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Substitute Parents: Biological and Social Perspectives on Alloparenting in Human Societies

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Book Review

Substitute Parents: Biological and Social Perspectives on Alloparenting in Human Societies, edited by Gillian Bentley and Ruth Mace. Studies of the Biosocial Society, v. 3. Oxford, U.K.: Berghahn, 2009. 336 pp. £58 (hardcover).

Investigators of ecology and evolutionary biology have extensively explored the involvement of parents and other kin in the care provided to juveniles. This has led to many empirical and theoretical advances in our understanding of the parent-offspring conflict, kin selection, and the evolution of sociality and altruism. In humans, however, investigating the role played by adults in child care, according to their gender and how they are related to the child, has proved difficult. As a consequence, the emergence of alloparental behaviors during human evolution is yet unsolved. This is because humans are highly social, long-lived, iteroparous, and dimorphic and because they care for children of different ages at the same time and show many unusual life-history traits. Other factors are the peculiar evolution of the hominins and the many uncertainties concerning human origins, the complexity of socioeconomic relationships between individuals within and between families, and, most of all, the variation of these across cultures and through time. More than in any other species, a multidisciplinary approach is therefore needed to investigate alloparental care in humans, and we should therefore welcome *Substitute Parents*, which, as the editors put it, “brings together a variety of contributors who can cover the topic of alloparenting from widely different perspectives.”

Substitute Parents opens with an excellent review, by N. G. Solomon and L. D. Hayes, of alloparental behaviors in ecology. In this review Solomon and Hayes give a structured panorama of the alloparenting strategies across vertebrates and discuss with pedagogy the evolutionary theories of alloparenting. This chapter, together with S. Hrdy’s prologue and the editors’ introduction, sets the scene for the ecologic and evolutionary theater in which human behaviors play. This theoretical background agreeably echoes throughout the 14 following chapters, which address the fundamental questions of parenting and substitute parenting in humans: Who is caring for the children and to what extent? What are the social and biological costs and benefits for the parents and the substitute parents? What are the social and biological costs and benefits for the child? How do these vary cross-culturally?

The first set of chapters aims to measure the investment of kin in child care and/or to estimate the effect that kin investment (or the lack of it) has on the child, from the physiological and psychological level to that of survival and reproduction. Measures of investment are mainly encompassed by estimates of the time and resources allocated by kin in child care (the Maya population of Mexico, studied by K. L. Kramer; and the Toba population of Argentina, studied by C. R. Valeggia). Effect of kin and/or nonkin investment on children is estimated by means of phenotypic (anthropometric and endocrinal) and demographic variables

(the rural population of Gambia, studied by R. Sear and R. Mace; and the population of Dominica, studied by M. V. Flinn and D. Leon) and behavioral observations (contemporary U.K., studied by J. Bense). These quantitative approaches are nicely combined with more qualitative analyses aimed at identifying nonparental caregivers (A. Gottlieb on the Beng population of Ivory Coast), performing a cross-cultural comparison of parenting and substitute parenting between northern and southern countries (H. Penn), and discussing how puzzling adoption is in light of evolutionary theory (D. Howe).

The last set of chapters, which are more oriented toward sociology and public policies, analyze the psychosocial consequences of surrogacy (in the contemporary U.K., studied by E. Lycett), divorce (in the contemporary U.K., studied by M. Robinson, L. Scanlan, and I. Butler), and child care services (in the contemporary United States, studied by J. Belsky); ask whether schools can be seen as substitute parents (contemporary U.K., studied by B. Mayall); analyze the socioeconomic factors that determine the use of child care services (contemporary U.K., studied by G. Paull); and investigate how the need for alloparenting has increased in response to the AIDS pandemic in Malawi and is currently accompanied by a change in intergenerational relationships (L. van Blerk and N. Ansell).

Several chapters are of particular interest to the readers of *Human Biology*. For example, the remarkable work of K. L. Kramer provides estimates of the time allocated in child care by mothers, fathers, and siblings. Kramer also presents data on how this is later linked to the resources production-consumption balance both within a family life cycle and throughout an individual life course. The effect that helpers have on maternal time constraints is also analyzed. Together, these discussions provide the reader with an extensive description of the dynamic interplay between child care and resource production at the level of the individual, the family, and the community as a whole.

At the level of the child, M. V. Flinn and D. Leon analyze the stress response to social challenges (measured by the level of cortisol) of children exposed to early family trauma in a population of Dominica. Although all these children exhibit higher cortisol levels, stepchildren are characterized by a higher stress response than children living with both of their biological parents. Moreover, Flinn and Leon show that this exacerbated stress response of stepchildren is attenuated in the presence of alloparental care. This can be seen as overwhelming phenotypic evidence of the importance of both parental and alloparental care on child psychological development.

In their remarkably exhaustive study, R. Sear and R. Mace estimate the relative importance of kin on children through both anthropometric and demographic variables in the case of the population of rural Gambia. Sear and Mace enlighten the role played by kin (e.g., mother, maternal grandmother, older sibling) in child survival during infancy and childhood and its effect on the child's age at his or her first reproduction. They also show how these roles vary while the child grows up.

Although these three studies were realized by pioneers in their respective fields and largely meet the methodological criteria required, these quantitative analyses are nevertheless challenged by the qualitative work of A. Gottlieb on the Beng population of Ivory Coast. Indeed, Gottlieb emphasizes how numerous may be the actors caring for a child within a single day, how caring arrangements may be flexible according to work constraints and opportunities, and how child care goes well beyond relatedness between parental and nonparental caregivers.

Beyond these empirical results, many valuable theoretical reviews and thoughts can be found all along the pages of *Substitute Parents*, for example, the reviews of the hypotheses explaining variations in the use of alternative caretakers in foraging societies written by C. R. Valeggia. The chapter by D. Howe, which discusses thoroughly the puzzle raised by adoption in evolution, is also a good example. Oversimplifying his thought for the sake of concision, Howe convincingly argues that adoption may not be “the thorn in the side of Darwinian views” as commonly thought but rather the proof that selection has favored strong behavioral and emotional needs between adults and children that go far beyond the cost of raising an unrelated child.

Substitute Parents is not a textbook. It brings together high-quality papers from many different fields: endocrinology, evolutionary biology, demography, economics, psychology, sociology, anthropology. In this way, it could disappoint readers who expected it to cover in depth the field of alloparenting within one research area. Rather, the book emphasizes the extraordinary flexibility of the human species regarding who provides care for children and the many options that exist in numerous societies around the globe. In this sense *Substitute Parents* raises more questions than answers. The book can be seen as a practical tool for researchers in the field, and it provides a large amount of data across a wide range of populations and helps to find a common ground between theories emerging from different fields. It is the kind of book that will never end up in the last dusty row of your shelves because you will continually refer to it, picking up here and there empirical and theoretical data for the next decades.

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