What Makes a Family? The Science of Human Development

Dr Kate Ellis-Davies

'What makes a family? Parents and family development in the 21st century' was amongst one of the many presentations held during this year's Cambridge Science Festival (March 10-23). Dr Kate Ellis-Davies, Research Associate, Department of Psychology at Cambridge University was part of a team leading a family friendly session which discussed new research looking at families helped by assistive reproduction technologies (ART's), same sex-parenting and single family parents, as well as the role of the family in child development. In this article she describes how approaches to research into parenting and child development have been changing and outlines some current projects.

Dr Kate Ellis-Davies' research interests focus on infant and parent contributions to the development of communication, attachment and regulation. Kate has examined the roles of infant attention, motor and language milestones; temperament; parenting and well-being within the context of normative and atypical human development.

Current research is undertaken as part of her post as Research Associate within the Applied Developmental Psychology Research Group, where she is the research associate responsible for managing The New Parents Study. Work within this project centres on the development of children across the areas of Kate's interests, within families based in the UK, France, and The Netherlands where conception has occurred through assistive reproduction who are headed by straight, gay and lesbian parents.

Kate's other research has involved examining the roles of personality and context for the aspiration to parent, as well as the well-being of parents, adults born preterm, and couples relationship satisfaction through her work within the Big Personality Test, run in collaboration with the BBC. Parent and child contributions to adaptive development of self-regulation are another area Kate investigates, through her role as investigator in the Parenting And Child Engagement (PACE) Project.

In addition, Kate is on the developing team for methods advancing developmental surveillance, through her work in implementing the development of the Continuous Unified Electronic (CUE) diary method (Ellis-Davies et al., 2012). Through this work, the role of infant's attention to others' hands in social cognitive development and the impact of locomotion on infant communication have been examined by Kate.

How have families changed in recent times?

In recent decades the age people become parents, what constitutes a family, how individuals become parents, what the law has to say about family structure and function, parents working outside the home, and the size of our families have all changed. It is difficult to think of an aspect of families that hasn't changed! All these adaptations to what constitutes a family, has shaped what we used to consider the 'nuclear family'.

Has this had any major effect on how families function? If so, how?

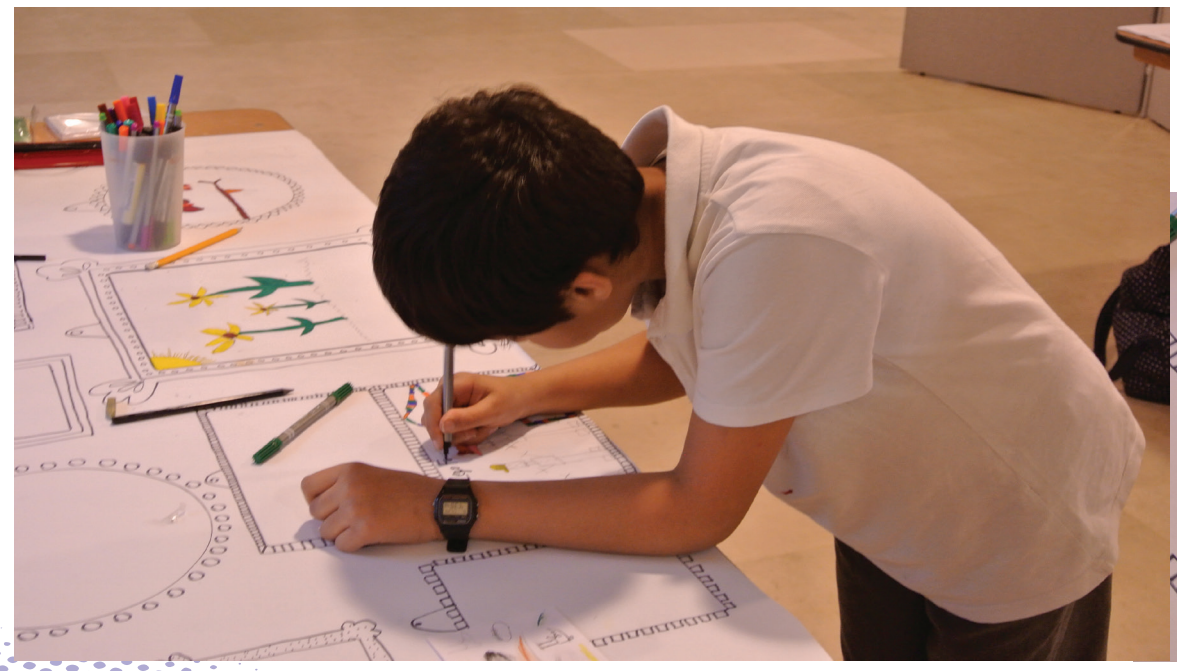
One of the big questions for psychology is whether structure dictates function. That question is equally important for developmental psychology. Specifically, does the structure of a family, or how the family was formed, dictate the functioning of that family.

