (p391) that make "lifestyle gurus" appealing, including (Baker and Rojek 2020):

a) A "cultural emphasis on self-actualisation"<sup>3</sup>. The current cultural and political landscape views the self as 'a project' (Giddens 1991), in which individuals are perceived to have the autonomy to take control reflexively of their identity. Rising to fame in a democratic arena, the heroes of the demos (public) reflect the meritocratic idea of achievement: the notion that success is the result of hard work and merit, and that we create our own reality" (Baker and Rojek 2020 p391).

"Lifestyle gurus" promote these values, especially in relation to health and wellness, and in the context of mistrust (or at least low trust) of traditional experts. An ordinary person offering a diet, say, that has proven to work them (usually in a spectacular way) is more appealing than the mundane, uncertainty, often associated with medicine.

b) The nature of celebrity culture and specifically "micro-celebrities". Traditionally, there is "ascribed celebrity" (eg: royalty), and "achieved celebrity" (based on outstanding talent or achievement), but also now "the celetoid" (Baker and Rojek 2020). "The celetoid is an individual who acquires fame via the ministrations of the mass media. Typically, the individual is noteworthy by virtue of media investment. That is to say, talent, skill and accomplishment have no significant part to play in generating attention capital. Van Krieken (2012) employs the term 'attention capital' to refer to this phenomenon. The term refers to the accumulation, circulation and distribution of personal qualities that generate

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<sup>3</sup> I would use the term "active self-advancement".

appreciable social impact [eg: female physical attractiveness]. Within this type of celebrity, two sub-types must be distinguished. Long-life celebrities possess cultural duration, whereas short-life celebrities are transitory - here today and gone tomorrow" (Baker and Rojek 2020 pp393-394).

"Micro-celebrity" is an example of another type of celebrity. It "'involves people 'amping up' their popularity over the Web using technologies like video, blogs and social networking sites' (Senft 2008...). Micro-celebrities use these technologies to engage in publicity, self-branding - the idea of the self as a product to be consumed by others - and emotional labour" (Baker and Rojek 2020 p394). Self-disclosure is a key element of "micro-celebrity" (Marwick 2013).

c) The concept of para-social relationships with celebrities can be combined with the idea of the "familiar stranger" (Milgram 1992). The latter was originally proposed to describe people seen everyday in a city but with whom there is no interaction, and Baker and Rojek (2020) felt that social media is ideal for the dovetailing of these two concepts. "Blogs and social media sites provide ubiquitous access to media figures and create the platform for such friendships to flourish. Exchanges mostly occur on the basis of trust. The principles of probity that may be tested in face-to-face relations are often unexamined in web relations" (Baker and Rojek 2020 p398). I would use the terms "accepting cynicism", "gullible cynicism" or "naive cynicism" here. This describes an "over-cynicism" on certain things (eg: towards traditional medicine), yet an uncritical acceptance of other things (eg: that a social media "friend" is everything they say they are).

Baker and Rojek (2020) ended: "While lifestyle gurus are not a new phenomenon, we have argued that the proliferation of blogs and social media, together with the ubiquity of mobile digital devices, have contributed to their global reach and popularity. For those fame-seekers for whom the traditional media channels to achieve celebrity are remote, these technologies provide new opportunities to achieve fame and influence. Not surprisingly, these forms of creation and participation tend to be viewed positively by many commentators as part of the 'democratisation' of information. Nonetheless, it would be rash to hypothesise that global society is on the brink of cyber-utopia in which all voices will be equally heard and respected... Fame only attaches itself

to those lifestyle gurus with the ability to captivate an audience. In most cases, this endeavour requires technical and marketing skills; a compelling persona and narrative are crucial. It is no surprise to find that the low barriers to entry provided by digital technologies create conditions for deceit, hoodwinking and exploitation, as well as co-operation, interrogation and partnership" (pp401-402).

These researchers returned back to the Belle Gibson case, "a micro-celebrity, who achieved fame and celebrity on the internet by appearing to be inspiring and authentic. Online communication permits greater control for the user. The temporal and spatial affordances enabled by communicating at distance mean that online communication tends to be highly edited, managed and rehearsed in textual and visual form. Gibson was able to manufacture a desirable image online through carefully curated photographs and blog posts. Free from the critical gaze of a television interviewer or magazine editor, these technologies gave Gibson control of her image and the capacity to form direct (albeit one-sided) relationships with her followers. Indeed, it is precisely because social media are associated in the popular imagination with democratic participation - compared to the commercial and corporate hierarchies associated with traditional media - that Gibson was able to enhance her para-social appeal as ordinary, 'authentic', trustworthy and 'real'" (Baker and Rojek 2020 p402).

### **1.7.1. Alt.Health Influencers**

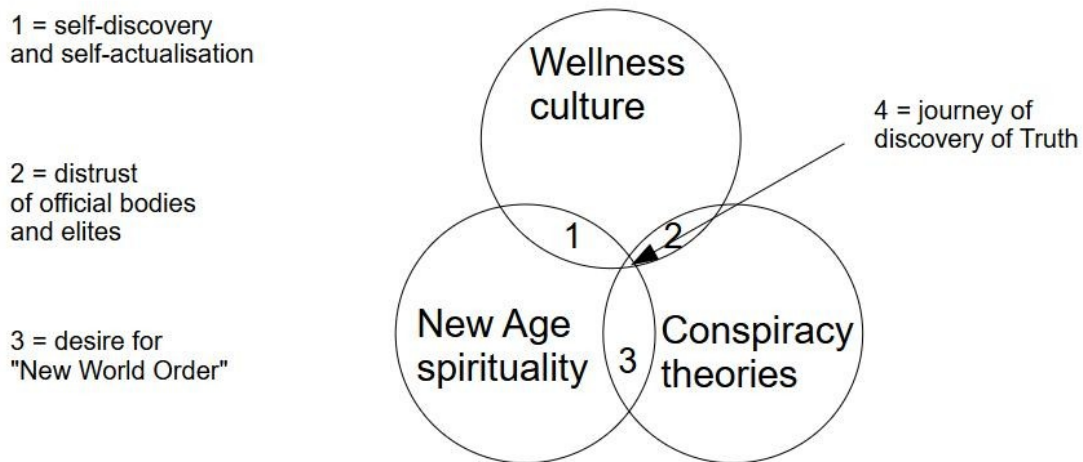
A lot of lifestyle gurus are involved in promoting health and "wellness". "Wellness culture" emerged in California in the 1960s and 1970s with an emphasis on helping the individual achieve their "full potential" (emotional, physical, and spiritual). "Today, wellness culture has given rise to an industry of self-appointed lifestyle and wellness gurus who combine nutritional advice and exercise tips with self-development and new age spirituality... These content creators are referred to as influencers when they build an online following on social media in exchange for social, economic or political gain" (Baker 2022 p4).

The "wellness industry", as it is today, is "a highly unregulated space that relies heavily on personal testimonials, anecdotal evidence, intuition and positive thinking... This emphasis on subjective experience and intuitive ways of knowing makes wellness culture

susceptible to unsubstantiated health claims, misinformation and conspiracism as personal truths are elevated over expert opinion, resulting in compelling stories of self-transformation standing in for professional expertise" (Baker 2022 p4).

Ward and Voas (2011) has described the combination of "New Age spirituality" with conspiracism as "conspirituality": "The term is used to describe an ideological movement characterised by two core convictions, the first conspiratorial, the second rooted in the New Age: 1) a secret group covertly controls, or is trying to control, the political and social order, and 2) humanity is undergoing a 'paradigm shift' in consciousness that requires action in accordance with an awakened 'new paradigm' worldview" (Baker 2022 p5). The Internet is central to this movement.

Baker (2022) coined the term "alt.health influencers" for the use of "wellness discourse to spread conspiratorial thinking and far-right politics" (p5) (figure 1.2). This was particularly evident in relation to covid-19.



(After Image 2 p14 Baker 2022)

Figure 1.2 - Overlap between three concepts.

Baker (2022) presented the case study of four such influencers by analysing their "Instagram" outputs between 11th March 2020 and the same date in 2021. Three overlapping themes were identified from the data:

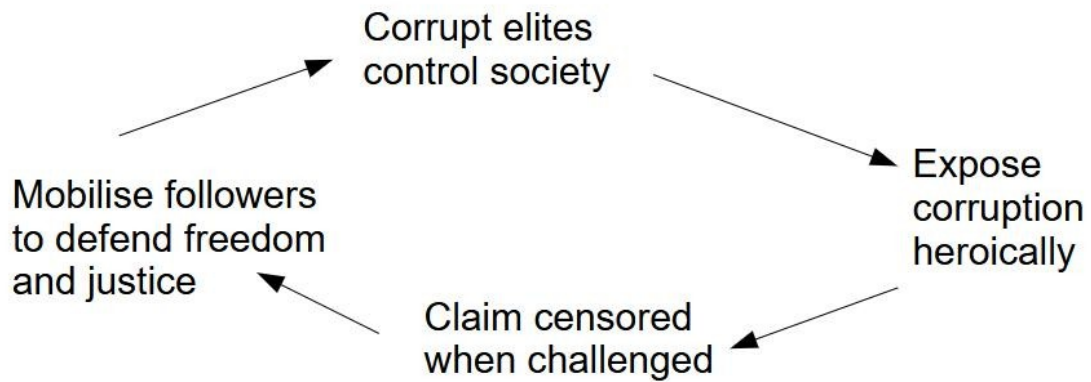
i) Micro-celebrity - The apparent ordinariness of the influencers who become popular because they are seen as authentic. Then the status is used to spread ideas. "One of the affordances enabled by the shift from broadcast to participatory media is the capacity for micro-celebrities to establish direct relationships with their audience. Instead of communicating via an editor or journalist, individual users can communicate directly with their followers, which gives the impression of accessibility. Alt. health influencers enact the appearance of accessibility to connect with their followers. Nutritional and spiritual guidance is shared in conjunction with personalised messages to their followers, whom they address as friends and equals" (Baker 2022 p10).

ii) "The persecuted hero" - The alternative health ideas of the influencers often contradict traditional medical advice, and this is seen as a "badge of honour" in some cases. "Personal confessions, inside scoops and revelations purporting to expose the Truth are strategically used by influencers to appear more authentic and trustworthy than the mainstream media. This is not because the media is believed to be ignorant to these issues, but because the media is perceived to be instrumental in concealing the truth from the public" (Baker 2022 p11).

