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Children of Media – World-builders

Culture, deme formation and children's class consciousness in the global-digital semiosphere

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ABSTRACT

(Keywords in bold)

Using the interpretive and speculative form of the humanities essay, this paper is organised into five sections: Children; Semiosis; Play; Groups and classes; 'One species; one planet'.

I argue that children play a productive role in human cultures (if not in the economy or politics), based on their generative role in the reproduction and reinvention of **demes** or culture-made and knowledge-making groups. With the emergence of global digital media, children are at the forefront of imagining a **global-scale** deme, where for the first time it is imaginable to act collectively and globally as a **population.**

Some children have taken the further step of using social media, technological platforms and popular affordances for global political **organisation and activism**, especially in relation to climate change, intersectional human rights and posthuman ecologies.

Such children (and allies) are organising around the **means of mediation** (rather than the means of production) to develop **class consciousness** and **demic purposefulness** beyond the horizon of the 'adultist lens' of control. I argue that these socially mediated developments – in both playful and productive modes – amount to demic **'worldbuilding'**.

Individualist science has largely failed to address the environmental, economic and political implications of children's cultural agency, confining them instead to behavioural motivation, economic consumerism and political inconsequentiality. An alternative systems model of **'cultural science'** would enable child/media research to move beyond the spent paradigm of correction and protection, without essentialising children as a group, to learn from and to assist their self-organised **mediated activism** in response to anthropogenic crises.

Comments welcome!

> In an important sense, in a breathtakingly intimate sense, touching, sensing, is what matter does, or rather, what matter is: matter is condensations of response-ability. Touching is a matter of response. Each of "us" is constituted in response-ability. Each of "us" is constituted as responsible for the other, as being in touch with the other. … Crucially, there is no getting away from ethics on this account of mattering. Ethics is an integral part of the diffraction (ongoing differentiating) patterns of worlding. … The very nature of matter entails an exposure to the Other. Responsibility is not an obligation that the subject chooses but rather an incarnate relation that precedes the intentionality of consciousness.
>
> (Karen Barad, 'On touching', 2012)

1 INTRODUCTION

In the sciences as well as in policy and family structures, children are routinely regarded either as an absence – only adults are counted (Fig. 1) – or as a negative condition: unproductive, unknowing, asexual, infertile, irresponsible, incomplete; and therefore inconsequential. Official and research attention to children in relation to media and social media use is focused on what media do to children and not what children do with media, uncritically perpetuating pre-internet 'uses and gratifications' approaches. Funding agencies are most mindful of parents and their assumed fears, and research leans towards the 'correction and protection' institutions of clinicians, schools and news media.[2]

[2] See for instance Pew Research (US, 2020): https://www.pewresearch.org/internet/2020/07/28/parenting-children-in-the-age-of-screens/; Ofcom (UK, 2017): https://www.bbc.com/news/technology-42153694; eSafety Commission (Australia, n.d.): https://www.esafety.gov.au/parents/skills-advice/are-they-old-enough.

Fig. 1. The 'typical human'[3]

Meanwhile, childhood agency itself is explained as inconsequential or purposeless play, as children explore and thereby constitute their physical/social/virtual networks and media affordances on an unprecedented global scale, from ever-younger ages (Reeves and Vibert, 2020: 13), in line with what Karen Barad calls 'worlding' (2012). This in turn enables children's collective agency to gain self-identity – not least by means of the selfie, whose social poetics they quickly made their own (Burns, 2015; Frosh, 2015; Senft and Baym, 2016; Warfield et al., 2016).

[3] The 'typical human' for science is not a child, although children under 15 comprise 26 percent of the world's population. Scientific protocols do not require children to be tested in clinical trials. As *Time* reported in relation to COVID-19: 'testing in children is not a requirement for the vaccine to be released and be used in kids'. Sources: Picture: Mannequin designed to test bodily heat loss in humans, from Holmér et al. (2001). World population of children: https://data.worldbank.org/indicator/SP.POP.0014.TO.ZS. *Time*, 2 November 2020: https://time.com/5905272/covid-19-vaccine-trials-kids/.

Children are now using social media for culturally purposeful activism (Sengupta, 2020), not only to achieve short-term personal, partisan or commercial objectives, though that happens too, with influencers, unboxing, slime business and the rest,[4] but also to secure long-run human futures at global scale, especially environmental and climate justice (Greta Thunberg); human rights (Malala Yousafzai), animal and posthuman rights (Skye Bortoli; and see Chiew, 2014).[5]

This is the topic of the present paper, which offers an account of children's agency in relation to media and social media that I have developed across several publications (with numerous co-authors) under the sign of 'cultural science' (see especially Hartley and Potts, 2014, Ch8; Hartley, 2020, Ch12; Hartley, Ibrus and Ojamaa, 2020, Ch18).[6] Here, I pursue some implications of our contention that culture makes groups; groups make knowledge; and knowledge makes newness – a process in which children play a constitutional role. The fundamental culture-made group is the *'deme'* or 'inter-knowing population', bonded by culture, language, codes and 'imagined community'. The term comes from the political 'demos' and the 'deme' or 'interbreeding subpopulations' of the biosciences. It's a shame that the concept of a 'deme' in everyday life is driven by fear, as in pan*demic*, epid*emic*, not to mention aca*demic*, because what it describes is a self-building, self-recognising, communicative subpopulation, not just a viral contagion.

Childhood's long period of acculturation is a prime site of deme-formation and renewal for any and all cultures, using language, communication, media, song, story and performance as the raw material for what I'm calling here 'worldbuilding', borrowing that term from one of childhood's favoured haunts, the movies, where it has revolutionised production design (Cechanowicz et al., 2016). Worldbuilding is a practical instantiation of Yuri Lotman's concept of the 'semiosphere' (Lotman, 1990; Hartley et al., 2020), and of the posthuman or quantum notion of 'worlding' elaborated by Karen Barad (2007; 2012). This is Alex McDowell's 'map' of worldbuilding (Fig. 2).[7]

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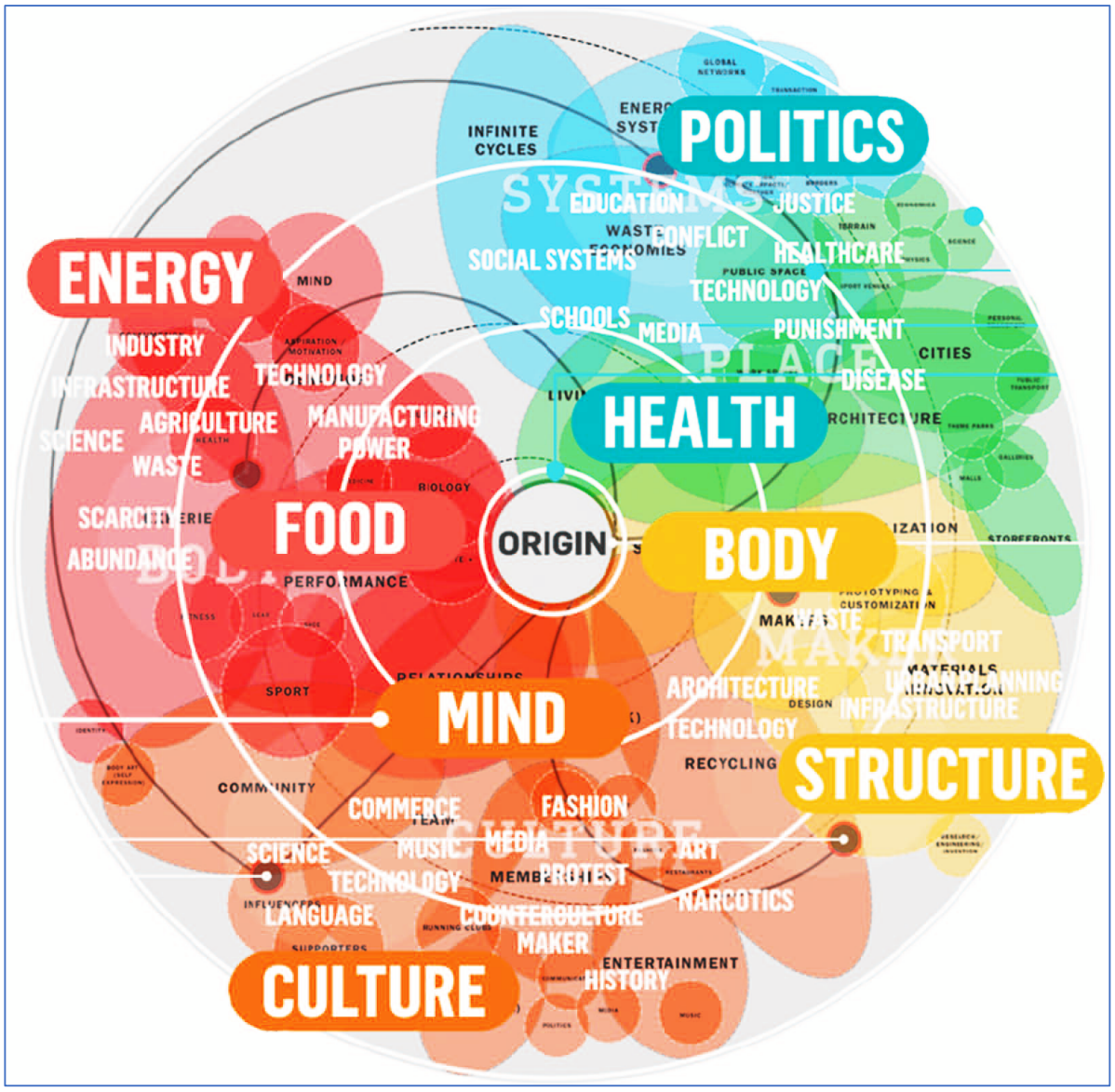
[4] For influencers, see Abidin and Brown (2018) and Callens (2020); for unboxing, see: https://www.theverge.com/2016/12/22/14031288/ryan-toys-review-biggest-youngest-youtube-star-millions (2016); for slime, see: https://www.cnbc.com/2018/07/23/15-year-old-makes-over-100000-a-year-selling-slime-on-the-internet.html (2018).

