Using Healthier Media and Reclaiming Life Beyond Small Screens – a dual approach for young people's wellbeing.

Written evidence by L F Wycherley [caring humanitarian observer]. I declare I have no conflicts of interest

A As a society, our rush into social media /small screens appears to be blinding us to vital questions about the *relative health merits of different ways of accessing such media*, ►below. (I have studied this field meticulously for six years).

B This is of particular relevance to under-age users, in whom, without exception:

i) neurological development is still in train, and

ii) health impacts may take decades to manifest fully (re: the Precautionary Principle)

iii) peer-pressure to use devices may be high and self-regulation low. As Dr Nicholas Kardaras, former professor of addiction, writes in his book *Glow Kids* 2016 "*if I'm having such a hard time managing my tech usage...with all my training and addiction recovery work, what chance does an impulsive eight-year-old have?"* He presents the case, with citations, that "*a kid's brain on tech looks like a brain on drugs".*

C When assessing *alleged benefits* of juvenile smart-phone /WiFi-tablet use and linked social media – particularly prolonged use – conscientious questions to ask include i) might any advocates have potential conflicts of interest? ii) might any of us be unconsciously sanctioning addictive small screens /social media because we ourselves are sliding into addiction?* A helpful analogy: can heavy smokers address smoking?

*saddened to see some children numb with addiction, I role-model the opposite

D Please study the inspirational clinical work of Dr Victoria Dunckley. Her 500 case histories suggest that ***over-stimulation by interactive screens*** mimics many juvenile mental-health disorders – and may account, in part, for the rapid rise in diagnoses. Digital fasting, structured over 4 weeks, reprieved such diagnoses or made them easier to manage, restoring young people's healthy functioning and non-aggression. See her book /bibliography for evidence relating to *addiction-impacted brain chemistry* and the physiological stresses of interactive screens.

Notice Heo 2017 (smartphone-skewed brain chemistry), new studies on smart-phone compulsion disorders, particularly in young women, plus eye-opening insights from Silicon Valley's new Center for Humane Technology on how media-design hijacks young lives.* See also Gentile 2014, who found less obesity, insomnia and aggression in 8-to-11-year-olds when parents limited their screen time. **Note**, however, such authors appear to be unaware of ►**A**, below – a grave *limitation* in psychology papers on screen-time.

*wireless radiation may trigger opioid receptors, worsening addiction: 2007 review

E Any actions to *reduce screen-time* – especially *mobile* screen-time (since this can invade so many aspects of life*) – potentially increases *unmediated* face-to-face time with other human beings, and with Nature, and the enrichment each vitally brings. Research affirms that "green time" is associated with health [Kaplan 1995, IEEP 2016], including child wellbeing [Wells 2000]. To impoverish *direct, sensory* connection with the natural world may additionally risk its neglect.

For example: if you are a young adult, would you care, perhaps, about the new peer-reviewed evidence of mobile phone-mast damage to trees [Waldmann-Selsam 2016] if your physical awareness of plants was low? If these had become "virtual" or relegated to the edge of awareness while you were deep in small screens?

In the poignant words of Dr Kardaras (ibid.) as he observed addiction in a place of great beauty: "*I never forgot the hypnotised expressions of those boys playing* [on small screens] *in that horrible cellar while paradise was just over their heads".*

Those of us, including all on the Select Committee, whose connection to Nature predates heavy societal smart-phone use – who enjoyed a childhood less tethered to /swallowed up by addictive screens – have a

duty towards present /future generations to safeguard their daily, *direct, unmediated* face-to-face social contact and contact with Nature. If we fail to act now, recognising this as a birthright, the onus may fall on a generation *less able* to act due to its own pixel-addiction and weakened face-to-face /Nature connection – a negative spiral.

* notice Heathrow Airport's toilet-wipes for mobile phones to curb the spread of faeces. In addiction terms, are we not facing a "new smoking"?

F Joined-up thinking is needed on the likely costs to children /adolescents of proposed wireless (microwave /mmwave) 5G engines of addiction. Commercial pressures to fill streets and buildings with output from *super-dense 5G transmitters* (at the expense of safer 5G means, ►**A** below) to profit from instant multi-film downloads /games /porn will drive up many youths' addiction at potential risk to their mental balance and ability to lead well-rounded lives – with societal costs.