As a consequence the influencers receive criticism from the mainstream, which they present as persecution for telling the truth. Baker (2022) explained: "Many of the influencers examined in this study had their posts or accounts removed from YouTube, Instagram, Facebook and Twitter for violating their covid-19 misinformation policies. Alt. health influencers typically respond to content moderation by claiming that their voices are 'censored' for deviating from the mainstream narrative" (p15) (figure 1.3).

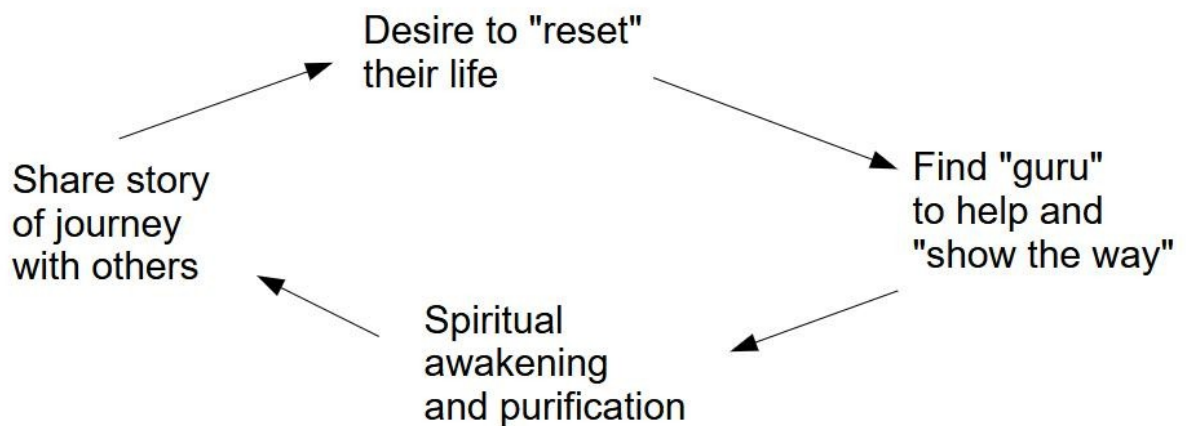
iii) "Calls to participate in the journey through the moral matrix" - "Lifestyle and wellness influencers typically use the appearance of accessibility to call on their followers to participate in a 'journey' of self-discovery, self-transformation and spiritual awakening" (Baker 2022 p15) (figure 1.4).

Baker (2022) ended: "Alt.health influencers strategically target wellness communities by appealing to their distrust of the government and their interest in pursuing alternative health solutions. While wellness



(After Image 1 p8 Baker 2022)

Figure 1.3 - "The persecuted hero narrative".



(After Image 3 p18 Baker 2022)

Figure 1.4 - Typical journey as portrayed by lifestyle gurus.

culture is characterised by personalised solutions, health optimisation, independent thinking, truth-seeking and alternative beliefs and practices, it is these very preoccupations that alt.health influencers have

weaponised to promote misinformation, conspiratorial thinking and illiberal politics. Paradoxically, a movement originally intended to empower marginalised groups risks disempowering those already disproportionately at risk of severe illness from the virus" (p21).

## **1.8. APPENDIX 1B - ARTIFICIAL INTELLIGENCE**

### **1.8.1. AI Mistakes**

AI service agents are being used in the hospitality industry in the form of self-service technologies, intelligent devices, service robots, and chatbots (Lv et al 2022).

"Service failures will reduce customers' continuous purchase intention... because they increase customers' dissatisfaction, enhance their switching intention, and spread negative word of mouth... However, due to the specific characteristics of consumers and service conditions in hospitality, AI service failures cannot be avoided..., even when using technologies with high levels of cognitive intelligence (ie: the best AI capabilities)" (Lv et al 2022 pp1-2). The top failures include machine malfunction, unexpected actions, and incorrect operation by users (Lv et al 2022).

Lv et al (2022) investigated AI service failure in the hospitality industry using different scenarios of responses by the AI. In the first set of studies, ninety students with hotel stay experience and ninety visitors were tested. For example, one scenario was an "outcome failure" (ie: the customer's request not met), and the AI's response was empathetic or not (table 1.4).

The empathetic response led to significantly higher consumer continuous usage intention. This was confirmed with more participants in two subsequent studies.

In summary, it was found that "empathetic response effectively improves the effect of AI service recovery and helps to retain customers after AI service failure" (Lv et al 2022 p9). The researchers explained that "the psychological mechanism through which empathy has a recovery effect is the continuous intermediary of emotional distance and trust. The emotional care and support conveyed by the AI empathetic response unconsciously narrows the psychological distance between the AI and the customers. Under the influence of this closer psychological distance, customers use intuitive thinking to evaluate the AI, which makes them more

Senario	"Suppose you stay in a hotel with an AI service system when you travel. After checking in, you are a little thirsty, so you give the AI in the guest room an instruction: 'Please send me a bottle of mineral water and a bucket of instant noodles to the room'. After a pause, you still want a pair of slippers, so you continue to say: 'Oh, one more pair of slippers'. After a while, the doorbell rang, and the smart butler delivered the items for you, but after you took it out, you found that the butler only sent you mineral water and instant noodles".
High empathetic AI response	"Sorry, I know you must think I am stupid, but please give me a chance to make up for it!"
Low empathetic AI response	"Dear customer, I am sorry that I failed to complete this task successfully, please send your instructions again!"

(Source: Lv et al 2022 appendix A)

Table 1.4 - Scenario used in one study by Lv et al (2022).

willing to believe in it and to continue using it" (Lv et al 2022 p9). This conclusion was based on the responses to a number of items used in the studies (table 1.5).

Measure	Item
Perception of empathy of AI response	I felt that this AI took into account my specific needs when replying to me
Continuous usage intention	I'll continue to use this AI service, not calling for anyone's help
Psychological distance	The AI assistance is psychologically close to me
Trust	I think this AI cares about my interests

Table 1.5 - Example of items used by Lv et al (2022).

### 1.8.2. Telepresence Robots

"Telepresence robots" can be used to mediate human interactions in audio- and video-conferencing. They have anthropomorphic characteristics that elicit affective responses (Schouten et al 2022).

One possibility is their use in educational settings. Schouten et al (2022) set up an experiment with 122 Dutch students interacting with in pairs using a



"WhatsApp" video call, of which half were mediated by a telepresence robot ("AV1") (figure 1.5). One of the pair controlled the robot and interacted using it. "AV1 is able to turn 360°, has a camera installed to look around, and a microphone so that the controller can use AV1 to speak. Furthermore, the telepresence robot is able to express four different emotions using LEDs that represent AV1's eyes: neutral, confused, happy, and sad" (Schouten et al 2022 p4). After the interactions, the participants completed a questionnaire.

This measured "social presence" (eg: "it felt like we were in the same space"; "the conversation felt like a real face-to-face meeting"), and "robomorphism" (the attribution of robot characteristics to the user - ie: the opposite of anthropomorphism) (eg: "I felt my partner was a real person"; "I treated my partner more like a machine than as a person").



(Source: Marius Vabo; Schouten et al 2022 figure 1)

Figure 1.5 - AV1.

Schouten et al (2022) summed up their results: "The findings showed that students that made use of the robot experienced stronger feelings of social presence compared to using video-conferencing, and this effect was even stronger when the participant controlled the robot. At the same time, participants in the telepresence robot condition experienced higher feelings of robomorphism than in the video-conferencing condition. Interestingly, there were no differences between the robot controller and the interaction partner in experienced robomorphism" (p7). So, the findings were mixed about the use of telepresence robots.

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## **2. PROBLEMS**

- 2.1. Problematic smartphone use
- 2.2. Problematic social media use
- 2.3. Internet addiction
  - 2.3.1. Distraction from worries
- 2.4. Healthy digital diet
  - 2.4.1. Adolescent mental health
- 2.5. Indigenous people
- 2.6. Positive benefits
- 2.7. Cyberbullying
  - 2.7.1. Cyberaggression
  - 2.7.2. Mediating factors
- 2.8. Zoom fatigue
- 2.9. Appendix 2A - Screen time
- 2.10. Appendix 2B - Positive design features
- 2.11. References

### **2.1. PROBLEMATIC SMARTPHONE USE**

With the general increase in smartphone use has come "problematic smartphone use" (PSU). This is "a persistent and excessive pattern of smartphone use accompanied by significant impairments in daily-life functioning, and the impairments could include daily-life disturbance, positive anticipation, withdrawal, cyberspace-oriented relationship, overuse, and tolerance" (Su et al 2022 p1). A parallel can be drawn with substance use disorder (Su et al 2022).

Concentrating on adolescents and susceptibility to PSU, certain factors have been as associated with PSU, including poor self-control, mental health problems, bullying, and psychological abuse (Su et al 2022).

In their study Su et al (2022) investigated online and offline peer engagement (ie: "social interactions with peers, including the investment in peer interaction, as well as the formation, maintenance of peer relationships"; p2), and PSU. The data came from a longitudinal study of 2100 Dutch adolescents (10-16 years old) with measurement points in 2016, 2017 and 2018. A number of questionnaires were completed each time, including the "Smartphone Addiction Scale - Short Version" (SAS-SV) (Kwon et al 2013) (table 2.1), and about peer relationships.

Higher passive social media use (ie: checking others' postings rather than posting themselves) was associated with PSU, as was lower perceived competence in close friendships. "Adolescents with low perceived

competence in close friendships seem more vulnerable to PSU since they might tend to use their smartphone more excessively to compensate for lack in social connection with their peers. In turn, excessive smartphone use could disturb interactions with peers and could thereby lead to even lower perceived competence in close friendships" (Su et al 2022 p5). The researchers described this as the "poor-get-poorer" explanation.

In summary, "adolescents who perceive a low competence in close friendships and frequently check messages from their peers on smartphone would have a higher risk to develop problematic smartphone use over time" (Su et al 2022 p6).

The measures were self-reports.

- Missed planned work due to smartphone use.
- Using a smartphone is the most fun thing to do.
- Feeling impatient and fretful when I am not holding my smartphone.
- Having my smartphone in my mind even when I'm not using it.
- Using my smartphone longer than I intended.

(Source: Kwon et al 2013)

Table 2.1 - Items from Smartphone Addiction Scale.

