

# Looked after and adopted children: applying the latest science to complex biopsychosocial formulations

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## Introduction

Looked after children and adopted children have higher rates of mental health problems than birth children, even if we take into account those that live in a situation of social deprivation [Ford, et al, 2007]. However, when they present to mental health services, there can be a tendency to explain most or even all of their problems as 'trauma and attachment issues' [Barth, et al, 2005]. These explanations are, however, rather simplistic because by not taking into account biological and some other psychological factors, which are key in formulating the problems, the children end up not receiving the appropriate personalised interventions - and 'personalised' is key because not all of the children have had the same experiences or have responded in the same way. Some of them will present with many symptoms despite not very high degree of neglect/abuse, and others, with higher levels of neglect/abuse, can be resilient and present with relatively fewer symptoms. There are individual biological reasons why different children respond differently to similar types of maltreatment, and a model that explains this is 'differential susceptibility' [Belsky, et al, 2007]: genes and environment interact and shape each other and, whilst some children may be more vulnerable to toxic environments, others will be more resilient. Acknowledging this difference is vital and avoids the danger of assuming that all of them will suffer from 'trauma and attachment' problems.

To ensure that all the possible implicated factors are considered, specialist child and adolescent mental health professionals working with looked after and adopted children need to be consider recent scientific developments in child development when generating hypothetical explanations of why a child may be presenting in a particular way [Woolgar and Pinto, 2016]. In these formulations, both post-natal and pre-natal biological factors should be considered, for example, the heritability of mental disorders, parental learning attainment [Uher, 2010] and the impact of maternal stress and substance use during pregnancy [Ornoy, et al 2001]. Likewise, psychological and social factors, such as exposure to abuse and neglect [Teicher and Samson, 2016], multiple placements [Ford, et al, 2007], parental loss and witnessing violence among others [Kessler, et al, 2010], should also be considered.

When children's difficulties are described as 'attachment and trauma issues', it is often unclear whether they reach the diagnostic criteria for the disorders in question and how conclusions have been reached, especially as they are rarely evidenced by data. This creates problems because good practice requires that diagnoses are linked to interventions proved to be effective. We will explore the concept of 'attachment issues' later in the article but with regard to trauma, it is frequently found that the negative experiences that the children suffered while living with birth parents are conceptualised under the general heading 'trauma', regardless of the child presenting with symptoms of post-traumatic stress disorder (PTSD). Even where there have been

no traumatic experiences, the change in living situation itself is conceptualised as ‘trauma’, even if it represents an improvement in the child’s situation. In summary, well-established disorders have clear care pathways for evidence-based interventions, so among looked after and adopted children, we should use the same widely established diagnostic criteria as for the general population [ICD-10, DSM-5], but always bearing in mind their special circumstances and adapting any interventions to suit their particular presentation [e.g. Woolgar, Bengo and Scott, 2013].

The case study that follows is one example of many seen in the National Adoption & Fostering Clinic at the Maudsley Hospital in London. It offers a good illustration of how all of an adopted child’s problems were previously understood and formulated as ‘attachment difficulties’. The diagnosis of neurodevelopmental issues, unrelated to the boy being removed from his birth parents and adopted, was delayed because he was adopted and professionals did not feel confident about making such diagnoses. Because there are no evidence-based interventions for a vaguely defined presentation such as ‘attachment problems’, the boy was given non-evidenced therapies for many years and the parents felt blamed. Understandably, there was then little progress with his difficulties and this in turn had a seriously detrimental impact on his family, academic and social life.

### **Case study: Lucas**

#### *Reasons for referral*

Lucas (name changed for confidentiality issues; the family gave their consent to publish this case study) was a 15-year-old boy referred to the National Adoption & Fostering Clinic by his post adoption social worker, using the Adoption Support Fund, ‘for a comprehensive assessment to further understand his cognitive and emotional development, so that specialist support could be gained’. He had had longstanding difficulties at home and school with challenging behaviour, maintaining focus, behavioural outbursts and lying to avoid responsibility. His parents were also concerned about his lack of empathy and poor emotional literacy.

#### *Birth family history*

Lucas’s birth parents had problematic backgrounds and both had confirmed behavioural problems as children themselves. His birth mother was reported to be verbally and physically aggressive and his birth father was referred to CAMHS and reviewed by psychiatry for his aggression when aged eight. Due to the severity of these problems, he was accommodated in care when aged 12 and progressed with the years into severe offending behaviour, including burglary and firearm possession.

