The Community with the Bad Brain? - Neuroscience as discourse in Early Childhood Intervention

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The focus of this article is on understanding Early Intervention as a discourse; how it is generated and reproduced and how it makes possible certain processes and practices and limits others. In particular the research study considers the dominant discourse of neuroscience associated with the notion of early childhood and how this is translated in policy and practice. This is explored through a single complex case study of a self-proclaimed Early Intervention City in Northern Ireland. The study findings highlight the ways in which the policy discourse, claiming an evidence base from neuroscience, locates the origin of social problems in a deficit model of neurological development in early childhood and advocates parenting programmes as a solution which will bring transformative change. The analysis of accounts from the field demonstrated a high degree of critical engagement amongst parents/carers, programme providers and policy makers. While ‘silver bullet’ claims from evidence based programmes persist and ‘home grown’ initiatives promise community contextualised solutions, social inequalities for young children in the case study area remain persistently intractable.

Keywords: early intervention, neuroscience, discourse, policy, communities, Bourdieu

**Introduction**

The political impetus and drive behind the concept and practice of Early Childhood Intervention is an important area for exploration for those interested in young children’s care and development, not least because it could appear on the surface, moving towards the third decade of a new century, that the needs and rights of young children have moved centre stage. Research from neuroscience has opened up new understandings of how sensitivity to young children’s needs and responsive interactions may impact on the physiology of brain development. Policy and advocacy has drawn on this knowledge to drive investment in prevention and early intervention. Multiple programmes have been developed to support young children and parents and numerous research studies, focused on the efficacy of these, have further informed the debate. As researchers and advocates in the field of Early Childhood, it is tempting to hold back from too much critical examination of a tide which has brought new investment and political priority to young children. However, in presenting this study, it is argued that it is not only desirable but necessary that the discourse of Early Childhood Intervention is critically explored by those with research insight and practice experience in the field.

# Aims and Objectives of the Study

The study aims were: to examine the public policy discourse on Early Intervention using Critical Discourse Analysis; to identify the Early Childhood Intervention approaches being implemented in the case study context; to address ways of communicating and connecting this knowledge back to practice in the field and to add to the theoretical understanding of the implementation of Early Childhood Intervention approaches in communities.

# Methodology

The framework for the study employs the ‘thinking tools’ of habitus, capital and field as identified by Bourdieu (1990; 1992; 2004) to explore the ways in which early intervention discourses might impact on young children, parents and communities as well as in the broader political context. The overall methodological framework for construction and analysis of the field had its basis in Critical Discourse Analysis (Foucault, 1980; Chouliaraki and Fairclough, 1999) and Grounded Theory (Charmaz, 2014). The Northern Ireland context was a particularly interesting position from which to examine the out-workings of discourses in Early Childhood Intervention from both a policy and practice perspective. Implementation in a self- identified Early Intervention City ‘Ballymore’ was where the field was constructed from; this was considered in relation to the broader field of power, the structure of relations and analysis of the habitus of agents. The different levels of enquiry at city, neighbourhood and programme levels within the case study were explored. Documentary analysis, interviews, focus groups and participant observation of actors and agents at each level were the principal methods. In this way the case study reflected a cross section of an ‘open system’ (Pawson and Tilley, 1997; Bhaskar, 1998) which facilitated the complexity of exploring structural and agency dimensions and where policy and community based implementation could be interfaced. A case study can be *explanatory* in relation to an empirically observed phenomenon such as an intervention programme, or it can be *exploratory* identifying how agents and structures interact with programmes or interventions in a real world context (Nash, 2005; Scott, 2007). Identifying the boundaries of an exploratory case study is therefore challenging, as once we view a case as a system, it is necessarily connected with other systems such as broader political structures. While the original study also encompassed a broader analysis of the policy context, the practice context is the main focus of this article.

Bourdieu (1992) highlights the danger of separating discourse from structural and empirical realities, advocating instead for thinking ‘in and through’ theoretically constructed cases in the real world context (159). Fortunately, Bourdieu also provides the researcher with a set of ‘tools for thinking with’: the interlinked concepts of habitus, capital and field. Used together, these provide an approach to exploring the operationalization of a discourse or set of discourses in a specific setting. They are also appropriate to the sociological study of early childhood as used together connect the first environment of home and family to wider discourses of economics and politics.

