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# Early Intervention and Evidence-Based Policy and Practice: Framing and taming

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*In this article, we highlight some critical matters in the way that an issue is framed as a problem in policymaking and the consequent means of taming that problem, in focussing on the use and implications of neuroscientific discourse of brain claims in early intervention policy and practice. We draw on three sets of analyses: of the contradictory set of motifs framing the state of 'evidence' of what works in intervention in the early years; of the (mis)use of neuroscientific discourse to frame deficient parenting as causing inequalities and support particular policy directions; and of the way that early years practitioners adopt brain claims to tame the problem of deficient parenting. We argue that using expedient brain claims as a framing and taming justification is entrenching gendered and classed understandings and inequalities.*

**Keywords:** Early intervention, brain science, evidence-based, parenting, social inequalities.

## Introduction

The mantra of evidence-based policymaking has an international reach and long roots, but came to the fore in the UK with the advent of the New Labour government, who saw it as a pragmatic 'third way' approach that transcended ideologies of Left and Right (Solesbury, 2001; Smith, 2013). A bio-medical model from the health care field was widened to the public policy area generally (Marston and Watts, 2003; Trinder, 2000). The approach has been continued by the current Conservative-led Coalition government, including through instituting 'What Works' centres for social policy that are intended to provide evidence of best practice for best outcomes to commissioners and providers of services (HM Government, 2013).[1]

The notion of using evidence to drive policymaking and practice appears to be indisputably desirable and unquestionable commonsense; of course policy and practice should be guided by evidence. As critics have pointed out, however, this assumption that every problem in society has an evidence-based solution is part of a modernising, new managerialist approach to governance in which social values and moral issues are reduced to technical rationality, cut adrift from political debate involving interests and



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power, while social justice, material conditions and social inequalities are obscured from view (Trinder, 2000; Hammersley, 2001; Marston and Watts, 2003; Greenhalgh and Russell, 2009). Political programmes become disguised as 'hard science'.

In this article, we highlight some critical issues in what Gibson (2003) has termed the 'framing and taming' of a social issue, including the use of evidence as a political strategy, in the early years field. This phrase refers to the particular way, from a range of possibilities, that people, groups or organisations involved in the policymaking process pose a problem and who is responsible for creating it (framing), and the consequent means of dealing with it (taming). In particular, we focus on a specific form of 'hard science' evidence being used to underpin policy and shape practice: a neuroscientific discourse of brain claims and its implications. Indeed, appeals to neuroscientific discourse as a driver for early years intervention policies and practice is an international trend (Macvarish et al., 2014; see for example, Bruer, 1999; Wall, 2010), presented as a determinant fact by the World Health Organisation[2] and as solving inequalities:

> *The environmental conditions to which children are exposed including the quality of relationships and language environment in the earliest years literally 'sculpt' the brain'.* (Irwin *et al.*, 2007: 7, original emphasis)

Rather than calls for evidence-based policymaking in the early years field being about the thoughtful and discriminating use of relevant research, however, we show how pseudo-scientific 'brain science' discourse is co-opted to bolster policy claims about optimal childrearing. This discourse frames poor mothers as the sole architects of social disadvantage, and its taming strategies of early years intervention are entrenching gendered and classed understandings and social inequalities.

## Our research

We draw on our own evidence about 'framing and taming' for this discussion: the 'Brain Science and Early Intervention' research project.[3] This study looks at how accounts of the formative impact of early experience on brain development have come to shape politics, key social policy legislation, and early intervention initiatives and practice, as well as the consequences for everyday practices among health care providers and early years educators[4] (Edwards *et al*. 2016, forthcoming).

Towards this aim, our research process included:

(i) A review of key literature, including policy reports and talks by key advocates in the field that have been influential in shaping and defining political and policy engagement with brain science ideas, especially in relation to early years childrearing and intervention;
(ii) semi-structured interviews with four influential public figures who have promoted the application of neuroscientific concepts in intervention policy and practice, about their understandings of brain science processes, parenting practices and their consequences for policy interventions; and
(iii) interviews with seventeen early years practitioners in the south east of England, asked about their understandings of brain science processes, parenting practices and the consequences for practice interventions.



