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Australian high school students and their Internet use: perceptions of opportunities versus 'problematic situations'

luke gaspard

Department of Media and Communications, The University of Sydney, Sydney, Australia

Article

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Author for correspondence:
luke gaspard,
Email: luke.gaspard@sydney.edu.au

Abstract

The Internet has, for varied reasons, emerged as a critical mediating tool in the everyday experience for many young people. Opportunities for access and participation are vast and well-documented. There are, however, risks, or more accurately 'problematic situations', associated with these online experiences. From a digital youth's perspective, real and perceived threats, primarily related to content, contact and conduct, all play to policy agendas, and adult fears of how best to protect youth within virtual space where the boundaries of private and public are easily blurred and compromised. Drawing upon a purposive sample of four high schools, in greater Melbourne, Australia, frequency analysis is performed on questionnaire data from 770 students aged 12–18. Adapting the research taxonomy from the EU Kids Online (2014, EU Kids Online: findings, methods, recommendations (deliverable D1.6)) project, this paper extends that work by developing a more comprehensive coding structure to reflect the complex attitudes high school students of this study exhibit with their online practice. In doing so, this research, via a more nuanced classification, supports the ongoing validity of previous research that points to navigation of the Internet as a continuing contestation between balancing opportunity and risk.

Introduction

Digital media tools and the Internet are ubiquitous features of the everyday experience of many young people, particularly those of more economically developed countries. The opportunities these provide are vast, including communication and socialisation, entertainment, identity exploration, information searching and learning, play, as well as civic participation (Buckingham, 2008; EU Kids Online, 2014: Eynon & Malmberg, 2012; gaspard, Horst, Gomez-Cruz, & Pink, forthcoming; Holmes, 2011; Ito, 2010; Livingstone, Haddon, Görzig, & Ólafsson, 2011; Vromen, 2008). Perceptions across civil society view the preparation of youth for participation in an increasingly digitised economy as worthy and necessary policy aspirations (e.g. see www.betterinternetforkids.eu, www.commonsensemedia.org and www.namle.net). There are, however, risks associated with these opportunities; particularly those that can threaten the social, psychological and physical well-being of young people (Ciarrochi et al., 2016; Li, 2007; Livingstone, 2012; Livingstone et al., 2011).

Taking as a starting point the work conducted by Livingstone and colleagues as part of the large-scale EU Kids Online project (EU Kids Online, 2014), this paper further develops their taxonomy of classifying risk and opportunity. In doing so, this work provides a more detailed and nuanced account of how young people, living in Melbourne, Australia, reflect upon their online experience. Questionnaire results from 770 high school students provide ongoing validation to previous research indicating that the navigation of the Internet for young people is an ongoing contestation between balancing opportunity and risk (EU Kids Online, 2014). To better understand how 'risk' is integral to the online experience of adolescents, attention is drawn to the broader manifestation of risk in their lives. Not only as a product of the highly risky period in their life course, which adolescence represents, but also due to the broader implications for self-actualisation and identity formation brought on by late modernity within neoliberal societies as per Beck's (1992) thesis on the 'risk society'.

Young people's digital media lives

From a digital youth's approach, it is clear that the Internet is a powerful and essential tool in respect of young people's lives, even more so, among Australian youth than youth elsewhere. Young Australians can be categorised as some of the most digitally connected youth in the world. At an average age of 8 years old when first going online, this ranks them as some of the earliest Internet adopters (Green, Brady, Ólafsson, Hartley, & Lumby, 2011). Australian youth have access to an extensive range of digital technology within the home (on average

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10 devices) (gaspard, Horst, Gomez-Cruz, & Pink, forthcoming). Moreover, when compared with youth from the USA, they have access to more devices that can facilitate access to the Internet (i.e. desktop computers, laptops and tablets) (gaspard, Horst, Gomez-Cruz, & Pink, forthcoming).

Internet access in the home is near universal for Australian youth (ABS, 2018; ACMA, 2016; gaspard et al., forthcoming). While at the same time, opportunities for going online beyond the household have also increased significantly. More Australian young people connect to 2011 and 2015; while during the same period, using the Internet at a friend's house has increased by 30%, and the use of public wireless hotspots has more than doubled (ACMA, 2016). In comparison with countries of the European Union, these young people go online more when 'out and about', at school and also at libraries (Green et al., 2011, p. 14).

Added to these connectivity options, more Australian adolescents have a smartphone than their American or British counterparts, and it is this device used most frequently to go online (ACMA, 2016).

Unsurprisingly in this evolving media ecology, the screen habits of Australia's digital youth are radically redrawn with new media experiences replacing those of the past. While the average time spent viewing television has more than halved among 13- to 17-year olds (ACMA, 2017), time online has grown to astronomical levels. Recent OECD data rank Australian young people as the sixth highest among its 30 full members in the amount of time spent online (OECD, 2017, p. 25). According to research undertaken by the Australian Government and the Office of the Children's eSafety Commissioner (OCeC), 14- to 17-year olds spend 33 hours online per week (OCeC, 2016). Between 2011 and 2015, the number of teens' streaming video content has nearly doubled, audio streaming has increased by 122%, nearly three times as many teens are uploading content, and the number using the Internet for research and browsing has also seen a double-digit increase (ACMA, 2016). Alongside this, we see social media, above all other offline and online media activities, including book-reading or video gaming, mentioned as the most frequently occurring 'Every-day' activity (gaspard et al., forthcoming).