Such 5G escalation may also pose risks, according to growing numbers of precautionary scientists /doctors, to skin pain-receptors/ precancerous skin cells (children's included), eyes, leaves (example), micro-fauna, antibiotic resistance, and to children /adults already functionally impaired by wireless pollution (see **A8**, below). These are important, level-headed considerations: notice, for example, that 1 in 4 UK children have the "silent" red hair gene conducive to precancerous skin cells (Sanger Institute 2016).

►**A** *The relative health merits of different ways of accessing screen content/ social media*

This theme is both timely and pressing in relation to juvenile screen use /social media. From care for all British children /adolescents, I hope that each of you will address it with courage and creativity, drawing fully on your powers as a Select Committee, informed by all the latest precautionary evidence tendered for this inquiry. Thank you.

As a humanitarian observer, I perceive that new /emerging communications media flexibly using *the latest* ***fibre*** and data-rich *infrared /visible light* (LiFi), offer inspiring, healthy alternatives to the relentless pulsed microwaves ("radiofrequency" exposure) currently transmitted by smart-phones, WiFi tablets, and cells /routers exchanging with them. Faster than our eyes can detect, the delicate flutter of LiFi does not penetrate children's/adults' bodies; in common with *fibre-to-the-device*, it *crucially removes* the increasing published effects on life seen from current wireless outputs (and from proposed mmwaves, **F**). It is now known to reflect around objects (Edinburgh University), opening up many philanthropic possibilities: German tests in schools have been successful.

As a Commons Select Committee, you have a unique opportunity to highlight these healthy technology options for the sake of the safety and wellbeing of our children /adolescents. (Particularly *two-way* use rather than hasty *one-way* use dependent on microwave transmitters). To flag such healthy ways forward may inspire ethical UK businesses – LiFi is already being trialled for smart-phones, while fibre has kaleidoscopic possibilities [Schoechle 2018]. In combination they are the digital equivalent of lifting children out of industrial smog into clean air.

To cite, meanwhile, the powerful ***new precautionary evidence*** below [**1** to **8**], is to transcend wider systemic failures that have been holding up vital humane progress. To recommend a transition towards cleaner, safer, juvenile connectivity is to go down in history, gracefully, as conscientious policy-leaders making a genuine, far-reaching difference to our children's long-term health and life chances.

Although over 2,000 peer-reviewed papers (e.g. a, b, c,) now record effects on life from wireless microwave output at levels 1 to 4 magnitudes below current safety standards – see the 41-nation scientists' appeal to update these standards, below – there is *growing documentary evidence* that this invaluable body of work is being unjustly marginalised, so delaying vital progress, at chronic hidden health costs, particularly to our children.

High quality examples of this documentary evidence include i) *Downplaying Radiation Risk* by Cambridge physicist Nicola Wright in Corporate Ties that Bind, ed. M J Walker 2016 ii) *Captured Agency* 2015, the Harvard Ethics Report by visiting professor Norm Alster, and iii) Starkey 2016, an important peer-reviewed

paper that meticulously documents how precautionary evidence was excluded from the AGNIR 2012 summaries on which many government bodies – our own sadly included – have based non-precautionary recommendations (re: heavy wireless device use /exposure).

As a caring, conscientious Select Committee you might perhaps offer: "*we have reason to believe our government may not have always enjoyed the very best, up-to-date access to fully unbiased advice in this field (i.e. child health implications of wireless-screen / social-media's cumulative pulsed-microwave output) and we therefore offer some remedial working recommendations in relation to long-hour, juvenile use".*

For a wealth of support, do draw on the helpful, growing 41-nation 237-scientist appeal (full text /initial video) to all UN member nations. Signed by international peer-reviewed experts in this field, many with decades of research, it calls for wireless safety standards to be revised (these currently protect only from tissue-heating) alongside harm-reduction strategies, doctor and public education, and protection of vulnerable groups – notably children. Notice the appellants are authors, collectively, of over 2,000 peer-reviewed precautionary papers in the field.

A harmonious, pragmatic way forward might be, for example (see **1-8** below): "*we have been made aware of* **new** *peer-reviewed precautionary evidence – including findings 'hot off the press' that postdate all current policy in this field – and have conscientiously integrated this into our understanding and working recommendations".*

If I may, I would like to share **eight new advances in precautionary understanding** for you to enjoy, absorb, and integrate into your team-thinking. Thank you. Landmark, peer-reviewed new /recent data includes (among other precautionary advances):

1) the discovery of a *master mechanism of harm*, Pall 2013 to date, for current pulsed wireless output, at levels far below existing safety limits. This mechanism won a Global Medical Discovery listing and was published in one of the highest-ranking peer-reviewed journals. The author, biochemist Professor Martin Pall (speaking on this here /here), is already winner of eight international awards. *How might we use this gift for humanity to the benefit of all British young people in their screen /social media usage?*

This mechanism, and the peer-reviewed evidence supporting it, readily explains the *recent toxic effects* seen in paper after published paper on wireless exposure – particularly aging free radical /nitrosative damage (for example, **6** below, and here) and genotoxic changes.

