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Abstract

There are several complications in the geographies of children and young people, and in all social science, including the following three questions.

How can we resolve disagreements and even contradictions between empirical, evidence-based, factual, statistical research, versus interpretive and social constructionist research into contingent beliefs, behaviors and values?

How can we understand and respect each local culture, and yet not fall into mere description and cultural relativism?

Limited micro observational studies of children can be superficial and misleading if they ignore powerful macro causes that shape children's lives. How can short studies, without the time and resources of international longitudinal research such as Young Lives, take due well-grounded account of such macro causal powers as global politics and economics?

The chapter will outline concepts in critical realism and relate them to research reports about children from around the world, in order to show how the concepts help to resolve these problems. The concepts are especially relevant at the stages of designing research projects and later of analyzing and interpreting data. The concepts include: being and knowing; intransitive and transitive; theory/practice contradictions; social science and philosophy; the epistemic fallacy; the possibility of naturalism; closed and open systems; polyvalence; depth realism; structure and agency; natural necessity; power; predicting the future; absence, change and emergence; macro and micro levels in research; four planar social being; and a four stage process of analysis that will be discussed later.

[A heading] Introduction: Problems in social science

Natural scientists broadly agree with one another on their theories and methods. Although there is much debate about the precise and rigorous use of methods, and about the validity of the findings, there is still major consensus about the following: empirical research methods (based on evidence gained through the five senses); positivism (proving hypotheses empirically); validity and the search for reliable generalizable findings; fallibility (skeptically testing and retesting hypotheses);

technology (as the practical means of conducting and applying replicable scientific research); and policy (it should be based on sound, unbiased scientific evidence). Quantitative and statistical social researchers tend to accept these certainties. For example, they may assume that standards in schools across the world can be verified and compared accurately, as long as rigorous tests are precisely conducted with each specific age group. An example is the Program for International Student Assessment (PISA, 2012) which tested a sample of 510,000 students selected from 28 million 15-year olds from 70 “economies” or countries. The students’ recorded replies are taken as direct and valid evidence of their learning, in standardized formats that are measured and compared. Hypotheses about which educational methods are most successful are tested and then retested regularly. The global results, obtained through massive computerized programs, are taken to support valid education policies. And these are implemented through new teaching technologies and materials, both printed and virtual. Many materials are supplied through multinational corporations, such as Rupert Murdoch’s Harper Collins. However, social science is complicated by disagreements between empirical and interpretive researchers. Many interpretive social scientists contest the above certainties. They deny scientism, the notion that natural and social science methods can be identical. “Rigor”, they argue, can be an empty aim, when strictly standardized methods do not fit the complex variety of social life. “Validated” findings, claimed to be generalizable, replicable, and therefore predictable, also ignore this social complexity. People, unlike chemical elements, are unpredictable agents. Students might be enthusiastic or afraid or confused when tested. They might be disadvantaged when required to work in their second or third language. They may have been intensively coached or else neglected by teachers. There is therefore no inevitable, direct link between children’s test results and their ability and potential. And when students vary so much, the relatively small samples can easily misrepresent each nation. “Empirical” research methods that rely on the five senses do not allow for tacit social interactions, contingent meanings, implicit values, or invisible social pressures and policies. Yet when power invades and “governs the soul” it is most powerful when it is least visible and cannot easily be identified or challenged (Lukes, 2005; Rose, 1989).

Geographers have shown how social contexts and customs vary immensely around the world. Test questions can therefore be clear in one language but obscure in another; a single word can have very different meanings and associations. There are also moral and political complications in projects such as PISA. Some countries might seem to be highly successful when the governments allow testing only in elite schools or put pressure on teachers to alter the students’ replies. There are further problems in the methods. How can a small sample of students be representative? How and why are the exam questions chosen, and how can the choice be fair and equally relevant and meaningful to students in every country? Inevitably questions will favor some cultures over others, whereas should we not respect cultural diversity? How do cheap, fast, automated methods of mass testing change education, so that teachers “teach to the test”. Teaching is then reduced and fragmented into pass/fail notions of correct replies to specific, easily scored, closed questions (Scott, 2010), instead of encouraging individual students’ critical and imaginative discovery and new thinking. Education risks being reduced wholly into a commodity, to be bought by parents and students in order to promote the students’ future earning power. This can leave little time or interest in education’s other crucial

aspects, such as to promote critical democracy, and concern with justice and personal fulfillment, concepts that cannot be standardized or easily tested. These are a few of many complications in social research, which raise doubts about natural science models of proving hypotheses empirically to supply unbiased scientific evidence as a sound basis for policies, practices and technological developments. Interpretivists who are sensitive to these complexities regard empiricists as rather simplistic or naive for seeming to ignore them. In turn, empiricists question the value and purpose of interpretive research when it describes particular examples but does not generalize or produce sound evidence for politicians and practitioners to apply. When empirical and interpretive social scientists disagree on their basic tenets they can hardly all convince politicians or the general public that their work is worth taking seriously. Some consensus which increases the coherence and credibility of social science is therefore urgently needed.