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The literature and transcripts of talks and interviews were subject to an in-depth discourse analysis, broadly involving close reading of the written text to identify recurring terms, metaphors and references that create and constitute understanding of an issue or set of issues (Gee, 2012). We draw on analyses of all these materials in our discussion here.

## Framing the evidence in the early years field

Early years policy and service provision in the UK are now characterised by an emphasis on early intervention in the belief that pregnancy and the earliest years of life are most important for development. The idea is to pre-empt rather than react to social, educational and behaviour 'problems', using evidence-based interventions (for example, Allen, 2011a, b). The spotlight has alighted not on the unequal material and social conditions in which children live and are brought up as causal, but on parents and how they rear their children. This is as distinct from support as an offer for parents who are going through difficulties, embedded in universal services (Featherstone *et al.*, 2013). Evidence from social indicators is used to identify particular categorical groups in which 'poor parenting' is said to be leading to 'poor outcomes' for children, so that services and evidence-based interventions can be targeted at those groups (for example, 'Better Start' area wellbeing profiles[5]).

Evidence-based intervention in the early years field has been bolstered by a What Works centre based at an independent organisation, the Early Intervention Foundation.[6] A few months after its launch, an event was organised by Westminster Forum Projects (a private company with strong parliamentary, business and professional links that arranges fee-paying seminars on public policy issues) focusing on 'Early intervention: joining up services, targeting support and the role of the Foundation' (Westminster Social Policy Forum, 2013).[7] The day seminar brought together a range of speakers: Members of Parliament, directors of government services and NGOs, chief executives of councils and charities, leading professionals and heads of research institutes, to address an audience of (mainly) early years service providers and consultants.

A recurring set of motifs in the talks and discussion was that of 'evidence'. The discursive framing of this issue ranged across versions of:

(i) *We have evidence that the early years are formative*:

> So I want to open today's Forum by taking a moment to think about the massive amount of evidence we now have that early life experiences provide a blueprint for the rest of our lives. (Andrea Leadsom, then Chair, All-Party Parliamentary Group on Sure Start Children's Centres, and a Trustee of the charity Parent Infant Partnership UK)
>
> We now have a huge body of evidence demonstrating the very close association and relationships between health and early years ... some very clear evidence linking quality of early years and later health outcomes. (Dr Jessica Allen, Deputy Director, Institute of Health Equity, University College London)

(ii) *We need to understand the evidence base that we have*:

> [We decided that we would] try and understand where there's a problem where we can track, monitor progress against, understand an evidence base that's currently there and take research from the globe. (Dharmendra Kanani, Director England, Big Lottery Fund)



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(iii) *We have evidence about intervention*:
It has to be about the total impact that early interventions will have across society, including things like prevention of domestic violence and substance misuse. All of those aspects are in Public Heath England's evidence base. (Professor Rod Thomson, Director of Public Health, Shropshire Council)
There is a consortium of eight organisations . . . organisations which are specialists in evidence, the evidence-based practice. (Sarah Brennan, Chief Executive, YoungMinds)

(iv) *We have evidence about intervention working but there are hurdles that get in the way*:
In our work we've found that it's not really a knowledge problem that we have here, it's a systemic problem . . . Simply telling people that some of these interventions have a really strong evidence base will not be sufficient. (Matthew Horne, Managing Partner, The Innovation Unit)
[Key elements include] the systems that work around the evidence as well as the language and translating that evidence, research evidence, into real practice. (David Buck, Senior Fellow, Public Health and Inequalities, The Kings Fund)

(v) *We need evidence of the efficacy of intervention*:
Firstly, you need to get the evidence right, you need to show that certain things work and certain things don't. The Early Intervention Foundation is part of the What Works network that the Government has created . . . [We need] hard evidence about what works. (Graham Allen MP, then Chair, Early Intervention Foundation)
I still think the evidence base is weak and there's more to do on the evidence base. Because we have to get this to a point of producing the evidence that absolutely convinces chief executives, Chancellor of the Exchequer to make these investments. Because they don't speak for themselves, no matter how enthusiastic we can all be about all of this. (Martin Fisher, Director, Universal Credit and Social Justice, Department for Work and Pensions)