In essence, delicate voltage sensors in our cell walls are rapidly over-stimulated by our pulsing wireless output, driving a rise in peroxynitrite, one of the most toxic substances in our bodies, implicated in creeping cell /organ damage and gradual, chronic diseases. [e.g. Bandara 2017: potential risks of *early heart-disease* from wireless-induced free radical damage].

Because these voltage sensors are particularly dense in the nervous system, including children's developing nervous systems, it would indeed be wise to recommend a transition towards safer, non-penetrative media (see above) for juvenile screen-time /social media.

2) new evidence [Philips, March 2018] of a rise in *deadly* ***brain cancer*** *in England 1995-2015* across all ages, particularly in lobes more irradiated by mobile phones. Note the parallel evidence from two vast new studies (National Toxicology Programme / Ramazzini Institute). Dr Annie Sasco, a former director of cancer prevention epidemiology (France), observes "*the younger one starts using cell phones, the higher the risk*."

3) new evidence [Sirav 2016] and Tang 2015 of mobile-phone *risks to our* ***blood-brain barrier*** *that protects our brains from toxins* – at potential risk of early dementia or other gradual decline. It is worth noting that the most long-running research (Salford, speaking here) found *high damage* from weak exposure, revealing risks from child /adult ***passive exposure***.

4) new evidence [Lerchl 2015/useful discussion] of *tumour-accelerating effects from exposures less than* ***tablets'*** *SARS.* Notice the *stronger* effect from "weak" everyday exposures in this important replication

study. (As each of you will appreciate, power is only one aspect: the piercing wireless ***pulse***, and polarisation, increases the published impacts on life).

5) recent evidence [Margaritis 2013] that ***Bluetooth***, and other everyday wireless sources, can affect life during brief exposure, triggering cell death. In relation to Bluetooth-dependent social media (e.g. wireless 'earbuds') this offers scope to recommend Bluetooth is kept off children's bodies, particularly in the very young.

6) mounting new evidence*, in animals, of ***free radical damage to organs from WiFi sources*** or analogues, sometimes from only 1 or 2 hours' exposure per day. Although animal evidence does not always replicate in humans, it invites respect: consider all the WiFi tablets /toys being cuddled by young children, placing the hidden multiple antennas next to their skin /vital organs. (WiFi tablets transmit non-stop microwave spikes, at relatively high intensities, unless in *Flight Mode*: simple examples a, b; ditto smart-phones left on *standby*). Also note that WiFi hastens mercury release from dental fillings [Paknahad 2016]. Please each read Pall's highly helpful overview [**March 2018**] of emerging WiFi risks and watch this scientist-video of how a child's /adult's body is irradiated. Thank you.

* [*Damage to, for example*:] Pancreas: Topsakal 2017 /Kidney: Kuybulu 2016 /Testes: Akdag 2016 /Eyes: Tök 2014 / Throat: Aynali 2013 /Foetal brain, liver, kidney: Celik 2016, Ozorak 2013 /Skin: Ceyhan 2012 /Blood: Chaturvedi 2011/ Brain: Desmunkh 2015; Megha 2015; Kesari 2012 /Thyroid: Agustino 2015 /Nervous system: Ghazizadeh 2014, Naranayan 2018 / *Also to:* Heartbeat: Sailh 2013 /Conception: Shahin 2014 /Puberty: Sangun 2015 /New teeth: Ciftci 2015 / Learning & memory Shahin 2015 /Hormones: Yuksel 2015 [*And so on*: here are the research papers]

7) fast-growing evidence of potential general ***fatigue risks*** (and more) to children /adults due to damage to ***mitochondria*** (the fragile energy-producing entities in our cells) from weak wireless exposure [Hao 2015 /Hongyan 2014 /Shangcheng /all the papers they reference]. Bristol University found child chronic fatigue syndrome is rising: might this be an overlooked factor? Mitochondrial damage typifies autism: read Harvard professor Martha Herbert's in-depth work on wireless /EMF pollution and the ***simultaneous rise of autism*** here /here (489 references).