This chapter will draw on ideas that are much more fully developed in Bhaskar (1998, 2008), Yoshida (2011) and Alderson (2013). It will review ways in which deep assumptions held by empirical researchers are defined in contradiction to those held by interpretive researchers. It will outline approaches towards resolving the contradictions, drawing on the strengths of each side, and overcoming weaknesses and omissions. This chapter will examine how we can understand and respect each local culture, and yet move beyond description and cultural relativism towards critical and comparative analyses that can inform policies to benefit children. This will avoid relativism that vetoes moral judgments and critical analysis of power, and also vetoes comparisons of children's differing wellbeing, and normative conclusions intended to benefit people (Lukes, 2008).

Concepts in critical realism to be reviewed, which help to resolve problems and contradictions in the theories, design and analysis of research with children around the world, include: being and knowing; intransitive and transitive; theory/practice contradictions; social science and philosophy; the epistemic fallacy; the possibility of naturalism; closed and open systems; polyvalence; depth realism; structure and agency; natural necessity; power; predicting the future; absence, change and emergence; macro and micro levels in research; four planar social being; and MELD.

[A heading] Seven contradictions between positivism and interpretivism

Positivist and empirical researchers tend to assume the following seven tenets about their data, such as international comparisons of school students' PISA scores. The scores and indeed childhood itself, as in its Piagetian approach to developmental stages, can consist of: (1) objective self-evident facts separated from values; (2) these are understood apart from their social context and as separate variables; (3) they are independent and pristine, so that whoever observes, records, reports or reads about them sees the same fact. (4) Their essential inherent qualities and (5) stable lasting reality "out there" in the world can remain unchanged when transferred across time and space. (6) Positivist social research, modeled on the natural sciences, can therefore discover general laws, replicable findings and reliable predictions. (7) This confidence encourages assumptions that "evidence based" findings can provide self-evident conclusions about causes and effects in social life, which support effective solutions to public and private problems.

Despite the variety among interpretive childhood researchers' theories (for example, hermeneutic, ethnographic, phenomenological, postmodern, post-structural), they are more or less likely to fit into the following summary. However, the next seven points tend to contradict the seven previous ones. Interpretivism cautiously treats phenomena (again such as PISA scores or stages of childhood) as if they are: (1) constructed or generated by subjective human perceptions and values and negotiated interactions, (2) within specific social contexts and cultures. (3) Phenomena are contingent, and depend on our individual social selves and perceptions, (4) as if phenomena have few or no essential, inherent qualities and (5) no independent, lasting truth or reality of their own that could transfer intact across time and space. They do not exist "out there" in the world, but only through the social institutions and cultures that give them meaning. (6) Interpretivism recognizes dynamic unpredictable human agency, freed from biological, historical, economic or religious determinism. (7) Connections between research data, conclusions, recommendations and later policy making may be tenuous claims and constructions rather than self evident conclusions.

[A heading] Towards resolving the contradictions

These deep contradictions complicate the work of social scientists, such as children's geographers. How can we convince critics, including our colleagues in rival sub-disciplines, that our work provides valid findings to inform academic, political, practitioner and public understanding of children around the world? How can we really know about children's and young people's views and experiences, needs and rights? The next sections briefly outline a few of the ways in which critical realism works to resolve these contradictions and to strengthen and validate social science theories, methods and findings.

[B heading] Being and knowing

Critical realism resolves these contradictions between facts and perceptions in several ways. First, it clearly separates *ontology* (factual being) from *epistemology* (perceptual knowing). For example, real children, who actually play in fields, learn at school or work in street markets (ontology), differ from observers' perceptions of them (epistemology). Whereas children are physical and social beings, childhood is a set of theories about what children and their relations with adults are, or could, or should be like. To confuse "children" and "childhood", using them as interchangeable terms, is to blur this vital difference between realities and theories. *Intransitive being* needs to be distinguished clearly from our varied and shifting *transitive thoughts* and perceptions.

Social constructionists such as Latour and Woolgar (1979) would contend that everything comes down to our perceptions: through them we experience and actually construct "reality". This is partly true, our understanding and behaviors are immensely influenced by contingent and often perhaps fallible perceptions, our own and those of other people. The great variety of childhoods around the world illustrates the power of local beliefs and customs. This view may be taken to extremes to assert, first, that no child has an inner essential reality or, second, that even if such a reality exists we can never truly know or prove it. We do not have valid

grounds of knowing what we know. Instead, it is averred that it is more accurate to see individuals and their experiences and relationships wholly in terms of their contingent beliefs. And if we could peel away the local layers of the onion of any individual identity, we would not find any essential centre left.

Critical realists would reply to the first point: each child has unique, real, biological, genetic, historical origins and continuing social being: the heart constantly beats; there were specific birth parents; children live in particular material housing and neighborhoods, on actual daily resources that provide their food and clothing. Phil Mizen and Yaw Oforu-Kusi (2012) draw on critical realism when discussing their analysis of photographs taken by children in the slums of Accra Ghana. They consider that it is not “naive” to take the street children’s experiences and images as real instead of as only subjective social constructions. This is partly because the photos cannot be made by the viewer to mean simply anything and to have no inherent truth or reality. The photos have specific meanings that powerfully convey the “flatness” of real working children’s “wageless lives”.