(vi) *We need good quality and 'fit for purpose' evidence*: 'strong'/'convincing'/*'robust'/'hard', synthesised, and longitudinal*:
Lots of interventions have been discussed in relation to early years services, but not all of them have robust evidence. One urgent need is to get the appropriate evidence together, particularly around the longer-term consequences. (Martin Knapp, Professor of Social Policy and Director, Personal Social Services Research Unit, London School of Economics and Political Science)

Viewed together, the logic of these various versions of the state of evidence about early intervention in the early years field do not sit comfortably alongside each other. There is the obvious inconsistency of both having (motifs (iii) and (iv)) and being in need of (motifs (v) and (vi)) evidence of intervention working. Notably also, the discursive motifs of requiring good quality and 'fit for purpose' evidence of the efficacy of intervention (motifs (v) and (vi)) call into question the notion of evidence-based policy, since the evidence required is that which shows that interventions already in place are working. Indeed, if the evidence required is longitudinal, then the production of evidence cannot precede the adoption of an intervention. Clearly then, evidence is being used as political



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strategy, where objectives come first and research evidence is then generated to justify them (Davies, 2003), what Gregg (2010) dubs 'a classic case of policy-based evidence' in the family intervention field.

Further, evidence that the early years are formative (motif (i)) does not lead in any necessary and direct fashion to a particular form of policy action; rather it has to be mediated and framed in a certain way. We turn to this issue next.

### Framing the early years intervention problem

The reason why a focus on pre-emptive intervention in the early years field is regarded as crucial and the state of evidence is such an important stake is clear from the resources and literature in the field. For example, the voice-over in the 'Brain Hero' video shown in the Westminster Social Policy Forum event and long featured on the Early Years Foundation website[8] asserts:

> Science tells us that we may find the solutions to these complex social problems in early childhood, where the architecture of the brain begins to form.

There has been a slew of political and think tank reports across the political spectrum. The examples that we quote here come from, first, one of the independent reviews commissioned by the Conservative coalition government from Labour MP Graham Allen, making the case for early intervention to counter the damage to babies' and young children's brain development caused by sub-optimal parenting; and, secondly, a cross-party 'manifesto' reinforcing the importance of the period from conception to age two for children's brain development and life chances:

> A key finding is that babies are born with 25 per cent of their brains developed, and then there is a rapid period of development so that by the age of 3 their brains are 80 per cent developed. In that period, neglect, the wrong type of parenting and other adverse experiences can have a profound effect on how children are emotionally 'wired'. This will deeply influence their future responses to events and their ability to empathise with other people. (Allen, 2011a : xiii)

> By the 1001st day, the brain has reached 80% of its adult weight. Ensuring that the brain achieves its optimum development and nurturing during this peak period of growth is therefore vitally important ... From birth to age 18 months, connections in the brain are created at a rate of one million per second! The earliest experiences shape a baby's brain development, and have a lifelong impact on that baby's mental and emotional health ... A foetus or baby exposed to toxic stress can have their responses to stress (cortisol) distorted in later life. This early stress can come from the mother suffering from symptoms of depression or anxiety, having a bad relationship with her partner, or an external trauma such as bereavement. (Leadsom et al., 2013 : 5)

The importance of early intervention is also a feature of the arguments of researchers evaluating early years intervention programmes,[9] for example:

> pregnancy and the first two years of life ... represent 'sensitive developmental periods', during which there is significant 'biological embedding of adversities' ... 'Sensitive developmental periods' refer to biological time points during which the effects of experience on the brain are particularly strong, and when certain types of experience need to be present ... experiences of



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> childhood adversity get 'under the skin' and affect physiological and cellular pathways. (Barlow and Axford, 2014: online)

Overall then, the evidence being called upon is that biological mechanisms underlie personal and societal dysfunction. The quality of parental nurturing and care in the first years of a child's life is claimed to be formative, reflected in the anatomical structure of the child's neural circuits with sensitive mothers producing 'more richly networked brains' (Gerhardt, 2004: 43). This 'brain science' evidence thus leads to the calls for intervention to take place in this window of opportunity in a child's life, when synapses are connecting, before it is too late and their brains are hard-wired for failure through deficient parenting.