Interestingly, despite the considerable growth in accessing and using the Internet, when compared with previous years, young people's satisfaction with online content is in decline (Livingstone, Mascheroni, Ólafsson, & Haddon, 2014, p. 11). However, commensurate with the increasingly flexible and sophisticated ways in which youth go online, fears escalate in response to the intended and unintended risky experiences they encounter with their Internet use.

Encountering risk

While it is clear that digital technology expands the temporal and spatial arrangements in which young people can go online, creating 'anywhere and anytime' accessibility, questions arise as to the consequences to youth's well-being via these activities. Problematic Internet use (PIU) across a range of online-based practices is observed as being of genuine concern for many youths around the world. Prevalence rates of Internet addiction range from 10.4% among high school students in China (Wu et al., 2016), 16.3% of 12- to 17-year olds in Spain (Gómez, Rial, Braña, Golpe, & Varela, 2017) to as high as 26.6% of students during high school years in Hong Kong (Shek & Yu, 2016). Internet gaming disorder, proposed by the *Diagnostic and statistical manual of mental disorders* (DSM-5) as a potential pathological condition worthy of further study, was found by Fam (2018) in a meta-analysis of international research spanning three decades to be of concern for approximately 4.1% of young people.

These potential pathologies become ever-more concerning when we consider, via the extensive work undertaken as part of the EU Kids Online project (e.g. EU Kids Online, 2014; Livingstone, 2012), that a young person, as they spend more time online exploiting its affordances, tends to expand the range of activities in which they engage. This combination typically warrants increases to the skills brought to their online use (Livingstone, 2012). Hence, this correlation between time online, opportunities and skills becomes reflective of the heightened exposure to risks young people tend to experience (Livingstone, 2012; Livingstone & Helpser, 2010). Increasingly challenging to the management and mediation of these potential threats is the knowledge of how the bedroom increasingly dominates where young people mostly go online of all locations both inside and outside the home (Livingstone, Haddon, Vincent, Mascheroni, & Ólafsson, 2014). Mediation of youths' online use is viewed as doubly valuable as it works to both support young people to more fully exploit the advantages of online opportunities while at the same time, minimise exposure to risk and its potential impact (Livingstone, Haddon, & Görzig, 2012).

Chief among the concerns emerging from this interrelationship between risks and opportunities are issues of content, contact and conduct. In developing the model that would later underpin the work of EU Kids Online, Sonia Livingstone and Leslie Haddon (2009) set out in their introduction to *Kids Online: Opportunities and Risks for Children*, how to consider these categories of risk. In respect of content, this is thought of as a young person in receipt of, or exposed to, content described as commercial (as with advertising or spam), exposure to violent or hate content, as well as content of an inappropriate sexual nature. Where a child encounters issues of contact, the authors describe this as predominately driven in an adult-to-child interactive situation, revolving around harassment, stalking and contact with strangers. Conduct occurs via peer-to-peer interactions through which a young person can either be a perpetrator or victim of behaviours such as bullying or harassment.

As the EU Kids Online research team further developed this taxonomy (e.g. Livingstone, Kirwil, Ponte & Staksrud, 2013), a 40-point risk coding structure emerged from the near 13,000 young people aged 9–16 surveyed across 25 European Union countries. This taxonomy underpins the analysis in this paper. Additionally, this paper also incorporates broader perceptions of how risk can be thought off differently by youth and adults. Vandoninck, d'Haenens and Smahel (2014) highlight how youth may not always understand risk in a straightforward delineation between negative and positive experiences as the outcome of the experience is related to its context and a young person's perceptions. Because of this, these authors avoid the term 'risk' altogether and instead lean towards 'problematic situations' as a way of capturing 'any unpleasant, annoying or bothersome experiences which affect children in digital environments' (Vandoninck et al., 2014, p. 1). This more broadly prescribed definition as to how youth perceive any concerns in their online experiences is adopted in this work when analysing young people's questionnaire responses.

This digital conceptualisation of risk is married with the observation that adolescence represents a period in a person's life course

inherently saturated by risky behaviours and practices (Mitchell, Crawshaw, Bunton, & Green, 2001). Fuelled by rapid changes in physical and cognitive growth, the onset of puberty and a shift from the relative stability of childhood, adolescents are recognised as the most significant risk-takers of all age groups (Arnett, 1992; Steinberg & Steinberg, 2010; The science of adolescent risk-taking workshop report, 2011). Whether due to a greater willingness to accept ambiguous outcomes (Tymula et al., 2012) or brain chemistry more prone to reward-seeking behaviours, use of alcohol, illicit drugs, sexual activity and tobacco all tend to increase through adolescence (The science of adolescent risk-taking workshop report, 2011). Due to the instability and turbulence, expected of adolescents terms such as 'rebellious' and 'promiscuous' have been used to encapsulate this period in youth development (Santrock, 1993).