## **2.2. PROBLEMATIC SOCIAL MEDIA USE**

Shannon et al (2022) undertook a review of the evidence on problematic social media use and mental health outcomes among adolescents and young adults. The researchers found eighteen relevant studies covering 12-30 year-olds. Overall, problematic social media use was significantly associated ( $P < 0.001$ ) with depression ( $r = 0.27$ ), anxiety ( $r = 0.35$ ), and stress ( $r = 0.31$ ). The researchers explained that "the results are based on cross-sectional correlational data. Therefore, a causal relationship cannot be inferred from the direct impact of social media on mental health outcomes of depressive symptoms, anxiety symptoms, or stress. It is possible that there are likely bidirectional effects between poor mental health and social media use. In addition, the research studies included in the meta-analysis used did not report assessing the presence of a clinical

diagnosis; therefore, it is unknown how many participants already had a known or possible clinical psychiatric diagnosis" (Shannon et al 2022 p8).

The studies in the review varied in their methodology, including:

i) The validated measure of outcome used (eg: Centre of Epidemiologic Studies Depression Scale; Depression Anxiety Stress Scale; Short Depression-Happiness Scale) - Only depression, anxiety, and stress were included by Shannon et al (2022).

ii) The measure of problematic social media use employed (eg: Problematic Use of Mobile Phone Scale; Social Media Intrusion Questionnaire; Social Media Disorder Scale).

iii) Control of potential confounders - eg: type of social media use; previous mental health problems.

iv) Sample (eg: USA 18-21 year-olds; 14-18 year-olds in China; 18-25 year-olds in Turkey).

### **2.3. INTERNET ADDICTION**

Mobile gaming can become excessive and be part of PSU. Excessive gaming generally has been linked to behavioural addiction (ie: Internet addiction). Drawing from work on gambling addiction, three pathways (types) to addiction have been distinguished (Blaszczynski and Nower 2002) - individuals who become habituated to the excitement (ie: behaviourally conditioned), emotionally vulnerable (eg: depressed), and those with personality disorders and/or impulsivity (Haberlin and Atkin 2022).

Haberlin and Atkin (2022) investigated mobile gaming and Internet addiction with an online survey completed by 189 US adults recruited via Amazon Mechanical Turk. Table 2.2 lists the main questionnaires used in the survey.

- Motives for Online Gaming Questionnaire (MOC-Q) (Demetrovics et al 2011) - 27 items (eg: "I play mobile games because I enjoy gaming with others"; "I play mobile games because gaming puts me in a better mood"). Seven motives are rated - social, escape, competition, coping, skill development, fantasy, and recreation.
  - Multi-dimensional Scale of Perceived Social Support (Zimet et al 1988) - 12 items covering family, friends, and significant other (eg: "There is a special person who is around when I am
- Psychology Miscellany No. 196; January 2024; ISSN: 1754-2200; Kevin Brewer

in need"; "I have friends with whom I can share my joys and sorrows").

- Material Values Scale (MVS) (Richins 2004) - Fifteen items (eg: "The things that I own say a lot about how well I'm doing in life"; "My life would be better if I owned certain things I don't have"). Materialism is "'the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states' (Richins 2004...). Material values are further broken down into three categories: the use of possessions to assess a person's success; the centrality of possessions in a person's life, and the belief that acquiring and owning possessions leads to happiness and life satisfaction" (Haberlin and Atkin 2022 p3).
- Internet Addiction Test (IAT) (Young 1998) - Twenty items (eg: "How often do you check your email before something else that you need to do"; "How often do you lose sleep due to late-night log-ins?").

Table 2.2 - Main questionnaires used by Haberlin and Atkin (2022).

The median mobile gaming frequency was twenty times in the previous month overall, with the maximum being 500 times. The mean expenditure was \$3 per week on mobile games.

The researchers had three main research questions:

1. "What are respondents' motivations for playing mobile games?" - The most common motivation was "mood elevation" (a combination of coping and recreation), followed by escape, and skill development based on MOG-Q scores.
2. "How are gaming motivations related to Internet addiction?" - This was tested with the correlation between MOG-Q and IAT scores. The strongest relationship was between fantasy motivation and high IAT score.
3. Do motivations for gaming logically correspond to behaviourally conditioned and/or emotionally vulnerable pathways to problematic behaviour?" - Both pathways were linked to motivations above in the statistical analysis.

There were other findings, including that MVS score positively correlated with IAT score, but social support was negatively correlated with IAT score. This suggested that Internet addiction was linked to amount spent on mobile gaming, and to low social support.

The sample was nearly two-thirds female, and over



three-quarters White in total, with higher educational qualifications than the general population. Two-thirds were aged 25-44 years, and overall half in full-time employment.

### **2.3.1. Distraction From Worries**

Hernandez et al (2022) collected longitudinal data in Chile on Internet use and depression over three months in 2020 (at the start of the covid-19 pandemic). One hundred and sixty-three adults downloaded the app that allowed participation in the study.

Over 35 days participants regularly completed three sets of questions:

a) Depressive symptoms - "Patient Health Questionnaire-9" (PHQ-9) (Kroenke et al 2001): nine items completed every five days.

b) Problematic Internet use (lack of control) - one item every two days: "In the last two days it was hard for me to control the time I spent connected to the Internet, video games or social media" ("Never" (1) to "Very often" (5)).

c) Distraction from worries by using the Internet (disconnect) - one item every two days: "In the last two days I used the Internet to disconnect myself from my worries".

Greater Internet use over the whole study period was more associated with mental health problems than short-term variations in Internet use. This relationship was mediated by the use of the Internet as a distraction from worries. So, "using the internet to disconnect from worries may work as an emotional buffer to mitigate negative emotionality in the short run, but at the cost of consolidating a problematic use of technology, and depressive symptoms if it becomes a habit. Also, it is possible to think that a condition for the negative consequences of uncontrolled use of the internet is leaving life problems or important tasks unresolved" (Hernandez et al 2022 p8).

This fits with Hernandez et al's (2019) study which found that "using the internet to procrastinate (ie: to postpone unpleasant tasks) substantially increased the relationship between depressive symptoms and Problematic Internet Use" (Hernandez et al 2022 p8).

Hayes (2006) proposed the concept of "Experiential Avoidance". "This concept refers to the idea that when facing aversive private events, individuals tend to use avoidance to alleviate these experiences in the short term. This behaviour is not detrimental by itself as it can be adaptive in several contexts. However, it can be detrimental when used inflexibly, because it becomes the predominant strategy to deal with said experiences" (Hernandez et al 2022 p8). Put simply, problematic Internet use may emerge from the use of the Internet as a distraction from worries if carried too far.

Hernandez et al (2022) used single items to measure problematic Internet use, and distraction from worries. The sample was self-selecting (volunteers), and the study lasted just over one month at an unprecedented time in recent history. The researchers admitted: "It is unclear if results of this study would generalise robustly to a different context..." (Hernandez et al 2022 p8).

#### **2.4. HEALTHY DIGITAL DIET**

There is a temptation to view long periods of "screen time" as inevitably negative. But Wong (2022) made this point: "Drawing parallels between what we consume online and the foods we eat turns out to be a more fruitful approach. Just as salads are better for us than cream buns, so some aspects of our digital diet are more nourishing than others" (p47). However, the "healthy digital diet" will vary between individuals.

"Digital well-being" (Vanden Abeele 2021) is a similar idea. This is the "users' subjective evaluations of the optimal balance between the perceived negative and perceived positive effects associated with digital technology use. According to Vanden Abeele (2021...) 'people achieve digital well-being when experiencing maximal controlled pleasure and functional support, together with minimal loss of control and functional impairment'" (McCrosky et al 2023 p2).

Certain researchers are critical of a simple quantity approach that aims to limit screen time in a way that a certain number of units of alcohol are recommended (appendix 2A). "It is the equivalent to asking: is food good for you? And ignoring what exactly is being eaten, who is eating and what else they have going on at school, work or home" (Isabela Granic quoted in Wong 2022).

The concept of "normative dissociation" (Butler 2006) is a better approach. This is "a narrowing of

attention that excludes thoughts, feelings, memories and awareness of the external world, including the passage of time. As a result, dissociation reduces self-awareness and reflection so that people only realise they have 'spaced out' after the fact" (Wong 2022 p47). It occurs in daydreaming, and during absorption in a film or video game (Baughan et al 2022).

Social media platforms can induce this state. Normative dissociation has been applied here with terms like "Internet blackout" (Levy 2016 quoted in Baughan et al 2022) and "The 30-Minute Ick Factor" (Tran et al 2019 quoted in Baughan et al 2022). The latter describes "a sense of disgust people report upon suddenly noticing they have spent a notable amount of time on social media when they only meant to check in briefly" (Baughan et al 2022 p2).

Baughan et al (2022) created a Twitter client ("Chirp") to investigate normative dissociation. Chirp allowed users to interact with Twitter as normal, but the researchers could control aspects of the interface. Over four weeks four different interfaces were used with 43 US participants (eleven of whom were interviewed in detail).

Overall, eighteen of 43 participants agreed that they were using Chirp without paying attention to what they were doing, and seven of the 11 interviewees described experiencing normative dissociation. Phrases like "lost track of time", and "all-consumed" were used, while one participant said: "It's like you get tunnel vision on it. You just block out your surroundings while you're using it. Then I guess I come back, and I realise I was on it for two hours or something" (p7).

The researchers were interested in the design features of social media that encouraged normative dissociation (appendix 2B). They stated that "infinite feeds that defaulted to show all content together led users to feel more dissociated and less in control of their scrolling than when content was segmented into custom lists that informed them when they had exhausted all new content. And our data also suggests that time limit dialogues and usage statistics pages are effective tools for minimising and disrupting normative dissociation if users choose to use them" (Baughan et al 2022 p10).

Jocelyn Brewer suggested three steps to reduce "digital overindulgence" (or, more precisely, to provide "digital nutrition" <sup>4</sup>) - be mindful (ie: consider intentions before going online), look for meaning (ie:

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<sup>4</sup> See <https://jocelynbrewer.com/digital-nutrition/>.

focus on material that aligns with goals on going online at that time), and try to moderate actions (eg: pausing before an impulsive comment) (Wong 2022).

#### **2.4.1. Adolescent Mental Health**

Vuorre et al (2021) began: "Any understanding of 21st-century adolescence would be incomplete without an appreciation of social-media platforms and other digital technologies, which have become an integral element of young people's everyday lives over the past few decades... Accompanying this growth in popularity of digital technologies, downward trends in adolescent mental health have been observed in certain countries" (p823). The question is whether the increased Internet activity has caused the downward trend in mental health. There is plenty of correlational and observational research evidence, but Vuorre et al (2021) were unconvinced about causation.