Yet the state of hard science does not point towards formative hard wiring in any clear-cut fashion. First, current neuroscientific knowledge highlights the long-term plasticity of brain structures and functions; brains are constantly reacting to stimulae across the lifespan: forming, embedding and discarding synaptic connections (Rose and Abi-Rached, 2013; Schmitz and Höppner, 2014). Second, the state of neuroscientific knowledge itself is far from settled and 'policy ready' (Wastell and White, 2013). It is fluid and developing rather than definitive:

> Our early twenty-first century world truly is filled with brain porn, with sloppy reductionist thinking and an unseemly lust for neuroscientific explanations. But the right solution is not to abandon neuroscience altogether, it's to better understand what neuroscience can and cannot tell us, and why. (Marcus, 2012: online)

Indeed, even much cited sources in policy documents can criticise misuse of their work by politicians.[10]

This reductionism seems almost beside the point though. Neuroscientific evidence, it seems, is not necessarily called upon for its actual explanatory capacity, but for its persuasive value. Bruer (1999) has shown how, in the USA, advocacy groups in the mid-1990s started drawing on long-established neuroscientific principles to make claims about the primacy of infant brain development in an effort to convince the American public of the value of early education initiatives and to lobby for greater funding for early years services.

Brain claims as evidence are acknowledged as a current politically expedient strategy in the UK too, by proponents of their use to drive early years intervention. For example, a prominent UK policy advisor who we spoke to, like other proponents, asserted that neuroscience has an advance role in pushing policy but is limited in forming it, and emphasised how 'brain science' overcomes outmoded ideas about social class as shaping life chances:

> If you're asking to what extent does neuroscience and just neuroscience influence policy I would say in a very very limited way ... there can be a tendency to want to put the neuroscience argument at the front because it's couched in science and, you know we generally speaking believe science has an authority that social sciences doesn't have ... When sociologists point out that poor kids have worse life chances than rich kids, is there a danger that people on the Left adopt a kind of crude social determinism? ... this kind of crude sociological determinism excused, you know, really an abdication of responsibility.



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Highlighting the evidence provided by 'brain science' enables policymakers to endorse and pursue some sorts of policy intervention and to avoid others. They do not have to bother about strategies for redistribution. They no longer have to consider material and social inequalities as causal and in need of policy solutions. They can put that aside and focus down on where the real responsibility lies for the early years problem, how parents, or more specifically mothers, bring up their children and determine their brain architecture.

## Brain claims and taming the early years problem

The emphasis on evidence-based solutions to social problems as part of new managerialism involves a shift from valuing the knowledge of practising professionals in shaping service developments to prioritising that of auditors, policymakers and statisticians (Rose, 1999), and now to lauding the 'authoritative' knowledge of neuroscience (Rose and Abi-Rached, 2013). Some commentators have argued that the evidence-based approach not only excludes professional judgement but also erodes professionals' confidence in their ability to make assessments on the basis of their tacit knowledge and practical wisdom (Hammersley, 2001; Marston and Watts, 2003). Others declare that professionals acquire the new discourses and become party to their dissemination (Davies, 2003), and that in the social work field the concern for evidence-based practice is adopted as a political strategy articulated by an unstable occupational group in the context of occupational upheaval. It is a strategy to gain regard, status and recognition (McDonald, 2003), or even a radically democratising strategy that empowers professionals (Trinder, 2000).

From our interviews with practitioners working in the early years field, it appears that both positions can be the case. Practitioners can feel that neuroscience provides new evidence, separate from but to some extent dependent on the expertise that they have built up over the years, and also that it offers valuable knowledge that means others must pay attention to them. All these facets are captured in the account given by an early years professional with over two decades of experience:

> If you follow the [intervention] programme in the way that it's set up you're going to have the best outcome … It's got to be confidence backed by a good foundation of knowing you've been able to practice safely and well for a long time. Does that sound a bit full on, doesn't it? But that's what I believe guides my everyday practice. And a good programme with an evidence base. That's the thing you're working off all of the time … It's becoming more and more and more known how the importance of, you know, how babies are responded to in the first two years has an effect on their brain and their life chances … how important that is, which as a practitioner I hadn't really thought about that really. And now it obviously informs all of our practice. It's just like a given, everything we do that's what, how we work … And any work and any talks that we give to other practitioners, to spread that and discuss that, we do … You know, everybody looks for an evidence base and it's very hard to argue with some of the strong evidence that's out there … Through all realms I don't think anybody working in, you know, professions such as health and social work should not be aware of these changes.

