Parents are Discriminative Nepotists

A cornerstone of evolutionary psychology is the proposition that Darwinian selection shapes social motives and behaviour to be effectively “nepotistic», that is, to contribute selectively to the well-being and eventual reproduction of the actors’ genetic relatives. In any species, the genes and traits that persist and proliferate over generations are those whose direct and indirect effects cause them to replicate at higher rates than alternative genes and traits. Richard Dawkins captured this point, the essence of modern Darwinism, in his famous phrase “the selfish gene”.¹

One implication of this proposition is that the care of dependent young will ordinarily be directed

selectively toward close relatives of the caretaker. Usually, this means the caretaker’s own offspring. Imagine a population of animals in which there are two alternative, heritable types of parental psyche. Type A invests its time and energy selectively in the care of its own young, who are better than average bets to be carriers of the same heritable tendencies. Type B nurtures any youngster in need, regardless of which type of behaviour it will display when it later becomes a parent itself. If that is the sum total of their differences, then the more discriminative type A will assuredly increase in prevalence at the expense of type B.

This point now seems rather obvious. However, for a century after Darwin first described the pro-
cess that he called »natural selection«, such implications of his theory were poorly appreciated. Before the sociobiological revolution of the mid-1960s, many biologists subscribed uncritically to the view that the attributes that natural selection favours must be those which best promote »the survival and reproduction of the species«. This view, which the English philosopher Helena Cronin has aptly labelled »greater goodism«,2 was wrong.

A 1962 monograph on the reproductive behaviour of a small mammal called the Mexican freetailed bat provides an instructive example.3 Observing that thousands of helpless pups were left together in a squirming mass each night while their nursing mothers went out foraging, researchers blithely concluded that when females return in the morning, they must nurse the pups at random, thus constituting an »anonymous dairy herd«. But only a few years later, the greater goodism implicit in such inferences had been critically dissected and demolished,4 and such a conclusion could no longer be published in a reputable biological journal without explicit discussion of the formidable theoretical grounds for thinking it must be wrong. The problem facing the idea of an anonymous dairy herd is that it is difficult to envision how costly lactation could be evolutionarily stable in such a case, since selection would surely favour those females who expended the least lactational effort and left their pups to be fed by others. It should thus be no surprise that the anonymous dairy herd idea turned out to be wrong: the mother bats are now known to possess remarkable adaptations for finding and feeding their own pups.5

The psychological adaptations that produce discriminative parental solicitude vary between species, in ways that reflect regularities in each species’ ancestral environment of evolutionary adaptiveness (EEA). The guillemot is a marine bird that lays its eggs on rocky ledges only a few centimetres from nesting neighbours. Guillemots recognize their newly hatched chicks and even their eggs on the basis of individual markings, and reject any unrelated chicks or eggs that turn up in the nest uninvited. The razorbill is a closely related species that nests in the same habitat, but with a crucial difference: nests are dispersed and spontaneous transpositions of chicks and eggs do not occur. In the absence of selection for chick and egg recognition, razorbills have not evolved discriminative abilities like those of guillemots, and if an experimenter places an unrelated egg or chick in a razorbill nest, the parents will nurture it as they would their own.6

Discriminative parental solicitude in mammals follows the same principle.7 In those species, such as rats, who sequester and defend immobile pups in isolated burrows, parents do not initially recognize their young as individuals. Individual recognition develops just before the pups become sufficiently mobile that mix-ups might have occurred in the EEA. In other species such as sheep and horses, however, young can mingle with those of other mothers very soon after birth, and an indiscriminate mother would be at risk of misdirecting her parental nurture even on the day of birth. In these species, specialized brain mechanisms are dedicated to the task of establishing an individualized bond between a mother and her newborn at birth, and the mother will subsequently reject or even attack unrelated milk thieves of the same age and infantile appeal as the youngster she is cherishing. In sum, there is nothing magical about parental discrimination: preferential treatment of one’s own young exists only where a species’ ecology demands it, and is accomplished by means of evolved psychological mechanisms for attending and responding to specific cues that helped parents behave in an appropriately discriminative manner in the EEA. We know of no reason why the evolution of the human psyche should have been exempt from this logic.