A heightened tendency towards risk in adolescence is coupled with observation that the Internet acts as an important space for the playing out of problematic or self-destructive behaviours for this group. Young people struggling to cope with negative moods or unable to effectively employ strategies to affect problems, PIU or excessive video-game play can be a consequence as these practices provide distraction and escape from negative and problematic feelings and moods (Brand, Laier, Young, & Brand, 2014; Kuss et al., 2017).

Setting the context for this work, this section discusses how digital technology and the Internet figure in the lives of many young Australian people. In essence, digital engagement can be thought of not only as highly connected in terms of opportunities and the amount of time they spend online but also increasingly private regarding how and where this access takes place. There are, however, consequences that typically emerge with the more time youth spend online. The more they exploit the opportunities available from the Internet, the increased likelihood of encountering problematic situations. This is against a backdrop where youth appear physiologically primed for boundary testing and enhanced risk-taking. With each of these conditions in mind, the question is, How do youth perceive their experience of being online, is this reflection emblematic of opportunity or does it more closely align with negative issues and problematic concerns?

Methodology

Data for this paper emerge from a larger project, *Transmedia Literacy: Exploiting transmedia skills and informal learning strategies to improve formal education*, supported by the European Union Horizon 20/20 fund and coordinated by Universitat Pompeu Fabra (UPF), Spain. The principal aims of this multination (Australia, Colombia, Finland, Italy, Portugal, Spain, UK and Uruguay) research considered how young people aged 12–18 consume, create, participate, play, produce and share in digital spaces and the social and technical skills and strategies employed in these practices. This interdisciplinary project set out to chart the informal learning practices and transmedia skills used by our research participants in the everyday navigation of their digital practices. One of the chief aims of this work was to formulate initiatives for formal educational systems, which mimicked the learning experience outside of school for this group (for further details of the project visit https://transmedialiteracy.org/).

Data collection occurred through a 'short-term ethnography' approach, which, as described by Pink and Morgan (2013), receives inspiration from established ethnography practices. While taking its cue from the principles of long-term observational fieldwork, this ethnographic form is premised instead upon *briefer* more *intense* immersion in an 'ethnographic place'. Constitution of this 'place', while inclusive of the locality of the fieldwork, also encompasses the dialogue between researchers as they come to understand and reflect upon the research encounters post-fieldwork. Additionally, use is made of more innovative techniques when observing the research context in comparison with more conventional fieldwork. Thus, as part of the *Transmedia* project, the research team utilised focus groups, questionnaires, semi-structured interviews and a 'netnography' through this ethnographic approach. A netnography as defined by Kozinets (2010, p. 10) finds and studies a community online 'who share social interaction, social ties, and a common interactional format, location or "space"'. As a consequence of investigating the online digital practices of our Australian research participants, the Steam gaming platform emerged as our youths communal 'space'.

To meet the demands of the *Transmedia* project, a purposive sample of five secondary schools and one primary school within the Greater Melbourne region of Australia was engaged. The selection of these specific schools was due to their contrasting teaching approaches and philosophies, as well as differences in the composition of their student bodies in terms of socioeconomic status and cultural background.

This paper uses a subset of this data – questionnaire responses from four high schools. These schools represent the data collection sites with the highest numbers of completed questionnaires.

Participants

Each of the four schools is co-educational and non-denominational. Three are classified as free public schools, while the fourth is private and fee-paying. This school (named as Wallsend in this paper) is also the largest with 3,031 total enrolments. Of all the schools in this study, Wallsend has the highest ratio of enrolled boys to girls (58% vs. 42%) and, according to the MySchool website,[1] this is the school with most students within the top quarter of income distribution (71%). Davies Lane High School divides students into a novel House system, whereby each self-contained house maintains purposefully designed learning spaces for the core learning needs of its members. Each house comprises a roughly equal number of students from year 7 to 12. In total, 1,785 students attend this school. Davies Lane is recognised as one of the most ethnically mixed schools in Melbourne. Kanning School, with 1,747 student enrollments, has a high number of students having a language background other than English (80%+), and both Davies Lane and Kanning schools have a near-identical proportion of students located in the bottom quartile of the income distribution (approximately 64%). The final school, Peterborough, is the smallest in size with 867 students, has a strong reputation for success in the performing arts and is similar to Wallsend in both the ratio of boys to girls enrolled and the proportion of students within the top quarter of income distribution (66%).

In total, 770 students completed a questionnaire. Of these, 454 are boys and 316 are girls. The number of young people in each age is age 12, $N = 131$; age 13, $N = 137$; age 14, $N = 158$; age 15, $N = 105$; age 16, $N = 139$; age 17, $N = 85$ and age 18, $N = 15$. The mean age for boys is 14.4 and 14.3 for girls.