That photography is so adept as record and memorial is testament to its powers of close description and capacity to initiate historical recall, an ability to affirm the existence, fabric and texture of other people's lives in all their unfamiliar, edifying or pitiless forms. To fictionalize this function, as visual ethnographers are now encouraged to do, is to risk disabling these powers and possibly to concede that unforgiving worlds like those inhabited by our working children, together with the creativity with which they confront them, are merely a matter of invention (Mizen and Oforu-Kusi, 2012, p. 12).

The researchers used the photos to record and extend their detailed ethnography and to deepen their discussions with the children and the insights they shared with them into their hard daily lives. Too many children were chasing too few opportunities to work.

The disposability of the children's labor constantly threatens even the most basic and tenuous forms of work security, while the exclusionary practices of older, adult informal workers means they must work within spatially restricted order governed by the social regulation of space and gender (Mizen and Oforu-Kusi, 2012, p. 46).

The second point (even if there is reality, how can we know or prove what we know?) is answered by the *theory/practice contradiction*. This means that even if researchers deny an independent universal reality, they still rely on the printed word, they send emails and publish journal papers. By assuming in practice that their words, language and meanings can be read more or less intact anywhere, they accept and rely on universal reality even if in theory they deny it. By signing their work, they claim not only authorship and defense against plagiarism, but also the certainty that their own identity exists and continues across time and space. To reduce interviewees’ accounts into social or moral constructs (for example, Silverman, 2009, pp. 138-45) yet to treat their own text as authentic direct communication sets up contradictory double standards. Critical realism aims to resolve such theory/practice contradictions by endorsing reality, and thereby the practical relevance of our research for informing policy makers and practitioners.

[B] Social science and philosophy

Readers may be thinking that this chapter is less about social science than about philosophy and so is not suitable for this encyclopedia. The chapter definitely does not aim to add in unnecessary philosophy and confusions. Instead, it is concerned with the practical work of unraveling basic and inescapable philosophical questions about being and doing, which are integral to all social science. When the ideas are ignored, they are left to exert their powerful underlying influences unnoticed and unchallenged. The philosopher Mary Midgley (1996) compares philosophy with plumbing, which is ignored until the taps and drains stop working, resulting in leaks and floods. The contradictions noted earlier are like taken-for-granted but disconnected pipes and blocked drains, which urgently need to be sorted, as this chapter aims to do.

[B] The epistemic fallacy

When critical realism works to resolve differences between positivism and interpretivism by drawing them together, a first step is to note how both of them collapse being into thinking (the *epistemic fallacy*), things into thoughts, real children wholly into perceptions of them. Interpretivists do so by their emphasis on perceptions, interpretations and theories (thinking). Positivists do so by collapsing observed or reported realities (such as children's daily experiences, living, doing and being) into data, graphs, statistics, variables and the results of tests and experiments. All of these translate the original being into words and numbers (thoughts). While this is inevitable in research reports, there is the risk that researchers' representations are mistaken for the original reality or are more highly valued than that.

Long academic traditions favor the epistemic fallacy, which sets thinking over being. Descartes, for example, hoped to prove his own existence, and by extension any other being, by asserting, "I think therefore I am". His egoism, which collapsed reality into his own perceptions, has gradually been challenged. Yet the view still predominates that reality can only be known and translated through the human mind. Critical realism emphasizes that social reality is concept-dependent but is not exhausted by concepts. Instead reality extends independently in time and space far beyond our concepts of it, as geographers recognize when they accept that the communities they research continue to exist before and after their visits. Critical realism does not try to invent new problems. Instead it works to unravel and resolve them, and to show how seemingly disconnected though widely held views (such as positivism and interpretivism) can both logically be held.

[B] The possibility of naturalism; closed and open systems

As already mentioned, *scientism* mistakenly assumes that natural and social science methods can be identical. Critics of scientism tend to assert that natural science deals with things and is very different from social science, which deals with ideas. However, each one deals with both things and with ideas when they explain and link causes to effects through the imaginative leap towards an abstract hypothesis.

Newton's theory of gravity and Darwin's theory of natural selection are examples. These invisible causal powers can never be directly sensed or proved; they are only known in their visible effects, and as reliable explanations that have not yet been disproved. Critical realism therefore recognizes the *possibility of naturalism* (Bhaskar, 1998), that there can be unity though not uniformity between the methods of the natural and social sciences.

Newton moved beyond observing falling objects to theorize a hidden power, gravity, which causes the falling. Similarly, it is a strength not a weakness or "bias" in social science to trace the powerful, unseen, abstract, structural causes. These include class, race, gender and, as Leena Alanen and Berry Mayall contend (2001), generation, in how they are associated with children's higher or lower levels of health or educational success.