**Case Study**

The Northern Ireland context was particularly interesting to examine in relation to the out-workings of key discourses in Early Childhood Intervention from a policy and practice perspective. The ‘field of power’ in which the different social fields associated with Early Childhood Intervention are located has particular features, not least of which is that Northern Ireland is a region emerging from conflict (Knox, 2016). This context also presented significant challenges, not least those of capturing the ‘open system’ during a period of significant political change and flux. In addition to the challenges, there were important advantages in the context. Early Childhood Intervention was emerging as a significant policy driver at the time of the study in 2015/2016. A particular city in Northern Ireland, Ballymore[[1]](#footnote-1), the location for the study was one of a number of places formulating an articulated focus at local level on Early Intervention. Ballymore has the highest levels of child poverty at Local Authority level in Northern Ireland. The population of children under three is 6,472 of whom 3,644 (56%) attend one of the four Sure Start programmes in the city. These are based in neighbourhoods which for the purposes of the study are called, ‘North River’, ‘South River’, ‘East River’ and ‘West River’.

 Alongside Critical Discourse analysis of the policy at regional level, fieldwork took place in Ballymore at local partnership, neighbourhood and programme levels. Key informants were those who manage interventions - neighbourhood, programme and Sure Start managers (n=10), those who deliver interventions, family support workers and health visitors, (n=16) and those who participate in intervention programmes, parents, carers and children (n=86). Regional managers and commissioners in health and social care (n=2) and Early Intervention Partnership members (n=4) were also interviewed to establish the connection from policy to practice locally. By interviewing and conducting observational studies with multiple informants, the study incorporated different layers of meaning and experience in the interactions between agency and structure at different levels. Thus the field of enquiry was constructed to examine the ways that discourses are translated from ‘neurons to neighbourhoods’ (Shonkoff, 2000, 1).

Intentionally, fieldwork began at community level and the rationale for this was methodological and practical. Data from community managers enabled an initial mapping of programmes to provide an overview of Early Intervention in a citywide context and enabled access to be negotiated at the micro level with facilitators and programme participants. Following the mapping exercise a sampling frame was developed which informed the selection of observational studies and parent focus groups. This was designed to provide a cluster sample to include externally and locally developed Early Intervention programmes, home based and group based interventions. All parents participating in the four Early Intervention programmes identified through the sampling frame were invited to take part in the study.

Methodologically, building the data at community level was a conscious decision in order that grounded data rather than policy discourse shaped the research process. Sequentially, the first phase of data collection comprised mapping and semi-structured interviews with community managers. The next phase involved observational studies conducted over a 6-10 week period of programmes identified in the sampling frame. Interviews with group facilitators and focus groups with parents were also conducted at the close of each programme. The third phase of data collection involved semi-structured interviews with Early Intervention Partnership members, Commissioners and Service Planners to capture the picture at sub-regional level. The triangulation of this data enabled a perspective on the layered ‘open system’ of Early Intervention and an understanding of the interaction of structure and agency in a real world context.

Ethical approval was obtained from the author’s university prior to commencement of data collection and ethical guidance was followed with regard to information, consent, confidentiality and data protection in relation to all participation in the study.

**Case Study Context**

The political context in Northern Ireland is in a process of significant structural change, particularly within the public sector. Much of this change has been contested and the period of the study was often characterised by stalemate, resistance, and the struggle to sustain workable institutions in government (Knox, 2016). One of the challenges this presents from a research perspective is capturing a context that is both structurally in flux and politically contested. From a Bourdieusian perspective, the particularly Northern Irish ‘rules of the political game’ must be considered (Bourdieu, 1998). Fields of power and struggles over different forms of capital: economic, social, and political are evident in the wider context as well as within policy and practice relating to early intervention.