[5] These names are just shorthand for the global movements they personify. Skye Bortoli, an Australian of Indigenous heritage, founded Teens Against Whaling when she was 11 years old: see Bortoli (2008): https://www.austlit.edu.au/austlit/page/A131600. For posthumanism (a topic that exceeds the scope of this paper) see Barad, 2007; Wolfe, 2009; and the writings of Donna Haraway.

[6] Some material in this paper is taken from Hartley, Ibrus and Ojamaa (2020) and Hartley (2021).

[7] Alex McDowell is an accomplished production designer (*Minority Report* (2002), *Corpse Bride* (2005), *Man of Steel* (2013)) turned professor: see his World-building Institute at the University of Southern

Fig. 2.: Worldbuilding[8].



California: http://worldbuilding.institute/about; and: https://worldbuilding.institute/people/alex-mcdowell. For other concepts of 'worldmaking' and 'worlding' see McCormick (1996) and Barad (2007).

[8] Alex McDowell has reimagined production design as a 'technology of the imagination': 'Our version of world building employs a collaborative, ethnographic design methodology that incorporates extensive research at the individual, community, and world scales; a constant redefinition of research questions; a research and world map; as well as expert interviews, speculative fiction, character lenses and development, narrative design, and rapid prototyping' (Cechanowicz et al., 2016: 29). This may be a visual model of the process that children undertake as they reach out to explore the semiosphere.

If children make demes (as they have throughout humanity's duration), then what happens when their agency expands to global scale via social media and digital-computational technologies? The cultural semiosphere is planetary in extent, perhaps coextensive with the biosphere, but humanity has emerged into global knowledge and action without a sense of itself as a single, planetary species.[9] Because each local culture, language, nation or 'tribe' sustains its own semiosphere, often in competitive opposition to neighbours (Lammy, 2020), there is no institutional form or forum (except for Sci-Fi and the speculative imagination) for *H. sapiens* to reflect on and to regulate itself as 'one species' occupying 'one planet'. Instead, 'we' take to the global stage armed only with inter-demic competition and 'aggressive parochialism', which served the species during its first, scattered 200,000 years (Pagel, 2012; Malešević, 2017; Scott, 2017; Turchin, 2016; Watkins, 2010), but is now manifestly toxic to people and planet alike.

Children of the current era are the first population-wide generation to assume and thence to constitute a new, global deme using digital-media affordances. Within that context, some of them are beginning the work of consciousness raising, organisation and activism proper to the formation of a new '*world class*', led by girls (Hartley, 2020: Ch12). Thus, I argue that treating children as inconsequential consumers at best and unwitting victims at worst is a serious impediment to scholarly understanding, and an impediment to system-change agents, among whom children now figure unmistakably as a leadership cadre.

2 CHILDREN

2.1 There is no such thing as children

The general scholarly presumption that children are involved only in 'consumption' rather than 'production' is a serious impediment to understanding their cultural function, which is to *produce the future*, using the semiospheric knowledge, codes, rules, technologies and systems of the past. While they get on with that, formal disciplinary knowledge casts them mainly as a problem for some other group to solve. Disciplinary knowledge systems are tied to existing control structures (Third et al., 2019: 83-4). Children only attract scholarly notice as a group when their functional disutility is infringed – by child labour, public sexualisation or adult

[9] The semiosphere – the space of culture, meaning, communication and language – should not be thought of as immaterial. It is realised in both institutional and physical form, whose impact on the Earth system is now transformational, as the mass of human-made things begins to exceed the mass of the biosphere as a whole: https://www.bbc.com/news/science-environment-55239668.

responsibilities and experiences; or when they deviate from norms – by dissidence, deviance, delinquency, difference.

It needs to be recognised here that there is no such thing as childhood in the abstract – it's not a universal but a cultural-historical condition. Globally, according to the World Bank and UNICEF, 'an estimated 1 in 6 children—or 356 million globally—lived in extreme poverty before the pandemic, and this is set to worsen significantly'. Such children are most likely to live in Africa (two thirds) or South Asia (one fifth).[10] Meanwhile, child poverty in rich countries is on the rise too: 'child poverty rates have increased in almost two-thirds of OECD countries since the start of the Great Recession in 2007/08'.[11] Childhood is policed by the familiar raft of racial, gender, family, disability, wealth and other social institutions, which widen inequality in mixed societies, where children of colour will experience life and life chances quite differently from their affluent white neighbours. Here, 'deviance' is a control technique applied to unfavoured demographic groups by state agencies and populist prejudice alike (Wang, 2018), from which children are not exempt.[12] Thus, in the US, Black children are six times more likely to die at the hands of police than white children, and Hispanic children three times more likely.[13] In settler countries like Australia, where I live, Indigenous children are routinely but systematically targeted by police; Indigenous children and youth are 17 times more likely to be incarcerated than non-Indigenous children (up to 43 times in the Northern Territory).[14]

Childish behaviour is likely to be dubbed deviant when children of any stripe shift into purposeful or systemic 'worldbuilding', because the very concept of childhood requires 'innocence', where all actions are pre-coded as unknowing pretence or make-believe. In practice, this means denying childhood its own agency and keeping children disenfranchised until they are programmed to comply with institutional, instrumental or 'interested'

[10] Source: World Bank, 20 October 2020: https://blogs.worldbank.org/opendata/356-million-children-live-extreme-poverty.

[11] Source: OECD, October 2018: https://www.oecd.org/els/family/Poor-children-in-rich-countries-Policy-brief-2018.pdf.

[12] See, e.g.: https://idcoalition.org/wp-content/uploads/2016/09/End-Child-Detention-Advocacy-Brochure_web_spreads_190816-1.pdf.

[13] Source: Children's National Hospital (USA), 24 November 2020: https://www.eurekalert.org/pub_releases/2020-11/cnh-bha112020.php.

[14] Targeted: see, e.g.: https://theconversation.com/enforcing-assimilation-dismantling-aboriginal-families-a-history-of-police-violence-in-australia-140637; https://www.bbc.com/news/world-australia-51496206. Incarceration rates: https://www.theguardian.com/australia-news/2020/jul/16/nts-indigenous-young-people-43-times-more-likely-to-go-to-jail-than-non-indigenous-youth. The UNHCR has issued a human rights handbook for police (2004), with a section on the rights of children: https://www.ohchr.org/documents/publications/training5add3en.pdf (pp. 38-42).

(proprietorial) purposes. Even as social media put global connectedness in their hands, questions about how children imagine themselves in and as the world, and how they may be grouping in opposition to existing arrangements, simply don't arise. Any grouping is suspect, from 'minority' identities to 'activist' communities.

In knowledge systems beyond the family unit, itself an uncertain concept,[15] children as a category are 'encircled' by other groups (Donzelot, 1979: 103) – healthcare, school, nation, audience, market, etc. In each case, the imagining institutions use children to serve their own purposes, not children's own directly, and certainly not as *self-represented* by children. Jacques Donzelot (1979: 103) writes:

> […] the family appears as though colonised. There are no longer two authorities facing each other: the family and the apparatus, but a series of concentric circles around the child: the family circle, the circle of technicians, and the circle of social guardians.