[1]This website, administered by the Australian Curriculum, Assessment and Reporting Authority , maintains comprehensive data on student's educational testing under the National Assessment Program – Literacy and Numeracy (NAPLAN), school finances, staffing levels and characteristics of students attending a school including parents' education and occupation.

In negotiation with executive management at each school, questionnaires were completed under a school's standing consent, meaning student participation occurs as part of a school's normal activities. Due to the differing time commitments schools were able to provide in the research project, significant variances emerged to the number of students completing questionnaires. Wallsend School features as the smallest sample group with 69 students while the largest, Peterborough School, provided 326 students (the next section contains a more detailed breakdown of the available sample).

Ethics approval was applied for and granted by a university review board, and permission to research in schools obtained from the Department of Education and Early Childhood Development, Victoria, Australia. All questionnaire data are de-identified.

Measure

The questionnaire contains a total of 81 multiple-choice and short answer questions. These enquire about media availability in the home, media uses and reflections on transmedia and informal learning practices, for example, do respondents make and post online fan fiction or post content to a social media account. As part of the broader Transmedia project, results from the complete survey are published elsewhere (gaspard, et al., forthcoming).

The focus of analysis for this paper emerges from a single open-ended question 'What I have learned from the internet is . . . ' This question featured at number 73 (Q.73) on the questionnaire and is the fourth of 12 open-ended questions that feature on the final page of this research tool. Participants did not receive any additional context by which to respond to this question, except that provided from the other questions preceding this target question. The other open-ended questions are generalist in nature, for example, 'What interests me most from the Internet is . . . '; 'When I connect to the Internet, the first thing I do is . . . ' and 'What interests me most from YouTube is . . . '. If students were unclear as to the meaning of any of these open-ended questions, the standard researcher's response was 'What does the question mean to you?' This unspecific and generalised researcher's response allows participants to provide, as far as is possible, a personally interpretative answer to the question. Data collected from each school were then keyed into a single Excel spreadsheet to allow the performance of a frequency analysis based upon the emergent coding structure. This structure developed from an inductive grounded theory approach (Glaser, 1992), which is insistent upon allowing theory to emerge through the data using comparative analysis. Hence, once the analysis of the data from this single question began, it became clear young people's responses followed categories similar to that developed by the EU Kids Online research team. Further developing this coding structure, student's responses were manually coded by the researcher through examining the content themes of each response. Participants' responses were classifiable into one of two groups: the Internet as positive/opportunistic or the Internet as negative/problematic.

While the EU Kids Online coding structure emerged as helping to guide the processing of data for this paper, it was clear that there were limits to this usefulness. In part, this is due to the specific intent of the work of EU Kids Online not only to investigate the existence of risks and opportunities but also to capture the user-flow of these relationships: mass communicated content, adult-to-child contact and the conduct in peer-to-peer interactions. In taking the grounded approach to data analysis, this paper captures a more 'spontaneous' response as to how risk and opportunity inform youth's Internet use.

In many instances, participants' Q.73 responses indicated a one-word or brief answer, such as 'be careful' or 'not to trust the Internet', which although indicating a form of concern with their online use does not point to where in the user-to-user interaction this takes place. Hence, a subjective decision is made on the part of the researcher to only code responses into these three categories of content, contact and conduct when responses indicated from what or whom this concern originates. Due to this specificity, responses not containing this origination are coded under the 'Other problematic concerns' category. Once categorisation of student responses into positive and problematic concerns had occurred, a frequency analysis was performed on this data.

Once the sample underwent cleaning to remove questionnaires where respondents left a blank response or recorded 'Nothing' or 'I do not know', a useable sample of 676 questionnaires emerged ($N = 676$; boys = 397 and girls = 279). Tables 1 and 2 contain a detailed breakdown of the final numbers of questionnaires included for analysis in this paper based on age, gender and school.

Procedure

Questionnaire data collection took place between August 2016 and May 2017 and is the first research tool from the series listed above used with research participants. The researcher administered paper and pen questionnaires in the classroom to students during a class period. Completion time typically took 20 minutes. At the point of administration, students were provided with the opportunity for non-participation and reminded this would not negatively impact any aspect of their relationship with the school or their teacher. No students withheld their participation.

The Internet as opportunistic

Of the 676 useable responses provided by students to the open-ended question, 'What I have learned from the internet is . . . ', the majority viewed being online as a place of positivity rather than a practice harbouring negativity or problematic concerns or situations (see Table 3). In total, 58% ($n = 392$) of these respondents considered what they have learned from the Internet can be described as positive. However, boys and girls perceived the Internet as being valuable to different degrees. Boys responded to having a more positive perception of being online than girls (60.5% of boys vs. 54.5% of girls).

Boys and girls were also united when examining the types of activities or practices they considered to be most favourable in their use of the Internet. Undoubtedly, the most frequently mentioned by all young people was the perception of the Internet as a place of acquiring knowledge (see Table 4). Of all the 392 students who recorded their 'learning' from the Internet as a positive experience, 69.5% ($n = 274$) mentioned a form of informal learning or information seeking on a diverse range of topics such as fashion, doing fitness, making things, 'life hacks', make-up, politics or playing a video game or learning an instrument.