**Neuroscience as Discourse**

The origins of the key debates in neuroscience as to the importance of the first three years and how these have shaped the broader policy discourse in Early Childhood Intervention has been widely discussed and critiqued elsewhere (Edwards, Gillies and Horsley, 2015; Gillies, 2017; Vandenbroeck, 2017). In terms of discourse, Gillies (2017) locates the widespread use of the Perry (2002) cross sectional images of infant brains placed side by side as a significant moment in the evolution of neuro-based policy making, where these became a ‘key motif ‘ in policy and strategy (2017, 2).

The confluence of neuroscientific, political and economic discourse in Early Intervention is most explicitly seen in the imagery used on the front covers of the 2011 Allen Reports (Figure 1). These are arguably the most explicit articulation of a policy discourse that juxtaposes Perry’s cross sectional brain images with an economic discourse of cost savings represented as gold bars on the cover of the report. It was the contemplation of these images while working in Early Childhood advocacy that motivated this author to further explore the troubling question as to how these might be translated in practice.



Figure 1 Cover of the Allen Report

Within Early Childhood research, the use of neuroscience is contested. Maggio (2018) conceptualises this as a polarity between ‘neuro-enthusiasts’ and ‘neuro-sceptics’ and proposes a focus on ‘practical ethics’ to navigate the interaction of neuroscience with policy. Turning the lens from policy to practice, Aronsson & Taguchi’s (2018) work on the interpretation of neuroscience in the educational context suggests that the connection beween neuroscience and practice must be chartered collaboratively with teachers, practitioners, parents and children. Vandenbroeck (2017) in his examination of constructions of neuroscience in early childhood education advocates for ‘action at place’ (2017, 90), that rather than viewing early childhood education as shaped by neuro based policy making, we acknowledge that practice in itself has the capacity to shape and even transform visions of early childhood education and care. Critical consideration of action at place, informed by those at the direct face of implementation in the community is therefore the focus of this study. While the policy context in relation to neuroscience and early childhood intervention has been subject to robust critique by the authors named above, there has been much less examination of the translation and application of that discourse in practice. To appropriate and critically reconsider Shonkoff’s Early Intervention metaphor of the journey from ‘neurons to neighbourhoods’ (2000), tracing the translation of research and policy to the outworkings in practice is therefore the particular contribution of this research.

**Deficit and polarisation in the discourse**

The ongoing influence of the Perry (2002), cross sectional brain images in Early Intervention policy discourse shows the limitations of a linguistically or textually based approach to discourse. Foucault’s (1980) theorisation as to how discourse constitutes objects and subjects alerts us to the potential for reification through the repeated usage of the Perry images in policy and practice:

My general theme isn’t society but the discourse of true and false, by which I mean the correlative formation of domains and objects and of the verifiable, falsifiable discourses that bear on them; and it’s not just their formation that interests me, but the *effects in the real to which they are linked*. (1980a, 237 emphasis added)

The next stage of the discussion is therefore to consider the ways in which neuroscientific discourse has been interpreted and used in commissioning, community and practice contexts in Ballymore. Was the predominance of a deterministic, deficit-based discourse evident in commissioning or in practice in the field? In what ways were commissioners, managers, practitioners and parents engaging with neuroscience?

**Perspectives from Commissioners and Managers**

The combined symbolic power of neuroscientific and economic discourse is evident in the following extract from an interview with a Public Health Manager where scientific capital is directly associated with economic capital and resource allocation:

It (neuroscience) has been a really powerful enabler for the policy makers and service planners because suddenly here comes this very clear and unequivocal piece of information. It has garnered all that huge resource and provided compelling arguments to the decision making process about where we put our money. From the prevention end we have always had a hard battle with the treatment people about where we put our resources. We couldn’t prove that what we do makes a difference. Then suddenly there is this piece that says the first three years… it really has allowed us to take off. Without the research we would be on a slower train.

