

[Guest editorial]

The diverse neurobiological processes and legacies of early adversity: implications for practice¹

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Introduction

We are grateful for the opportunity to edit this special edition of *Adoption & Fostering* on the neurobiological aspects influencing the mental health needs of looked after and adopted children and young people. The impetus for this in part grew from an earlier article in this journal which gave an overview of the complexity and interrelatedness of some of the domains that influence the neurobiological legacy of early maltreatment (Woolgar, 2013). In particular, it drew attention to the common misunderstandings and over-simplified messages that have tended to obscure the individual differences in maltreated children and make them sound more similar than different.

This collection of seven articles represents an updated and more in-depth review of current thinking across the range of possible neurobiological legacies of early maltreatment and neglect and their impact on practice. In so doing, it highlights the complexity of this area and the challenges for translating these important and rapidly developing fields into our thinking about looked after and adopted children. We also hope that this extended issue of the journal will provide a useful resource for practitioners faced with a biologically framed hypothesis or plan about a child or young person that seems to be not about them in particular, but more about some average, generic, hypothetical maltreated child.

¹ This is the first part of the guest editors' extensive editorial introducing a special edition on 'the impact of neurobiological sciences on family placement policy and practice' (*Adoption & Fostering* 43:3, October 2019).

The biological sciences investigating the legacy of early negative experiences for children and young people have already influenced significant policy decisions and guidance, and alongside this, debates within the social care practice arena, most notably to do with early intervention initiatives. Planning and decision-making for children whose parents are struggling to provide safe and adequate parenting are undoubtedly challenging, troubling and hugely significant. Children are highly dependent on their parent(s) for their basic survival, although this changes as they develop degrees of physical and psychological maturity and independence. But as the experience of abuse and neglect demonstrates, at whatever age, maturity and independence are not sufficient protections in themselves. Domestic violence has become clearly identified as a serious risk factor for children and adults who are subject to or witness such abuse. The basic ability of an adult to protect themselves in such situations and take action to do so can help. However, the identification of ‘coercive control’ in adult relationships has highlighted the complexity of taking protective steps in such circumstances.

For children and adolescents, the ability to leave abusive and/or neglectful situations is almost impossible. This reinforces the importance of the state being able to take protective action, whether by providing proactive support to parents through the provision of services or taking proactive action to remove children from high-risk families. The child’s right to a safe, protective, respected and enabling family life is clearly set out in law as a court’s ‘paramount consideration’ when it is determining any question with respect to the upbringing of a child.

The impact of neurobiological science on family placement policy and practice is substantial and at the same time, highly controversial. It is a primary concern for every parent to ensure that their child develops to their full potential. This is also an enormous challenge as there are typically questions posed 24/7 for parents about ‘what the right thing to do’ is in a specific set of circumstances. There is a vast range of views about parents finding the ‘right solution’ – different models of parenting, having access to the right resources, having the personal capacity to respond to the unknown and problem-solve, and in addition, individual qualities such as sensitivity and the capacity to think, feel and respond to the child over time. Much of this suggests a significant degree of control on the part of the parents, though in many circumstances, control is elusive or problematic. These issues are often at the heart of what social workers become involved in: parents who are significantly struggling to provide

their children with what they need and children whose welfare and development are under varying degrees of threat. How social workers come to explain what is going wrong and what they should do about it are longstanding challenges to the profession.

There are well-established explanations of underlying features such as attachment or trauma impacting on parenting. There are also specific, commonly reported issues like parental drug or alcohol misuse. The challenge is to know what influences what and then what is effective at addressing the issue identified. These are very serious questions when the consequences of what might happen next are the forceful removal of a child in either the short term or perhaps forever. And as a part of that journey, there will be the evidence on these matters as they are presented to court and the court's interpretation of its weight and significance in its administration of justice.

In such complex situations where the challenge is huge and consequences life changing, colourful pictures of brain architecture have an objective appeal when faced with the dilemma of making day-to-day sense of a child's emotional, behavioural and social issues. Neurobiological science can be seen to root uncertainty and anxiety into a set of scientific explanations that are reassuring. Connecting these brain images to other anatomical features such as the Hypothalamic-Pituitary-Adrenal (HPA) axis and then the impact of the stress response associated with cortisol, gives further reassurance. When this is amplified by video material that shows neural connections being or not being made, or the pathway of cortisol across the HPA axis, we are into a whole different explanatory world that eases the pain of the very difficult decisions that lie at the heart of both care proceedings and placement plans. But while these explanations and perspectives may be confidence boosting, they have also been subject to intense criticism since they are seen to minimise the impact of factors such as inequality, poverty and austerity on families and replace this with a scientific lens through which to interpret human behaviour.

These issues were played out in a very intense challenge to the publication of the Department for Education funded evidence review (Brown and Ward, 2013), which had the support of the Family Justice Council. The President of the Family Division commended the publication in the Foreword:

I am confident that this excellent research summary will prove invaluable as an aid to our understanding of the child's developmental journey, providing up to date material regarding the impact of adversity on child development, and the likely outcome for the child. I commend it.