There was evidence of both parents’ limited attainment at school, with reports of the mother’s reading and spelling problems and the father’s low average intellect. There was limited information on history of mental health problems: birth mother had anorexia but there was no confirmed mental health diagnosis for father. Information about parents’ smoking or alcohol intake was not known. However, both had long standing problems with substance misuse and were addicted to heroin.

### *Pregnancy /neonatal history*

Lucas's mother kept on taking heroin during pregnancy and did not attend any of the antenatal appointments. When Lucas was born, his mother was seventeen. It was a preterm pregnancy at 34 weeks (frequently associated with heroin use [Ornoy, et al 2001]) and was by normal vaginal delivery. Lucas was withdrawing from heroin and showed some of the features of infants prenatally exposed to opiates; for example, he was a small baby (2.6 kg , 2nd-9th centile) and had a small head circumference (34 cm, in the 10-25<sup>th</sup> centile) [Preece and Riley, 2011].

As he was born withdrawing from heroin (shown by high irritability, high pitched crying, sleep problems and poor feeding) [Bandstra, et al, 2011], Lucas was in the special care baby unit (SCBU) for his first 23 days of life. Unknowingly to staff, birth mother used to breastfeed him while she continued to misuse heroin. During this time in the SCBU, there was also an episode in which Lucas was abducted by his birth parents for 36 hours. All of the above, together with his mother's inability to engage in a methadone rehab programme, led to Lucas being accommodated by social services in foster care directly from hospital aged 23 days.

### *Early months in foster care*

Lucas was placed with a very experienced foster carer from three weeks old to ten months. He was described as 'a restless baby' and had several fits during the first three months in care. His adoptive parents remained in contact with the foster carer once Lucas came to live with them, so that this important figure was not lost from his life.

During this period, there were sessions of supervised contact with birth parents who were inconsistent, not attending regularly, and if they did, their care was described as inadequate and dangerous, e.g. they would fall asleep and on one occasion they dropped him. This resulted in no head or other injury.

### *Adoptive family*

At 10 months, Lucas was adopted. His adoptive father had been married previously and had two adult daughters. His adoptive mother had had relationships but not married before. Father ran his own business and mother worked as a teaching assistant in supporting primary school children with complex needs. They could not conceive and after 10 cycles of IVF decided to adopt and finally they were matched to Lucas. Both of them were very committed to the boy and had many different strategies for managing his behaviour. They had attended parenting courses and seemed to have a good understanding of social learning theory parenting techniques.

### *Developmental history*

Lucas presented with delayed and unusual milestones: for example, he never crawled, he just shuffled on his arms, and one day started walking when he was one year. He was very delayed in his language, which for a long time was mainly babble. By the age of six–seven, the words he pronounced could only be understood by his parents. However, he would use non-verbal communication, e.g. point at things, and his mother learned sign language. His difficulties with language and communication were so severe that he had speech and language therapy for nine years, from age three to twelve.

His social development remained unusual: he did not do greetings, he had poor imagination, his play was highly repetitive and he was rigid with routines (at night-time his mother had to sing the same song every night up to 50 times).

Lucas was also delayed with toilet training, wearing a nappy at night until he was 10. Up until the age of 11, he used to soil his pants and sit on his faeces for a whole day at school. Other children would report this, but he would not appear to care. There was also smearing on the walls in his bedroom and toilets and his hands frequently smelt of faeces. The family saw a bowel specialist at 11 years who made him talk about his habits and parents believe that, out of embarrassment, things then improved.

### *Medical history*

Lucas had several medical problems: he had chronic diarrhoea and projectile vomiting till he was two-and-a-half years, due to a dairy intolerance which was not diagnosed until later. He had mild asthma and used an inhaler. At five, Lucas was diagnosed with a childhood disease of the hip that caused him to use a wheelchair for five years and this had a major psychological impact on him as he had been a very active child and keen on sports. Interestingly, although the aetiology for this disease is still unknown, it is thought that individuals affected by it are hyperactive (Perry, et al, 2013) and some studies state that they have a higher risk of ADHD; it is also thought that the associated hyperactivity could drive some of the physical damage that occurs in this disease. In addition to this, Hailer and Nisson identified higher risk for depression and suicide in later life [Hailer and Nisson, 2014].