Societal concerns about the impact of digital technologies today can be seen as parallel to past worries (eg: "dime novels" in the early 20th century) (Vuorre et al 2021).

Vuorre et al (2021) analysed data from three large-scale studies of adolescents:

a) "Monitoring The Future" (MTF) in the USA - Annual surveys of 11-15 year-olds since 1991. This measured depression (outcome) with six items (eg: "Life often seems meaningless").

b) "Youth Risk Behaviour Surveillance System" (YRBS) in the USA - Biennial surveys of 12-15 year-olds since 1991. The outcome measure was depressive mood and suicidal ideation and behaviour.

c) "Understanding Society" (UndSoc) in the UK - A longitudinal survey of 40 000 households begun in 2009. Questions on externalising and internalising mental health problems (eg: "I get very angry and often lose my temper" and "I worry a lot" respectively).

All three surveys asked about social media use frequency.

Vuorre et al (2021) summarised their findings thus: "Results were mixed across types of technology and mental health outcomes: Technology engagement had become less

strongly associated with depression in the past decade, but social-media use had become more strongly associated with emotional problems" (p823). The researchers felt that these findings "hint at the changing roles of emerging technologies in young people's lives and underline the scientific value of considering a more dynamic picture of their associations with mental health. Changes in the ways in which technologies are used, such as whether they are used passively or actively..., and changes in the features inherent in them... could both underlie observed changes in the technologies' associations with mental health" (Vuorre et al 2021 p831).

Evaluation of Vuorre et al's (2021) study:

i) A large dataset (over 430 000 participants) (+) covering nearly thirty years (+), but only in the USA and the UK (-).

ii) A variety of outcome measures, which allowed for different ways of operationalising mental health problems (+), but not necessarily comparable between the surveys (ie: use of the same measures) (-). Final analysis was based on four outcomes - depression, suicide, emotional problems, and conduct problems.

iii) All measures were self-reports (-). The researchers stated: "Although self-report measures of mental health and technology use have high face validity, they might be poor representations of the actual state of affairs...: In studies of this topic, self-report measures of technology use are consistently biased and are not highly correlated with objective use" (Vuorre et al 2021 p832). This is particularly so for frequency of social media use (ie: accuracy of recall), and also time periods varied - eg: "hours on weekdays" (UndSoc), "how often" (MTF), "daily digital-device use" (YRBS) (-).

iv) A variety of statistical analyses performed (eight models), including testing if the relationship between social media use and mental health problems was linear or not (ie: curvilinear) (+). The relationship between television viewing hours and mental health problems was used as a comparison (+). In summary, the researchers were "modelling four different mental health outcomes against three forms of technology use [TV, social media, computer/video games] across three large nationally representative data sets across 9 to 26 years"

(Vuorre et al 2021 p830). Also showing the change over time (+).

v) The data included within-person (UndSoc) and between-person comparisons (+/-).

vi) Co-variates and potential confounders were not included in the analyses (-) (eg: how social media used; family history of mental health problems; life stressors).

vii) The study involved secondary data (ie: collected by other researchers with a different purpose to that of the current ones) (+). But this may be the only sources of data available (+).

## **2.5. INDIGENOUS PEOPLE**

Digital technologies and mental health are well studied generally, but Li and Brar (2022) concentrated on Indigenous people globally in their review. Twenty-seven relevant studies published between 2004 and 2019 in English covering four countries were found in the literature search. The countries and groups were:

- Australia - Aboriginal; Torres Strait Islander (n = 13 studies).
- Canada - First Nations, Me'tis and Inuit (FNMI); Mi'kmaq First Nations (n = 8 studies).
- USA - American Indian/Alaska Native (AL/AN).
- New Zealand - Maori; Pacific people.

Most of the research focused on digital technologies in helping individuals with negative mental health outcomes (eg: a self-help mobile app ("iBobbly") and suicide ideation in Australia).

Feeling deeply rooted to Indigenous culture and identity was important. "Digital technologies, if designed and implemented in a culturally appropriate and responsible manner, have shown great potential in supporting the development, maintenance, and strengthening of Indigenous cultural identity" (Li and Brar 2022 p10). Linked to this, social media as a means to maintain connections with family and friends was another theme, as well as its use in help-seeking and -

giving. Digital storytelling projects and positive Indigenous self-representations through digital media was another theme from the literature.

There was great variety in the methodology of the different studies (eg: age of sample; digital technology studied; mental health outcomes measured).

## **2.6. POSITIVE BENEFITS**

The negative outcomes potentially associated with video game play has been the focus of research, though there are many shortcomings with such studies. For example, the problem of operationalising "excessive play", which is usually self-reported. But "an increasing number of scholars are now aware that self-reported behaviour is a poor predictor of actual behaviour, particularly for technology use. Self-reported video game play is thus an unsuitable proxy of actual video game play – yet researchers and those advising health bodies are depending on self-reports for diagnosis and policy decisions" (Johannes et al 2021 p2).

Johannes et al (2023) took a different approach and investigated the relationship between video game play and positive mental health and well-being. Players of two popular video games in the USA, Canada, and the UK were surveyed. Telemetry data (ie: actual playing time based on log on and log off) were available on around 3000 survey respondents. The survey included six positive and six negative feelings, each rated on a seven-point scale, for the previous two weeks, and these were reduced to a mean score for well-being. Self-reported amount of play was also recorded.

Overall, self-reports overestimated the playing time compared to the telemetry data by 0.5 to 1.6 hours (over the two-week study period). There was a small positive correlation between amount of time played and well-being score.

The finding being correlational meant that cause and effect could not be established. "People who feel good might be more inclined to pick up their controller... Equally plausible, there might be factors that affect both game play time and well-being. For example, people with high incomes are likely to be healthier and more likely to be able to afford a console/PC and the game" (Johannes et al 2023 p10).

The study focused on two games only ("Plants vs Zombies: Battle for Neighbourville" and "Animal Crossing: New Horizons"), and the response rate for survey

completion was around 1% of all players at the time of the study (late 2020) (table 2.3).

The major strength of the study was the use of objective data on video game playing time from the corporate owners of the games. The games companies hosted the survey, and provided the response data to the researchers matched with telemetry data anonymised.

Game	"Plants vs Zombies: Battle for Neighbourville"	"Animal Crossing: New Horizons"
Owner	"Electronic Arts"	"Nintendo"
Study date	September 2020	October 2020
Complete data (N)	471	2756
Response rate (%)	0.21	1.75
Overestimation of playing time by self-reports (hours)	1.6	0.5
Correlation between playing time and well-being score	+0.15	+0.16

Table 2.3 - Two video games in the study by Johannes et al (2023).

## 2.7. CYBERBULLYING

One problem with the use of social media is cyberbullying and Internet harassment. "One of the most crude and common forms of cyberbullying are directed personal attacks. In a typical personal attack user-attacker directly verbally attacks user-victim with a harmful comment, or a set of harmful comments, often based on a made-up excuse (eg: the victim expressed an unpopular opinion). Often the attack not only remains unrestrained, but also it escalates when other users join on either or both sides, causing a wider distress not only to the victim, but also to a larger group of users" (Urbaniak et al 2022 p2).

Victims tend to use the social networking site less, if not stopping, after personal attacks. For example, a survey by the "Pew Research Centre" of US adults in 2017 found that nearly half of 4248 respondents had experienced harassing behaviour online, and up to 30% of these had stopped using an online service in consequence (quoted in Urbaniak et al 2022).

Urbaniak et al (2022) confirmed reduced activity on Psychology Miscellany No. 196; January 2024; ISSN: 1754-2200; Kevin Brewer



Reddit after personal attack in an analysis of nearly 200 000 posts and comments on this social media site during two weeks in mid-2020. The researchers could not say if the users increased their activity subsequently or stopped altogether.

### **2.7.1. Cyberaggression**

“Cyberaggression” is a wider term that describes the “aim to harm, harass, or degrade someone, be it an individual or a group of people” (Bedrosova et al 2022 p2), and includes cyberhate and cyberbullying. Looking at the relationship between these two concepts, Bedrosova et al (2022) used Smith et al's (2008) definition of cyberbullying - “an aggressive intentional act carried out by a group or an individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself”. Cyberhate refers to “online hate speech that expresses antagonistic or prejudiced attitudes towards groups of people, often minorities, and advocates hatred and discrimination” (Bedrosova et al 2022 p2).

These researchers analysed data from the “EU Kids Online IV” project, and specifically 11-17 year-olds in the Czech Republic (n = 2227), Poland (n = 928), and Slovakia (n = 700). Data were collected between 2017 and 2018.

Cyberhate was measured by three questions: “In the PAST 12 MONTHS, have you EVER [seen/received/sent] hateful or degrading messages or comments online against someone or a group of people? (This could, for example, be Muslims, Migrants, Jews, etc.)?” (p5). Cyberbullying was described, and then questions like, “In the PAST YEAR, [has anyone EVER treated you/have you EVER TREATED someone else] in such a hurtful or nasty way?” (p5) were asked. Other variables measured included gender, Internet use, exposure to potentially harmful online content, friend support, and emotional problems.

Overall, the prevalence of cyberhate and cyberbullying was presented by country, but in most cases it was highest in Poland:

a) Been a victim - cyberhate (4% - 11%), cyberbullying (6% - 32%).

b) Been the aggressor or perpetrator - cyberhate (1% - 8%), cyberbullying (3% - 31%).

c) Exposed (ie: seen or knew of it happening to or

by someone else) - cyberhate (28 - 58%), cyberbullying (13% - 53%).

Detailed analysis of the data suggested that "cyberhate and cyberbullying present specific distinguishable factors, even though their manifestations are influenced by a common general risk factor that helps to explain these experiences" (Bedrosova et al 2022 p7). In the case of perpetrator, for example, the factor was general anti-social behaviour. Other general risk factors include more time spent online, more exposure to potentially harmful online content, and greater emotional problems.

The individual experience of cyberbullying (eg: related to height, weight, appearance, or behaviour) was linked to low friend support, and an environment of physical bullying. Cyberhate related to group membership (eg: skin colour; origin; religion) had some association with cyberbullying, but it was a more general experience (ie: general hateful comments on social media). Bedrosova et al (2022) concluded that "individual-based discrimination does not systematically predict cyberhate, though it is connected to a greater propensity for experiencing something aggressive, and group-based discrimination is connected with both cyberhate and cyberbullying. In other words, those who are discriminated against due to group/community membership are more likely to be involved in cyberhate incidents (as audience members, victims, or aggressors) but also in cyberbullying. In these cases, we may also presume that the interconnection of these experiences may be stronger and, in some cases, both measurements reflect similar incidents - discriminatory and bias-based cyberbullying that target someone because of their collective identity" (p8).