Each such circle is itself encircled among overlapping media spheres, where guardianship is contested and legitimated. Childhood as a condition is set aside as legally irresponsible, economically unproductive and culturally impotent, while individual children absorb (or do not) what's thought to be good for them from their family, where they have one, and other institutions, while being prevented from absorbing what's reckoned harmful by successive institutional 'guardians'.[16]

2.2 Utility vs futility: 'A moment of buffoonery'

Thorstein Veblen made a distinction between, on the one hand, the 'instinct for workmanship', seen as the 'conscious pursuit of an objective end' – or 'teleology' – of human action (1994/1914), which he construed as exclusively economic (not to mention adult, male and industrialised) and, on the other hand, 'conspicuous waste', which he construed as pecuniary display, one component of which was later dubbed the 'trophy wife', whose habits (embroidery, learning Latin) and physical constraints (dress, thinness) render her 'unfit for work' and thereby of value only as a signal of affluence (Veblen, 1899, Ch7: 79; 83). This is

[15] The family is widely recognised as an ideological category in crisis (Donzelot, 1979), in its nuclear homeland and globally (Brooks, 2020; Rahman and Zhang, 2017). See also: https://www.oecd.org/els/soc/47701118.pdf; https://www.pewsocialtrends.org/2015/12/17/1-the-american-family-today/.

[16] There is abiding social anxiety about what children 'absorb' in their minds (i.e. media influence), perhaps even more widespread than what they absorb into their bodies (i.e. processed and junk food; alcohol and other drugs).

exactly the space occupied by the conspicuous 'innocence' of idealised children, especially in media, marketing and popular culture, as Veblen recognised (1899: 40).

But, as Theodor Adorno famously argued, such binarism, separating economic rationality from cultural meaning, 'fails to grasp the interdependence of the useful and the useless' (1967/1941: 75-93; and see Svelte, 2019, 198-204). Such *interdependence* describes the condition of childhood in culture, while economics and public policy remain stubbornly Veblenesque. There, children are still coded in as doubly useless: they lack economic *utility* (productivity) and are apt to pursue cultural *futility* (play).

Adorno makes a further point about *disciplinary* specialism that also applies to 'children of media' – they need to be seen in their 'social totality'. Of Veblen (1967: 83), he writes:

> While as economist he is all too sovereign in his treatment of culture, cutting it from the budget as waste, he is secretly resigned to its existence outside the budgetary sphere. He fails to see that its legitimacy or illegitimacy can be decided only through insight into society as a totality, not from the departmental perspective of the questioner. Thus a moment of buffoonery is inherent in his critique of culture.

Beyond this 'departmental perspective', children – led by girls – are creating something new: not buffoonery but *interdependent class consciousness and action*, organised around the means of mediation.

To summarise so far: Discourses *about* children, in the behavioural and medical sciences, news media and politics, tend to focus on control. Representations *of* children, in visual culture, advertising, popular media and fiction, tend to focus on 'innocence', especially when it is thought to be under threat, unless the children in question are persons of colour, in which case representations may be organised under the heading of 'victim' (girls) or 'perpetrator' (boys).

3 SEMIOSIS: WHAT ARE CHILDREN *FOR*? CULTURAL FUNCTION AND 'OPEN' LITERACY

A different picture of childhood's cultural function emerges if you move away from the repositories of collective rules – sciences, politics, economics and society – to consider children as a distinct cultural population, with a group identity that matters to them and is a source of collective agency. What children do 'for themselves' – as a deme or class – has been the subject of study in sociolinguistics (Kerswill et al., 2013; Meakins, 2013); in folklore anthropology, pioneered by Iona and Peter Opie (1959); in social history, pioneered by Philippe Ariès (1962); and – in another register – in British commercial documentary television, with Michael Apted and Granada TV's *Seven Up* series (every septennium since 1964).[17] Social class occupies an important place in media studies too, but usually in order to locate media audiences, including children, in external socioeconomic class settings (e.g. Livingstone and Blum-Ross, 2020), rather than to explore the *creation of class consciousness* in media by children, teens, young people and their allies (but see Wark, 2020). Critical attention concentrates on the dangers children face in relation to commercial and exploitative uses of media, where agents are seen as 'perpetrators' not 'producers'. These dangers are real, but attention to them is maintained disproportionately (Buckingham and Jensen, 2012), at the expense of understanding children's own 'uses of (media) literacy' (Knobel and Lankshear, 2007) as a matter of significance for cultures as a whole.

The fundamental medium for human communication and cultural identity is language. No 'culture as a whole' can survive without it. But the same applies to cultural change. Those who must carry languages and their cultures over to uncertain futures are of course the current cohort of children. Thus, each new generation has to *translate* the received semiosphere into the realities of changed circumstances. In turbulent times, when change is rapid and contact among previously incommensurate groups is accelerated by incursion, migration, and colonial media affordances, it is children who must find ways not only to communicate these relations but to express their identity using 'contact languages', creoles, pidgins and mixed languages (Kerswill et al., 2013; Bakker and Matras, 2013). Out of such contact, new languages emerge – one of them having been English itself (Winford, 2012). Creation of new meaning across incommensurate semiospheres is in turn foundational of culture (Lotman, 1990). The

[17] For the Opies, see: https://www.encyclopedia.com/children/encyclopedias-almanacs-transcripts-and-maps/opie-iona-and-peter. For Ariès see Beck et al. (eds) (1978/2020), Ch3. Information on the '*Up*' series is readily available online. The latest 'episode' is *63 Up* (2019).

semiosphere as a whole and each local semiotic subsystem together constitute the conditions for existence for any and all cultures, which are relational – created by 'touch' – such that it takes 'at least two systems' to create meaning:

> A minimally functioning [semiotic] structure requires the presence of at least two languages and their incapacity, each independently of the other, to embrace the world external to each of them. This incapacity is … a condition of existence. (Lotman, 2009: 2)

Evolutionarily, children and childhood are the means by which humans can achieve continuity of genetically uninheritable knowledge and culture, under uncertainty over time. Childhood as a culture is not accomplished by the instrumental purposes or will of parents and leaders, but by children themselves, using the semiotically stored apparatus of collective memory. They do not enter adulthood as empty vessels or as an individualistic 'self-contained globule of desire' (Veblen, 1898: 389-90), but as agents of continuity and change within the semiosphere. They may aim to achieve self-realisation, but to do it they must become semiotically 'literate', that is, adept within culture-made systems, including 'contact languages' across multicultural and often conflicted groups. It follows that, as Bakker and Matras put it: 'all languages are contact languages'. (2013: 1). This process of self-realisation through contact with incommensurable others is the *semiosis of the 'touch'* – as understood in quantum physics (Barad, 2012).

Here, literacy is not tied to one lexical coding system like writing, and is not just an individual skill. It is oral, experiential and multimedia as well as written; it includes 'media literacy' and 'digital literacy', not to mention the rhetorical and performative arts, traditional and remixed (Hartley, 2019). It expresses in-group identity (Meakins, 2013: 216). This is not the literacy of priesthoods, bureaucracies and knowledge elites but of whole population units – demes and classes (Hartley, 2018). Semiotic literacy is not universal but culturally bounded and competitive or adversarial. You can be literate in one language community and illiterate in another; but that may be seen as a group choice, not individual competence, if you grow up in a certain country, religion or socioeconomic category. 'We'-groups are at once inclusive, bonding populations by shared meanings, and exclusive, opposing 'they' groups. Literacy is typically developed in a 'home' environment, but it is inevitably translational and relational, not only across technologies but also across communities and languages. It is not a one-off skill-acquisition but a lifelong process of learning, adjusting and 'keeping up' with unpredictable trends and twists. It enables in-group members to participate in 'the definition of the situation' (Hall, 1973), especially in the 'high-contact scenario' of the 'multilingual metropolis' (Kerswill *et al.*, 2013: 268).

Becoming adept in peer-approved forms and platforms is a valued accomplishment *among* children, who create strongly bounded social networks within and between social media platforms to distinguish themselves from older/other demographics. Peers are recognised and trusted by the way they present themselves. Parents are more likely shunned than owned; confidants in one situation may be frozen out in another (this is a driving theme of the school-crossed lovers in *Normal People*).[18] In other words, literacy in culture of the 'we'-group is itself a group-forming social action which is self-policed – insiders are checked for the right look, language, moves, knowledge and affiliations – such that boundaries are continuously patrolled ad remade by the group's semiotic dealings. And everyone 'belongs' to more than one overlapping (but sometimes conflicting) 'we'-groups, requiring them to translate continuously among them in order to achieve self-identity and social cohesion.

Unlike genetic inheritance, any form of literacy is porous. Individuals may enter and leave their culture or tribe, for instance by migration, maturation or exclusion; by education, activism or mediation. Those not born to it can opt-in or be co-opted, for instance by marriage, affect or affiliation (often in the form of favoured authors, performers and celebrities). Such 'open' literacy can only be learned and deployed in appropriate contexts. It is historical and contextual. Whether it's oral/aural (song, story, performance), or technological (writing, print, screen), it is confined to a given 'we'-group, however large and diffuse. Scale is partly set by technological affordance: oral groups to those who can hear (the original meaning of 'audience'); literate groups to those who can read; mediated groups to humanity as a whole. Literate individuals (i.e. everyone) can widen their horizons as they operate across increasingly diverse and dynamic demes.