### History of presenting problems/concerns at early years

From the beginning, the adoptive parents noticed that several of the concerning behaviours described by the foster carer were still present, e.g. Lucas was restless, he would not want physical contact and would scream non-stop. His adoptive parents described how he had always struggled to sleep, starting as an infant. Aged two-and-a-half, Lucas's behaviour was already extremely challenging, so much so that the strain it placed on his parents led them to separate for three months. He resisted affection, showed a limited attention span and difficulties in regulating his volume and emotions. He was further described to be rough with animals and showing no empathy towards people.

### *Education*

In nursery, staff struggled with his behaviour as he was hurting children on a daily basis and hiding under the table and not coming out. In primary school, they had problems managing Lucas from the beginning, with particular problems of aggression towards other children. He started secondary education in his local mainstream school where, despite not having had a formal diagnosis, they promised support as they had a specialist Autism Spectrum Disorder (ASD) unit, but eventually he could not attend this due to his extreme behavioural problems. Whilst there, Lucas had treatment from the Early Intervention Team for anxiety, social skills and anger management. Although these three problem areas are common in social communication disorders, ASD was not seen as the explanation for them; instead 'attachment problems' were

highlighted (see 'Previous formulations and interventions' below) because he was adopted. Lucas left this school due to being bullied and was faced with the threat of permanent exclusion.

At 13 and up to the point of the assessment, Lucas attended an Academy. He continued to display challenging behaviour; avoiding writing tasks and being 'the class clown'. As a result, he ended up being educated in 'seclusion', which meant a whole day on his own with a teacher in a room, not seeing his peers even for lunch or breaks. School staff had different views on his presentation: the school's special needs coordinator acknowledged that Lucas presented with some elements of ASD, but that the problem was that 'his parents did not manage him properly'. However, his class teacher, who had known Lucas for four years, reported that he had 'definite traits of Autism Spectrum Disorder and that she had been treating him as if he was on the spectrum all these years'.

#### *Previous formulations and interventions*

At five years, Lucas was referred to Child and Adolescent Mental Health Services (CAMHS) following the diagnosis of the above-mentioned physical illness affecting his hip, as his need to use a wheelchair was thought to contribute to his emotional and behavioural difficulties. Following this assessment, he was referred for 'attachment work'; but the only rationale articulated in the report was that he was adopted. As a result, he received intensive psychodynamic psychotherapy for five years: three times a week for the first two years, two days a week for a year and once a week for the last six months. In the psychotherapy closing report, Lucas's sleep problems, soiling, smearing faeces, making compulsive strange and animal-like noises and crawling around in imitation of animals were understood in terms of his 'early history prior to adoption, which may well have impacted severely on his emotional and cognitive development in ways that had been difficult to assess'. In the psychotherapy assessment sessions, it was reported that he was 'enthralled' while playing with toy figures that engaged in 'mutually destructive and repetitious battles' and that he 'often would deny any responsibility without any obvious sense of guilt or regret'. During the latest assessment, Lucas reported that he 'didn't like the therapist much as he was "annoying" and went on a bit too much', adding that he would 'rather have a spider crawl on my arm than go through this experience again'.

Aged 10, his psychotherapy ended and this coincided with an assessment and diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). His medication was monitored by a specialist nurse practitioner at his local CAMHS. His regime had been increasing over the years, so that at the point of referral to our clinic he was on a very high amount of medication: Elvanse (Lisdexamfetamine) 70 mg once daily, Equasym (Methylphenidate) XL 20 mg once daily, Equasym (Methylphenidate) XL 50 mg at 13:00, Risperidone 0.5 mg once daily and Melatonin 8 mg at night.

Also at the age of 10, Lucas had an initial ASD assessment using gold-standard measures: the Autism Diagnostic Interview – Revised (ADI-R) [Rutter, et al, 2003, 2008], a semi-structured interview with the parents and the Autism Diagnostic Observation Schedule (ADOS) [Lord, et al, 2003] and observational measure of autism with Lucas. It was concluded that he did not meet the criteria for autism, but did show a 'lack of insight and expressive language deficits'.