8) new evidence of overt ***sensitivity to wireless exposure*** in some adults /children (reporting linked migraines, dizziness, racing/irregular heartbeat, nausea, buzzing tinnitus, insomnia, muscle pain, anomia, etc.) This includes i] new MRI brain scans showing hyper-connectivity in the most affected and ii] mounting evidence from Belpomme 2015-2018: nearly 700 patients struggling with wireless exposure symptoms were found to have damaged brain blood-flow and multiple toxic markers in their blood. Where re-tested, cases improved after lengthy avoidance of wireless exposure. (Nb, this sensitivity was missed by studies based on whether subjects can detect on/off radiation from rapid on/off discomfort – neglecting gradual /lingering pain etc.) Some doctors testify to being personally affected by this sensitivity.

The implication is that alternative social /school media, plus creation of low-radiation areas in key public services (e.g. GP surgeries, public transport) needs to be considered to meet the 2010 Equalities Act, the Children's Act, and to preserve UN human rights such as Article 5, right to freedom from torture.

Belpomme and other scientists have called for this sensitivity to be formally recognised as an environmental illness (here) with an International Disease Code. It is recognised as a *functional impairment* in Sweden, i.e. the problem resides in the electromagnetic pollution, not the patient. Compare this, for example, to addressing chemical air pollution for asthmatic children.

A tobacco analogy may perhaps be helpful: driving up pulsed-microwave dependency (smoke) and permitting digital "smoking" in all spaces may be making our country uninhabitable for the more sensitised – surely this is inhumane? Driving up *heavy* digital smoking looks to be a downhill slope for all, especially children, degrading our environments incrementally in favour of aging, disease-friendly free radical damage while plausibly risking high rates of sensitisation.

But *if heavy data traffic*, and juvenile consumption of it, can be routed increasingly through clean, non-polluting means (fibre /light-based) – vibrant growth areas for our communications industries – then inspiring, policy-led humane progress can be made, to the benefit of all.

Conclusion
Safeguarding the young and vulnerable is one of the greatest moral imperatives of any civilised society. It is laudable that as a Select Committee, you are examining juvenile screen /social media use – the bulk of which is currently wireless (pulsed-microwave) with highly addictive properties (**B**, **D** above) – and ways to address the emerging problems. We are at a conspicuous *tipping point in history* in which growing, substantive evidence of risk and harm ***on both counts***, much of it new, is coming powerfully to light just as clean connectivity, combining versatile fibre and infrared /light, is becoming viable.

This is both a challenge and a serendipity. To address both issues jointly – both the means used and the addictiveness – is to award our children far healthier long-term futures than those living in head-in-the-sand regimes who face runaway addiction and cumulative, close-range RF pollution, the two rising in lockstep with each other (worsened by old-style 5G, above) at ever-growing risk and harm.

Dear all: take courage. If you act remedially on both counts, future historians will praise you.
From long study of this field (six years working alongside pioneering doctors), I commend this twin approach with every fibre of my being – please act now to avert the wide-ranging potential downstream tragedies that may otherwise ensue.

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Postscript Positive, creative recommendations for juvenile wellbeing, based on the above, include:

● recommend a 5G which creatively prioritises fibre-to-infrared /light (see, e.g. the white paper Reinventing Wires) and a transition towards these clean technologies in schools

● recommend a minimum age for smart-phone ownership (see also: cyber-bullying)

● recommend more juvenile use of fibre-to-device /Flight Mode (WiFi-tablets included)

● offer parents practical examples, e.g. to adapt a child's device, disable wireless output in "settings" and link to cable broadband /dLAN using the excellent new adapters = rich digital access without cumulative RF exposure

● role-model safer digital practices and promote healthy memes, e.g. electromagnetic hygiene, digital detox, "Flight Mode is your friend", green time, "log off and live"

● boost screen-free time in Nature /social spaces by popularising device drop-boxes /Dugoni-style pouches

● work with sympathetic teen-cult heroes, artists, musicians (watch Moby's "Are You Lost in the World Like Me?") to spread the low-addiction, reduced-radiation message

● as in Poland (Krakow) supply simple RF meters to public clinics /libraries to enable families to perceive and manage their voluntary exposures

● red-flag addictive algorithms

● advise parents to consider limiting interactive screen-time (see **D**), particularly in mental illness

● raise awareness among parents /doctors /teachers that some children may be affected by wireless sensitivity and begin pollution-mitigation to improve access to public services

● **celebrate** device-free time with national "switch off" days, cultural events, and joyous competitions