Of course, 'the future' is uncertain, except in the certainty that it will differ from the present. The reproduction of culture – and the species – requires new generations to develop their own new rules, which means breaking or mixing the old ones (Hammer, 2007; Thomas, 2007: 144; Meakins, 2013). That is an evolutionary process. But it can also be revolutionary and contested, a means for rebellion against established rules (Hartley, 2019). New generations use learned rules to break the rules, making new *groups* with new *media*, at widening distance from the self (Leach, 1964; Street, 1993), the nature and identity of each group being carried in language-institutions (genres) (see Table 1).

[18] *Normal People* is a 2018 novel by Sally Rooney and a 2020 TV romance by BBC/Hulu/Stan.

Table 1: The expanding semiosphere.[19]

Scale	*Subject/Relation*	*Group, Deme*	*Genre, Form*	*Media app, Platform*
Micro	Intimates/confidants	Family, friends	Poetry, song	TikTok, Instagram – [Premodern]
Meso	Friends/enemies	Neighbours, class	Drama, news	FB, Twitter – [Modern]
Macro	Speech community	Society, culture	Worldbuilding	TV series, movies – [Postmodern]

These mediated groups in turn generate new meanings, relationships and purposes, and at the same time face their own internal conflicts, as revolutionary change sparks counter-revolutionary reaction. Childhood is the autopoietic (self-creating) system whose 'cultural function' is to use the expanding semiosphere dynamically, as children *make up the future as they go along*.[20]

Unsurprisingly, literacy in any medium has been regulated and controlled by state and other control agencies since media technologies were invented. Social leaders may seek to extend or restrict it for their own purposes. But open media literacies remain a necessity for cultural coherence and engagement. The interoperability of groups at any scale depends upon it, even as specialisation decreases the mutual legibility of intersectional modes of expression. Children are the principal emergent group who need semiotic literacy not only to enter the

[19] The table represents increasing cultural distance from self (top to bottom), which at the same time expresses increasing scale and diffusion of population, across identities, social groups, and media. Implications: (1) It suggests that the cultural function of specific media genres and platforms correlates with demic (group) scale, expanding from 'performance of the self' to 'narration of the deme'. (2) It may be expected that children are most active at the most intimate micro-scale (TikTok) and at the most social macro-scale (TV/movies), (3) And that engagement with the intermediate space of conflict and connection is acquired later through meso-scale institutions, one of which is class. (4) It may be conjectured that the consciousness of class as a 'we'-group is expanding over the *longue durée*, from premodern tribal consciousness, via modern industrial and national consciousness, to postmodern and posthuman global mediated species-consciousness (Barad, 2012), (5) And that children are the bearers and agents of this expansion as it is occurring now, creating an emergent 'world class' via social media.

[20] This view of autopoietic systems is indebted to Niklas Luhmann's theory of society as a communicative system. See, e.g: Luhmann, 1997; and see commentary by Lee (2000) and Mingers (2002). I would argue that 'society', like the semiosphere, is best understood as a system of systems, one/many of which is/are 'childhood', depending on context.

domains of formal knowledge but also to co-create a working repertoire of language, codes, media, knowledge and custom upon which to build the identities, families, communities, economies, politics and societies of the future. Naturally, children are not left to themselves in that endeavour. Disciplinary agencies crowd around too (Duschinsky and Rocha, 2012; Wang, 2018). But, however powerful, those who control current cultural arrangements are not the actors who will have to deal with their consequences.

4 PLAY

4.1 Purposeless?

Learning and exploring group-making cultural expression is the 'work' of childhood, just as creating it anew is the 'play'. In the short-run sciences of the industrial age, play has degenerated from a society-making art to an individual behavioural condition. *Play*, as ungoverned communal inventiveness, and *plays*, from Aeschylus to Shakespeare to Netflix, have been reduced to developmental psychology, where even 'free play' is assessed as an instrument for inculcating preferred behaviour, e.g. focused attention; or as an impediment to it, e.g. aggression (Burdette and Whitaker, 2005).

Against the grain of psy-complex thinking, my home discipline of media studies devotes serious attention to 'play' as the elaborate modelling of society for demic attention. One could say that media studies is itself a mediator between 'short-run' technological and 'long-run' semiotic systems (Keen, 2004: 177-8), aimed at increasing and making explicit like-minded literacy – and its limits – within and across culture-made groups. Plays, games, stories, drama, make-believe, fiction and fabrication are our stock in trade. Here, on pain of being dismissed for 'irrealism',[21] we love nothing more than the imagined conflicts and vicissitudes of people who've never existed, played out over quick-fire performances and long-form narratives alike (from memes to games; movies to multi-season series), sometimes with immediate socio-political 'effects', sometimes with long-run 'impact', and many more times for the pleasure of imaginative repetition, in company with our demic 'imagined community' across the semiosphere.

[21] 'Irrealism' was a catchcry of 'culture wars' commentators, although the philosophical issue lies elsewhere (McCormick, 1996). For an attempt to reconcile relativism with democratic politics via a feminist notion of 'paradoxical universalism', see Fenton (2000). For a future-facing view of videogames as the irreal mediator between politics and aesthetics, see Shaw and Sharp (2013).

The emergence of digital social and screen media has expanded the potential scale of childhood as a demic group to global extent. Children can now express and experience themselves to potential interlocutors numbering many millions, across borders, languages and cultures. For instance, at time of writing, 15-year old American dance/video entrepreneur Charli D'Amelio boasted over 70m followers on TikTok, and a single post of hers could attract 'likes' in the tens of millions (July 2020); while Swedish 17-year old school student and climate and environmental activist Greta Thunberg had over 10.5m followers on Instagram, which she used exclusively for climate activism.[22] The relative popularity of these two celebrity figures, where *phatic* dance-craze videos attract seven times more attention than *referential* climate-crisis voices (Jakobson), may suggest that children are disproportionately carefree. Certainly that's their status in *knowledge*. But purposelessness – I argue – is a valuable cultural resource in itself. It enables meaning to freewheel; and children to practice what movies and videogames call worldbuilding. Despite the constraints, co-option and instrumentalism, children use family, peers, schooling and neighbourhood as well as media entertainment to interact directly with a continuously widening world. They encounter media as 'culture' rather than 'technology'. Devices, platforms and commercial players are used as means not ends. Here, they find new resources for some of the characteristic (allegedly inconsequential) pursuits of childhood:

'talkativeness' (exploring language, codes and culture),

'daydreaming' (fantasy and fiction in which to explore senses of self and 'other'),

'play' (rehearsal of skills, roles and conflict),

'mischief' or *'exploit'* (creative groups – gangs, BFFs, clubs – for collective action).

They also learn to navigate risk and conflict, and to deal with danger, not least by *'flirting'* with its boundaries.[23]

[22] For Greta Thunberg, see: https://www.instagram.com/gretathunberg/?hl=en; and: https://www.socialtracker.io/instagram/gretathunberg/. For Charli D'Amelio, see: https://www.tiktok.com/@charlidamelio?lang=en; and: https://www.socialtracker.io/tiktok/charlidamelio/.

[23] One extreme illustration of this is documented in George Gittoes's powerful film on gun violence, music and street culture in South Chicago, *White Light* (2019): https://www.whitelight.film/.

4.2 Leisure class exploits?

In this allegedly inconsequential world, 'exploit' is valued; 'drudgery' is avoided. Cue Thorstein Veblen (1899: 4-8):

> Those employments which are to be classed as exploit are worthy, honourable, noble; other employments, which do not contain this element of exploit, and especially those which imply subservience or submission, are unworthy, debasing, ignoble. The concept of dignity, worth, or honour, as applied either to persons or conduct, is of first-rate consequence in the development of classes and of class distinctions.