At 15 years old, Lucas had a second ASD assessment using the 3Di [Skuse et al, 2004], a structured parental interview on autism symptoms given to his parents and a new ADOS. He met criteria in the 3Di but, as for the previous time, he did not reach threshold in the repeated observational ADOS assessment.

Assessment by the National Adoption & Fostering Clinic, a service with specialism in adopted and fostered children's mental health

Three months after the last ASD assessment, when Lucas was still 15, he was referred to a national clinic that specialises in adoption and fostering. The multidisciplinary team undertook an in-depth assessment that included a thorough revision of past records and reports, and clinical interviews with parents (that also included past history), teachers and Lucas himself.

### **Parents' views on current/past problems**

#### *Behavioural problems and prosocial emotions*

Parents described daily temper tantrums, comprising shouting, verbal abuse, throwing things and damaging property. Lucas was reported to change 'from calm to rage in a second', more often with mother. He was described as 'touchy' and very easily irritated/annoyed by others, an angry and resentful boy from early childhood. He always refused adults' requests, argued with them and defied rules.

Lucas would blatantly lie and would never admit having done so. However, he did not engage in physical violence, his aggression being all verbal. He had 'a thing with knives, like a fascination', although he had never used them to threaten or hurt. He had exhibited physical cruelty to animals when he was younger - like bending the leg of the dogs and harming the pet rabbit - and as a result, animals avoided him. Lucas stole money from his parents regularly, sometimes minor amounts to buy sweets for his friends, and on other occasions higher amounts, like when he took money from his parents' on-line account to pay for games he was 'obsessed with'. Over the three months it took for this to be discovered, he had spent more than three hundred pounds per month.

Lucas was described as 'very inappropriate' with his adoptive mother, always touching her breasts from as young as three. At that age, he would also want to see other children's bottoms. As a teenager, he started sexting and some of the things he wrote were extreme and probably inspired by pornography. However, there had been no behaviour to suggest he was likely to carry these things out, as he was afraid of relationships.

The main area of concern for his parents was his apparent lack of prosocial emotions: Lucas did not seem to feel bad or guilty if he hurt someone. He would not take responsibility for his actions: 'even if you caught him red-handed, he would deny it'. He showed little empathy: he did not seem to care about the feelings of others, other than as an instrumental 'façade' in front of friends to be accepted and popular. He did not care who got hurt or humiliated to look better socially. He could make fun of or tease other people in ways that hurt their feelings. He had the ability to

make people laugh, but usually at the expense of others, not understanding or caring if the joke was inappropriate. Both parents described him as cold and his mother reported he could be intentionally cruel. Lucas would not do nice things for other people when there was nothing for him. He cared about how well he did at football, at which he was quite gifted, and would like to get good grades but would not make the effort. He blamed others if he did not do well in something rather than take responsibility for his poor performance. Lucas did not show his feelings and emotions openly to others, 'only his anger' and other negative emotions. When he showed feelings, they did not seem real, sincere or genuine: 'if he shows love, there is a reason behind it, he wants something'. His parents said they did not get any emotion from him but he would now say 'I love you' in what felt 'a learnt way'. When something bad happened to someone else, he did not seem genuinely upset. For instance, his parents said that 'when his grandfather died, he was with his earphones on and did not get why people were crying. He was annoyed his dinner was not ready when we arrived back home.'

### *Social communication*

Lucas's parents were asked about his behaviours both when he was four to five years old and currently, and about its impact on his and the family's personal functioning. In terms of social communication and social interaction, his parents reported deficits in social-emotional reciprocity: he could only have a normal back-and-forth conversation if it is about football and he had never spontaneously opened up conversations with his parents nor shared his interests or emotions. He would not initiate or respond to social interactions, unless it was football-related or with his friends to be popular. His language was described as one-sided, used to request rather than to comment.

His parents also reported some deficits in nonverbal communicative behaviours: 'when he was small there was no eye contact, now it is better, but he has to be reminded'. The use of body language or gestures was limited but he had a variety of facial expressions.