Similarly, using the Internet as a study resource to help with schoolwork or homework was mentioned by roughly equal numbers of both boys (6.3%, $n = 15$) and girls (5.8%, $n = 8$). While responses to this question are in no way reflective of how much students used the Internet for homework, it was interesting to note

Table 1. Number of completed questionnaires by boys, their ages and the school attended

	Boys							
	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17	Age 18	Total at school
Davies Lane	11	16	14	8	1	4	1	55
Kanning	0	1	10	9	29	35	7	91
Peterborough	47	54	33	27	34	6	0	201
Wallsend	0	0	26	9	10	5	0	50
Total in each age group	58	71	83	53	74	50	8	397

Table 2. Number of completed questionnaires by girls, their ages and the school attended

	Girls							
	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17	Age 18	Total at school
Davies Lane	12	11	8	7	0	6	0	44
Kanning	0	2	8	10	44	21	4	89
Peterborough	38	36	24	20	9	0	0	127
Wallsend	0	0	15	2	1	1	0	19
Total in each age group	50	49	55	39	54	28	4	279

Table 3. Number and frequency of young people who consider what they have 'learned from the Internet' as either positive or problematic

	Boys		Girls	
	Number	%	Number	%
Positive	240	60.5	152	54
Problematic	157	39.5	127	46

Table 4. Number and frequency of young people responding the Internet provides a positive experience

	Boys		Girls	
	Number	%	Number	%
Accessing information/knowledge	171	71.3	103	67.8
Community (being part of/finding . . .)	5	2.1	13	8.6
For all	0	0	2	1.3
Game playing	1	0.4	1	0.7
Important thing to have	6	2.5	3	2
Interconnectedness	3	1.3	1	0.7
Internet is valuable	10	4.2	4	2.6
N/A	15	6.3	6	3.9
Neither positive or negative	3	1.3	4	2.
Shared culture	4	1.7	3	2
Study resource	15	6.3	8	5.3
The Internet is everything	7	2.9	4	2.8

how previous research has typically found the Internet as a study resource much more frequently used by girls than boys (Chan & Fang, 2007; Smith, Skrbis, & Western, 2013). While research also indicates that an overwhelming number of young people have and continue to use and rate the Internet as the number one resource to support formal education in the form of homework (Chan & Fang, 2007; Crammer, 2006; Eynon & Malmberg, 2012; Holmes, 2011; Smith et al., 2013), among our research participants, just 5.8% ($n = 23$) reflected upon the Internet in this way.

Other notable findings from these positive responses to 'learning' from the Internet were the presence of gender differences for the other major categories mentioned by respondents: being part of a community and the Internet as valuable. Findings from both these two categories appeared to support other research indicating gendered differences to ways in which the Internet is used and experienced by boys and girls. First, taking the category of community, responses reflected on the Internet as a space for bringing people together and building social relationships, for instance, one 16-year-old girl commented the Internet '. . . is a great way to stay connected and meet new people', while a 15-year-old boy felt 'the Internet is a massive place where people from all over can meet and share items'. However, while boys and girls provided very similar responses under this communal-based category, the higher frequency with which girls mentioned these reflects previous research indicating how social connection and communication are a more prominent characteristic to understanding how girls make use of communication technologies compared to boys. From television viewing patterns (Nathanson, Perse & Ferguson, 1997) to mobile phone text messaging (Lenhart et al., 2010) and mobile phone calls (Geser, 2006), online instant messaging (Lee, 2003) and email (Fallows, 2005), research indicates a definite and persistent socioemotional preference as to how girls make use of electronic media.

Secondly, when considering the category of the Internet as valuable, although the overall number of students mentioning this characteristic was not overly significant – just 3.4% ($n = 14$) of all these positive responses – the gender difference did reflect wider trends with 47% more boys recording the Internet as being valuable than girls. In addition to the discussion in the following section, these findings appear to align with prior research indicating that, when evaluating the Internet as a place of well-being, more girls