To stop analysis at the level of observing and describing would be like trying to trace the causes of the falling within the observed objects or in the patterns between them. Similarly, studies of poverty would search for its causes in many variables, such as types of housing, diet, parenting or schooling. Yet this can confuse correlation with cause and miss deeper causal analysis.

Powerful as gravity is, it cannot have total or one hundred percent effects. Birds, planes and spiraling leaves show the counteracting powers of flight, engines and air currents. However, although they defy gravity they do not disprove it. Similarly, social causes do not have one hundred per cent effect. Some disadvantaged children are very successful at school. They defy adverse structures of poverty and inequality but they do not therefore disprove them.

Critical realism clarifies this confusion. It contrasts *closed systems*, which have a single overwhelming force and almost never occur, with *open systems*, when two or more causal powers compete. Once complex uncertainties in natural science are accepted, then complex ones can be more accepted in the social sciences too. It is therefore illogical of critics of social theories to assume that exceptions, such as the rare disadvantaged children who are highly successful, can disprove and dismiss theories about class as simply "weak and politically biased". "If these children can succeed," critics argue, "it proves anyone can if they only try hard enough. The problem is not inequality, but lack of personal ambition and effort." Like the American dream, this view reduces problems of political structures into personal (in)abilities, and blames those who fail. Yet this sets unrealistic, hundred per cent closed system standards of proof of social theories. And social science involves many more competing forces in complex open systems than the natural sciences do. It is therefore even more logical to accept that there are open systems in the social sciences than in the natural sciences. Like evolution, class structures are determining, they explain and influence events, but they are not determinist; they do not wholly control them. When disadvantaged children succeed at school, structures such as class may be countered by chance, or by high standards of teaching, by friendships and other influences, whereas without these influences many other children who work equally hard will fail.

Social and natural unseen causal powers are only known through their observed effects. Social powers are apparent in social behaviors, policies and outcomes. The possibility of naturalism opens social science to being more widely accepted as able to produce reliable evidence, analysis and conclusions to inform policy and public opinion in the ways natural science is assumed to do.

[B] Polyvalence and depth realism

Darwin and Newton moved beyond the obvious and visible into the controversial and invisible. Darwin's theory of invisible natural selection outraged public and religious belief that humans are created by God and not "descended from apes". For millennia everyone believed Aristotle's view that stones fall because of the power within them, their *gravitas*. Newton challenged not only Aristotle, but also the conservative view that we must respect tradition instead of relying on our own experience and imagination.

There are two reasons for emphasizing these points in relation to children's geography. First, controversy and politics can arise in both the natural and social sciences. Second, ever since Plato, philosophers have stressed that we must adhere to the visible and present and never study "what is not". Bhaskar (2008) terms this *monovalence* or the single value of the present. This continues today in the stress on (visible) evidence. Yet Newton and Darwin give a few of many examples of the need to look below visible evidence to what seems to be missing in invisible real causes. *Polyvalence* analyses both visible and invisible, presence and seeming absence. Tamaki Yoshida's (2011) study of physical punishment in primary schools in Dar-es-Salaam Tanzania shows how critical realism attends to *depth realism* or the three layers of reality: actual, empirical and real. The *empirical* layer involves how we sense, observe, record and interpret experiences. During interviews, children expressed their pain after they were punished by having to kneel for hours on the hard floor.

Then tomorrow, tomorrow when you wake up these legs would hurt so much that you cannot even go to school. Because everywhere in your legs would hurt (Yoshida, 2011, p. 160).

The children also talked about the anger and potential violence generated among them by such punishment. Teachers spoke of hope and enthusiasm in their work but also of the severe difficulties of controlling classes of around 100 children in hot crowded rooms with few teaching resources. Those who failed the end of year exams had to repeat the year, possibly several times, so that each class included a range of age groups. This repetition seriously reduced families' income when they had to pay for unhelpful schooling, and when children who were at school were not being paid workers. Poverty and high unemployment rates increased parents' and children's great anxiety that the children should do well at school in order to increase their chance of finding reasonably paid work afterwards. However, schools had no resources for the work of identifying learning difficulties such as dyslexia, or for skilled remedial help for the many children with extra learning needs, or for those who missed weeks and months of school because of illness or family crises. Children were punished for the failings of the schools and education systems. Long-term devastating effects included a widespread sense of shame and hopelessness. Robert Serpell (1993) analyzed meanings of children's "intelligence" in several African languages. He showed how *nzelu* involved three dimensions, of wisdom, cleverness and responsibility, all vital for the well-being of rural Zambian communities. Sadly, the local schools did not respect or nurture these capacities, and they left 80-95 per cent of young people and adults Serpell contacted feeling that they were "brainless" failures.

