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Research Article

Special Issue: *Kinship Trouble: Traversing Interdisciplinary Boundaries between Archaeology, Archaeogenetics and Socio-cultural Anthropology*

Commentary: Afterword

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Abstract

This 'afterword' offers a critical reflection on the theme of 'kinship trouble' which runs through the papers in this special collection. Central to all of them are the questions of what it takes for individuals to be 'biologically' related, of what—if anything—this has to do with genetic connection, and of whether anything can be deduced about the kinship of individuals from the prehistoric past by way of the biomolecular analysis of their remains. It is shown that much of the trouble with kinship comes from the confusion between two understandings of the gene: as an information-bearing particle in a system of inheritance, and as a segment of the molecular genome. Starting from one or the other gives rise to markedly different accounts of kinship, founded respectively on inheritance and begetting. This also underpins the different ways we understand connections with other-than-human kin, whether in terms of evolutionary phylogenesis or ecologies of coexistence. The latter, better regarded as 'kinning' than 'kinship', lies not in a mix of genetic and cultural inheritance, but in the milieu of an intergenerational life process.

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A few days ago, directly after I had finished reading the collected papers for this special issue on kinship trouble, I chanced upon an article in the magazine section of the previous Saturday's *Guardian* newspaper (Kleeman 2025). It was about the increasingly frantic search of a woman, Joan, now well into her nineties, for her first-born son. The story, which has been widely publicized, begins in a maternity hospital in 1951. Joan has just given birth to a baby boy. But as was routine in those days, the baby was immediately taken from her to be washed, while she was told to rest. The following morning the sister on duty returned carrying four babies—Joan's and those of other women in the ward—but almost dropped one of them, saved only by Joan's quick action in picking the infant up. The nurse, promptly assuming it to be Joan's, instructed her to begin breast-feeding. She did what she was told, but sensed from the start that something was wrong. Even after she and the baby returned home, things did not seem right. She did not have that 'motherly feeling', she recalled, nor did the baby respond as she had been led to expect.

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Joan would go on to have two more children, Sue and Doug, both born at home. Now in their sixties, they remember a bustling, happy family, surrounded by relatives. Yet despite everyone's best efforts, their elder brother never seemed to fit in. Relations became increasingly strained, and were eventually broken off altogether—until 2019 when, out of the blue, Joan received a text. William (not his real name) had been keen to trace his ancestry with the help of a commercial DNA testing service. Sue was eventually persuaded to do the same, and so was a cousin of theirs. This cousin had informed William that while he (the cousin) and Sue were genetically matched, he (William) was not. William drew the inevitable conclusion. His text to Joan read simply 'You are not my mother'. For her, the news was heart-rending. With her long-held suspicions of what had happened at the hospital confirmed, and with the assistance of Doug and Sue, Joan has been racing against time to find her 'real' first-born. This has involved a lot more DNA testing, at great expense. Through a process of elimination, the net is finally closing, giving hope that this sad story will eventually reach a satisfactory resolution.

But for me, reading the article with the papers in this collection still fresh in my mind, two things immediately stood out. One was the apparently uncontroversial use of the term 'biological', by both the reporter and the family members she spoke to, in referencing Joan's relation to her

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long-lost child. To the reporter it was self-evident, as she put it, that William was 'not biologically related'. The distraught Joan, likewise, was desperate to know: 'Who is my biological son?' What, then, makes one relation biological and another not? The other thing was the obsession with DNA testing, as if the mere fact of sharing segments of DNA from an assumed common ancestor would be enough to clinch the matter. These two themes—the remit of the biological and the use of DNA-testing to determine 'identity by descent' (IBD)—run through this entire collection and, taken together, lie at the root of the 'kinship trouble' identified in its title. And the questions asked are not dissimilar, even if the people of interest to archaeological students of kinship are long dead. Excavating a burial site, and finding bodies interred together, we want to know: how were these individuals related? Will DNA-testing give us the answer?

Undoubtedly, the introduction of scientific techniques for sequencing ancient DNA has had as explosive an impact in the field of archaeology as has the market in Ancestry DNA test kits for large sectors of the public, at least in so-called Western societies in which the laws of science and of the market have long marched hand in hand, each reinforcing the other. These laws have in common that they should apply universally, whether to marketable commodities or objects of nature, regardless of time, place, or context. Applied to living organisms, this condition amounts to a claim that each is specified, in its essential nature, independently and in advance of its life in the world, by a complex of characters bestowed upon it at the very moment of conception. In a word, they are inherited. Science calls these heritable characters genes. An entire field, of genetics, has grown up around the study of their variation and distribution in ancestral and descendant populations. But for genes to be inherited, some mechanism is required that would reliably copy the information they contain from one generation to the next. For many decades, the search was on for such a mechanism. With the discovery of the structure and properties of the DNA molecule, it seemed finally to have been found.