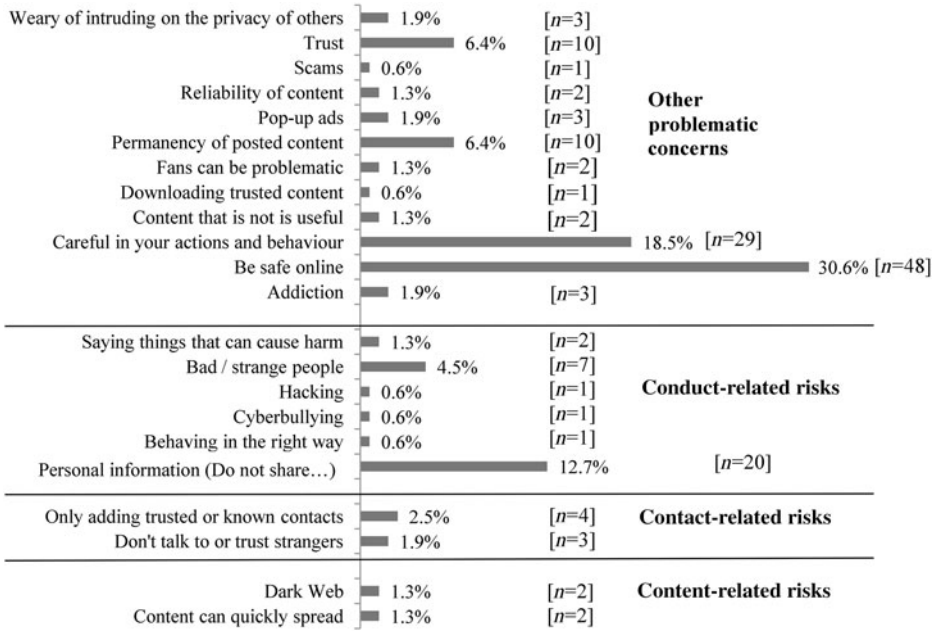

Fig. 1. The frequency boys mention the Internet as being problematic ($n = 157$).

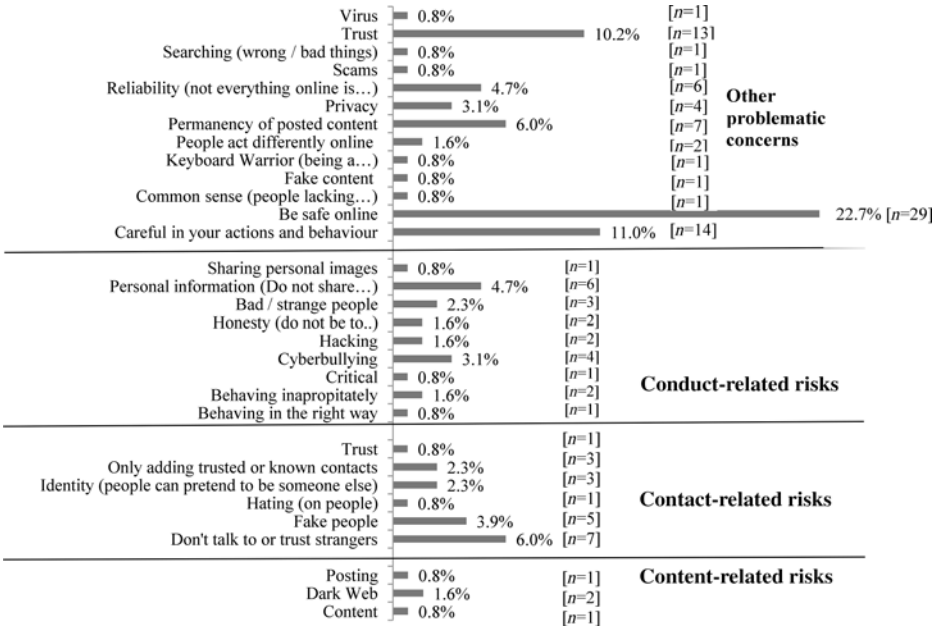

Fig. 2. The frequency girls mention the Internet as being problematic ($n = 127$).

tend to respond negatively compared to boys (e.g. Booker, Kelly & Sacker, 2018; Ciarrochi et al., 2016; Jackson et al., 2009).

The internet as a place of concern

While it is clear that the majority of the whole sample ($n = 676$) viewed learning from the Internet in a positive light, a significant minority of these high school students took a more pessimistic view. Overall, 39.5% of boys ($n = 157$) and 45.5% of girls ($n = 127$) viewed the Internet as a place holding concern rather than opportunity. However, when looking in more detail at the data, it emerged that boys and girls hold differing areas of concern as being significant (Figures 1 and 2).

Starting with the three core characteristics used by EU Kids Online – content, conduct and contact – boys and girls in this study exhibited some commonality when viewing the Internet as being problematic in these ways. A similar proportion of responses from both boys and girls suggested content as being problematic – 2.5% of boys ($n = 4$) and 3.2% of girls ($n = 4$). Of concern for both boys and girls was what they termed the 'Dark Web' and fears that content 'can spread like wild fire' once posted online.

Similarly, conduct emerged as troubling to equal proportions of boys (20.4%, $n = 32$) and girls (17.2%, $n = 22$). However, a broader range of issues concerned girls (9) compared to boys (6). Similar issues were of most concern to both, but the rates at which these troubled each group was substantially different. For example, the most mentioned category under concerns of conduct by both boys and girls was related to fears of sharing personal information: as one 12-year-old boy put it, 'Don't use your real name or share any private stuff'. This fear was expressed by 12.7% of boys ($n = 20$)

in contrast to only 4.7% ($n = 6$) of girls. Likewise, a fear of encountering bad or strange people – a problem described as 'People can be really offensive and argumentative over small things that turn into big things' by one 14-year-old girl – was a concern for twice as many boys ($n = 7$, 4.5%) than girls ($n = 3$, 2.3%). Conversely, cyberbullying emerged as a problem for four times as many girls than boys. This final finding is indicative of other Australian research indicating it is girls most likely to face issues related to online bullying (Campbell, 2005; Lodge & Frydenberg, 2007; Price & Dalgleish, 2010).

