

Suffer little children

When a California fertility clinic withdrew its offer of 'designer' babies it revealed a deeper societal problem, says **Michael Le Page**

MADLINE Kara Neumann, age 11, died of diabetes because her parents prayed rather than taking her to doctors. Caleb Moorhead, age 6 months, died after his deeply religious vegan parents refused a simple vitamin injection to cure his malnutrition. The list of children killed by their parents' superstition or wilful ignorance is a long one.

Most people are rightly appalled by such cases. How can parents stand by and let their children die instead doing all in

their power to get the best medical care available?

Yet this is precisely what society is doing. We now have the ability to ensure that children are born free of any one of hundreds of serious genetic disorders, from cystic fibrosis to early-onset cancers. But children continue to be born with these diseases.

All would-be parents should be offered screening to alert them to any genetic disorders they risk passing on to their children. Those at risk should then be

offered IVF with pre-implantation genetic diagnosis (IVF-PGD) to ensure any children are healthy.

Why isn't it happening?

Because most people still regard attempts to influence which genes our children inherit as taboo. When a fertility clinic in Los Angeles recently offered would-be parents the chance to choose their child's eye colour, for instance, it provoked a storm of criticism that forced the clinic to reconsider.

Such fears are misplaced: IVF-PGD is little use for creating designer babies. You cannot select for traits the parents don't have, and the scope for choosing specific traits is very limited. What IVF-PGD is good for is ensuring children do not end up with disastrous genetic disorders.

Nearly 150 years after Darwin unveiled his theory of evolution, we have yet to grasp one of its most unsettling implications: having diseased children is as natural as having healthy ones. Every new life is a gamble, an experiment with novel gene combinations that could be a brilliant success or a tragic failure.

Thanks to technology, we are no longer entirely at the mercy of this callous process. Rather than regarding this ability with suspicion, we should be celebrating it and encouraging its use. Instead, we continue to allow children be born with terrible diseases because of our collective ignorance and superstition. That makes us little better than the parents of Madeline and Caleb. ■

Michael Le Page is biology features editor at *New Scientist*

Jailhouse study is time well spent

Teaching science to prisoners pays off, argues **Marc Bekoff**

FOR 10 years I have been teaching animal behaviour and conservation biology at the Boulder County Jail in Colorado. The course – part of the Jane Goodall Institute's Roots & Shoots programme – is one of the most popular in the jail. Inmates have to earn the right to enroll and they work hard to get in.

One reason the course is so popular is that many prisoners find it easier to connect with animals than with people, because animals don't judge them. Many of the inmates had lived with dogs, cats and other companion animals who were their best friends. They trust and empathise with animals in ways they don't with humans.

Nonetheless, they retain a distorted view of how animals treat one another. The inmates have often had enough of "nature red in tooth and claw": many lament that their own "animal behaviour" is what got them into trouble in the first place. I teach that though there is competition and aggression in the animal kingdom, there is also a lot of cooperation, empathy, compassion and reciprocity. I explain that these behaviours are examples of "wild justice", and this idea makes them rethink what it means to be an animal.

Many of the students yearn to build healthy relationships, and they find that the class helps them. I use examples of the



social behaviour of group-living animals such as wolves as a model for developing and maintaining friendships among individuals who must work together for their own good and also for the good of the group.

It's clear that science inspires the students: our exchanges rival those that I've had in university classes. It also gives them hope. I know some students have gone back into education after their release while others have gone to work for humane societies or contributed time and money to conservation organisations. One went on to receive a master's degree in nature writing.

Science and humane education help the inmates connect with values that they otherwise would

"Many prisoners find it easier to connect with animals than with people"

not have done. It opens the door to understanding, trust, cooperation, community and hope. There's a large untapped population of individuals to whom science could mean a lot, if only they could get exposure to it. The class helps me, too. I get as much out of it as the students and it has made me a better teacher on the outside. ■

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Mindfields

A. C. Grayling



In search of the essence of personality

AFTER John Locke published his *Essay Concerning Human Understanding* in 1690, he sent copies to various savants of his acquaintance, asking for comments and in particular for advice on whether he had left out anything essential - for if so, he could add it to a second edition. His correspondent William Molyneux of Dublin replied that Locke needed to say something about personal identity: that is, what makes a person the same person throughout their life.

Belief in the idea of a substantial soul - a "you" that is separate from your body - was waning. In the absence of this metaphysical entity, a convenience for underpinning personal identity, what, asked Molyneux, makes the retired general continuous with the eager subaltern of 40 years before, and he with the red-cheeked baby in his nurse's arms 20 years before that? In response, Locke added a chapter to his second edition which instantly caused a storm of controversy and has been famous ever since in the annals of philosophy.

In that chapter Locke argued that a person's identity over time resides in their consciousness (he coined this term, and here introduced it to the English language) of being the same self at a later time as at an earlier, and that the mechanism that makes this possible is memory. Whereas a stone is the same stone over time because it is the very same lump of matter - or almost, allowing for erosion - and an oak tree is identical with its originating acorn because it is the same continuous organisation of matter, a person is only the same through time if he or she is self-aware of being so. Memory loss interrupts identity, and complete loss of memory is therefore loss of the self.

The divines, represented by Edward Stillingfleet, Bishop of Worcester, took umbrage and attacked Locke for ignoring the immortal soul. In 1712 *The Spectator* magazine ran a front-cover demand that "the wits of Kingdom" should get together in conference to settle the matter of

personal identity and selfhood, because the controversy was getting out of control. In 1739, when David Hume published the first volume of his *Treatise on Human Nature*, he stated that there is no such thing as the self, for if one conducts the empirical inquiry of introspecting - looking within oneself - to see what there is apart from current sensations, feelings, desires and thoughts, one does not find an extra something, a "self", over and above these things, which owns them and endures beyond them.

Thus in 50 years the unreflective idea that each individual has an immortal soul as the basis of their selfhood had changed utterly. For millennia before Locke, no one had so much as raised the question. But it was no surprise that the question should

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suddenly become urgent as the Enlightenment dawned, with its central idea of the autonomous individual who is a bearer of rights and responsible for his or her own moral outlook; such an idea needs a robust idea of selfhood, and the philosophers eagerly tried to make sense of it.

Hume's sceptical view did not prevail. Kant argued that logic requires a concept-imposing self to make experience possible, and the Romantics made the self the centre of each individual's universe: "I am that which began," wrote Swinburne in *Hertha*, "Out of me the years roll, out of me God and Man." Without a deep idea of the self there could be no Freud or psychoanalysis.

So fundamental is the idea of the self to modern human consciousness that one would expect developments in neuroscience to have a direct bearing on it. And as Thomas Metzinger argues in his stimulating new book *The Ego Tunnel*, reviewed on page 44 of this issue, that is exactly what is happening - with surprising and often disconcerting results. ■

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