There were major deficits in developing, maintaining, and understanding relationships and although he was very interested in peers, he was not popular or liked. This was already the case in primary school: despite throwing a big birthday party every year, he did not get invited back and this was still the case now. As a child, he used to have an imaginary friend and parents had to set up the table for him. Lucas could not understand the subtleties of friendships and 'in his mind he has loads of friends, but they are all on short-term basis'. He had one friend from primary school with whom he played football and idealised him, not realising that this boy 'just tolerates him, he will never phone'. Lucas was described as 'socially naïve' because the other children would wind him up, so he engaged in arguments with teacher for their entertainment and had become the class clown.

His parents described several restricted and repetitive patterns of behaviour. Although there had never been motor stereotypies (e.g. hand flapping), there had been repetitive use of objects (when younger he would line up toys and now still with monopoly cards) and definite repetitive speech (he would use the same phrase over and over again for many days, repetitively asking the

same question, speaking in accents 'till he drives us insane. He cannot stop it till he has it perfect') and idiosyncratic phrases. There was repetitive behaviour that lasted for a certain period of time and then he would move to something else, for example a game or obsessively learning to whistle, trying it at inappropriate times (dinner).

His parents reported that Lucas was very insistent on playing by very fixed rules that he could only determine, different from convention. In any situation he needed to know what and when things would happen because of his rigidity. From an early age he had no imagination at all, he hated role play or dressing up. He had difficulties with major transitions, e.g. at school from one teacher to the other or if they took a different route. He insisted on wearing the same restricted set of clothes: approximately 10% of his wardrobe He would not eat certain foods. Change was a problem even in football and he had to dress in a ritualised pattern (e.g. he had a fixed routine about which gloves go with each games). He had fixated interests that were abnormal in intensity even for a teenager, for example he obsessively followed two YouTube bloggers.

Lucas had a very high pain threshold and he never cried in pain. He was very sensitive to texture: he did not like bits in yogurt nor casseroles where things are mixed together, 'he likes to see separately what he is eating, so no soups as he does not know what is there'. He was sensitive to noise, despite being very loud himself. He liked to feel things and he was often sniffing his fingers and the washing powder or conditioner on his clothes.

Lucas had never had any motor deficits, he had always been athletic and never clumsy, but on the other hand, he had severe language impairment and was very slow to talk. He used to self-injure, banging his head in the floor, but this stopped after toddler years. He still hit himself really hard with both arms if he got agitated, saying 'it is as if my head is going to explode. Why is my brain like this?'

### *Attachment*

The assessment of attachment was undertaken by clinical interview with the parents, asking them to focus their responses on Lucas's behaviours before the age of five, which is the time when attachment should be assessed. So, before five, he would always come for comfort when upset or hurt or ill and had a preferential attachment figure in his mother. However, she felt that she could never effectively comfort him, 'I could never make things better for him, whatever I did, it would not be enough'. When he first came to the home, he was crying constantly, he would scream and climb out of his cot and was very difficult to settle. He would seek comfort when hurt, upset or frightened by screaming, but not put his hands up to be picked. He responded to cuddles by being stiff and tense. His parents reported that although it was less obvious now, he was still uncomfortable being cuddled. His mother always had to lie with him sometimes for hours before he fell asleep but could not touch him.

Lucas was never wary of strangers and could be overfriendly with unknown adults. He would not check back on his parents in unfamiliar settings, but probably would not have gone off with a relative stranger.

### *Systematic enquiry*

Other aspects that were highlighted in the assessment were obsessive compulsive symptoms (that can be frequently seen in Autism Spectrum Disorders), and some residual social anxiety. Sleep was a long-standing problem that is frequently seen in children with neurodevelopmental problems. At the time of the assessment, he was not soiling any more but still did not properly wipe himself or flush the toilet.

There were no concerns around substance misuse, psychotic illness, mood disorders, PTSD or tic disorder.

### **Lucas's views and clinic observations**

#### *Behaviour and prosocial emotions*

In our assessment, Lucas remained pleasant and cooperative throughout the sessions and did not present with any oppositional, aggressive or anti-social behaviour toward either of the assessors. He mentioned that while he normally felt 'just annoyed' at school, he was always 'plain angry' at home and shouted more there. He reported that he would sometimes punch or kick a wall and if he hurt other people, he would not feel guilty as they probably deserved it. In general, he provided vague responses to questions relating to emotions or empathy and also appeared to find it difficult to give specific examples that related to his past emotional experiences.