However, of the three principal areas of content, conduct and contact, the issue of contact showed the widest discrepancy between boys and girls. This emerged as an area of worry to almost 12% more girls than boys. While boys were concerned with adding contacts they did not know or were weary of ('Never talk[ing] to strangers', 14-year-old boy), girls indicated other areas that were a worry to them: fake accounts and fake people ('How to tell a fake account and to know if someone is real', 15-year-old girl), other online users 'hating' ('Don't be a hater it's rude', 14-year-old girl) and fears of not being able to trust people ('I have learnt that there could be bad people', 12-year-old girl).

Expanding how we think about problematic concerns

Accounting for the responses falling under the categories of content, conduct and contact, in total, these represented only a minority of all the problematic or risky concerns recorded by young people (31%). The vast majority of responses – 72.6% ($n = 114$) of boys and 63.9% ($n = 81$) of girls – can be categorised under a more general heading of 'Other problematic concerns'. Here again, as elsewhere in these findings, similar patterns emerged as to the issues troubling both boys and girls. The types of concerns are identical, but the rates at which they occur among the sample varied significantly. For both boys' and girls' safety online and being careful in how they acted and behaved ranked as the number 1 and number 2 most frequently mentioned issues. Interestingly, a greater proportion of boys recorded being concerned with these two issues than girls. Almost one in three boys (30.6%, $n = 48$) pointed to issues of safety while less than a quarter (22.7%, $n = 29$) of girls expressed this same concern. Being careful – expressed by one 13-year-old boy as 'To be careful, watch appropriate stuff, do things related to your age' – is mentioned by 18.5% of boys ($n = 29$) as opposed to 11% ($n = 14$) of girls.

Beyond these two leading issues of concern, the permanency of content posted online troubles both boys and girls to similar degrees (boys, 6.4%, $n = 10$; girls, 6%, $n = 7$). While trust, the other principal category recorded by both boys and girls is of more concern to girls than boys. For young people recording a response under this category, a degree of fatalism characterised their feelings of the Internet, as one 12-year-old girl responded: 'Don't trust everything that is on the Internet'.

Discussion

Findings from these 676 high school students in Melbourne, Australia, capture an Internet landscape viewed by the majority of these young people in opportunistic terms. However, a significant minority, 4 out of every 10, hold a contrasting view, more indicative of concern about being online. When considered in terms of the relationship maintained by young people between their offline and online worlds, this presents several worrisome conclusions to the current state of teens' lived experience. As research thinking has shifted from perceiving cyberspace as 'a qualitatively distinct place' from that of youths' lives offline, there is now agreement within the research community that there exists 'substantial continuities' between their 'virtual' and 'real' worlds (Livingstone & Haddon, 2009, p. 7). In essence, being online means, rather than reconstituting a virtual world that is separate and distinct from their lives offline, young people are reinforcing their social relationships, social hierarchies and social hostilities encountered in their everyday lives (Livingstone & Haddon, 2009). As an example, the work of Cross et al. (2009), in an analysis of primary and secondary school data from over 20,000 Australian young people, identified the same students as being the principal perpetrators of both cyber- and traditional forms of bullying.

Similarly, online tools allow bullies to extend the scope and scale of their bullying. Price and Dalgleish (2010, p. 52), in a review of international studies, conclude 'cyberbullying is often used in tandem with traditional bullying'. While at the same time, the anonymity afforded by online bullying may help understand that, although reporting of traditional forms of bullying is in decline (Rigby & Smith, 2011), incidents of cyberbullying are on the rise (Livingstone, Mascheroni et al., 2014).

If, as in these contexts, the Internet merely reflects and extends youths' offline experiences, major anxieties would appear replicated from one space to the other. Alternatively, if taken from a different perspective, could these results merely reflect what it means to have a highly connected youth population? Addressing this latter point, Stald et al. (2014) concluded youth accessing the Internet via a smartphone are likely to experience higher levels of risk; in countries where Internet diffusion has occurred earlier and faster among teens, these groups are, according to Hasebrink (2014, p. 7), '. . . most likely to be bothered or upset by something online'. However, if returning to a significant theme underscoring the work of EU Kids Online, 'online opportunities and risks go hand in hand – the more of one tends to mean the more of the other' (Livingstone et al., 2011, p. 142).

Although the value of this determinist relationship between risk and opportunity is valuable, underlying the issues and concerns emerging from these students' questionnaires was the pervasiveness of risk to young people's lives. From the individual, in the form of boundary testing and risky behaviours as a consequence of adolescence, to the imposition of structural risk via the 'risk society' and the resultant fears and anxieties, this pervasiveness of risk is created in the everyday experience of contemporary neoliberal societies.