The second visible *actual* layer involves the people, things and events that actually existed or occurred and could be observed. Besides the empirical and actual levels is the deeper third level of *real causal structures*, real because like gravity and evolution, they create and are known by their effects. They include politics and economics. In 2003, an estimated 92 per cent of Tanzania's urban population lived in slums, 11 million people (Davis, 2006: 24; UN-HABITAT, 2003). Slums involve unplanned, insecure housing that can be demolished at any time, from a legacy of Black Africans not being allowed to own land or be recognized as citizens with rights. Slums lack piped utilities and sewage, while mega-tons of rubbish lie uncollected (Davis, 2006), contrary to children's basic health rights (UNCRC, 1989, Article 24). Yoshida's ethnography described her experiences of extremely inefficient housing, electricity, transport and education administration services in the city. However, the structural causes extend far beyond Africa. When granting loans to countries (and so trapping them more deeply into debt), the USA-based World Bank forces strict limits to their public services budgets. African schools are then grossly underfunded, with under-paid teachers in under-resourced classes. In countless ways, children's daily lives are tightly constrained by national and global pressures. Real structures include: unequal power between nations, historical legacies of violent empires, and neoliberal policies to promote commerce and to cut and privatize state services including schools. Though mainly invisible and seemingly absent, real political structures are a vital part of explanations about daily life (Archer, 2003; Harvey, 2005, 2012; Keenan, 2012; Mason, 2012; Mizen and Wokowitz, 2012; Nadesan; Nieuwenhuys, 2005; Qvortrup, 2005; Serpel, 1993; Wacquant, 2009; Young Lives, 2014).

[B] Structure and agency, natural necessity and power

Critical realism analyses how *agents* draw on *structures*, and are powerfully enabled but also constrained by them. The underlying structures in the previous section precede individual agents yet are also constantly reproduced and refined by and through them (Bhaskar, 2008; Archer, 2003). To recognize the great power of adverse structures can increase respect for the relatively few agents who manage to surpass them, as when children succeed educationally despite severe economic disadvantage. Causes can also include people's agency in their hopes and intentions, which become real when they have actual outcomes. Structures and agents express their *natural necessity*. In humans that is the reality of our natural-social essentially moral human being that compels us into thought and action. From the first years (Dunn 2004; Alderson 2014), children and adults see people, things and events largely in moral terms of benefit, respect and justice (Maybin, 2014). Social research is therefore misguided and distorted if it attempts to be "objective" by setting morality aside. Moral questions are central not only to all methods through the research process (Alderson and Morrow, 2011) but also to all the research topics and analyses (Sayer, 2011). Children's geographies are imbued with moral questions, such as of justice. However, political research, for example about respecting or withholding the spaces, freedoms, rights and resources of people, is mainly about adults, or about younger adults versus older ones (such as Harvey, 2012; Howker and Malik, 2010; Wacquant, 2009). Mainstream "adult" research reports and debates mainly ignore the particular needs, interests and rights of children and young people, although one

third of the world's population, and over one half of the people in Africa are aged under-18 years. The wealth of findings in childhood geographies research could greatly inform and expand these debates.

Conversely, despite repeated urging from Qvortrup (2005) and others, childhood research rarely attends to the multi-layered politics and structures that control childhoods. Such multi-layered research by Katz (2004) and Nadesan (2010) is fairly unusual. So children tend to be doubly excluded from vital debates about policy making, when they are ignored in adult-centered work and when childhood research is largely apolitical. And yet today's children will live through the effects of these policies for many more decades than will the older adults who dominate today's debates.

One reason for the exclusions is ambiguity about the politics of children as citizens. Most of the related research examines how children learn to become citizens, rather than how they are active citizens now in legal, political and economic contexts.

Another reason is that most childhood research is funded to be conducted with only quite small groups of children, and in sheltered rather than openly public settings. And large projects such as the longitudinal birth cohorts, which measure and describe thousands of childhoods, tend to eschew political analysis, saying that it is too early to judge the effects of government policies (for example, Hansen, Joshi, & Dex, 2010). The 15-year-long Young Lives (2014) program is unusual in drawing together micro and macro, qualitative and quantitative, local and international, personal, political and economic levels

Central to critical realism's analysis of morality are concerns with power. To avoid a common confusion, critical realism separates power₁, which is creative emancipatory power, from coercive oppressive power₂. (The numbers are part of the two terms for power, not end notes.) Human beings are seen as constantly aiming to work away from power₂ and, through power₁ towards freedom (Bhaskar 2008). Although rights and freedoms are sometimes classed as "Western" values, the wave of mass protests demanding freedom and justice around all continents during this century has shown how these concerns are universal and greatly involve young people (Mason 2012). Yet so far, we know little about important questions of how and when their practical political engagement begins in childhood, although awareness begins very early (Connolly, Kelly & Smith, 2009).

[B] Predicting the future

Natural science involves making reliable predictions based on replicable experiments. Social scientists hesitate to predict futures, when these are likely to be disproved quickly by uncertain and complex open social systems and unpredictable human agency. Their critics then ask, "What is the point of social research if it can tell us nothing about the future?" However, natural scientists' predictions are also limited. For example, they cannot be certain about the weather, and if it will rain at a certain time and place weeks ahead. Yet they can predict far longer-term climate change trends (with agreement among 97% of climate scientists) in that if fossil fuel emissions continue to increase there will be catastrophic global warming (IPCC, 2014).