Stepparents are Over-represented as Perpetrators of Abuse and Homicide

In 1976, we were among the participants in an animal behaviour seminar discussing »sexually selected infanticide«. This term refers to the lethal result of natural selection in favour of those who kill any dependent offspring encumbering newly acquired mates and thereby accelerate the timing of their own reproduction. Such behaviour was then well documented only in lions and in one species of monkey, but it has since been shown to occur in many other animals, and in both sexes, albeit mainly in males.8 During the discussion, a graduate student raised the question of whether there might be any truth to the stereotype of »wicked« human stepparents, as illustrated by Cinderella and many other folktales. Might stepparents be disproportionately responsible for various sorts of child maltreatment? To our considerable surprise, we soon learned that

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this question had never been asked in the large and rapidly growing literature on child abuse, and we therefore set out to answer it ourselves.\textsuperscript{9}

In our first study of this issue, we used an archive of 87,789 legally mandated and subsequently validated reports of child maltreatment in the United States, in conjunction with available estimates of the prevalence of various living arrangements among children in the relevant population at large, to estimate rates of abuse in various sorts of households and by various categories of »parents«. Because the US census did not distinguish stepparents from genetic parents, there were no solid data on the incidence of steprelationships in the general population, so we made our comparisons conservative by adopting an estimate from the literature whose simplifying assumptions guaranteed that it would be too high. But despite handicapping the hypothesis in this way, a substantial degree of excess risk at the hands of stepparents was still apparent. For example, children under three years of age who dwelt with one genetic parent and one stepparent were estimated to be seven times as likely to be the victims of validated physical abuse as those living with both their genetic parents.\textsuperscript{10}

There are several reasons to be cautious when interpreting such evidence. One is that the detection or reporting of abuse may be biased: if there is a stereotype to the effect that stepparents are hostile and potentially abusive, then ambiguous evidence may be more likely to be followed up and eventually validated when a stepparent is involved. But although such biases may exist, we were certain that they could not explain away the over-representation of stepparents as abusers, for the following reasons. As the severity of child abuse increases, up to the extreme of lethal battering, it becomes increasingly unambiguous and difficult to hide, and distortions due to biased detection and reporting should therefore shrink. However, as we narrowed the case criteria in such a way as to make them increasingly severe and unequivocal, the overrepresentation of stepparents as abusers increased, rather than shrinking, and when we considered only the 279 fatal cases, the estimated rates in stepparent-plus-genetic-parent homes had risen to approximately one hun-

Figure 1. Age-specific rates of child homicide perpetrated by genetic parents versus stepparents in Canada, 1974-1990, based on all cases known to Canadian police forces.
dred times greater than in two-genetic-parent homes.

This study left little doubt that elevated abuse risk in stepfamilies was genuine and huge, but that does not necessarily mean that steprelationship itself was to blame. Because the study was correlational, rather than experimental, we cannot readily rule out the possibility that stepparenthood was associated with some other factor of more direct causal relevance. One obvious possibility is that poverty might constitute such a »confounding« variable, but this hypothesis could also be rejected, since survey data showed that the income distribution of step-parent-plus-genetic-parent households was virtually identical to that for two-genetic-parent households. Low-income families were indeed over-represented in the abuse data archive, but the association between abuse and poverty was independent of that between abuse and stepparenship.

Our subsequent research in Canada has told essentially the same story. In the city of Hamilton, where we live, we found that about 1 out of every 3000 pre-schoolers living with two genetic parents was reported as a victim to the provincial child abuse registry in a 12-month period, compared to 1 in 75 for those living with a genetic parent and a stepparent. Poverty was again a distinct risk factor in this study, and maternal youth and the number of children in the home were shown to be additional risk factors that were independent of the large effects of stepparenship. The hypothesis that stepparents are frequent abusers merely because those who remarry include disproportionate numbers of violent personality types was also eliminated by the demonstration that abusive stepparents were usually discriminative in their targets, treating their own offspring well.