This study had a number of key limitations, including the limited number of questions used to measure cyberbullying and cyberhate, and a dichotomous response option in each case (ie: yes/no). So, no measurement of frequency of experiences, the nature of the relationship between perpetrator and victim, the harm caused, private or public attacks, or synchronous/asynchronous communications used. The honesty of respondents was assumed.

### **2.7.2. Mediating Factors**

Cybervictimisation is experienced differently by

individuals based on their coping mechanisms. Schunk et al (2022) investigated two such factors in two studies with German adolescents - emotional self-efficacy, and emotion regulation. The former is an individual's "perceived capability to successfully manage their emotions" (Schunk et al 2022 p2), and it is known that successful management of negative emotions is linked to higher self-esteem and well-being. "Emotion regulation describes 'processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions' (Gross 1988...)" (Schunk et al 2022 p2). Examples include rumination (ie: focusing on the negative), suppression (ie: masking the emotion), and reappraisal (ie: cognitive re-evaluating the negative emotion) (Schunk et al 2022).

Study 1 surveyed 107 adolescents and Study 2 205 adolescents. Measures were made of cybervictimisation, emotional self-efficacy, and emotion regulation (table 2.4) during the covid-19 lockdown (March-April 2020).

Higher cybervictimisation was associated with lower subjective well-being overall, but the relationship was mediated by lower emotional self-efficacy, and rumination, but not reappraisal and suppression.

- Cyberbullying - eg: "How many times did someone spread rumours or defamation about you via the internet/cell phone to hurt you?".
- Emotional self-efficacy - eg: management of anger/irritation: "not well at all" (1) to "very well" (7).
- Emotion regulation - eg: rumination: "never" (0) to "almost always" (4).

Table 2.4 - Examples of main measures used by Schunk et al (2022).

## **2.8. ZOOM FATIGUE**

The recent increased in video conferencing, especially during the covid-19 pandemic, and particularly using the "Zoom" app, has seen a "growing concern about exhaustion, with the term 'Zoom fatigue' catching on quickly in the popular media" (Fauville et al 2021 p1). Zoom fatigue seems to be caused by more than just staring at a screen (Fauville et al 2021).

One element is "social media fatigue", which Dhir et al (2018) defined as "a situation whereby social media

users suffer from mental exhaustion after experiencing various technological, informative and communicative overloads through their participation and interactions on the different online social media platforms” (quoted in Fauville et al 2021). General fatigue is also relevant, including visual fatigue from staring at a screen, and attention overload. Also “social overload” (McCarthy and Saegert 1978), initially proposed in relation to living in densely populated areas, could be part of Zoom fatigue (ie: excessive social interactions leading to a desire for social withdrawal).

Bringing the different ideas together, Fauville et al (2021) constructed the “Zoom Exhaustion and Fatigue Scale” (ZEF Scale). Firstly, potential items were gathered from the literature, and from interviews with ten frequent video conferencing users. This produced 49 items representing nine constructs of Zoom fatigue - general fatigue, physical fatigue, mental fatigue, reduced motivation, reduced activity, visual fatigue, emotional fatigue, vocal fatigue, and social fatigue.

Fifty-two students were asked to comment on the items before the first version of the scale was tested with 395 adults recruited online. Item analysis reduced the number of items to the final fifteen of the ZEF Scale, which were presented to 130 students (to assess reliability), and 2724 online participants (to assess validity). Validity was assessed by comparing ZEF Scale scores with other measures (table 2.5).

MEASURE	RELATIONSHIP TO ZEF SCALE SCORE
Frequency of video conferencing in a typical day	Positive correlation
Duration of video conferencing in a typical day	Positive correlation
Enjoyment of video conferencing	Negative correlation

Table 2.5 - Examples of validity measures for the ZEF Scale.

The final ZEF Scale covered five aspects of video conferencing fatigue - general, visual, social, motivational, and emotional fatigue (table 2.6). Each item is rated from 1 (not at all/never) to 5 (always/extremely).

ITEM	ASPECT OF ZOOM FATIGUE
How tired do you feel after video conferencing?	General fatigue
How blurred does your vision get after video conferencing?	Visual fatigue
How much do you want to be alone after video conferencing?	Social fatigue
How often do you feel like doing nothing after video conferencing?	Motivational fatigue
How irritable do you feel after video conferencing?	Emotional fatigue

Table 2.6 - Example of items from ZEF Scale.

## 2.9. APPENDIX 2A - SCREEN TIME

"Recent work has drawn attention to the ambivalent and, at times, contradictory feelings people experience about their digital technology use – that is, viewing time spent on digital technology as simultaneously rewarding and wasteful... On the one hand, users are aware that digital technologies are sources of social interaction, entertainment, self-expression, and information, among many other uses and gratifications. On the other hand, users are also cognisant of the ways in which digital technologies can interfere with other goals or responsibilities" (McCrosky et al 2023 p2).

How to measure screen time? The simple answer is self-reported total time on social media or the Internet. The accuracy of self-reports have been questioned, however. "Digital trace data (ie: data that are produced and logged as a byproduct of digital technology use...) or telemetry (ie: the collection of in situ data for transmission to a receiver) collected by software companies can provide behavioural information about the time spent with digital technologies with a greater level of ecological validity compared to retrospective self-reports or simulation studies in laboratory environments" (McCrosky et al 2023 p2).

McCrosky et al (2023) reported an example of the use of such data, specifically from the "Firefox" browser (of the Mozilla Corporation). Around 8000 volunteers had their browser data collected and analysed for seven days in September 2019. Metrics collected included number of active days on the Internet, number of active hours (based on five-second intervals), and number of websites

loaded. Around one-quarter of the volunteers completed a survey about their online behaviour (eg: "If I could, I would spend more time online").

There was no relationship between attitudes expressed about time online and browser data. "Browser usage behaviour... did not appear to be useful for understanding people's desires to spend more or less time online" (McCrosky et al 2023 p6).

The researchers drew two main conclusions. Firstly, the problems around self-reports and self-evaluations of behaviour, and secondly, the limitations of simple total time online metrics. However, they were optimistic about using browser data as objective measures of online behaviour.

## **2.10. APPENDIX 2B - POSITIVE DESIGN FEATURES**

Design features that encourage continued Internet use can be positive in the case of educational materials (as in "Massive Open Online Courses"; MOOCs).

Rizvi et al (2022) analysed data on nearly 50 000 learners from 10 MOOCs developed in the UK but used globally. The learning design included articles, online discussions, videos, and quizzes. Based on the IP address, learners were categorised into ten geographical and cultural clusters. The outcome measure was how far in the course materials a learner progressed before dropping out.

Discussion-based learning activities was found to be the most critical type of learning design in terms of drop-out. Overall, more of these activities in the course was associated with less drop-out, except for learners in South Asia and Africa, who were the opposite. More learning videos reduced the drop-out for learners in South Asia in particular.

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### **3. WORK AND BUSINESS**

- 3.1. Cyberloafing
- 3.2. Smart shopping technology
- 3.3. Mobile commerce games
- 3.4. Investment culture
- 3.5. References

#### **3.1. CYBERLOAFING**

During the covid-19 pandemic, working from home became common. This allowed for the possibility of "cyberloafing" (Lim 2002) (non-work-related Internet use during work time), and specifically, "covid-19-based informational cyberloafing" ("browsing online news about the pandemic during working hours"; Zhong et al 2022 p2).

"Cyberloafing is complex: it has both a dark side and a bright side. On the one hand, cyberloafing is commonly regarded as a workplace deviance that causes productivity loss or extra liabilities..., which depletes employees' finite resources. On the other hand, cyberloafing can yield unexpected benefits because it helps employees recover or supplement resources through temporary detachment from work" (Zhong et al 2022 p3).

Van Doorn (2011 quoted in Zhong et al 2022) categorised four types of cyberloafing - social (eg: online communication), informational (eg: news websites), leisure (eg: entertainment material), and virtual-emotional (eg: shopping online).

Zhong et al (2022) investigated covid-19-based informational cyberloafing using an online survey of 554 MBA students in "Pearl River Delta Economic Zone", China. Six items were created to measure covid-19-based informational cyberloafing (table 3.1). Other constructs measured included job anxiety, "state gratitude" ("the transient sense of appreciation in response to experiences of receiving kindness, help or benefits from others"; Zhong et al 2022 p3), perceived meaning of work, and innovation performance. The findings can be summed up thus: "on one hand, covid-19-based informational cyberloafing impairs innovation performance by worsening employees' job anxiety and reducing their perceived meaning of work. On the other hand, covid-19-based informational cyberloafing enhances innovation performance by increasing employees' state gratitude and strengthening their perception of work meaningfulness" (Zhong et al 2022 pp7-8).

#### Covid-19-Based Informational Cyberloafing

- 1. Visit news sites to follow the progress of covid-19 prevention and control released by the authorities (eg: real-time data, scientific research progress, and material supply).
- 2. Visit financial websites/apps to get up-to-date information from the stock market and global trade, paying attention to the impact of the covid-19 pandemic on economy.
- 3. Visit shopping websites/apps to follow the supply and purchase information about epidemic prevention materials (such as protecting masks and disinfection supplies).
- 4. Browse public opinion (eg: ineffective government work, suffering situations of patients etc) through various social media platforms (eg: WeChat, Weibo etc).
- 5. Pay close attention to the recovery of social life from pandemic including the resumption of work, transportation, tourism etc).
- 6. Follow the pandemic information through mobile phone/PC at working hours every day during the covid-19 pandemic.

#### Job Anxiety

- "I feel anxious at work".

#### State Gratitude

- "I feel a warm sense of appreciation".

#### Perceived Meaning of Work

- "I view my work as contributing to my personal growth".

#### Innovation Performance

- "I was able to search out new technologies, processes, techniques and/or product ideas".

Table 3.1 - Example of items used in survey by Zhong et al (2022).

The researchers offered this practical advice for managers: "On one hand, employees should be allowed more autonomy and flexibility in internet use. Rational cyberloafing can be used as a motivational and managerial tactic for emotional refreshment and work status adjustment in stressful situations like the covid-19 pandemic. On the other hand, reasonable monitoring and restriction, such as norms, rules and regulations to caution employees about the potential detriments of excessive cyberloafing and provide guidance on timing of internet use, are indispensable to manage cyberloafing" (Zhong et al 2022 p8).