In short, children at mischief are indeed a *leisure class* – semiotically affluent and autonomous. Play is the structural opposite of drudgery: 'let's pretend' and 'make believe' are games of exploit in Veblen's sense. Children are active in *semiotic exploit* from the outset and, for them, 'pretence is a form of agency':

> Children's agency involves their motivation to learn, to become more competent and knowledgeable and to manage the social dynamics of institutional and interpersonal power. […] Making choices involves different forms of agency such as pretence, managing task difficulty, negotiating social power dynamics and orchestrating individual and group activities.… Pretence is a form of agency: by creating imaginary roles and events, the children […] created their own situations, rules and internal logic. (Wood, 2014:7; 14)

Such accomplishments are encouraged – at least until technology and peer pressure outpace parental control. Childish exploit turns to media devices, and their agency becomes collective. Then, if it's play, what children use media affordances to *make* – their demic 'lore and language', to use the Opies' terms – and, with that, what they *make of each other*, is disregarded as purposeless and therefore inconsequential. The control-culture's main priority is to police the boundary between exploit and 'crime', which is routinely feared to lurk in whatever medium happens to be popular at the time, from Victorian 'penny dreadfuls' to videogames, virtual and augmented reality.[24]

If children's media play crosses the boundary into non-childish accomplishments, such as economic productivity (Abidin et al., 2020) or political activism (see below) then the priority is not to encourage but to regulate them and to minimise their 'effects' on individual behaviour

[24] Penny dreadfuls were an early version of 'fake news' – popular salacious, sensational and often fictional serial stories, published in weekly parts for a penny in mid-nineteenth-century London. They introduced the world to Sweeney Todd the Barber and Varney the Vampire as well as murder cases from the courts and Dickensian serials (Hartley, 2020: 211); see also: https://www.bbc.com/culture/article/20160502-the-shocking-tale-of-the-penny-dreadful.

(Wertham, 1954; Himmelweit et al., 1958; Livingstone and Bovill, 1999), for instance by limiting 'screen time' (Blum-Ross and Livingstone, 2018; Mascheroni, Ponte and Jorge, 2018).[25]

5 GROUPS AND CLASSES

5.1 Culture makes groups

Media studies seeks not to minimise but to maximise the 'effects' of media, by making its group-making function explicit and promoting astute literacy at demic scale. Making identity may seem private and individual, but semiotic agency – literacy in any medium, from talk to tech – is always socio-technological too. With language, children enter the most complex human system ever invented; one that they themselves, over their lifetimes, will maintain and evolve, anonymously and collectively. They use it to create, explore and transgress boundaries and to 'translate' unknowns into knowledge. This growing semio-social autonomy is secured by opportunistically creating new peer-groups: both 'real' neighbours, BFFs (best friends), cliques and gangs; and 'mediated', through language games and technological media.

Naturalistically evolved cultural group sizes seem to conform to a process where increased size-limits scales in multiples of three. These are known as 'Dunbar numbers' after Robin Dunbar (1996; 2004; 2010), who extrapolated from non-human to human primates:

> from 5 or so *intimates*,
>
> to 15 or so *confidants*,
>
> to 50 *friends*,
>
> to a *socially knowable* group of 150 (the original 'Dunbar number'),
>
> to 500 *casual acquaintances*,
>
> up to the limit of *recognisable community* of about 1500 faces.

Online cooperative groups, e.g. open-source developers, tend to conform to Dunbar's numbers (Palazzi et al., 2019), but of course the same cannot be said for online social media platforms. The 'trouble' here is that humans no longer have to do the counting. Leaving it to algorithms can extend the range of an individual's 'friends' (Facebook) or 'followers' (Instagram) to

[25] And see: http://eprints.lse.ac.uk/66927/1/Policy%20Brief%2017-%20Families%20%20Screen%20Time.pdf.

thousands and millions. Today's children are the first generation for whom that is a cultural given. They are active participants in and co-creators of these global-digital social-media environments.

Mediated demes or speech communities are more diffuse and multivalent than in face-to-face sociality, but crucial to it, because individuals and micro-groups learn semiotic literacy from them, by perception, reading, copying, discussing and using, even where they don't author their own text in return. Here, children can practice their sense of their own peer-group's cultural reference and identity, building a repertoire of age-related ways of speaking and dressing, with games, pacts, jokes, riddles, tricks, toys, shows, superstitions, apps, crazes, memes, music, chants, gestures, swearing, dances, stories and the 'lore' circulating in their subculture. They use this cultural repertoire for fun, but that may include 'exercises of power' (humiliation, bullying), selfishness, sexuality and violence as well as daydreaming, wish fulfilment and 'exploit'. In other words, childhood mischief enables and rehearses 'vital evolutionary adaptations' (Konner, 2010: 662; 669).

Social media globalise this kind of demic belonging and collective identity. Indeed, the TikTok tag for friends (#friends) has attracted 45.4 *billion* (45,400,000,000) 'views' (July 2020) – more than five tags for every human alive today (7.8bn). The 'technosphere' (artifacts) is now coextensive with the semiosphere (mentifacts), and both of these 'facts' co-create and are co-created by demic organisation (sociofacts) (Huxley, 1955; and see note 9 above).

The years of childish irresponsibility constitute a user-created model for life, so they're not purposeless at all, but a *systemic* process that is personally creative, artefactually wasteful and socially consequential. Through oral and mediated semiosis, children navigate extending and varying senses of identity/difference, belonging/disjuncture and affiliation/aversion with their own growing deme(s) or peer-groups; and difference among other groups, up to and including adversarial opposition and conflict.

5.2 Scene, not heard

Children as a population take the giant systems of social and mediated networks as they find them, and remake them anew as they use (and 'misuse') them. System innovation is achieved collectively, anonymously, through inter-group interaction and intra-group dynamics, not by individual inventors or entrepreneurs. Children make demic identity, resilience, agency and aversion, as seems appropriate in any micro-cultural context. Youthful peer groups divide themselves from foreign and parental groups by asymmetries of trust, comprehension and cooperation, codes for which are learned and shared in play, including via online social media. Such distinctions can make and break a platform, as young users migrate from one to the next, especially when unwanted older demographics intrude: MySpace → Facebook → Instagram → Snapchat → TikTok → and whatever's next….

As they experiment with social media, they are building selves and society anew, longing for love, fearing death, finding boundaries and obstacles, and combining:

identity ('me'),

affection ('you/me'),

approbation ('we'),

adversaries ('they').

Children's collective creative and communicative dynamism, as they 'come of age' in the face of uncertainty, anxiety and difference, is the *cultural* driver of *economic* productivity. A question that all this 'semiotic promiscuity' (Doru Pop, 2018) poses for adults is perennial:

> But how about young people who chat or text message most of the time or read and create memes, engaging in highly performative, simultaneous, pastiche-like activity. What kind of social subject is produced through these activities and is it one we adults will want to live with? (Lewis, 2007: 236)

5.3 Not so innocent

When it comes to how children are *represented* in corporate and commercial media, drama and fiction (Jordan and Prendella, 2019), they routinely appear in rather different guise, where 'innocence' is far from innocent (Fig. 3). Happy smiling girls are the standard token of *marketing*, where they play the 'conspicuous' part of Veblen's 'conspicuous consumption'; their euphoric uselessness an index of their society's affluence or, where children are exploited as a labour force instead, its poverty.

Fig. 3.: 'Where "innocence" is far from innocent'. Mannequins[26] are marketed thus:

(a) 'The MM-KW1 girl child mannequin is the cutest little girl! She is in such an innocent, adorable pose with her hands behind her back and head tilted to the side in curiosity. This child mannequin is great for showing off your clothing for young girls.'

[26] Source: Mannequin Mall, 'the #1 retailer of mannequins in the USA'; Fig. 3: *(a)* *https://mannequinmall.com/collections/child-mannequins/products/girl-mannequin-mm-kw1*; *(b)* - *https://mannequinmall.com/collections/child-mannequins/products/53-teenage-girl-mannequin-mm-bc07*.

(b) 'The MM-BC07 Teenage Girl Mannequin is the girl you have been looking for. With a beautiful face and slim body, she is the ultimate teenage female model. Whatever you need to display, this young female will look amazing.'

But innocence can only be experienced from an external point of view: that of a possessive system (and its agents) who 'write' their own values on the abstract unknowing child as on a blank page or mannequin. In other words, childhood innocence is not a property of persons; it is property, full stop. Here's where power returns to centre stage.

5.4 Girls and class formation

Girls form a significant proportion of internet and social media users, and are often the source as well as destination of innovations, crazes, and new ideas that sweep the world. The Pew Research Center (USA) conducted a major survey of American teens' (13-17yrs) use of social media in 2014-15; updated in 2018. In 2015 it found that girls 'dominate visually-oriented platforms' (Pew, 2015). More boys than girls played games, although the majority of girls did. Four years on, these differences were still apparent: girls predominated on Snapchat (42% vs. 29%), boys on YouTube (39% vs. 25%). Usage of Facebook went down (from 71% to 51%). 'Most notably, smartphone ownership has become a nearly ubiquitous element of teen life: 95% of teens now report they have a smartphone or access to one'. In general, girls remained more frequent users than boys: 'half of teenage girls (50%) are near-constant online users, compared with 39% of teenage boys' (Pew, 2018).