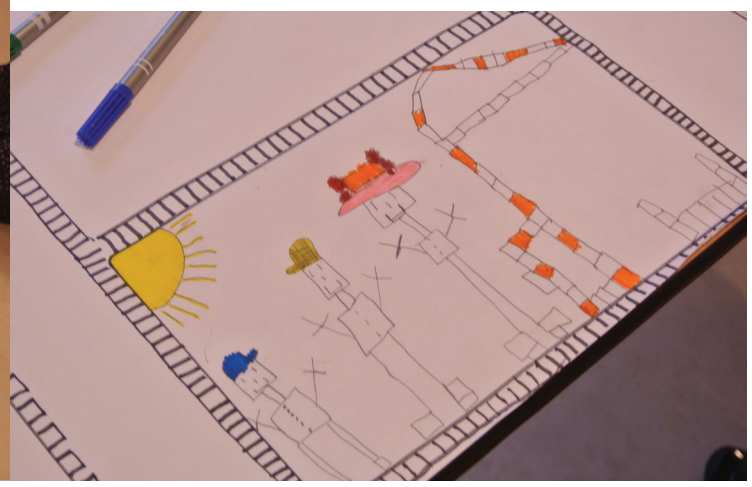
Historically in developmental psychology there was a deep seeded assertion that parents parent differently dependent on factors such as gender or sexual orientation. In this sense the presumption was that female parents were determined to fulfil X parenting function and male parents Y function. In recent years, we have been able to test these presumptions. We now are in a position where there is increasingly a mounting of evidence suggesting that the function may not be determined by structure, in meaningful ways. Infants attach to both available parents at around the same time in development. The core features of sensitive and responsive parenting predict parent-child development in strikingly similar ways.

What is The New Parents Study about?

The New Parents Study is an ambitious project that aims to be the first family development to incorporate gay, lesbian and heterosexual families, formed through assisted reproduction technologies (ARTs), across Europe from early in the children's development. Questions of universality are as pressing in psychology as those of when do things differ. For families formed through ARTs we have opportunities to ask questions around how universal parenting is. For example, what is the role of biological relatedness, gender, sexual orientation and social/cultural context for developing families.

When children in the New Parents Study turn 4 months old, we visit families in their home. During these visits we are able to gain a glimpse





of how parents and children are developing, as well as gaining first hand views from parents on their experiences of becoming parents. We then invite families to visit us when the children turn 1. During these visits we follow up with how families have been developing in that first year of the child's life.

What is the Big Personality Test about?

The Big Personality Test was a project run by Professor Michael Lamb and Dr. Jason Rentfrow, here at the University of Cambridge, in collaboration with the BBC. Alongside a televised program on personality, nearly 600,000 members of the public took part by completing online questionnaires on personality, demographic, and well-being questionnaires. The questions we are able to ask are as varied and relevant as what the effect of childhood trauma may be for well-being later on in life, how children born preterm fair when they become adults, what role personality has to play in well-being of parents, as well as personality's role in the aspiration to parent.