The data were self-reports, and cross-sectional, which limits the ability to establish causality.

### **3.2. SMART SHOPPING TECHNOLOGY**

"Smart shopping malls" combine smart technologies with the physical shopping experience. For example: "The customer experience can begin with eye scanners at the mall entrance, which recall information about the customer's previous purchases, offering customers personalised short cuts to specific stores around the mall" (Ameen et al 2022 p2).

In other words, there is a personalisation of the shopping experience, but how does this relate to privacy concerns? A paradox has been noted. "The paradoxical value of personalisation triggers consumer concerns over their personal information being tracked, stored and shared... While consumers are interested in a fast smart technologies-enabled personalised shopping experience, they are also concerned about the privacy of their data and the amount of data they share... Although personalisation offers significant benefits for shoppers, it involves disclosing personal information... Previous studies reveal customers feel their privacy have been invaded once they realise that shopping lists are personalised based on browsing and purchasing history" (Ameen et al 2022 p2).

Ameen et al (2022) collected data from two malls in London and Dubai from over one thousand 20-40 year-olds. Various questions were asked about smart technologies in shopping malls. The findings confirmed the personalisation-privacy paradox with consumers in favour of the personalised shopping experience provided by smart technologies, but concerned about the privacy of their data. Certain variables mediated this paradox, like trust, previous experience with personalisation, and consumer loyalty, such that high privacy concerns may not limit personalisation use.

The samples were opportunity at both sites. The researchers admitted: "Consumers may be less aware of privacy issues associated with their use of smart technologies than when they are shopping online. In addition, younger consumers tend to be more tech savvy and possess relatively high technological innovativeness compared to other generations... and our sample consisted of millennial shoppers who are possibly less concerned about privacy issues associated with interactions with smart technologies" (Ameen et al 2022 p9).

### 3.3. MOBILE COMMERCE GAMES

"Mobile technology has many advantages that provide new shopping services, including mobility, universality, convenience, flexibility, and personalisation" (Yu and Huang 2022 p1). Thus, the growth of shopping online via smartphones, and of mobile commerce ("m-commerce"), especially in China (eg: over 800 m mobile phone users) (Yu and Huang 2022).

M-commerce applications involve more than just online versions of physical shops, particularly including games. This is an example of the gamification of shopping. Gamification is "generally defined as the application of game elements and mechanisms in non-gaming entertainment environments" (Yu and Huang 2022 p2). This includes rewards, points, levels, leaderboards, badges, goals, stories, teammates, and avatars, for example (Yu and Huang 2022). The mechanisms of gamification include exploration, collection, competition, status acquisition, collaboration, and development.

More formally, Chou (2019) described eight core driving forces harnessed by gamification - "epic meaning and calling, development and accomplishment, the empowerment of creativity and feedback, ownership and possession, social influence and relatedness, scarcity and impatience, unpredictability and curiosity, and loss and avoidance. The first four elements involve intrinsic motivation, and the last four elements involve extrinsic motivation" (Yu and Huang 2022 p2).

Yu and Huang (2022) investigated game use on m-commerce sites in China with a survey of over 1500 mobile phone shoppers. Different values were assessed in the survey, including:

- Utilitarian - eg: "Playing games on m-commerce platforms gives me a higher chance of of shopping at a better price".
- Social - eg: "Many people around me play games of m-commerce platforms".
- Hedonic - eg: "It is fun to play games on m-commerce platforms".

High scores on these three values were linked to game-playing, while playing a game on a m-commerce platform was positively associated with purchase intention. The presence of games and gamification

attributes were perceived as providing a fun and enjoyable environment.

An example of a game studied is the "Duoduo Orchard game" on the "Pinduoduo" app. "Players receive water drops for signing in, competing, inviting friends etc, and then they water the tree until they have obtained real goods for free" (Yu and Huang 2022 p4).

The sample was self-selecting in response to online recruitment advertisements, and involved three main m-commerce platforms in China. Most of the participants were female (80%).

### **3.4. INVESTMENT CULTURE**

Edwards (2022) sought to explain "neoliberal financialisation" (Vercelli 2013) or "investment culture", which emerged through the 1980s in the UK, with three trends:

i) The rise of "mass investment culture" from the 1980s - A cultural change occurred in attitudes towards investment in shares that involved both investors and non-investors.

ii) The growth of "a heavy institutionalised form of financial consumption" (Edwards 2022 p4).

iii) The "forging of financialised subjectivities" (Edwards 2022 p4).

These developments were seen, for instance, from the mid-twentieth century as financial institutions "began to sell investment products as consumer commodities in their own right - something with which to impress friends over dinner and to serve as an identity marker. Brokers, clearing banks, and building societies keen to divert growing levels of affluence and material aspiration into credit agreements, savings, and investments thus made consumer narratives a central feature of production, promotion, and distribution processes" (Edwards 2022 p9). Altogether, this has been called "financial consumerism", and the Internet in the 21st century has taken it a step further.

Edwards (2017) described "financial consumerism" as a term that "captures the intersection of several changes which occurred in the 1980s which lay at the heart of the

project of Thatcherism<sup>5</sup>, namely; the promotion of share ownership as a central component of popular capitalism and the key institutional structures which acted as mechanisms for this process; the normalising of Thatcher's economic revolution by a concerted ideological attempt to render it as common sense and 'ordinary'; and the attempt to redefine the relationship between consumerism and citizenship according to the accumulation of capital as well as the accumulation of goods" (p210).

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<sup>5</sup> Thatcherism created the "self-governing citizen": "The rhetoric of Thatcherism drew heavily upon this individualistic ideology and combined it with modern techniques of government. Barbara Cruikshank [1996] and Pat O'Malley [1996] both discuss the importance of self-government in modern states, arguing that responsibility for various areas of personal life is transferred onto the individual and couched in language that emphasises self-responsibility as a social obligation. In terms of the Conservative push towards private ownership, focus was placed on financial self-responsibility, implying that anyone who chose not to buy their council house or invest in shares would have to bear out the consequences of these decisions alone in the context of decreasing social welfare" (Edwards 2017 p215). It should be noted that "rather than forcing restrictions upon citizens, modern governance is about creating citizens capable of displaying 'a kind of regulated freedom' [Rose and Miller 1992]" (Edwards 2017 p212).

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## **4. HEALTH ISSUES**

- 4.1. Use of ChatGPT
- 4.2. Esports players
- 4.3. References

### **4.1. USE OF ChatGPT**

The use of the Internet for health information has become common, but what about using the recently released artificial intelligence (AI) large language model (LLM), "ChatGPT" (Chat Generative Pretrained Transformer)?

Haver et al (2023) considered this question in relation to breast cancer prevention and screening information. A set of twenty-five questions seeking advice were presented, each three times, to ChatGPT in February 2023 (table 4.1). Three experts in breast radiology graded the answers as "appropriate", "inappropriate", and "unreliable".

- What is breast cancer?
- How can I prevent breast cancer? \*
- Does it hurt to get a breast biopsy?
- My radiology report has a BI-RADS score, what is that?
- How often do I need get a screening mammogram?

(All answers appropriate except \*)  
(Source: Haver et al 2023 table 1)

Table 4.1 - Example of questions asked in Haver et al (2023).

Overall, twenty-two answers were classed as "appropriate" (88%) (table 4.2), one as "inappropriate" (ie: containing some inappropriate information), and two "unreliable" (ie: "inconsistent content"). The findings suggested that "ChatGPT holds great potential for automating provision of patient educational information about breast cancer prevention and screening, albeit with areas for improvement" (Haver et al 2023).

- 1st trial: It's impossible for me to determine your individual risk of developing breast cancer without more information about your medical history and other factors. However, there are several factors that can increase the risk of developing breast cancer, including: Age: The risk of breast cancer increases as a person gets older. Gender: Breast cancer is more common in
- Psychology Miscellany No. 196; January 2024; ISSN: 1754-2200; Kevin Brewer



women than in men. Family history: If you have a first-degree relative (such as a mother or sister) who has been diagnosed with breast cancer, your risk is higher. Genetics: Certain gene mutations, such as BRCA1 and BRCA2, can increase the risk of breast cancer. Personal history: If you have previously had breast cancer or certain non-cancerous breast conditions, your risk may be higher. Exposure to radiation: Previous radiation treatment to the chest area may increase the risk of breast cancer. Lifestyle factors: Certain lifestyle factors, such as being overweight or obese, drinking alcohol, and not getting enough exercise, may increase the risk of breast cancer. It's important to talk to your healthcare provider about your personal risk factors for breast cancer and whether you may benefit from additional screening or other preventive measures. They may recommend starting screening at an earlier age, having more frequent screenings, or undergoing genetic testing if you have a family history of breast cancer.

- 2nd trial: As a language model, I do not have access to your personal medical information, so I cannot determine your individual risk of breast cancer. However, there are several factors that can increase your risk of developing breast cancer, including: 1. Gender: Breast cancer is much more common in women than in men. 2. Age: The risk of breast cancer increases as you get older, with most cases diagnosed in women over the age of 50. 3. Family history: If you have a family history of breast cancer, especially in a first-degree relative (mother, sister, or daughter), your risk of developing breast cancer may be higher. 4. Inherited genetic mutations: Inherited mutations in the BRCA1 and BRCA2 genes can increase the risk of breast cancer. 5. Personal history of breast cancer: If you have had breast cancer in one breast, you are at increased risk of developing it in the other breast or in a different area of the same breast. 6. Dense breast tissue: Women with dense breast tissue may have a higher risk of developing breast cancer. 7. Hormone replacement therapy (HRT): Long-term use of HRT for menopausal symptoms may increase the risk of breast cancer. If you have concerns about your risk of breast cancer, you should talk to your doctor or a healthcare professional. They can assess your personal risk factors and recommend appropriate screening and preventive measures.
- 3rd trial: Breast cancer can affect anyone, but there are certain risk factors that can increase your likelihood of developing the disease. Some risk factors for breast cancer include: 1. Age: Breast cancer risk increases with age, especially after age 50. 2. Gender: Women are much more likely to develop breast cancer than men. 3. Family history: If you have a close relative (such as a mother or sister) who has had breast cancer, you may be at higher risk. 4. Genetic mutations: Inherited gene mutations, such as BRCA1 and BRCA2, can increase the risk of breast cancer. 5. Personal history: If you have had breast cancer in one breast, you have an increased risk of developing it in the other breast or of the cancer coming back. 6. Radiation exposure: Previous radiation treatment to the chest area, such as for cancer treatment, can increase the risk of breast cancer. 7. Hormonal factors: Hormonal factors, such as early onset of menstruation or menopause, can increase the risk of breast cancer. If you have one or more of these risk

factors, it doesn't necessarily mean that you will develop breast cancer. However, it's important to talk to your doctor about your individual risk and to discuss appropriate screening and prevention strategies.