 (Health Commissioner)

So, the commissioning perspective is that neuroscience is an ‘enabler’ that galvanises scientific and economic capital, its claims are clear and unequivocal and are an economic driver for the prevention agenda. Interestingly, the next extract from a community based manager is much more cautious as to how these ideas and concepts would be received and translated in the community. The sense conveyed is that it is not just about ‘compelling arguments’ to convince those who hold the economic capital but that in communities, ‘the tone of it’ is important and you have to ‘bring everybody along’. As indicated below, the discourse of neuroscience is positioned as a challenge to the intergenerational discourse of the family and community, the ‘ould’ ways:

Scientists, you know, they say what they say, but I think you have to bring everybody along and I'm not saying that some of the ould ways worked but when somebody presents you with something I think there is an onus on them to say, well not the reverse or anything. The neuroscience stuff isn't saying anything bad but they are saying if you do this it will improve and some of the things, like, I fully believe, like if you stick your child in front of a video from Monday until Sunday like that literally can't be good for them but, I just think you need to be careful, I think the tone of it, like if you do them things you are harming your child’

 (Neighbourhood Manager North River)

While there is an element of challenge in ‘the tone of it, like if you do them things you are harming your child’ ultimately, there is symbolic violence in the acceptance of the positioning within the discourse of parents in the community and the association with ‘harm’. This becomes more explicit in the next sequence:

So early intervention in itself particularly around the development of children and coping children better for school and for life is good, but to *prove* that that is good I think the science at times is there pointing up sort of well, to say something is good you have to show what not doing would do. So the very point is, the sort of, the ‘good brain and the bad brain’ for want of a better term. But if you are living in a situation that your child is coming from a community that is likely to have the bad brain, there’s social and economic issues, there is alcohol in the home there is whatever, whatever…know. I think in one sense we need to be careful of doubly punishing.

(Neighbourhood Manager, South River)

The speaker, a community development manager acknowledges the power of the dominant discourse: ‘early intervention … is good’. The discourse around the evidence base comes to the fore here, ‘to *prove* that it is good’. The speaker is not critiquing, as such, the scientific discourse or the evidence based discourse, in fact he acknowledges the power of both. In framing the challenge, he is aware of the purchase of the discourse he is trying to oppose and chooses not to refute the scientific discourse in its own terms. Instead he acknowledges the subordinate position in the discourse, ‘the good brain and the bad brain’.

Butler (1997) describes ‘the very operation of interpellation that continually repeated action of discourse by which subjects are formed in subjugation’ (27). In this respect, the transition where the Neighbourhood Manager extends the ‘bad brain’ from individual to community is particularly important. The individual brain is now a common community brain. The children in one geographical area are aligned with the ‘bad brain’ of Perry’s (2002) subjects, children raised in Romanian orphanages or children raised by animals. The transition from ‘you’ to ‘we’ acknowledges the manager’s own position, aligned with the dominant discourse, ‘we need to be careful of doubly punishing’. The use of the word ‘punishing’ is interesting from a Foucauldian perspective as the discourse which constitutes the object also constitutes the ‘knowledges and practices through which the object is disciplined’ (Foucault 1977, 194).

The early intervention knowledges and practices through which the children and communities with the ‘bad brain’ are ‘disciplined’ is through the provision of parenting programmes. In the discourse, the locus of the neurological problem is in poor parenting, not in any broader social context such as poverty, unemployment or poor housing therefore the remedy is in parental education. The neuroscientific discourse is communicated as a polarity between the nurtured and neglected brain, this is interpreted by policy as placing the locus of blame and responsibility on parents. Parenting programmes, focusing on interaction and nurturing emerge as the practice solution to the scientific and social problem. So, within the community of Ballymore and the neighbourhoods of North, South, East and West River is there acceptance or resistance to this discourse?

Within the community, there was clearly critical reflection on and struggle with the dominant discourses. Another perspective, this time from a Sure Start manager, stressed the importance of critical reflection on the neuroscience; interfacing the empirical information from science with observations from practice with regard to resilience. This analysis, while validating the neuroscientific, the ‘irrefutable evidence’, challenges the empirical causality of this approach:

Some of that is based on the evidence that exists but I have become more critical of that, all the stuff around neuroscience that exists again seeing it as the silver bullet, if only we could understand brain function then we could sort everything else out. No, it's not as simple as that unfortunately, but at least some of it is based on the fact that there is irrefutable evidence that the combination of genetics, and early childhood experience actually influences an awful lot of your life pattern. Now that's not for everybody and I do think the whole concept of resilience is really important, alongside early intervention, because there are lots of children who actually do well despite very difficult circumstances, in their early years.