There are similar limits in social science predictions. Small and individual futures, the empirical and actual (like local weather), cannot certainly be predicted. But deep third level structural trends (like global climate change) may partially be foreseen

although, as with natural science, exact rates and dates remain uncertain. David Harvey (2005), Naomi Klein (2007) and others predicted the structural series of global financial crises and neoliberal take-overs. Jeremy Keenan (2012) traced decades of adverse Western political and economic interventions in Algeria, which drove the underlying trends that constructed the “war on terror” there. These deeper causal analyses help to explain the present predicaments of many of Africa’s children and young people, and their likely futures of increasing inequality and poverty, protest, violence and forced migration unless changes occur at underlying structural levels. Critical realism’s three layers of reality can help to increase areas of certainty.

There is pessimism among childhood researchers about children being ignored in national and global politics (Smith and Greene, 2014). That points to important reasons for geographers to connect their macro and micro studies into political strictures and long-term trends. These include: to begin to repair serious, unjust omissions of children from global policy; to understand and explain “adult” researchers’ actual and empirical observations more deeply and accurately by also taking account of children; to avoid superficial and misleading adult-centered analysis; to show the real value of research about children’s views, experiences and rights; to inform present and future policy making more fully and accurately.

[B] Absence, change and emergence

Research with children tends to be like snapshots, fixed into time and set age groups, in contrast to films that follow process and dynamic change over time. Even longitudinal projects may be disjointed when they review children at intervals every few years. To trace processes, three concepts in critical realism can be particularly useful. These are absence, change and emergence.

Plato’s veto on studying non-being or *absence* has been mentioned. Awareness of absence as well as presence is vital for understanding change. Absence includes all that ever was, or will be, or might have been, or might be, or is elsewhere. Absence includes ignorance (absent knowledge) and unmet need. Bhaskar gives the example of the monsoon that never arrives so that the crops fail. Absence is an almost infinite ocean, whereas the fleeting present moment, the positive, is “a tiny, but important, ripple on the surface of the sea of negativity” (Bhaskar (2008, p. 5).

Negativity includes the vital work of absencing absence, such as when learning absents ignorance, food negates hunger or clean water prevents disease. A world packed with presence has no spaces for movement, for change or alternatives. Yet as children become young people and then adults, we have to recognize their “begoing”, the gaps and spaces, losses and absences left behind, as well as the so-far empty spaces and potential they move into. For example, as they move towards greater independence, they leave behind the very close intimacy with those who care for them, which they enjoyed as babies.

To understand *change* involves seeing how it contrasts with *difference*. For instance, if one child leaves a room and another child enters it, a different child is in the room but there has not been transformative change. Real change occurs when, for example, a child learns to read; she becomes more independent, less reliant on others to read stories or instructions or websites to her. Her relationships and identity, her scope for making choices and her understanding of the world are

transformed. Another example is when children start to use public transport on their own and can roam far more freely and confidently.

Bhaskar (2008) considers that denial of absence and of becoming prevents us from understanding change and becoming. Instead, for millennia, researchers have concentrated on *difference*, on classifying and grouping things, species, age-groups and other concepts, on identifying differences between *the one and the many*. Taxonomy assigns objects and people into fixed groups according to their function. Child/adult, reason/emotion, mind/body are among the countless resulting dichotomies that dominate our thinking.

In contrast, research about change involves recognizing both continuity and transformation or *the one and the other*. In growing older, the child continues to be the same one person as well as the other different person. Child and adult can be seen as dynamic, dialectical aspects of the same person, with many continuities as well as differences. We are both our past and present and becoming selves in constantly changing patterns.

This continuity can be seen as *emergence*. Just as water emerges from hydrogen and oxygen, so consciousness emerges from mind, which emerges from brain, which emerges from body. They cannot be collapsed or separated back into their original elements although they remain interacting and interdependent, in dialectical relationships. Since change, emergence and personal and political transformation are so central to childhood and to child-adult relations, critical realism offers crucial insights for researching them, though there is space here only to outline these ideas briefly (see Bhaskar, 2008; Alderson, 2013).

[A] Macro and micro levels in research

It is not easy for childhood researchers working on small-scale short studies to set their qualitative material into broader political contexts. One way to do so is to “nest” their work into literature reviews and references to larger projects. Another is to show how their research can involve larger levels of analysis. For example, a study of preschools can refer to how and why they were set up and to their policy contexts, such as the education of future workers and consumers or promotion of mothers’ fuller employment, and to examine how these aims affect the children and their daily routines.

Even topics as domestic as nannies, may involve global economics. Olga Nieuwenhuys (2005, p. 168) showed how a vast pyramid of global labour and power, wealth and care, is invisibly displaced upwards, supported by the poorest children at the base. Filipino nannies on low wages in California are subsidised by the lower paid women who care for the nannies’ children in the Philippines. In turn, unpaid adults and children care for these women’s children.

Critical realism offers two major ways of organizing and synthesizing these kinds of diverse and wide-ranging materials: four planar social being and MELD, which will now be reviewed.