What is the Parenting And Child Engagement (PACE) Project?

The Parenting and Child Engagement (PACE) Project is an international project that has several aims. Firstly the aim is to engage fathers in studies that track developmental development. While our understanding of fathers importance in child development has improved, it is still the case the fathers are rarely included in developmental studies that consider parenting as there area of interest. The second aim of the PACE Project is to foster positive engagement between parents and children, in families where fathers are identified as experiencing challenges to their well-being. Currently the study is being conducted in Europe, with the future phases of the study incorporating families in Australia.

In terms of your research, what is the most surprising thing you have discovered?

The most surprising thing to me that I have taken with me is that narrowing your interests is not the only way to make progress in science. Embracing the variety of my research interests has allowed me to be a part of some amazing research projects, and work with a brilliantly eclectic set of scientists. Those collaborators continue to challenge they way I think about my research questions, which can only be a positive thing.

In terms of my own research, something that was great to demonstrate was how reliable and valid parental tracking of developmental milestones can be. With appropriate support and training parents can be incredibly informative about children's development continually and exhaustively across the domains of motor, language and even imitation development from the day the babies are born until well into the 2nd year of life. We developed the Continuous Unified Electronic (CUE) diary method to enable parents to upload this information in an integrated way, through portable handheld devices. By incorporating these data with observations and experimental paradigms we've been able to ask questions that you simply couldn't do without bringing parents into the process of being researchers in the study themselves.

Other studies we've done involving microanalytic coding of infant attention has surprisingly questioned the notion of how attention itself develops during infancy. While the research in attention has presumed attention to faces kicks things off, that isn't what we are finding. Instead infants appear to support their attention development with socially relevant and active cues, that are not necessary the face.

In which direction is your research heading?

While some of my research has involved fine grain analysis of relatively small samples, and other research has involved large scale populations with broader questions, I'm looking forward to melding those to streams of research in future, so that we can take advantage of the willingness and potential of large populations to gain high levels of information. That approach then can be applied to the various streams of research I'm interested in, including those surrounding family formation and function.

How did your event go at the Cambridge Science Festival? Did it help with your research in any way?

The event itself was a great experience. Alongside the co-organiser, Dr. Lucy Blake, we were able to put on an event that involved talks across a broad range of topics of developmental psychology, from language development, to ARTs, to cultural differences in parenting, to the role of fathers in development and the role of sexual orientation in parental and child well-being. In addition there was a chance for children who attended to engage in some of the activities we employ in studies. The public were also able to feedback to us on what they considered the pressing questions for understanding development. The feedback has the potential to feed into the designs of future studies.

Why do you think it's so important for researchers to get involved in such Festivals?

If we take science to be the act of taking an assumption and challenging it, to better improve our understanding of the real state of the world, then everyone should be engaged as a consumer of science. The science we do speaks to questions of how we developed as a species, how families form and function and what differences during development produce long lasting change for our well-being. These are questions that are not only of interest to the public, but speak directly to our experiences. By engaging with the public multiple important aims can be achieved. Firstly, as researchers funded by research council grants, the public owns the research we conduct. Science festivals are a great way of feeding back to the public, as stakeholders, on where we stand and where we hope to take the science next. As applied research has the potential to be utilised by policy and legislators, it is important that the public have equal access to the information. Secondly, it gives the public an easy, accessible and vital opportunity to feedback to us. Active engagement involves the public acting with researchers to consider questions together. In a science like psychology, where the public are the unit of interest, having them involved is a necessity. Finally one of the most important responsibilities for researchers is to spark the interest in science for others. Science is based on an incurable curiosity about how and why things are as they are. It is not enough to feel enthused by science for yourself, as researchers we need to encourage that curiosity in others as well.

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