We then went on to analyze Canadian national homicide data, and as with the fatal abuse cases in the United States, we found excess risk at the hands of stepparents to be even more extreme than was the case for non-lethal abuse. It is clear that the situation is similar in Great Britain, although estimates of the numbers of stepchildren in the British population at large are imprecise. Moreover, besides demonstrating that stepchildren are killed at relatively high rates, our analyses of Canadian and British homicide cases have shown that homicides by stepparents are qualitatively different from those perpetrated by genetic parents. Genetic parents who kill are often deeply depressed, and may even construe murder-suicide as a humane act of rescue, whereas homicidal stepparents are seldom suicidal and typically betray hostility to their victims by the relative brutality of their lethal acts. In Canada, for example, 44 of 155 men (28%) who killed their pre-school-age children during a 17-year period did so in the context of a completed suicide, compared with just 1 of 66 men who killed stepchildren, and whereas 82% of the victims of stepfathers were beaten to death, the majority of children slain by their genetic fathers were killed by less assaultive means. These contrasts are replicated in British cases.

Studies in several other countries, using a variety of methods, have also uncovered large differences between stepparents and genetic parents with respect to abusive treatment of children. In Australia, stepfathers are even more extremely over-represented as lethal baby batterers than in Canada, Britain or the USA. In a Korean study of schoolchildren in the 3rd and 4th grades, 40% of those living with a stepparent and a genetic parent were reported to be »seriously battered« once a month or more, compared to 7% of those living with both their genetic parents. In Finland, 3.7% of 15-year-old girls living with a stepfather claimed that he had abused them sexually, compared to 0.2% of those living with their genetic fathers. Many other examples could be enumerated.

Although the over-representation of stepchildren as victims of abuse is widespread, widely documented, and often extremely large, several authors have tried to refute it. One influential counterclaim, by Richard Gelles and John Harrop, was based on a telephone survey in which 117 US stepparents who agreed to be interviewed about conflict and violence in their families were no more likely than genetic parents to admit to having assaulted their children in anger. Perhaps the most interesting thing about this study is that it has been taken seriously. The American Medical Association, for example, cited it as their rationale for excluding stepparenthood, the most powerful epidemiological risk factor for severe child maltreatment yet discovered, from a check-list for family physicians screening for child abuse, and many other stepfamily researchers have accepted the claim that by phoning a random sample of US homes, Gelles and Harrop achieved a result of greater validity than could ever
be garnered from »biased« reports of children’s injuries and deaths.

Other counter-claims have been based on elementary statistical errors. Psychologists Louise Silverstein and Carl Auerbach,20 for example, noted that 29% of a sample of US child sexual abuse victims were molested by birth parents, 25% by substitute parents, and 46% by someone else, and concluded that »these statistics do not support the neo-conservative contention (sic) that stepfathers... abuse children more frequently than biological fathers« (p 402); these authors apparently failed to grasp that most children do not have »substitute parents« and that the quoted statistics reflected massively higher rates of sexual molestation of the minority who do. Catherine Malkin and Michael Lamb21 analyzed data on family circumstances of US child abuse victims, without making any reference whatever to the relevant figures for the general population, and drew the scarcely comprehensible conclusion that »biological parents were more rather than less likely than nonbiological parents to abuse severely and to kill rather than cause major physical injuries to their children« (p 129). Although 39% of the child victims from 2-parent families in their data set had a stepparent, compared to an age-matched expectation from population data of less than 5%, and although every form of abuse was perpetrated at massively higher rates by stepparents than by genetic parents,22 Malkin and Lamb apparently imagined that they had failed to replicate prior reports of such a difference, and their conclusion to that effect has been widely cited. Finally, Hans Temrin and collaborators reported that Swedish children suffered no excess risk of homicide at the hands of stepparents,23 a mistaken inference that derived from their failure to take account of the fact that the proportion of all children who have stepparents is near zero at birth and increases steadily with age; in fact, although the number of homicides was small, their data exhibited a highly significant 8-fold difference in risk among pre-schoolers.22