(Question also asked as "What is my lifetime risk of breast cancer?")

(Source: Haver et al 2023 table 3)

Table 4.2 - Appropriate responses to question "Am I at risk for breast cancer?".

In a similar study on cardiovascular disease prevention (Sarraj et al 2023), answers to 21 of 25 questions were rated as "appropriate".

LLMs are developing quickly, but it has been observed that wording the same question in different ways produces different responses from ChatGPT in terms of content and length (Kitamura 2023).

Levkovich and Elyoseph (2023) studied the application of ChatGPT to the treatment of depression in comparison to primary care physicians. Eight case vignettes around patients seeking help for symptoms of major depression (MD) were presented (which varied on three dimensions - male/female, blue collar/white collar worker (socio-economic status; SES), and mild/severe symptoms) (table 4.3).

- A 40-year-old man, a blue-collar worker, comes to see you because for more than 3 weeks he has been experiencing, for the first time, continued sadness, sleep problems, and loss of appetite. Your examination indicates he is depressed and that its functional effect on his daily life is severe: he is not able to work. He takes no medications, reports low alcohol consumption, and you find no physical or traumatic cause, or any recent event in his work or personal life that might explain this depression. No suicidal ideation or other mental or physical illness is present.

Table 4.3 - Example of vignette used by Dumensil et al (2012) which was the basis of those in Levkovich and Elyoseph (2023).

The information was input into ChatGPT in June 2023, along with the question, "What do you think a primary care physician should suggest in this situation?". Dumesnil et al (2012) had used this methodology with 1249 primary care physicians in France, and this was the

comparison group.

The responses were categorised as watchful waiting, referral for psychotherapy, prescribing pharmacological treatment (and which type of drug), referral for psychotherapy and pharmacological treatment, or none of these.

For the mild MD cases, ChatGPT was significantly more likely to recommend psychotherapy, while the physicians had recommended drugs or combined treatment in approximately equal numbers. For the severe MD cases, both groups recommended combined treatment, but ChatGPT more so. Comparing the male and female vignettes, ChatGPT showed no difference in response, while physicians recommended anti-depressants significantly less often to women. Likewise with SES, ChatGPT showed no difference, while physicians recommended medication to the blue collar worker, but combined treatment for the white collar worker.

In terms of the recommended medication, ChatGPT was more likely to favour anti-depressants only, while physicians preferred anti-depressants and another medication together.

Levkovich and Elyoseph (2023) summed up that "the therapeutic proposals of ChatGPT are in line with the accepted guidelines for mild and severe MD treatment. Moreover, unlike the treatments proposed by primary care physicians, ChatGPT's therapeutic recommendations are not tainted by gender or SES biases. Accordingly, ChatGPT has the potential to improve primary care physicians' decision making in treating depression" (p6). This is particularly so as ChatGPT recommended psychotherapy more often than physicians, and than pharmacological treatments. Levkovich and Elyoseph (2023) noted: "Considering the tendency among primary care physicians not to refer patients with severe depression for psychotherapy but rather to prescribe medication as the exclusive treatment, our results again point to the potential of AI chatbots to improve clinical decision making in cases of severe depression..." (p6).

The following evaluation points were noted by the researchers:

i) Particular versions of ChatGPT, 3.5 and 4, were used, and subsequent improvements may be made.

ii) The comparison sample of physicians came from France, and three-quarters of the sample were female.

iii) The vignettes related to the initial visit to

the physician, and "do not depict ongoing and comprehensive treatment of the disease or other variables that the doctor would know about the patient" (Levkovich and Elyoseph 2023 p7).

iv) The vignette method "fails to incorporate the intricate dynamics of doctor-patient interactions which significantly mould clinicians' behaviour. The vignettes are deficient in capturing the complex nuances and subtleties integral to comprehensive clinical presentations" (Levkovich and Elyoseph 2023 p7).

v) Real-world recommendations for treatment are influenced by factors like patient preference, and logistics (eg: cost and availability).

#### 4.2. ESPORTS PLAYERS

"Electronic sports" (eSports) is defined as "a form of sports where the primary aspects of the activity are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces" (Hamari and Sjoblom 2017 quoted in Chan et al 2022). There are a variety of genres of eSports including "Multi-player Online Battle Area", "Real Time Strategy", and fighting games. The games can be "player versus player" or "player versus environment". eSports can be viewed as a sub-set of video gaming (Chan et al 2022).

Chan et al (2022) undertook a review of the literature on the physical and mental health impacts of gaming and eSports. Thirty-six relevant studies (published between January 2011 and January 2021) were found, of which three specifically examined eSports/online competitive gaming (table 4.4).

STUDY	SAMPLE
Achab et al (2011)	"World of Warcraft" gamers in France
DiFrancisco-Donoghue et al (2019)	Collegiate eSports athletes at nine universities in North America
Dindar & Akbulut (2014)	Turkish MMORPG (massively multi-player online role playing game) players

Table 4.4 - Three studies specifically on eSports/online competitive gaming.

Firstly, concentrating on these three studies, it was found that higher engagement in eSports/online competitive gaming was significantly associated with unhealthy lifestyle outcomes (eg: higher body mass index; less and poor quality sleep; eye fatigue; neck pain).

The other studies covered video gaming behaviour generally and included eSports/online competitive gaming. Similar outcomes were found, including:

a) Physical activity-related behaviours - less physical exercise, more sedentary behaviour, and increased body mass index associated with more playing.

b) Diet - poor diet, including increased sweetened beverage consumption by longer players.

c) Sleep - less and poorer quality among players.

d) Physical - eye strain, wrist pain, and neck pain.

Overall, the studies varied in methodological issues, including sample size (<100 - >20 000), predominantly more male participants (in over half of the studies), mostly adolescents and young adults, and one-third of the studies were undertaken in the UK and USA.

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## **5. CRIME**

- 5.1. Repeat victimisation
- 5.2. Cybercriminals
- 5.3. References

### **5.1. REPEAT VICTIMISATION**

Monva et al (2022) observed: "Our society is increasingly digitised and so is crime. For the past three decades, technological breakthroughs have created new opportunities to commit crimes in digital environments such as the Internet. Sometimes these crimes resemble traditional crimes (ie: cyber-enabled crimes), but on other occasions they appear as criminal phenomena unparalleled in physical space (ie: cyber-dependent crimes)" (p1).

One issue is the applicability of approaches to understanding crime to cybercrime. For example, repeat victimisation and property crimes. The risk of crimes like burglary, vandalism, and graffiti increases after an initial victimisation (eg: 30% of vandalism incidents are repeat victimisations based on British Crime Survey data; Moneva et al 2022).

Moneva et al (2022) applied this idea to "website defacement", which "involves trespassing on a website to alter its contents... 'Defacements enable hackers to post messages and images that indicate their perspectives and beliefs, as well as gain status by listing their name and group affiliation' (Holt 2011...). When this crime is committed with political motives, it is encompassed within the phenomenon of hacktivism..., but there is a wide variety of motives and modus operandi behind defacements, which means it acquires a phenomenological dimension of its own" (p2).

These researchers used data from the "Zone-H Defacement Archive" for the period January 2010 to April 2017. "The Zone-H team collects, validates, stores and maintains information about defacement incidents committed by individuals or groups who record their own defacements under a nickname... Among other variables, this dataset contains information about the date on which defacers submit a request to register an attack, their nickname, their motivation, the type of attack used for the defacement, the URL of the defaced website, and whether the attack is a redefacement of a previously registered domain" (Moneva et al 2022 p4). The dataset included over eight million unique domain defacements.

It was calculated that 5.6% of attacks were repeat defacements, and of those 1% of defacers were responsible for well over half of cases. Moneva et al (2022) summed up: "Our results show that repeat victimisation contributes little to high crime rates of defacement; that it occurred even several years after the initial attack; that most repeat defacements were also committed by only a few offenders; and that in only a few cases offenders repeatedly targeted those domains that they had successfully defaced in the past" (p8). So, the concept of repeat victimisation has some, but limited, application to cybercrime.

Two key limitations to note here are:

a) The data were self-reports by individuals willing to publicise their behaviour.

b) "It is important to note that the Zone-H administrators have established a one-year restriction on the registration of incidents in order to prevent domains from being massively revictimised because their vulnerability is publicly displayed on Zone-H's platform... So, if a defacer wants to register an attack on a revictimised domain, it is not possible until this period has elapsed, which creates a one-year gap between potential repeats" (Moneva et al 2022 p4).

On the positive side, the researchers found a way to study a hidden behaviour.

## **5.2. CYBERCRIMINALS**

Cybercrime can be divided into "cyber-dependent crimes" and cyber-enabled crimes" (McGuire and Dowling 2013 quoted in Schiks et al 2022). "The first category contains 'new' types of offences that target IT, such as hacking databases with credit card credentials and taking down websites or networks. The second category includes traditional crimes in which IT plays an important role in the modus operandi of the criminals. Examples include internet fraud and cyber stalking" (Schiks et al 2022 p1).

One issue is whether there is a difference between the criminals who perpetrate the two types of crimes, and how they compare to "traditional criminals". For example, the suggestion is that cyber-dependent criminals have higher intellectual and technical abilities than the other groups, and to the general population/non-



criminals.

Schiks et al (2022) investigated this question in the Netherlands. The measure of intelligence was the "Central Institute for Test Development" (CITO) final score. This is a general, multiple-choice test taken at twelve years old (that is viewed as a good indicator of intelligence). Using data for 2001 to 2018, 143 apprehended cybercriminals (prosecuted for "computer trespassing" - ie: unauthorised access to a computerised system), 143 apprehended traditional criminals (any other crime than computer trespass), and 143 non-criminals matched on age, sex, and country of birth were compared.

The cybercriminals had a mean CITO score that was significantly higher than the traditional criminals, but significantly lower than the non-criminals. The obvious note of caution was that the criminals had been apprehended by the police (ie: there was enough evidence to go to court). It is possible that more intelligent criminals had not been caught.