(Sure Start Manager South River)

There is a challenge to the dominant discourse emerging here; ‘its not as simple as that’. There is also a departure from the internalisation of the subjected position, the shared community ‘bad brain’, in the statement ‘now that’s not for everybody and I do think the whole concept of resilience is really important, alongside early intervention, because there are lots of children who actually do well despite very difficult circumstances, in their early years’. There is a break from the determinism of the discourse, it is not a matter of the poorly parented child or indeed the poorly parented community with the ‘bad brain’.

The Sure Start programme in South River has placed a particular emphasis on the communication of neuroscientific information within the community. This is the same geographical community that was described by the Neighbourhood manager as having the ‘bad brain’. The interpretation of the neuroscience is assets-based, emphasising what parents can do to support brain development. Their newsletter shown in Figure 2 below uses a mock up road sign beside the picture of a baby declaring, ‘Brain Building in Progress’:



Figure 2: Cover of Sure Start Newsletter in South River

This cover stands in stark contrast with the cover of the Allen Report showing the CT scans of a ‘normal’ and ‘neglected’ child in a Romanian orphanage set against the gold bars to represent the economic savings to society. What, if anything has changed in the interpretation of the discourse? Does this discourse of neuroscience have the potential to be transformative?

There are, of course, key shifts from this image from the Allen Report. The real child, rather than the CT scan, is centre stage, engaged in sensory play with a large sand tray. The sign uses a roadworks image to explain that brain building is taking place. Inside the newsletter are ‘Five Simple Guidelines to help your child’s brain development’. These are:

1. Understand and respond to your baby’s needs and cues. 2. Take care of yourself so that you can care for your child. 3. Talk, sing and read to your child. 4. Provide a warm and loving environment and 5. Create good routines and a predictable world around them.

(Child Brain Development, Sure Start Newsletter South River)

Each example is supported by information in layperson’s terms, underpinned by the neuroscience, for example ‘Ignoring your baby’s needs can do harm by causing stress levels to rise’ or ‘It is important to take care of yourself. Get support from family, friends and community Organisations like Sure Start’ or ‘Helping your child to feel safe and secure is the key to healthy brain development’. While on the whole the discourse is presented from an assets-based perspective, the basis of the discourse is unchanged. Responsibility for healthy baby brain development is in the hands of the parent and the ability to create good routines, provide a secure home environment and access support in the community is all within reach of the parent. The underlying assumption behind this sort of messaging is, to use the Bourdieusian term, that by changing ‘habits’, we change habitus. The two are distinct terms and, in making this clear, Bourdieu asserts: ‘I said habitus, so as not to say habits’ (Bourdieu and Wacquant 1992, p122). Bourdieu explains the difference in the two terms thus:

The notion of habitus can refer to something that is close to what is suggested by the idea of a habit, while differing from that word in one important respect. The habitus, as the word implies is that one which is acquired but which has become durably incorporated in the body in the form of permanent dispositions.

(Bourdieu 1993, p. 86)

Bourdieu argues that to focus on regular practices or habits rather than the principles underlying or generating these practices is to miss those ‘invisible relationships’ which may not be immediately apparent to the untrained gaze. He directs the researcher to attempt to look under the surface of an empirical phenomena towards a generative principle which is more than the practices to which it gives rise. By using the concept of habitus, we can attempt to unpick why deceptively simple changes in habits may not result in deeper change taking place, much less the kind of transformative change suggested in the early intervention literature. In short the deeply internalised social structures that generate the habits are not easily changed, particularly when change is restricted to the interpersonal rather than the broader social context.