[B] Four planar social being

Critical realism sets human life into four areas or *planes of social being*. The first plane is our *material bodies in relation to nature*. Social researchers tend to

emphasize the mental over the physical, our social and mental understanding, manipulation and presentation of our bodies over our physical sensations and animal needs. This aspect of the epistemic fallacy (to set the mental over the physical) is part of the general undervaluing of nature since the Enlightenment, which has led among many other effects to current ecological crises (Bhaskar, et al., 2010; IPCC, 2014). Mizen and Ofosu-Kusi (2013, p. 15) illustrate critical realism's attention to real bodies and nature in their unusually evocative physical and sensuous description of life in a slum in Accra Ghana that houses up to 40,000 people.

[N]either its myriad shacks nor extensive network of alleyways and footpaths appear on city maps...[The slum] is a hive of industry with its metal recycling businesses, fruit and vegetable markets, street vendors, waste pickers, and auto parts and repair shops, the most visible signs of its importance as a place of work. Ringed to the west by the river Odaw, its foul-smelling and dark viscous contents somehow edging downstream into the now-toxic Korle Lagoon, parts of the settlement are regularly flooded during the rainy season. On occasions when the fetid contents of the river invade the settlement, it leaves behind torpid pools of evaporating water that harbour mosquitoes and water-borne diseases. There is no legal supply of mains electricity, running water, sewerage system or organized public waste collection. Emanating from the scattered detritus, discarded human and animal faeces, smouldering rubbish, primitive toilets and nearby vehicles, the settlement is cloaked by foul odours carried on the warm winds blowing in from the nearby Gulf of Guinea.

Young children who have not yet acquired immunity to infections are most at risk of disease when they play in the filthy alleyways. Over 50 percent of all people now live in cities, and dominant economic views encourage this migration despite the absence of planning to meet the basic needs of many millions. However, realistic micro studies of children's physical lives in this "planet of slums" (Davis, 2006) can crucially inform economic and political debates.

The second social plane is *interpersonal relationships*, and Mizen and Ofosu-Kusi (2010, p. 444) again illustrate how critical realism can inform childhood studies. They portray the noble, generous agency, the hardiness, and also the vulnerability and reliance on interdependent relationships of young people aged 13-15 years in the slums. Erico said:

A friend may ask you for something and when you refuse, one day you will also be in need and if your friend does not help you, you may think your friend hates you, but it is because of what you did, so you must always help, so that one day your friend can help you.

The third plane is *social structures*. Critical realist Douglas Porpora (1998, p. 339-55) identified different concepts of social structures. Structures may be seen as patterns of aggregate behavior that are stable over time. Childhood is an example, but this agency-dominated concept suggests that structures endure through repeated "childish" and "adultish" behaviors. It does not explain how mature children (and immature adults) step inside or outside these conventions. Another concept emphasizes culture, rules and resources that generate systems and relationships, reproduced across time and space while varying around the world.

Again, agents seem to have undue power to choose between structures, whereas millions are trapped unwillingly into oppression and disadvantage.

An alternative concept sees structures as law-like regularities that govern the behavior of social facts. Structural functionalists observe and measure many behaviors before searching for regularities that will indicate almost inevitable underlying structures, such as poverty or “social capital” or crime (Cunha, Heckman and Schennach, 2010; Dercon and Singh 2011). Porpora questions how this concept of structure can predominate so much over agency, and over individuals’ beliefs, decisions and psychology.

Finally, Porpora’s preferred model is social structures seen as systems of human relations among social positions. Rather than being underlying or external rules to be invoked, structures exist as powerful and enduring systems and positions in and through social relations, though they far precede and outlast individual agents. These structures include modes of production, domination, competition, exploitation and unequal social positions between classes and age groups. “Modes of production” and reproduction during childhood include parents bearing and caring for their children, and teachers instructing and socializing them to produce the finished adults. This broad concept of powerful structures allows for individual variety, and interactions, and resistance. And it also recognizes tensions between competing structures within open social systems.

Adversity can starkly reveal inexorable social and physical structures. The challenges of living in the Accra slum violently confronted the children with the social structures of gross poverty and inequality, and the many absences of unmet needs in the chaotic unplanned city spaces, the dangerously unregulated employment and the unmanaged refuse, traffic, housing and crime. In contrast, in well-organized wealthy city spaces, the same dangerous social structures tend to be concealed and smoothly managed so that citizens need hardly to be aware of them. These range from piped utilities to police protection, from city planning to massive systems for delivering necessary goods and removing unwanted waste.

The fourth plane of social being is *inner being and flourishing* and the kinds of societies, intergenerational relations, cities and schools that either undermine or promote this flourishing. The fourth plane involves further huge topics for research working with and for children and young people, and there is space here only to mention but not discuss them.

[B] MELD

MELD offers another framework for organizing and explaining complex research and for relating micro data into macro contexts. MELD is an acronym for four stages of social process, and dynamic change, and how one stage pushes inevitably forward into the next stage over time. Based on Hegel’s three-part dialectic (thesis, antithesis, synthesis), MELD expands dialectic into four parts and is open to diverse meanings and uses.