For Beck (1992), and other influential sociological theorists such as Giddens (1991) and Bauman (2001), modernity in the later phases of the 20th century has brought seismic shifts to the way in which society and self are both considered. No more is it possible to rely upon long-established traditional cultures, norms and values, as well as the nation state, to support youth in the development of self. Instead, responsibility for defining one's future increasingly becomes the burden of one's self. Thus the 'standard biographies' of the past, as Beck (1992) described the fixed predictable and traditional roles people relied upon in determination of their life-course, are no longer available. Instead, a 'do it yourself' or 'choice' biography has emerged whereby the work for defining the future increasingly becomes the active responsibility for each person (Beck, 1992). In the Australian context, as observed by Woodman and Wyn (2014), many challenges emerge to a youth's 'normal biography'. The authors point to the importance of an increasingly feminised

labour market where the likelihood of portfolio careers dominates work aspirations, and the institution of marriage declines as divorce and cohabitation become common and acceptable (Woodman & Wyn, 2014). Compounded by the shift in the general sociopolitical climate away from social-democracy towards individualism, and alongside technological development and the expanded growth of mass consumerism (Simmons, Thompson, Tabrizi, & Nartey, 2014), the resultant impact on youth is a pervasive atmosphere filled with uncertainty and fear that, as Foucault argues, leads to an inability to self-recognise or understand others (Foucault, 1977, p. 153). Woodman and Wyn (2014) sum up this uncertainty by concluding a 'choice biography' means 'less of the biography appears given and more appears open to, or in need of, conscious decision making' (p. 40).

The Internet, with its possibilities of identity exploration and play affords, as Merchant (2005) highlights per Beck's work, the ability to 'perform' identities where the chief premise is to 'wear' and 'show' these as opposed to acquiring an identity that can be 'stored and "kept"'. It is within this tension of the on-going need to 'make' oneself within a context of uncertainty and unpredictability where concerns of a 'crisis' of youth can be said to take place. Although the work of Beck is rightly critiqued for it its lack of engagement with the on-going importance of social structures in containing individualism, as with issues of class, gender and race, Woodman and Wyn (2014) provide valuable insight to the ongoing value of Beck's thesis; especially, when exploring the condition of Australian youth with youth in other developed countries.

Conclusion

The Australian high school students taking part in this study reflected upon the Internet not only as a place of opportunity but also one harbouring problematic concerns. Extending the risks taxonomy developed by EU Kids Online to include concerns, annoyances or troubling experiences encountered by youths in their Internet use, this paper provides, in addition, further scope in which to classify young people's opportunistic reflections on these practices. While it is clear that the majority of young people view the Internet as a place of positivity, of particular concern is the very significant number who did not. Almost half the girls participating in this study viewed being online as preoccupied with problematic concerns; this being a reversal of findings from previous work showing it is boys who encounter more risks online than girls (Livingstone & Helsper, 2010). Chief among the concerns of both boys and girls in this study was the issue of navigating safety while online. This is unsurprising given the level of public discourse and how 'e-safety' dominates school approaches to youth and the Internet.

Findings from this research also highlight that, despite the commonality of the youth online experience, this is far from uniform. As is clear from an already large body of knowledge, gender continues to play an essential role in understanding the relationship boys and girls have with the Internet. In this research, boys and girls tended to find the Internet opportunistic and problematic for similar reasons. However, the rates at which this occurs tend to vary widely. Dedicating further research to more fully grasping the unevenness in the experience and use of the Internet is essential to making it more equitable for all youth.

Given the overall rates of concern, however, the findings in this paper signal these Australian youth as experiencing the Internet as bothersome at some of the highest levels of youth anywhere in the world (Haddon & Livingstone, 2012). To some degree, this is likely to reflect the highly connected nature of Australian youth – some of the most digitally connected in the developed world. However, it is essential to reconcile this with how risk is symptomatic of adolescence and our moment in history. Traditional institutions, norms and values no longer shape the life course of youth as they did in the past. Instead, a more individualised approach places the burden of self-identity squarely on the shoulders of each young person. While youth face this increased weight of self-actualisation, unencountered by youth in previous generations, the desire to challenge and test boundaries is viewed as essential and inevitable during this period in the life course. As we understand virtual space as an extension, rather than a replacement, of a young person's offline world, research combining how risk plays out across broader aspects of this lived experience would provide immense value in better understanding the youth experience. As a consequence, more holistic education approaches and policy interventions would emerge that possess a higher likelihood of creating real change in the lives of youth.

Limitations of this study

While this paper provides analysis of high-school students' 'spontaneous' responses to an open-ended questionnaire question asking 'What I have learned from the Internet is . . . ', it is understood that the very nature of the study has achieved an element of priming to these responses. The primary focus of the project from which findings for this paper emerge explores Transmedia skills and informal learning. This nature of the project was communicated to students before undertaking the completion of the questionnaire. Hence, the research setting itself, formal educational institutions, compounded by the 'learning' intention of the project questionnaire may to some degree have informed students as to how they viewed their 'learning' from the Internet. This may be reflected in the high numbers of respondents recording knowledge acquisition as the principal positive characteristic from their Internet use.

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