**Practitioner and Parent Perspectives**

Knowledge translation, the interpretation of a more simplified assets-based approach rather than challenges to the discourse was very evident in the communication of the neuroscience in the programmes observed. Family visitors and midwives were clearly engaged in communicating the information from neuroscience and making it accessible to parents. This is shown in the example from the programme ‘Wonder Babies’, where a midwife is explaining when an infant breaks the communicative gaze with the parent:

I was showing them with a six week old baby the ‘dance of reciprocity’[[2]](#footnote-2), and he broke the sequence, he needed to process what was happening and then he came back to me and they were all ‘I noticed that too, and I thought it was that he doesn’t like me’.

(Midwife, North River Sure Start)

This translation of the neuroscientific messaging was also evident in the ‘Starting Strong’ home visiting programme in the case study area. In this example, the family visitor, Jackie, uses metaphors to explain cognitive development in this case to Rebecca who is the parent of seven month old baby Owen. Rebecca responds in similar tone with another metaphor, ‘like wee sponges’. In this way the communicative distance between professional and parent is reduced. There is also acknowledgement of the child’s agency and position in the discourse. The parent says that they want the child to be a ‘wee talker’:

Jackie: Adult Interaction is vital for his brain processing words. Remember what I said to you about his wee word bank, when he goes to school he will remember all those activities, nursery rhymes, songs. It’s hard to believe what the brain takes in.

Rebecca: Aye they are like wee sponges…

Jackie: and babbling is great for the voice box

Rebecca: That’s what we are looking for, a wee talker.’

Jackie: That wee sensory part of his brain is developing now, you see the way he is exploring putting his feet in his mouth….

In the act of translating the discourse it is important to consider what, if anything, changes. The locus of the problem remains with the parent and the practice solution is improving parenting skills and knowledge. The power relationships remain unchanged. Also in simplifying the neuroscientific evidence it is likely that the more popularised interpretations of ‘synaptic pruning’ and ‘critical windows’ for development will dominate over more nuanced approaches. Interestingly, if we consider the information from the ‘Starting Strong’ Programme curriculum that the Family Visitor is drawing from here, there is no mention of neuroscience. However, the communication between the family visitor and parents is strongly referenced to neuroscience, rather than child development, perhaps because this is viewed as a more powerful and engaging discourse. Bruer (2011) describes this as moving from a ‘mentalist’ communication perspective to a ‘materialist’ perspective. The former focuses on subjective, abstract mental experiences: thoughts, feelings, emotionality while the latter emphasizes the physical changes that take place in a child’s brain such as connections pruning, wiring and circuits.

The following interaction between three parents at the Wonder Babies programme in North River shows another way in which neuroscientific discourse is interpreted and how this interfaces with maternal habitus. Maria, a teacher on maternity leave is expressing her concern at her 5 month old daughter’s reaction to television. Gemma and Lynn are both stay at home mothers whose children are also 5 months old:

Maria: I have been coming since ante-natal. I find myself remembering some of the things they talked about there about their brain development that make sense now since she was born. It really stays with you, like the thing that children under two shouldn’t see screens at all. You know like TV and computers and all. I mean I would always have the TV off when she’s awake but in my mother in law’s house the TV is on all the time and I would notice if I was carrying her through the living room there she would turn her wee head to try and look at it, it just shows you.

Gemma: Aye but you don’t have to go over the top and worry like that. The TV won’t do her any harm, like my wee boy loves all those wee programmes like cbeebies and all. He loves all them wee children’s programmes.

Lynn: Aye there’s no harm in that as long as it’s suitable. You can get something done, like I would let her watch the TV so I can get a wee hour of ironing done.

 (Parent Focus Group, Wonder Babies, North River)

All the children are five months old, but clearly the information in relation to neuroscience and child development interfaces with other aspects of maternal habitus. One mother’s use of the local term ‘a wee hour’ of ironing contrasts with the anxious concern of another and show the different circumstances, expectations and demands in these women’s lives. The examination in depth of instances from practice shows the complex and layered way that the discourse operates. The ‘empowerment’ that is possible through drawing on neuroscientific discourse relates to the circumstances and habitus of the individual. Moreover, if the public policy discourse points towards the ‘good’ and ‘bad’ parent as evidenced by the good and bad infant brain, rather than recognising different and unequal positionings it is difficult to see how the discourse can be transformative.