**Discrimination against Stepchildren goes beyond Violence**

The fact that stepparents mistreat children at relatively high rates cannot be taken as evidence that such behaviour represents an adaptive »strategy« that has been directly favoured by selection. The abuse and murder of stepchildren are more readily interpreted as non-adaptive byproducts of an adaptation, namely the nepotistic bias in parental solicitude. It is scarcely plausible that non-legal child abuse could be an adaptation, for what does it achieve? The recurrent abuse that many stepchildren suffer is more likely to _elevate_ the perpetrator’s costs of investing in the child than to lower them.11

At first glance, stepparental homicide looks like a better candidate for an evolved adaptation, by analogy with the sexually selected infanticide observed in some other species, including several primates. But this idea is really no more plausible than that of adaptive non-legal abuse. Homicides by stepparents are seldom carried out in an »efficient« manner; they often evoke retributive justice from the victim’s genetic kin or the community; and they are apparently more likely to deprive the perpetrator of future reproductive opportunities with the victim’s genetic parent than to speed things up. Although it is possible that these costs and benefits were different in the EEA, no evidence in support of such a conjecture can be found in ethnographic studies of human behaviour in small-scale, face-to-face societies like those in which the human psyche presumably evolved. Thus, the most plausible interpretation of the high prevalence of stepchildren among abuse victims is simply that _stepparents love the children in their care less, and resent them more, on average, than genetic parents_. Differential violence is a relatively rare and extreme reflection of something much more general, namely differential parental solicitude.

If this claim is correct, we should expect to find that stepchildren are disadvantaged in a broad array of other, less violent domains, and that this is true not just of an unlucky few, but quite generally. A substantial body of recent research has confirmed this expectation. One large national probability sample survey study in the US, for example, showed that the financial support that families provide for higher education is substantially reduced for stepchildren, even when both parental wealth and the child’s scholastic record are statistically controlled.24 Not surprisingly, stepchildren have repeatedly been found to leave school at earlier ages than other children, and also to leave home earlier. In Britain, the _National Child Development Study_ demonstrated that both the genetic parent and the stepparent express low aspirations for the children’s
education in stepparent homes, lower even than the aspirations of single mothers, and that the children’s own aspirations follow suit. Further American studies, again controlled for parental means, have demonstrated that children living with steemother do not receive the same regular medical and dental care that children living with their genetic parents can expect, and even that less money is spent on food in stepmother households; these deficits are either smaller or non-existent in stepfather households, presumably because US wives take primary responsibility for the children’s health care and do most of the family food shopping. Other evidence of differential economic investments in genetic offspring versus stepchildren has been gathered in countries ranging from Finland to South Africa (references in 22).

There is also a large body of survey research concerning the quality of stepfamily life. Consistent findings are that steemother and stepchildren alike rate their relationship as less close and less dependable as a source of both emotional and material support, and that all parties in stepfamilies are less satisfied, on average, than persons living in intact first families. Not surprisingly, the presence of stepchildren is also associated with elevated rates of marital dissolution and marital violence. An observational study in Trinidad by anthropologist Mark Flinn was the first to provide direct behavioural evidence that men provide less nurturant attention to stepchildren than to their genetic offspring, and that the differences in how they treat the two groups of children are attenuated in the mother’s presence. Anthropologist Frank Marlowe has made similar, though less extensive, observations among Hadza foragers in Tanzania; one striking result was that Hadza men were never observed to play with their stepchildren. Subsequent work by Flinn in Dominica has shown that stepchildren have chronically elevated levels of the stress hormone cortisol. It seems clear that stepfamily life is difficult, the world round.