Taming the problem of how babies' brain development leads to educational, social and behaviour failure, means that services are targeted at mothers living in poor communities. They carry forward the gendered and social-class assumptions embedded



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in the evidence-based policies into practice interventions. While often couched in the gender neutral terminology of 'parenting', early intervention is largely directed at mothers as the core mediators of their children's development, where the foundations for optimal brain development are located in pregnancy (for example, Kinsley and Franssen, 2010). Underpinned by 'brain science' evidence, the early years workers attribute the fact that the mothers in whose lives they intervene are poor and living in difficult circumstances to the way that they were brought up by their own mothers, where their own brains were hard-wired for failure:

> A lot of these young people have had complicated young lives and maybe if left just to their own devices just to bring up their new baby they would repeat patterns that they'd had in their young childhood. This [intervention] programme gives them well-researched advice and an opportunity to discuss a different way of parenting this new baby. So just break cycles of behaviour and patterns of behaviour that have grown up within families through generations ... The more we know, the more we understand. The more appropriate support can be given to perhaps try and break what previous generations have, how they've acted. To help the biological processes play out in the way they're meant to when you're doing everything you should have done. So I think it would have a big impact on a lot of people if they knew as much as perhaps we do.

In this way, social and material inequalities are explained and justified as individual and familial failure; the poor have caused their own poverty. Wider structural and economic factors are not recognised within the taming interventions that are framed by an evidence-based practice built on brain claims.

## Conclusion

Early intervention has come to occupy an increasingly ideological role in the context of contemporary politics. Policymakers are not merely responding to self-evident social problems, they are 'framing and taming' them in a particular way. Drawing on brain science claims, the social, behavioural and economic problems and inequalities faced by society are framed as the result of deficient parenting. Consequently, the means of taming the problems is to intervene in how the people who create the problems for society bring up their children.

As we have discussed in this article however, rather than hard science and technical rationality informing early years policymaking and professional practice, the use of evidence is a political strategy. Appeals to the existence of and need for evidence about the efficacy of intervention are inconsistent and a classic case of 'policy-based evidence'. While the state of emergent neuroscientific knowledge points to plasticity across the lifespan, rather than hard-wiring of failure in pregnancy and the first few years of life, 'brain science' claims act as a politically expedient strategy for policy adoption of targeted interventions that focus on poor mothers and their deficient childrearing practices as the root of the problem. The evidence from our study is that the pursuit of particular interventions in the early years field using expedient brain claims as a justification is entrenching gendered and classed understandings and inequalities.



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## Notes

1 The 'What Works' initiative also relates to increased targeting of services, nudge policies and payment by results commissioning. However, we have no space to discuss these links in this article.

2 http://www.who.int/maternal_child_adolescent/topics/child/development/10facts/en/.

3 The project is funded by The Faraday Institute under its 'Uses and Abuses of Biology' programme: http://www.uabgrants.org/. The research has received ethical approval from the University of Southampton: ERGO ID 3581.

4 www.brainscience.soton.ac.uk.

5 http://betterstart.dartington.org.uk/resources/data/awp/.

6 http://www.eif.org.uk/about-us/.

7 We received a copy of the transcript of the entire proceedings as part of our payment for attending the event. The Westminster Social Policy Forum requested that we point out that speakers have not had the opportunity for any corrections to the transcript and that it does not represent a formal record of proceedings.

8 http://www.eif.org.uk/what-is-ei/.

9 Marston and Watts (2003) argue that researchers are actors who are influenced by politics in evidence-based policymaking.

10 For example, http://www.theguardian.com/politics/2010/apr/09/ian-duncan-msith-childrens-brains.

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