**Conclusion**

This article has traced the neuroscientific discourse from its emergence in the broader research and policy context, to its iteration within the Northern Ireland context through to its interpretation at practice level in communities. The Bourdieusian analytical framework of Capital, Habitus and Field together with Foucauldian discourse analysis was used to examine the ways in which the discourse has supported some practices while sublimating others. This highlighted the ways in which neuroscientific knowledge has been drawn upon selectively and sometimes misleadingly in both popularized and policy orientated readings. Using Foucault’s theorisation of the constitutive and disciplinary properties of discursive practice, the emergence of the discourse is considered particularly in how it constitutes and reifies particular kinds of objects and subjects, such as the bad brain, the poor parent, the neglected child. The conflation of social disadvantage with extreme adversity and the use and re-use of a polarised embodiment mis/represents a complex, nuanced and emerging area of science as a closed certainty. Within the discourse also a ‘materialist’ perspective dominates over a ‘mentalist’ perspective. The latter focuses on subjective, abstract mental experiences: thoughts, feelings, emotionality while the former emphasizes the physical changes that take place in a child’s brain such as connections pruning, wiring and circuits.

Using Bourdieu’s theory of ‘field’ the broader study considered how the neuroscientific discourse has been drawn on in public policy in Northern Ireland. Following this analysis of how neuroscience has been interpreted in public policy and using Bourdieu’s concept of ‘habitus’, the impact on commissioning, managing and delivering Early Intervention in practice in Ballymore was considered drawing from the interview and observational data. This demonstrated the ways in which the discourse in reinforced in interpellative statements in policy and practice contexts and the symbolic violence of when these are accepted in terms such as ‘the community with the bad brain’.

The analysis of accounts from the field however is not only one of subjugation within this discourse. The research in the field has also identified instances in which the discourse is beginning to be challenged and reinterpreted from an assets-based perspective, where individuals and communities are repositioning themselves, reframing the parameters of the discussion rather than accepting a position dictated by powerful voices in public advocacy and government. An observation however, was that whether neuroscience was interpreted from a deficit based or asset based perspective, it still positioned power and responsibility for change with the individual parent rather than more broadly in society. A strategy employed in the community was messaging parents around neuroscience to encourage them to adopt or adapt parenting practices. A problem it is proposed with this approach is that it focuses on the more superficial change of habits rather than addressing the embedded structures involved in habitus.

**Recommendations for Practice**

Firstly, it is important that practitioners have the opportunity to critically reflect on the ways in which discourse is interpreted in policy and to what extent this is reflected in the research base in neuroscience and evidence. Advocates in the field should also be aware that the process of simplification can distort or over generalise research findings. Early childhood practitioners must be supported to critically engage with discourse in neuroscience and evidence and to interface this knowledge with their observations from practice. Expertise in the nurturing and care of young children draws from multiple sources and need not have recourse to neuroscience for validation. Of course, in order for this to happen, it is important that both the research community and government respect knowledge from contextualised practice in the field. The potential for research partnerships between researchers and the community could be more effectively utilised, particularly research which critically engages parents and communities rather than that which positions them as passive objects of analysis. Finally, and most importantly, it is vital that practitioners reflect on their role as duty bearers in relation to upholding the rights of very young children. As young children cannot choose the ways in which they are represented and discussed it is important that practitioners challenge representations that depict young children as disembodied brains or passive objects of research and insist that young children have the status and agency which is theirs by right.

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1. Ballymore is the city which is the subject of the case study and in which the four neighbourhoods, North River, South River, West River and East River are located. Unless stated otherwise, much of the information drawn on with regard to Ballymore including demographic and economic trends and statistics has been derived from a number of publications which because of their focus on Ballymore have not been explicitly cited to ensure confidentiality. Certain details relating to the neighbourhoods and the city have either been removed or altered, or false ones added to maintain anonymity. Such details are not, however, significant to the overall argument set out in the study. [↑](#footnote-ref-1)
2. The dance of reciprocity in the EI programme describes the interaction between a baby and an adult where both the baby and the adult are involved in the initiation, regulation and termination of the interaction [↑](#footnote-ref-2)