More recent figures trace the rise of TikTok, which also marked the entry of Chinese social media into American and global markets (against the grain of White House rhetoric). TikTok swept the world.[27] In 2020, to the surprise of mainstream media, a dance craze on TikTok went from 'Renegade' to radical,[28] as teen celebrities used their prominence to aid a campaign, and not for the first time, moving from anti-bullying to Black Lives Matter. Reuters reported:

> TikTok's emergence as a platform for political discourse for teens follows a tradition of media platforms evolving beyond their founders' initial designs such as Twitter's role in the Arab Spring protests in 2011 and the MTV cable TV network's role galvanizing young voters in the early 1990s.[29]

Among those who were galvanised was the top TikTok dance influencer, Charli D'Amelio, who posted: 'I will continue to spread these messages and be an ally', in a post that 'garnered

[27] The *BusinessofApps.com* website reported: 'TikTok/Douyin (and formerly Musical.ly) users use the app largely to create, share, and view content based around lip syncing, dancing, comedy skits, and other physical activities. Clearly, this is something that appeals to young people (and quite a few older ones) around the world, with the app snowballing in popularity over 2018': http://www.businessofapps.com/data/tik-tok-statistics/ (February 2019).

[28] Renegade is 'a quick, multiple-step dance that incorporates popular moves like the woah, the wave, and the dab to the song "Lottery" by Atlanta rapper K-Camp' (*Vox*): It was invented by a 14-year-old black girl from Atlanta, Jalaiah Harmon. Originally uncredited as Renegade went viral via Charli D'Amelio (who's white), Jalaiah was eventually recognised too. Sources: *Vox*: : https://www.vox.com/the-goods/2020/2/4/21112444/renegade-tiktok-song-dance; *Teen Vogue*: https://www.teenvogue.com/story/jalaiah-harmon-renegade-creator-viral-dance.

[29] Source, Reuters, 3 June, 2020: https://www.reuters.com/article/us-minneapolis-police-tiktok/tiktok-has-its-arab-spring-moment-as-teen-activism-overtakes-dance-moves-idUSKBN2392WX.

more than 47.7 million views and 12 million likes'. D'Angelo had already shown that she was as active an advocate as she was a dancer in previous statements:

> Both Charli and Dixie D'Amelio [her older sister], two of the most famous people on TikTok, have already participated in multiple efforts to help the collective good, including a recent anti-bullying project with UNICEF and promoting body positivity. … "I'm still a 15-year-old teenager — girl, especially. It hurts for everyone, no matter who you are. Getting hundreds of thousands of hate comments per week is a lot to handle." Charli says she can get hundreds of thousands of hate comments every week.[30]

Reuters interviewed teen Taylor Cassidy:

> "Because the BLM movement has been present in society for such a long time, my generation has been able to use TikTok to spread awareness through the lens of a young person's mindset," Cassidy, who is black, told Reuters …. Cassidy, who has amassed 1.6 million followers on TikTok since joining last November, is among the millions of users who are helping to turn the go-to destination for short-form viral music videos and pranks into a first stop for youth activism as protests against police brutality spread across America. "The movement will be shaped to not only spread awareness about the injustice in society, but it will go further, teaching about the importance of voice and calls to action to stop the brutality," Cassidy said.

What happens in the USA, still the world's richest and most advanced technological economy, is not necessarily the norm for girls around the world, or even in the US, as detailed during the Black Lives Matter campaign.[31] However, it would not be right to assume that youngsters in less wealthy countries are less interested in or engaged with social media. Some of the strongest growth in usage comes from China, S Korea, Japan, Indonesia, the Philippines, Malaysia etc. While the digital divide is very real, there is no evidence that children *don't want* to participate in 'the importance of voice and calls to action'; only that they *cannot* if blocked

[30] Source: https://www.insider.com/charli-dixie-damelio-tik-tok-biggest-stars-cyberbullying-video-2020-2. And see 'TikTok stars Charli and Dixie D'Amelio on being bullied online', UNICEF: https://www.youtube.com/watch?v=-jFYPyC9n_0 (with 2 million views).

[31] For BLM, see: https://www.unwomen.org/en/news/stories/2020/6/op-ed-joint-black-lives-matter-protests-and-other-demonstrations (Africa): https://asia.nikkei.com/Spotlight/Society/George-Floyd-protests-inspire-campaigns-against-racism-across-Asia (Asia); https://www.nytimes.com/2020/06/26/style/teen-girls-black-lives-matter-activism.html (among teen girls). For a comparison with 'EU kids online' (with different age-ranges), see: http://www.lse.ac.uk/media-and-communications/research/research-projects/eu-kids-online/reports-and-findings; for AU kids online, see: https://culturalscience.org/articles/abstract/10.5334/csci.40/.

by poverty, isolation, educational and economic underinvestment, conflict, disasters, predatory policies or authoritarian regimes (UNFPA, 2014; 2015).

Girls are leaders in social media uptake, use and innovation, but that's not the whole story, of course. Online as well as off, they are targeted and insecure. While girls are ubiquitous *signs* of success, the good life and desirability in consumer media, they remain *society's* most vulnerable demographic across the world, especially younger girls living in poorer countries. According to the UN's Babatunde Osotimehin: 'A 10-year-old girl, for example, may be married off against her will, trafficked, separated from her family and all social support and have limited access to education, health or opportunities for a better life. When a crisis strikes, these risks multiply, and so do that girl's vulnerabilities. Her prospects go from bad to worse' (UNFPA, 2015: 3).

The UN's call for a 'transformative agenda for women and girls in a crisis-prone world' is based on the proposition that 'we' are 'one world', and that therefore the vulnerabilities of girls anywhere is everyone's problem (UNFPA, 2015: 35). What's happened in the wake of coronavirus, climate emergency and Black Lives Matter is that girls have taken 'everyone's problem' on themselves, as advocates and activists for a growing global 'class consciousness' among their peers, which spreads globally via the means of mediation available to children.

6 ONE SPECIES; ONE PLANET

6.1 Class consciousness

Children's entry into semiosis is cumulatively group-forming, and the demes so formed are what they take with them into the future. It is from among these groups that they will build their own identities as well as potential friends, partners, enemies and strangers at increasing distance from self. But with group-formation comes self-consciousness: group-formation is not a passive drift into and out of membership, but a creative process. Like semiosis and the economy, it is relatively stable at macro-scale (language, culture) but turbulent and unpredictable at micro-scale. Here, group-formation is marked by multiplicity: everyone belongs to and defects from many different types of group or 'club' over relatively short timespans, whether those groups comprise friends, workgroups, enterprises and organisations, or larger affiliations like audiences, fans, capitalism, etc.

Of course, no-one's choice of group is 'free'. As Joseph Schumpeter (1942: 129-30) wrote, what an individual thinks of capitalism is neither here nor there:

> Whether favorable or unfavorable, value judgments about capitalist performance are of little interest. For mankind is not free to choose. … Things economic and social move by their own momentum and the ensuing situations compel individuals and groups to behave in certain ways whatever they may wish to do—not indeed by destroying their freedom of choice but by shaping the choosing mentalities and by narrowing the list of possibilities from which to choose.

The 'momentum' of 'things economic and social' limits people's 'choosing mentalities' to the horizon of possibility that is already in place. Individualism and freedom of choice are not the generative origin of 'the future', but they do play a role in changing the horizon of possibility. However, here again, such individualism can encourage entrepreneurship and purpose, but change cannot be achieved without collective action by a group. How is collective action to be achieved? For Schumpeter, the answer was the entrepreneur, whose action is organised around the firm. For one of Schumpeter's chief sources of inspiration, Karl Marx, collective action was organised around the means of production, in the form of classes (capitalist; labour). The 'antagonism' between these fundamental classes was the driver of history (i.e. producer of the future) for Marx, just as 'creative destruction' of incumbent rigidity was the driver of economic growth for Schumpeter. But in the contemporary era of platform capitalism, the knowledge economy and information society, I would argue that collective action, i.e. class consciousness and class struggle, is organised around *the means of mediation* available to a group. For children, this means social media. Classes may be thrown up by impersonal forces, but at some point, if they are to act as a class, they must achieve and maintain both internal self-consciousness and external identity, such that agency is a mediated expression of the class 'for itself' and not just individuals 'choosing' to undertake a particular action.

Further, a class can exist 'in itself' without achieving self-consciousness and agency as a class; without mediation and communication they are prevented from achieving *systemic* identity. With social media and computational connectivity, children have begun to transition from a 'class in itself' to a 'class for itself'. For Marx (1847), this is the nexus between economic forces and political struggle:

> Economic conditions had first transformed the mass of the people of the country into workers. The combination of capital has created for this mass a common situation, common interests. This mass is thus already a class as against capital, but not yet for itself. In the struggle, of which we have noted only a few phases, this mass becomes united, and

> constitutes itself as a class for itself. The interests it defends become class interests. But the struggle of class against class is a political struggle.