1M stands for *first moment*, nonidentity and absence. It recognizes the independent, intransitive being that exists beyond transitive thinking (see above). This links to anthropologists’ standing back, trying to respect others on their own terms, to avoid imposing the observers’ thinking and classifying onto these independent beings. Critical realists try to avoid anthropism, which reduces all being (all nature and other species) into human being and thinking. Childhood researchers also aim to move

beyond adultism, which assumes that adults are at the centre of the meaning, purpose and functioning of the cosmos, with childhood as merely a prelude, when instead they listen to children and try to see observed experiences from their viewpoints. Robert Adomo (2013) mentions sacred aspects of inalienable human dignity and our need, beyond precise verbal reason, partly to apprehend it intuitively. 1M is concerned with the actual, the empirical and also the seemingly absent reality. Childhood is often seen as absence, or an emptiness of the powers and qualities that adults have. Yoshida's research in Tanzanian schools showed how children are expected to be silent and 'empty' in the sense that in Swahili, *watu wazima* means full people or adults. Yoshida researched children's own views, their moral agency and the many ways in which their hard work at school and at home tended to be unnoticed by adults. Nieuwenhuys's (2005) pyramid of global labour (see above) is another example of research that moves beyond the actual and empirical lives of Californian children into the hidden subsidies taken from unpaid childminders in the Philippines.

2E is *second edge*, negativity and power₂. Like Hegel's second stage of antithesis, 2E explores problems, needs and contradictions. The aim is to begin to intervene and to seek to resolve contradictions in research, or to plan and implement new policies. The power, accuracy and relevance of 2E depend on thorough questioning at 1M. One practical example of 2E was when some of the Tanzanian teachers and parents raised funds to provide a daily porridge meal to help the hungry children to concentrate more in class (Yoshida, 2011, p. 181).

3L, *third level*, is about building a more inclusive open totality than Hegel's closed third stage of synthesis envisaged. In 3L, nothing is infinite, fixed or final. Totalities are internally connected and integrated, but they are also always partial and they interact with other totalities: a (total) child, in a family, in a class, in a school, in a district, a country and the world of many other totalities in open systems. Again, researchers' and policy makers' understanding and responses to totalities depend on the informed care previously taken at 1M and 2E. If they leapt earlier to premature misunderstandings, then splits, fragmentation, unresolved contradictions and continued violence are likely to follow.

4D, *fourth dimension*, involves self-transformative agency and power₁, through desire for change and praxis, seeking to move away from power₂ and towards a society where "the free development of each is the condition for the free development of all" (Marx and Engles, 1848). This crucially involves critical new self-awareness, gained through the MELD process, which can impel agents to begin again at 1M in new cycles.

Yoshida (2011) shows how MELD can trace positive or negative cycles. False beliefs at 1M, of children's assumed deficits, can lead on at 2E to punitive power₂ policies and interventions. These can reinforce 3L oppressive systems and totalities and lead, at 4L, to denial of the critical personal and political awareness that can transform adverse power relations. Then the self remains alienated and detotalised in MELD and on the four planar social being. Among many examples are children's internalized deep feelings of shame, pain and fear when they are physically punished. Yoshida gave a more political example when adults and children held a big protest about the Dar es Salam council's plan to double the *daladala* (public minibus) fares, until the police dispersed them with teargas. Some children had to travel many dangerous miles to school. The buses greatly increased their freedom and autonomy, whereas higher fares posed serious problems for them. The authorities missed the chance that the protests raised of revising their policies. Yet

they were constrained by higher powers such as the World Bank. Real transformation has to happen at every level. .

Dynamic MELD offers ways to analyze how benign progress but also malign cycles drive inexorably on from one moment to the next. Politicians are often criticized for making policies that harm children. MELD analyses how directions cannot simply be changed. It is necessary to begin the whole process again by careful review at initial 1M if we are to change society, people and structures, and to avoid starting at 2E or 3L by trying to paste superficially different models on to past ones.

[A] Conclusion

This chapter has aimed to highlight major current problems and gaps in social research, and to outline a few from many ideas in critical realism that can help to resolve these problems and contradictions. Although the chapter has involved unraveling some underlying philosophical complications, such as between empiricists and interpretivists, the purpose has been practical: to enable geographers of children and young people to design, analyze and report more logical, realistic research, intended to inform policies and practices to benefit children. Examples reviewed include four planar social being, which offers ways to synthesize a wide range of relevant micro and macro material even in brief small-scale studies. In the four stage MELD: 1M lays the basis for explanatory social science critique of process over time; 2E pushes towards concrete visions for the future; 3L theorizes transition and change, totalities, and interactions between agency and structures, theory and practice that impel analyses into 4D, which can then involve reflective transformation.

This chapter has also briefly reviewed how dichotomies can be reframed as interacting dialectics, how invisible underlying causes can be analyzed, the need to avoid cultural relativism, so that due account can be taken of the morality that is inherent in all social life, perhaps especially in unequal adult-child power relations.

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