#### *Social communication*

Lucas's eye contact was somewhat limited. He generally looked down while completing each psychometric task and indicated verbally that he had completed an item, often without looking up at the assessor. He showed little variation in his facial expressions but was noted to look, smile or laugh briefly when recalling a funny incident or when the assessors smiled at him. He did not display facial expressions, such as worry or anger, at any point, despite reporting on difficult issues or when requested to show them. Lucas spoke clearly, at an appropriate pace but with a mostly flat tone. He spoke about his friendships in a very different way from his parents and teachers. He said he was popular and had friends home every weekend. He admitted that he was sometimes confused about how others were feeling.

#### Diagnosis and differential diagnosis

The assessment confirmed the ADHD diagnosis that was identified six years after first presentation but acknowledged that this was not the only neurodevelopmental problem that was present: the complexity of his presentation was not explained just by impulsivity, hyperactivity and problems with concentration.

Part of Lucas's presentation could be described by a new diagnosis of conduct disorder, unsocialised, (F91.1) as he presented with high levels of irritability, oppositionality and defiance,

together with more serious symptoms including lying, hitting and stealing. ADHD is highly comorbid with behavioural disorders. The conduct problems were further elaborated by being described as a) 'unsocialised' because he was not popular with his peer group and b) characterised by Limited Prosocial Emotions, given his lack of guilt or remorse, poor empathy and displaying shallow emotions.

Despite his parents' extensive descriptions in different interviews, clinical observations and teachers' reports, the social communication presentation of Lucas's behaviours were never formulated as part of the Autism Spectrum Disorder (ASD) but as 'attachment problems'. In the current assessment, taking into account that his care history was not disruptive or marked by multiple separations or gross neglect and that extensive information was available on his developmental history and clinical details from multiple informants, observations in clinic and clinical interview with Lucas, it was established that he met criteria for ASD.

In our differential diagnosis, we ruled out that he had an attachment disorder. He did not meet criteria for a Reactive Attachment Disorder (RAD) as he always used to come for comfort to a preferential figure (his mother) when upset or hurt or ill. He did not accept comfort in a conventional manner, but this was attributable to sensory issues (part of his ASD) – he did not like to be touched, whether or not his attachment system was activated. Lucas was never wary of strangers and could be overfriendly, he would not check back on parents in unfamiliar setting. Although these are potentially strong indicators of a disinhibited attachment presentation like Disinhibited Attachment disorder (F94.2) [ICD-10] and Disinhibited Social Engagement Disorder (313.89) [DSM-5], Lucas did not experience significant neglect early on – indeed he was with an 'excellent' foster carer for three weeks after leaving hospital and until he was adopted at 10 months. Furthermore, he has very severe ADHD and thus his disinhibition extends to all situations (in Disinhibited Attachment Disorder/Disinhibited Social Engagement Disorder, the disinhibition is specifically social). Given the context of his pre-existing neurodevelopmental problems and the absence of either pervasive neglect or frequent changes in caregivers, an attachment explanation was discounted.

## **Discussion**

This case study illustrates the importance of thinking about the biological factors, such as the genetic risks for both autism and severe conduct problems and intra-utero events, like maternal heroin intake, as contributors to the presentation in adopted /looked after children. Unfortunately, these can get neglected if professionals have not had appropriate training and are very focused on psychosocial factors such as attachment and trauma *only*.

### *Diagnosis and Differential diagnosis*

The failure to identify biological is clearly evident in Lucas's case. It took many years until the first neurodevelopmental problem (ADHD) was recognised, and many more till the second (ASD), which had been discounted twice, was finally identified. Important aspects of his behavioural disorder, especially that he lacked prosocial emotions, were also missed. Not establishing these

three core diagnoses meant that for a long time there was no intervention for ADHD which can be easily treatable and radically alter a child's experience at school and with peers, leading to academic achievement, more friends and better self-esteem [NICE, 2018]. Missing the ASD diagnosis also had serious clinical implications as it meant that he and his family did not receive all the psychoeducation and services around social communication available, educational planning and specific interventions [Green, et al, 2016]. Likewise, while behavioural problems were prominent, his deficits with prosocial emotions were not identified, which would have helped with tailoring the parenting advice more effectively. Having said this, the parents were never offered a parenting intervention, the evidence based therapy for behavioural disorders [NICE and SCIE, 2013], one of the best researched interventions in mental health. So all these years, his parents felt blamed as they had been unable to offer good enough parenting for him to develop an attachment with them and Lucas was treated individually with psychodynamic psychotherapy, with no impact in his functioning.