The subsequent challenge was set out in a seminar at Edward Lloyd-Jones's chambers in May 2013, followed by an article in *Family Law* (Lloyd-Jones, 2013). This was further developed in three online articles (White and Wastell, 2013) and a journal article (Wastell and White, 2012) where the authors summarised their objections to the earlier publication (p. 399):

We argue that the neuroscientific claims supporting current policy initiatives have received little critical commentary. They appear to be operating as powerful 'trump cards' in what is actually very contentious terrain, suppressing vital moral debate regarding the shape of state intervention in the lives of children and families.

The impact of this intervention was significant and subsequently a detailed response was published by the original authors (Ward and Brown, 2013) who wrote (p.1185):

Like our critics we are well aware that current neurobiological research could be misrepresented to inform policies that may damage families (for instance by feeding into the political discourse about '*strivers and skivers*'). However, it is not appropriate to attempt to discredit research because it could be misused in this way.

Unfortunately, however, this had the effect of diminishing the status and authority of the original published document as practitioners in law and social work could not resolve these complex questions in their day-to-day practice. It also did not ease the challenge in making decisions about children living in seriously difficult circumstances where an evidence base is critical: the issues of making sense of what was happening to them and what should be done to ensure their right to a life safe from harm, and to decide what is in their best long-term interests remain.

Part of the problem arises from seeking a balance between simplification of a complex area in order to be able to share important ideas with a wide audience, against paying sufficient attention to the nuance and complexity of a rapidly developing field. Simplifications can lead to practitioners over-estimating the extent of their knowledge at the expense of an openness

to nuance in expert opinion (Scharrer, et al., 2017) and this appears to be particularly true for neurobiological data, especially where images such as brain scans are used in court settings (Baker, et al., 2017). Indeed, there is much more than can be said in this selective collection about the rich diversity of scientific understanding in this area, as it incorporates research into a range of biological domains and is growing year on year. As a result, many practitioner-level presentations of the science are not only simplified but grossly simplistic; they have not embraced the diversity and range of the constantly emerging findings, or indeed the nuances of their application to the areas of adoption and fostering. For example, considering the innovations in neuroscience alone, there was a steady increase in the number of academic articles published in this field between 2006 and 2015, with almost 40,000 articles in 2015 alone, and approximately a quarter of them were in the fields of psychiatry, psychology and the behavioural sciences (Yeung, Goto and Leung, 2017). It is probably not feasible for practitioners to keep abreast of all these developments and innovations in an area that continues to increase rapidly in both absolute and proportional terms.

Leading developmental scientists tasked with investigating how the new and emerging sciences have been translated from primary research and into the public understanding have cautioned that ‘...the substantive content of the science was often misinterpreted or misrepresented...’ (Shonkoff and Bales, 2011: 18). This had implications not just for the way in which children are understood, but also how they are treated.

To quote Chaffin (2008: 313):

It is currently fashionable to extrapolate from basic brain research on these [maltreated] children to the hyperbolic conclusion that they are damaged goods who are extremely difficult to redeem. One of the opinions offered about these children is that regular treatments do not work and that therefore unconventional, highly intense, radical, risky, and coercive treatments are required to avoid dire outcomes. This clinical lore, almost completely untested, has been a foundational assumption legitimizing the use of concerning treatments. It is an opinion lacking scientific support and in fact appears to be an opinion increasingly contradicted by the available scientific evidence.

Not only have the impressive and innovative biological sciences related to the early adversity, maltreatment and neglect been misunderstood outside of specialist journals read by specialist

researchers, but there have also been significant implications for the ways in which maltreated children's individual needs have been obscured, and their access to effective interventions blocked as a result of that misunderstanding.

This is a shame because the biological legacies of early maltreatment, neglect and adversity are fascinating, but they are also complex and interdependent, a feature that we hope this compendium of articles will demonstrate. While it might be difficult to identify a single, purely scientific take-home message from this collection (e.g. one that could be applied to every child), we propose that the organising theme should be about keeping individuality in mind – that *early adversity breeds diversity in outcomes* and does so for good, biological reasons. This cannot be stated too often given the concerns about the simplification of early adverse experiences into common or average experiences, at the expense of individuality, and sometimes without considering individual level vulnerability and resilience factors. Or, indeed, in seeing the cohort of adopted or looked after children as all having 'trauma' or 'attachment' issues in a way that is so broadly construed that these important terms lose their meanings. Of course in the UK, specifically within England, evidence for this can be seen at the policy level in the Department of Education's decision to use the Adoption Support Fund only to support assessments and interventions that address trauma and attachment issues (www.first4adoption.org.uk/adoption-support/financial-support/adoption-support-fund/) – something that is out of step with the idea of diversity of outcomes following early adversity (Cecil, et al., 2017; Weissman, et al., 2019). Indeed, the negative consequences of importing only partially thought through biological constructs into social policy and practices have been discussed in detail elsewhere (see, for example, Wastell and White, 2017 reviewed in this journal).

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