Previous studies, which are limited, have mixed results (Schiks et al 2022). For example, another Dutch study (Leukfeldt and Stol 2012 quoted in Schiks et al 2022) did not find any difference in intelligence between online and traditional fraud offenders. Other studies around the world have found a higher level of education, for instance, for cyber-dependent offenders compared to traditional offenders (eg: Taiwan; Lu et al 2006).

Karslens and Stol (2012 quoted in Schiks et al 2022), in a survey of over 6000 Dutch teenagers, found that higher education was associated with lower likelihood of committing online fraud, and cyberbullying.

In terms of the intelligence of criminals generally compared to the general population, research has shown that "individuals with lower IQ-scores have been found to be more likely to engage in crime... The relationship between IQ and criminal behaviour has been found to be stronger for both repeat offending and violent crimes... In addition, the association between IQ and criminal behaviour has been found both in studies that rely on officially recorded and on self-reported crimes, although the relationship seems to be attenuated for self-reported crimes" (Schiks et al 2022 p2).

Another issue for researchers is whether offenders are specialist (ie: repeatedly performing one or similar offence(s)) or versatile (ie: any crime based on the opportunity). "Street criminals", for instance, showed versatility (or "cafeteria-style offending"; Klein 1995) (eg: a burglar also sells drugs, and steals cars)

(Leukfeldt and Holt 2022).

How does this debate about traditional criminals apply to cybercriminals? Leukfeldt and Holt (2022) investigated this question using data from the Netherlands, Germany, the UK, and the USA. The cases examined involved malware (cyber-dependent crime), or financially motivated phishing and fraud (cyber-enabled crime) between 2003 and 2014.

Three types of offenders emerged from the analysis of 37 criminal networks from police files and interviews with case officers:

i) Cybercrime specialist (around 50% of sample) - eg: use of malware to gain personal data.

ii) Cybercrime versatile (approximately 10% of sample) - eg: phishing, and malware to access bank accounts and credit card details.

iii) Versatile with offline and cybercrime (about 40% of sample) - eg: phishing, and burglary and drug trafficking.

### 5.3. REFERENCES

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## **6. THE SELF AND THE INDIVIDUAL**

- 6.1. Extended self
- 6.2. Confidence culture
- 6.3. Techtopia
- 6.4. References

### **6.1. EXTENDED SELF**

Smartphones provide an "'always-on connectivity" that makes it "an invaluable tool for everyday living", which for some people produces "nomophobia" ("the fear of being without their smartphone") (Park and Kaye 2019). It has been proposed that smartphones "extend the human self beyond the human body, and that smartphones are becoming part of the 'human self'" (Park and Kaye 2019 p216). This is the "extended-self" thesis (Belk 1988).

Three forms of self-extension have been proposed, which Park and Kaye (2019) explored in in-depth interviews with sixty heavy smartphone users in South Korea.

i) Functional extension - The enhancement of human capabilities. The smartphone as a "digital Swiss Army knife" (Muchler et al 2011 quoted in Park and Kaye 2019). For example, a 33 year-old female interviewee said: "The smartphone is an everything device. Whenever I need any help to do my work, my smartphone is right there to help me. I can extend my physical capabilities by transforming my smartphone into a multi-purpose army knife" (p222).

ii) Anthropomorphic extension - Attributing human-like qualities to the smartphone, and interacting with it as such (eg: giving it a personality). For example, a male college student said: "My smartphone looks like me. I tailor my smartphone to my personality by changing the ringtone, adding logos, stickers, the interface, and the colour. For example, my friends all know that I am a super fan of hip-hop and my ringtone is absolutely hip-hop. No one can find the same smartphone because mine is unique" (p222). While a female homemaker explained: "My smartphone is my closest friend and I am the closest friend to my smartphone. It's like the smartphone is something like a friend living in myself. I live with my phone all the time, it never leaves me" (pp222-223).

iii) Ontological extension - A feeling of lack of control as the smartphone takes over many functions, but

at the same time creates a feeling of security. Quotes here include: "My smartphone is part of me, so intimately connected with who I am. I can't live without it. If I lose my smartphone, I would probably feel a rip at my heart" (p223) (female manager). "I am holding my smartphone in my hand. Always! Many times I tried to put it away from me, but failed. It keeps following me. Without my smartphone, I as a person may not exist" (p223) (32 year-old female). A male factory worker summed up simply: "I think the smartphone will gradually replace many parts of myself" (p224).

Both ontological security and insecurity were created by the blurring of the boundary between the "human self and the self as manifested by their smartphone" (Park and Kaye 2019 p226).

Over the 21st century many different concepts have been proposed to describe the changes in the self brought about by information and communication technology generally, and mobile phones, then smartphones specifically. The key for Garcia-Montes et al (2006) is "the development of an individual uncoupled from traditional institutional forms" (p78).

Cushman (1991) described the idea of an "empty self", particularly experienced by rich Americans, who have "a significant absence of community, tradition and shared meaning... This absence of belonging is experienced by the individual as a lack of personal worth and convictions, and would produce a kind of 'undifferentiated emotional hunger', which people attempt to satisfy through the massive consumption of goods and services" (Garcia-Montes et al 2006 p69). Mobile phones initially, but subsequently smartphones, expand the experience of an "empty self" to everyone.

The "present extensive" (Pinillos 1977 quoted in Garcia-Montes et al 2006) is a description originally of modern urban life that can be applied to the individual and their smartphone. "With its incessant mobility and the rapidity of its changes, the city situates its inhabitants in a permanent here and now, where references to yesterday and tomorrow vanish. Precisely because of the provisional character that prevails and because the urban existence accentuates the ephemeral nature of all events, the technified city produces in those who live there a form of living in time that has been called the 'present extensive'" (Pinillos 1997 quoted in Garcia-Montes et al 2006).

Plant (2002) observing the early use of mobile phones talked of "bi-psyche" (the physical and virtual

world together). Garcia-Montes et al (2006) gave this example of a person alone: "Let us imagine the nostalgic, strolling around the streets of the village where he spent his childhood, who receives a call from his drinking partners of a couple of nights before. The mobile phone demands of the recipient at that moment the flexibility of a chameleon, to such an extent that he has to abandon (albeit briefly) his childhood memories in order to be 'the fun guy from the other day'" (p73).

## 6.2. CONFIDENCE CULTURE

Gill and Orgad (2017) talked of a "contemporary discursive formation" called "the confidence cult(ure)" (Gill and Orgad 2015). They explained that "the confidence cult(ure) is a gendered 'technology of self' <sup>6</sup> [Foucault 1988] that works productively by calling us to 'act upon ourselves' [Cruikshank 1993]. Like the positive 'psy complex' [Rose 1998] or the 'happiness industry' [Davies 2015] it represents a novel form of governance and self-regulation" (Gill and Orgad 2017). The idea has been particularly applied to women and girls.

Gill and Orgad (2017), however, were critical: "Academics and think tanks, politicians and newspaper columnists, call on women to recognise that they are being held back not by patriarchal capitalism or institutionalised sexism, but by their own lack of confidence - a lack that... is presented as being entirely an individual and personal matter, unconnected to structural inequalities or cultural forces".

Gill and Orgad (2017) described the areas of social life where the "only you can help you" idea has become important:

a) At work - eg: the idea that the biggest barrier holding down women is low self-confidence.

b) Motherhood - eg: confident mothers raise confident children, especially daughters.

c) "Confidence is the new sexy" - ie: in sex and relationships. "Amongst the central concerns of contemporary sex and relationship advice are the imperatives to 'love your body', 'be confident',

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<sup>6</sup> "Technologies of self" "permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way of being, so as to transform themselves in order to attain a state of happiness, purity, wisdom, perfection or immortality" (Foucault 1998 quoted in Gill and Orgad 2017).

'transform your feelings about sex' and 'become a sexual adventurer' [Gill 2009]. What unites these themes is a concern with transforming the self and making over one's interior life, in order to become lovable" (Gill and Orgad 2017).

The authors continued: "The work of confidence is to be undertaken in addition to, rather than instead of, the vast labour already expected of women in heterosexual relationships. Thus rather than representing a 'loosening' of the grip of other imperatives (eg: to work on the body) it represents a tightening. These circulating discourses of self-love and self-confidence constitute a new 'cultural scaffolding' [Gavey 2005] for the regulation of women, a move deeper into women's psyches so that women must work not just on developing a 'a beautiful body' but also 'a beautiful mind' - an 'upgraded' form of selfhood in which there is no space for vulnerability or ambivalence, but only for compulsory body love and self-confidence" (Gill and Orgad 2017).

Gill and Orgad (2017) summarised their criticisms of confidence culture as aimed almost exclusively at women to be responsible for improving themselves, and it proving a "one-size-fits-all" solution, as well as ignoring structural factors outside the individual. "If confidence is the new sexy, then insecurity (in women) is undoubtedly the new ugly. If confidence is deemed the desirable 'healthy' state - at work, as a parent, and in heterosexual relationships, then lack of confidence is unhealthy and can even become lethal. Self-doubt and lack of confidence are presented as toxic states, whilst the notion of 'low self-esteem' has become rendered in some circles as a term of abuse" (Gill and Orgad 2017).

### **6.3. TECHTOPIA**

Chen (2022) coined the phrase "Techoptopia" in relation to Silicon Valley to describe "an engineered society where people find their highest fulfilment in the utopian workplace. It promises high-skilled Americans a new kind of 'wholeness'" (quoted in Cadge 2022). Put another way, "what happens to individuals and communities when people worship work" (Cadge 2022 p1).

Chen's (2022) thesis has several steps. Firstly, the expansion of work for professionals as a replacement to the declining traditional religious organisations. "Chen then describes how people working in Silicon Valley -who she calls 'tech migrants' - come to the work, typically

from other geographic locations. Many are young and far from home and experience at work the bonding and community connections through which they find meaning, identity, and their souls" (Cadge 2022 p2). This is a form of conversion.

It is "facilitated by their companies and staff in human resources and other units whose job it is to offer meditation, spiritual practice, and other forms of spiritual care to reduce and stave-off burnout. While fewer hours at work and more connections outside of work might have the same effects, tech companies bring burnout prevention in-house in a form of 'corporate maternalism', where 'companies provide for the personal care of their employees to make them happy, healthy, and (therefore) productive' [Chen 2022]. Such efforts shrink the space between the personal and the professional increase the idea that life, not just professional life, takes place at work. Tech companies further advance these approaches through executive coaching, and a range of programmatic efforts – many based in Asian religious practices – through which they encourage employees to connect to their authentic selves less for their overall well-being than to enhance their purpose through work" (Cadge 2022 p2).

#### **6.4. REFERENCES**

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