Professionals should have suspected that attachment problems could not be the only explanation for this child's severe problems had they considered that attachment theory is clear about the capacity for recovery in children that have been neglected: he was taken directly from hospital into a good foster carer before one month and adopted at 10 months. The attachment system starts in earnest around six to nine months, [Zeanah, et al, 2011], so he was adopted around the time when children start to be aware of their main, discriminated attachment figure. In principle, a child without other psychopathology would likely have developed an attachment to their adopters spontaneously [Smyke, et al, 2010] and the fact that this child started presenting with such severe problems from a very early age should have made professionals consider other aspects, eminently biological, related to his birth family, like genetic risks and in utero events, which we will discuss below.

### *Genetics*

We all run genetic risks and it is well known that mental illness runs in families. But genes also interact with the environment and sometimes good parenting can help diminish the risk of an individual who carries high genetic risk from presenting with an illness [Uher, 2010]. If we classify mental illness and disorders in two broad groups ('any mental illness' and 'severe mental illness'), we see that the likelihood of the offspring developing an illness varies according to its severity and if one or both parents suffered from it. Very often in adopted children we do not have these data or it is incorrect: sometimes a diagnosis is mentioned as a suggestion in a report and then in subsequent ones recorded as a formal diagnosis, the wrong information getting perpetuated (e.g. from a possible mention of bipolar affective disorder in somebody with emotional dysregulation, this turns into the final diagnosis in reports related to the children. This is important as the genetic risk for the child will be very different).

In Lucas's case, we have a confirmed a diagnosis of anorexia in his birth mother and very clear early-onset severe behavioural disorders in both birth mother and father (who progressed into forensic history, hinting to even more severity and persistence). Two different types of conduct disorder can be distinguished, the childhood onset and the adolescent onset types [Caspi and

Moffitt, 1995]. Each type is thought to have different aetiology and although the genetics are still in the process of being understood, those with childhood onset tend to have lower IQ, more attentional and impulsivity problems, poorer scores on neuropsychological tests and greater peer difficulties [Moffitt, et al, 2001]. In addition, they tend to have poorer outcomes later in life in the domains of violence, mental health, substance abuse, work and family life [Moffitt, et al, 2001]. Lucas's birth parents appear to have presented with this more severe childhood onset type of conduct disorder and, indeed, Lucas presented with this early onset severe Oppositional Defiant Disorder (ODD). Temperamental factors should have been considered in this case as they may contribute to the development of ODD in toddlers, and the comorbidity between ODD and ADHD is predicted by temperamental over activity [Stringaris, et al, 2010].

Lucas showed impairment in his prosocial emotions, characterised by having rather blunted emotional reactivity to the distress of others, little concern for the disapproval of others and more interest in asserting control and gaining advantage over others than in companionship. Limited prosocial emotions seem to be highly heritable [Viding, et al, 2005] and characterised by poor recognition of emotion (particularly fear) in facial expression [Blair, et al, 2006; Dadds, et al, 2006]. It is likely that Lucas's birth father had some of these traits as well, taking into account his history of involvement with the criminal justice system.

Lucas's birth parents also had problems with substance misuse. Research in the last four decades has provided evidence of the importance of genetic influences in alcohol abuse which indicate that 40% to 60% of the phenotypic variance in alcoholism can be attributed to genetic factors [Dick and Foroud, 2010]. Twin studies have found that genetic factors also play a significant role in the transitions from drug initiation to dependence, and many studies have found that personality variables, such as sensation seeking, play an important role in the prediction of substance abuse [Kosten, et al, 1994]. This could point at the fact that some of the personality traits observed in Lucas (impulsivity, sensation seeking, risk taking) could be partly inherited. In addition, it is important to bear in mind as he grows into adulthood, that he carries a higher risk to develop a substance misuse disorder.

As seen above, the behavioural history of both his birth parents together with their substance misuse point towards highly impulsive traits in both of them. Lack of organisation, problem with completing tasks and difficulties with attention can be problematic when raising a child. Luckily, Lucas was not exposed to his birth parents' parenting as he was removed from their care on leaving the hospital, but one could hypothesise that his parents had traits or even frank ADHD (undiagnosed). Neurodevelopmental disorders are common in the general population and, as the above-mentioned epidemiological studies show, even more frequently in the looked after children/adopted population [Ford, et al, 2007].