Children and their allies are caught in the political vanguard. The 'struggle of class against class is a political struggle'. The 'common situation' that unites them is not their youthfulness as such, but in the relations among youthfulness (short-term powerlessness; long-run consequences), the condition of the planet (short-run damage; long-run destruction) and the creeping militarisation of the streets in defence of the powers-that-be (short-run control; long-run de-legitimacy).

6.2 Class struggle

Aged 15, Greta Thunberg precipitated a global movement, initiating an action that only children can undertake – a 'school strike for climate':

> We need to focus every inch of our being on climate change, because if we fail to do so then all our achievements and progress have been for nothing and all that will remain of our political leaders' legacy will be the greatest failure of human history. And they will be remembered as the greatest villains of all time, because they have chosen not to listen and not to act. (Thunberg, 2019: 35)

She furthermore wrote:

> Through history, the most important changes in society have come from the bottom up, from grassroots. […] It looks like well over 6.6 million people have joined the Week for Future…. That is one of the biggest demonstrations in history. […] We are the change and change is coming. (ibid: 105-6).

Thunberg's action combined consciousness-raising 'internally' among the grassroots, with campaigning 'externally' against the adversary she routinely identified as 'leaders' – 'presidents, celebrities, politicians, CEOs and journalists' (2019: 69). In both cases, the setting for action was not the factory or street, but the media, social and broadcast. Just as climate activists were galvanised through Facebook and Twitter, so the world's leaders failed to get the message across:

> Humans are social animals … And as long as you, the leaders, act like everything is fine and you have things under control, people won't understand that we're in an emergency. (Thunberg, 2019: 72-3)

Climate justice action soon melded with the coronavirus crisis, and here is where the barrier that Thunberg repeatedly criticised, between knowledge and action, grassroots and

leaderships, representative status and collective will, dissolved. Transformative, new-paradigm thinking was more evident among child and youth activists than among world leaderships, but the willingness of entire societies to take collective action in the face of COVID-19 could no longer be doubted, despite the cost to national and global economies and to individual livelihoods.

Some observers expressed regret that the virus soon got more media attention than the climate emergency. Some noted that following international lockdown the economic downturn was helping the environment more than climate activism had managed to do. However, the coronavirus crisis did convince many people that they are indeed 'one species' on 'one planet', the virus making no distinction among nations or any other demographic distinction, but treating the entire human population with equal indifference as mere replicators.

For climate activists, the two crises were one, as Vijay Kolinjivadi wrote:

> Both have their roots in the world's current economic model – that of the pursuit of infinite growth at the expense of the environment on which our survival depends – and both are deadly and disruptive. In fact, one may argue that the pandemic is part of climate change and therefore, our response to it should not be limited to containing the spread of the virus. What we thought was "normal" before the pandemic was already a crisis and so returning to it cannot be an option.[32]

Kolinjivadi notes moreover that the rapid response to COVID-19 around the world

> illustrates the remarkable capacity of society to put the emergency brake on "business-as-usual" simply by acting in the moment. It shows that we can take radical action if we want to.' He concludes that 'the inspiring examples of mutual aid also illustrate that society is more than capable of acting collectively in the face of grave danger to the whole of humanity.

Just as well, because, as Thunberg has more than once put it on her Instagram and Twitter accounts: 'The emperors are naked. Every single one' (cf. Keen, 2004). She added: 'The climate- and ecological crisis can no longer be solved with today's political and economic systems.' In response, Thunberg 'spent a large part of the coronavirus lockdown writing the script for a podcast called *Humanity Has Not Yet Failed*':

[32] Vijay Kolinjivadi (30 March 2020), *Al Jazeera* (opinion): The coronavirus outbreak is part of the climate change crisis: https://www.aljazeera.com/indepth/opinion/coronavirus-outbreak-part-climate-change-emergency-200325135058077.html. See also Natasha Chassagne in *The Conversation*: https://theconversation.com/heres-what-the-coronavirus-pandemic-can-teach-us-about-tackling-climate-change-134399; and professorial letters to *The Guardian*: https://www.theguardian.com/world/2020/may/10/after-coronavirus-focus-on-the-climate-emergency.

> In her programme, Thunberg goes on to say that the only positive thing we can take from the Covid-19 pandemic is the way we faced the emergency; how we were able to change our behaviour to face a global crisis. "This shows that during a crisis we act with the necessary force," she states, claiming that we should confront the climate crisis with the same urgency with which we addressed the health emergency.[33]

The 'take-out' lesson here is that mediation is central to the realities everyone faces. Media, creativity, culture and communication are not specialist sectors, of limited economic scale and confined to leisure activities, but are revealed as the very *medium* in which human endeavour lives and moves *'in the moment'*. It is here, and not among failing leaders, that change occurs.

Figure 4. World Class: Lisa Neubauer, Greta Thunberg, Anuna de Wever and Adelaide Charlier meeting Angela Merkel for talks on climate change (August 20, 2020).[34]

[33] Source: *Lifegate*, 23 June, 2020: https://www.lifegate.com/greta-thunberg-podcast. For the podcast, see: https://sverigesradio.se/sida/avsnitt/1535269?programid=2071; and: https://open.spotify.com/episode/7E2Wz3C5XwtEw3Pi96tLQA?t=0. See also: https://rewilding.org/greta-and-george-climate-biodiversity-and-restoration/.

[34] Picture posted by Neubauer and Thunberg on their Instagram accounts. For the event, see https://www.dw.com/en/greta-thunberg-angela-merkel-climate-change/a-54636521.

6.3 You have nothing to lose but your futures!

'School Strike for Climate' and 'Fridays for Future' developed intersectional alliances with other groups based on the struggle faced by young people, including eco-warrior activism, Black Lives Matter, the educational activism of Malala Yousafzai, human, migrant and refugee rights activism, LGBTIQ+ activism and many others. Girl activists like Thunberg and Emma González (US gun control) must also grapple with inevitable problems of media prominence:

Appropriation: becoming celebrities themselves;

Objectification: becoming a spectacle;

Discipline: being *confined* to 'girl-power'.

All of those processes tend to 'translate' leadership into personality, shifting the focus of attention from the collective cause to the individual carrier, rather than pursuing the changes they advocate. Emily Bent (2020) suggests that 'narratives of exceptional girlhood', applied to hyper-visible leaders, should be seen not as promoting but as confining 'girl-power'. Instead, she recommends that viral leadership cadres should be seen as 'public feminist intellectuals'; or, one might add in Gramscian terms, as the 'organic intellectuals' of mediated childhood.

Conservative commentators knew that they were facing a new kind of class formation, so they began a campaign against intersectionality, seeking to demonise it as 'woke culture'.[35] They sought to undermine intersectional solidarity by calling it 'cancel culture'.[36] They belittled it all as a kind of inner-city consumer fad.[37] While the 'prosecutorial media' (Feldman, 2015) were softening up the public for military intervention in civil affairs, as duly ensued, and not only in the US,[38] Thunberg herself – still legally a child – has had to confront the question of what might constitute the 'necessary force' to confront the climate crisis; the same force that has been used in many countries to confront COVID-19.

On that note – 'during a crisis we act with the necessary force' – recall how Marx concluded his 1847 tract *The Poverty of Philosophy*, in which he introduced the concept of class-consciousness 'for itself'. He wrote:

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[35] See, e.g.: https://www.theguardian.com/society/shortcuts/2020/jan/21/how-the-word-woke-was-weaponised-by-the-right.

[36] See a response at: https://theobjective.substack.com/p/a-more-specific-letter-on-justice.

[37] See, e.g.: https://www.smh.com.au/politics/federal/i-d-like-a-raving-inner-city-lunatic-t-shirt-for-christmas-please-20191112-p539tg.html.

[38] See, e.g.: https://www.buzzfeednews.com/article/craigsilverman/federal-officers-are-arresting-people-in-portland (17 July 2020).

> On the eve of every general reshuffling of society, the last word of social science will always be: 'Combat or Death: bloody struggle or extinction. It is thus that the question is inexorably put.'[39]

So far, climate activism has followed nonviolent civil disobedience protocols. But civil protest has already been met with militarised policing, most visibly against Black Lives Matter activism (Forester and O'Brien, 2020), but also against Extinction Rebellion, whose youthful sit-down protesters were pepper-sprayed in mild-mannered Finland (4 October, 2020) (Fig. 5).[40]

Fig. 5: protest met with militarised policing. Helsinki, 4 October 2020. A sit-down protest by Extinction Rebellion is cleared by police pepper-spray.