Parental Affection is Profound
Successful social relations with a spouse, a friend, a colleague at work, or even a sibling typically entail a reciprocal exchange of benefits. If one party consistently takes without giving, the relationship sours. But parent-offspring relations are very different, indeed unique: the flow of resources is consistently and cumulatively asymmetrical, and parents derive joy, rather than resentment, from being thus exploited! Why this should be so is easy to understand. Animals, including people, have evolved to expend their hard-won resources, and indeed their very lives, in the production and rearing of »fitness vehicles«: healthy offspring who are good prospects to reproduce in their turn.

The time, energy and love that parents invest in their young are valuable resources and selection has shaped parental psyches to guard against parasitism and allocate them carefully, in ways that would have promoted parental fitness in the EEA. Why, then, is any creature ever willing to assume the role of steemother? The answer appears to be that steemothering is an aspect of courtship: one component of the mutual considerations that new mates negotiate in species in which couples engage in complex cooperation and are likely to stay together for a long time. Steprelationships were certainly prevalent in the human EEA, and must have been important selective forces, for although steemotheral investment has its utility, it would surely have been a mistake to embrace the role with the same selfless devotion as genetic parents. And of course, steemothers do not embrace their parental role with the commitment characteristic of genetic parents. Few profess love for their wards, and unlike genetic parent-offspring relationships, those between steemothers and their stepchildren typically end if the marriage that created them dissolves.

Lest we leave the impression that successful steprelationships are an impossible dream, it is worth stressing that they often work reasonably well. Although violent abuse is far more prevalent in stepfamilies than in genetic parent homes, it still occurs in only a tiny minority of cases. Although few steemothers and stepchildren say they love one another, a great many profess some degree of mutual affection and respect. Many, perhaps most, steemothers derive pleasure from helping raise the beloved child of a beloved partner, and many, perhaps most, stepchildren are better off than they would have been had the genetic parent never remarried. But this is not to say that steemothers often come to feel the selfless commitment that is so common in genetic parents. They don’t.

Many social scientists apparently dislike the proposition that parental love is special and is seldom fully activated in steemother. A popular »alter-
native« is to argue that the differences between genetic parents and stepparents occur because stepparents were not in contact with the children from the time of birth and therefore never »bonded« properly. Of course, even if this were true, it would not really be an alternative to the proposition that natural selection shaped this »bonding« response to effectuate nepotistic favouritism in the EEA, but be that as it may, the only study that has addressed this hypothesis speaks against it. Flinn’s Trinidad study included a sample of men who established cohabiting relationships with women pregnant by other men, and who were therefore resident father figures when their stepchildren were born. These men exhibited higher levels of aggression and hostility than stepfathers who joined the household later, 29 a striking result which we interpret as a response to resented social pressures or presumptions that they should act like true fathers.

Concluding Remarks
The evolutionary reasoning that inspired and continues to inform our research is consistent with common wisdom. Parents love their children. This love is profound and not readily substitutable. Stepparents usually love the children less, or not at all, and many would really rather that the children, who entered into the remarriage negotiations as costs, not benefits, had never been born. Higher rates of child maltreatment by stepparents than by genetic parents are predictable byproducts of these differences in love and commitment.

There is little in these propositions that would inspire dissent from the proverbial man on the street; there is little that he would consider news. Curiously, however, these propositions and the empirical evidence in their favour have encountered a steady stream of muddled, indignant denials, in both the professional literature and in the popular press. Why? One reason seems to be that many commentators realize that stepfamily life is difficult, and believe that publicizing its more dramatic failures »stigmatizes« stepparents and makes their task all the harder. Many also suffer from the misconception that a »biological« explanation for stepparental violence is a claim of its inevitability and imperviousness to social controls, which, if accepted, will excuse the violence. These misunderstandings are an impediment to progress in understanding and remediating the mistreatment of children, and this and other areas of social science would surely benefit from greater sophistication about the evolutionary process and its relevance to human affairs.

Ironically, it is not evolutionary psychologists who denigrate human beings as simple automata, but those who adhere to the implausible notion that stepparenthood is psychologically equivalent to genetic parenthood and that »bonding« experience is sufficient to evoke the full depth of parental feeling. Evolutionary psychologists have much more respect for human complexity than that.

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