We gave Lucas his first diagnosis of ASD, despite having been assessed before for this twice. The role of genetic mechanisms in autistic disorder is suggested by the fact that siblings are at a 22-fold or greater risk of autism than the general population and studies of monozygotic and dizygotic twins have shown an increased concordance for autism in monozygotic twin pairs. Several chromosomes are currently being studied and multiple genes are likely implicated

[Rutter, et al, 2005]. Again, we do not have history of his birth parents in this respect, but we believe that the diagnosis was delayed because of his adopted status. Instead, attachment problems were suggested when it is known that children on the autism spectrum are capable of forming selective, secure attachments [Teague, et al, 2017].

### *Intra-uterus environment*

Another important aspect for the formulation that could give support to Lucas's neurodevelopmental problems was his birth mother's heroin intake during pregnancy and breastfeeding: we know infants prenatally exposed to opiates are at an increased risk for neurodevelopmental impairment. There are very few long-term outcome studies of the developmental effects of heroin due to methodological limitations in study design (including small sample sizes, poorly defined comparison groups and difficulty controlling for important environmental variables), making available results difficult to interpret. However, detrimental fetal effects of heroin exposure in terms of prematurity and intrauterine growth restriction have long been recognised: babies exposed to heroin have decreased birth weight, length and head circumference compared to non-exposed infants. In addition, evidence from relatively small neonatal studies of prenatally heroin-exposed samples indicated decreased cognitive performance in younger children and increased rates of behavioural problems in eight to 17-year-olds. Prenatal opiate exposure is also associated with ADHD and disruptive behaviours at age 10 [Ornoy, et al 2001].

### **Implication for services**

Multidisciplinary assessments by specialists teams that are familiar with the latest research in the area and in evidenced formulation and interventions are needed for the most complex of adopted and looked after children. One can hypothesise that these teams are not widespread because they are expensive, but the long-term cost for families and society of not giving them the appropriate interventions at the right time is much larger.

In terms of what can be done to disseminate the well-established knowledge that has been discussed, the main answer is professional development in the staff working with this highly complex group. It seems that a 'one size fits all' approach is used in many cases, explaining all of these children's problems solely in terms of attachment, trauma and loss. Generic services should have training in a scientific approach to attachment theory. Likewise, private providers helping adoptive families should be trained in the importance of a biopsychosocial approach in these children in particular, and especially in neurodevelopmental problems.

### **Prognosis**

The discussion in this article focuses on a single case study; this is because the assessing team was a national service giving recommendations to be applied locally. All of the recommendations made, however, could be accessible in generic CAMHS, apart from more specialist updated life-story work that could be led by the post-adoption social worker. One of the features of specialists

teams is that they can often open doors to local services that otherwise would not accept a case as it does not reach threshold on paper. This was not the case with Lucas who had been under services for years. The prognosis for this particular case is difficult to establish as his conduct problems featured with marked Limited Prosocial Emotions (Callous Unemotional Traits), and this is associated with worse outcomes. It may be that the combination of a school that understands social communication problems and his parents' unconditional love can be a protective factor for what could be otherwise a problematic future.

## **Conclusion**

Caution should be taken about assuming that all adopted and looked after children's problems can be explained with the attachment theory framework only. These children, many of whom have high levels of complexity, need ideally to be assessed by a multidisciplinary team in order to consider all the possible factors that can play a part in their presentation [Chaffin, et al, 2006]. They may present with problems related to the psychosocial impact of their being in care or their adopted status, but this will rarely explain the whole of their complexity. An approach that takes into account biological factors, together with psychological and social ones, will inform what interventions are indicated, having the child at the centre. The fact that ignoring the biological factors can lead to the wrong or no interventions and a lack of appropriate services has been highlighted by authors for more than a decade now [Barth, et al, 2005] but many professionals working in this field still seem to be receiving training limited to attachment theory, in some cases without full scientific rigor. Adopted and looked after children deserve services where staff are committed to evidence and understand their biological, psychological and social complexities, as is the case with like children living with their birth families.

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