[39] Marx quoted the passage in the original French: '*Le combat ou la mort; la lutte sanguinaire ou le neant. C'est ainsi que la quéstion est invinciblement posée*.' It comes from George Sand's novel *Jean Ziska*: http://www.gutenberg.org/files/15584/15584-h/15584-h.htm. 'George Sand' was the *nom de plume* of Amantine-Lucile-Aurore Dudevant, née Dupin. *The Poverty of Philosophy* (1847) is accessible at: https://www.marxists.org/archive/marx/works/1847/poverty-philosophy/ch02e.htm.

[40] Source: Yle, Helsinki: https://yle.fi/uutiset/osasto/news/police_to_look_into_who_gave_order_to_pepper_spray_helsinki_protesters/11578440. Picture source: Till Sawala on Twitter (https://twitter.com/tillsawala), 4 October 2020; retweeted 9 December, 2020.

Inevitably such protests have built on previous decades of conflict, which Allen Feldman (2015) has characterised as the means by which 'sovereign power mobilizes asymmetric, clandestine, and ultimately unending war as a will to truth', 'transforming violence into truth' over the dead bodies of subject populations – and their children (Wang, 2018). As Jacques Donzelot (1979: 103) put it so presciently:

> A paradoxical result of the liberalisation of the family, of the emergence of children's rights, of a rebalancing of the man-woman relationship: the more these rights are proclaimed the more the stranglehold of tutelary authority tightens around the poor family. In this system, family patriarchalism is destroyed only at the cost of a patriarchy of the state.

Perhaps unsurprisingly, Luisa Neubauer, one of the main organisers of the Fridays for Future movement in Germany, echoed Marx in her *Rolling Stone* profile:

> Why are things the way they are when they could have been different? We ask that at full volume, because we have nothing to lose – except our future.[41]

If the options are indeed 'bloody struggle or extinction', then the worldbuilding generation has already chosen sides.

7 CONCLUSION

This paper has tried to identify the process of class formation among deme-making groups – in this case as children – around the means of mediation, as part of semiospheric worldbuilding. The significance of this is that the semiosphere, worldbuilding, mediation and children are all planetary in extent, encompassing humans as a whole, despite their manifold differences. Previous models of social change – whether understood to be driven by Marxist classes, Schumpeterian entrepreneurs, or by community, national or corporate purposes, are all competitive models based on antagonism to other groups. In that process, social groups are presumed to be mutually exclusive and separated by borders, physical and cultural.

In this way, the struggles of any one group can be cast as exclusive of the interests of others. In terms of class, workers are typically distinguished from the middle class. Consequently 'working-class' interests (for example employment) are set against 'middle-class' ones (for

[41] Source, Instagram @luisaneubauer: https://www.instagram.com/p/B9laD0QK3AW/?igshid=cqwosxt7hlzf (in German). See also: https://www.dw.com/en/german-government-would-rather-save-the-coalition-than-the-climate-says-activist/a-51295110.

example environmentalism), such that protecting jobs and the environment at the same time is reckoned impossible and is used as a political wedge issue.[42] This paper does not seek to minimise or to resolve such differences, except to point out that they are all examples of demic (i.e. cultural) subsystems. Meanwhile, problems confronting the Earth-system continue to divide both 'sides' of class race, gender, and other demographic differences.

In contrast, by focusing on children, especially girls, the paper opens the question of how humans can act as a single self-conscious social group, at planetary scale. In this respect it follows those theorists who are aware of the pitfalls of universalist thinking, but who nevertheless hold to a notion of 'paradoxical universalism' (Fenton, 2000) in the cause of functional democratic equality; transferring some of the aspirational weight of organised 'solidarity' into negotiated 'intersectionality'. In that cause, it is possible to think across boundaries, not just across barricades, and to share 'open' knowledge rather than seeking to control, restrict or appropriate it.

It's hard enough to advocate for a socially cooperative polity, never mind a planet. Senator Robert F. Kennedy was one such advocate. Visiting Kansas University in 1968, he quoted with approval local editor and politician (from an opposing party) William Allen White, who'd written in 1932, to show that conflict and confrontation are essential components of a larger enterprise:

> If our colleges and universities do not breed men who riot, who rebel, who attack life with all the youthful vision and vigor, then there is something wrong with our colleges. The more riots that come out of our college campuses, the better the world for tomorrow.[43]

Quoting that to a crowd of 20,000 students in 1968 was a bold move, for this was the year of the Tet Offensive in Vietnam and growing anti-war protests in the US (Newfield, 1969; Gitlin, 1993), when, as Kennedy put it:

> […] demonstrators shout down government officials and the government answers by drafting demonstrators. Anarchists threaten to burn the country down and some have begun to try, while tanks have patrolled American streets and machine guns have fired at American children.[44]

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[42] For instance, in Australia: https://www.smh.com.au/politics/federal/our-coal-fondling-pm-switches-his-prop-to-gas-but-is-anything-really-different-20200918-p55ww9.html.

[43] W.A. White, 'Student Riots.' *The Emporia* (Kansas) *Gazette,* April 8, 1932. Source: https://www.bartleby.com/73/157.html.

[44] R. F. Kennedy, 'Remarks at the University of Kansas', 18 March, 1968. Source: https://www.jfklibrary.org/learn/about-jfk/the-kennedy-family/robert-f-kennedy/robert-f-kennedy-speeches/remarks-at-the-university-of-kansas-march-18-1968.

While praising this 'spirit of honest confrontation', Kennedy's real objective was to bring the warring parties together – white and black; affluent and poor; settler and native, American and Vietnamese – to build a greater truth:

> I want us to find out the promise of the future, what we can accomplish here in the United States, what this country does stand for and what is expected of us in the years ahead. And I also want us to know and examine where we've gone wrong. And I want all of us, young and old, to have a chance to build a better country and change the direction of the United States of America. (as above)

He spoke these words in March. In April, Martin Luther King was assassinated. May saw the *évènements* in Paris. In June Bobby Kennedy himself was assassinated. This is a measure of what's lost when sectarian boundaries go armed; and also of the importance of efforts like his to transcend such divisions in the belief that 'we … are bound together by a common concern for each other'.

All of these issues still resonate strongly, but now, a 'common concern for each other' extends beyond across the globe and beyond our own species to the Earth-system. Today's children are those whose material formation has included consciousness of humanity's planetary status and actions, and whose access to social and other media enable them to enjoy the experience of 'one species, one planet' while at the same time understanding the costs involved in mismanaging that position. Thus, while many children use such media for play, some are also using Instagram, TikTok and games to organise for activism, to advocate for the status of girls, Black Lives Matter, climate justice, and intersectional solidarity. This has inevitably attracted counter-narratives and trolling or bullying from reactionary commentators, but that is not the only hurdle global youth activism faces. Lines are drawn between classes (workers and capitalists), asymmetries of equality (poor and rich), or contested ideologies (libertarian, neoliberal, liberal, socialist, communist). Opposition comes from all parties, including those who assert that their own agendas should prevail on the grounds of greater materiality or more progressive credentials.

Dismissal of mediated youth activism comes in coded forms: as criticism of 'cancel culture', 'woke culture', 'inner-city latte liberalism'; or of 'middle class', 'white', 'privileged' 'mansplaining'; or of 'feral greenies', 'tree-huggers', 'recyclopaths', 'enviro-nazi' 'hippycrites'. Those who don't share an authentic lived experience with others cannot 'represent' their identity politically. But leaving it at that is not a systemic solution, it's a recipe for accelerating dissolution. Instead, both collective and connective work needs to be done to identify and support class leaders and groups who can press for and precipitate planetary 'common concern'. Girls as a class are self-organising and generating just such leaders, across many countries and conditions. But they can't fix the planet on their own. UNESCO, UNFPA and

other multilateral agencies, like expert researchers, have endured years of populist attack. Children, development agencies and scientists find themselves in the same political boat. But here also is where inter-demic alliances can be sought and built.

In this paper I have avoided drawing a 'class distinction' between material reality (e.g. inequality) and mediated meaning (e.g. girl culture). I have followed instead Barad's argument, from quantum physics and feminism alike, that *matter*, 'by its very nature', involves both relations with others and an ethics of responsibility: 'Responsibility is not an obligation that the subject chooses but rather an incarnate relation that precedes the intentionality of consciousness', where 'ethics is an integral part' of differentiating 'patterns of worlding' (Barad, 2012). My argument from this is that 'children of media' are posing a serious challenge to social sciences: How can intersectional cooperation at species scale be built in time to allow them to enjoy the planet after 'we' have finished with it?

* * *

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Contributors are encouraged to submit papers that address the social, political, economic and cultural context of the media and communication, including their forms, institutions, audiences and experiences, and their global, national, regional and local development. Papers addressing any of the themes mentioned below are welcome, but other themes related to media and communication are also acceptable:

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Papers should conform to the following format:

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150-200 word abstract

Headings and sub-headings are encouraged

The Harvard system of referencing should be used

Papers should be prepared as a Word file

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