The gene as a component in a formal design specification for the organism-to-be is, however, one thing; the gene as a segment in a sequence of DNA nucleotides is quite another. With biochemist and philosopher Lenny Moss (2002), we could call the former 'gene-P' and the latter 'gene-D'. Taken together, genes-P make up what is called the genotype, modelled as if it already contained a causal, context-independent blueprint for its expression, under particular environmental conditions, in the manifest form of the phenotype. Genes-D, by contrast, are the actual molecular constituents of the genome which, along with resources both within and beyond the cell, furnish the matrix from within which an organism's life-cycle develops and unfolds. Genes-P may be said to encode information, and as Moss acknowledges, there is a place for them in the kind of mathematical modelling with which geneticists have long been preoccupied. But they have nothing to do with the biochemistry of the cell. Genes-D, by contrast, are molecular strings which, within the cellular medium, have a remarkable capacity to make copies of themselves. They are not, however, carriers of information in themselves. For the form of the organism is not pre-specified, but the ever-emergent outcome of a developmental process in which this genomic material is bound up with all the other ingredients that together make up a living system.

Genes-P and genes-D, then, belong to entirely distinct worlds: the one, an *as if* world of self-replicating particles of information; the other, a teeming biomolecular flux—a world of life. Genetics deals with the former; genomics with the latter. So long as we keep the distinction in mind, there is no problem. It is when the two get confused that our troubles begin. And this confusion is as endemic in scientific as it is in popular discourses. In science, it underlies the belief that molecules of DNA are capable of importing coded information from one life cycle to the point of inauguration of another, even though there can be no 'decrypting' of the code apart from the development of the recipient organism in its environment. In the popular imagination, this belief, that every individual is somehow pre-informed by a legacy of inheritance, even before his or her life in the world has begun, lies behind the craze for genetic testing. In the rise of the testing industry, indeed, commercial and scientific interests have marched to the same tune. Yet tests can only look out for possible matches in genomic DNA. What, exactly, can these tell us? In the eyes of scientists, the public, Joan and her children, and the contributors to this collection, without exception, matching DNA sequences afford proof of relationships that are in some sense 'biological'. And all are agreed, to put it crudely, that biology means genes. But what genes are these? Are they genes-P or genes-D? Depending on the answer, we end up with very different accounts of kinship.

The discourse on inheritance is conducted exclusively in terms of genes-P. What it gives us is a calculus of relatedness depending on the degree to which individuals hold shares in a common genetic heritage that is reshuffled, like a pack of cards, in each generation. But this inheritance tells us nothing about what the individuals concerned will do with it, or how they will get along with one another in the conduct of their lives. It neither binds them together, nor splits them apart. Thus, with genes-P, the concept of the 'genetic bond', so commonly and uncritically invoked by scientists and public alike, is a contradiction in terms (Moots, Tsosie & Somel, this collection). When William tells Joan, 'You are not my mother', he is speaking the language of genes-P. His relation to Joan, he thinks, is a fiction, by which he means it is founded in social and cultural convention rather than biogenetic reality. In the discipline of anthropology, this distinction between 'real' and 'fictive' parenthood, the one biogenetically given, the other socially or culturally constructed, has been handed down through generations of textbooks and is familiar to every student trained, as I was, in the kinship theory of the 1960s. There were endless arguments over whether social kinship is ultimately dependent on biological kinship, or entirely independent of it, but the distinction between the two registers remained unquestioned.

Yet if genetic inheritance, *per se*, does nothing to induce an affective binding of lives, and if, conversely, lives can bind

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just as well in a relation that is—in the textbook sense—entirely fictive, then why did Joan have such difficulty in establishing a 'motherly' relation with William during his early years? And why her intense yearning for a son, removed at birth, whom she never even had a chance to hold? The answers to both questions lie in the first nine months of life, while the baby was growing in her womb. During this time, mother and baby would have developed a close and intimate feeling for one another which—had it not been for its abrupt termination, and the infant's substitution with another whose feelings for his own birth-mother had been just as brutally severed—would have blossomed in the months and years to follow, in the newborn's continuing nourishment and care. This process, of engendering a new life from within the compass of another, both before and after birth, can be summed up in a single verb, 'to beget'. Genes, of course, play an important if not vital part in this process of begetting, but only as embedded in the biomolecular flux—that is, as genes-D. As a developmental entwining of lives, from the moment of conception onwards, this process is evidently as much biological as it is social. It simply makes no sense to confine the biological and the social to distinct registers.

And herein lies the key difference. It is between inheritance and begetting. Inheritance, as we have seen, keeps generations apart, each confined to its own slice of time. What each receives from its predecessor is not its life, but a legacy. In begetting, by contrast, older and younger generations, as they mature together, collaborate by way of their overlap in the coproduction of a collective life process that carries on or perdures—so long, that is, as new lives are introduced with and alongside the gradual passing of the old. The labours of begetting, in short, are part of the same process as the life they beget (Ingold 2024, 13).

To grasp the difference, imagine an ancestor-descendant sequence. In the *as if* world of genetic inheritance, every link in the chain is a line for the transmission of genes-P from one generation to the next. Lives, in this world, are lived within generations, inheritance cuts orthogonally across them. But with begetting, genes-D play their part in the ongoing story of life-engendering life. In this story, every life lived prolongs the narrative of who begat whom, through the in-weaving of an additional thread. Not for nothing did the Romans of antiquity call their sons and daughters *filii* and *filiae*, both derived from the Latin for 'thread', *filium.* Many Indigenous peoples, tracing their genealogy to the very origins of the cosmos, would likewise understand their ancestors not as transit points for inherited characters, passed down the line from generation to generation, but as beings who came into the world before them, or whose presence belongs to time immemorial, and who—through the active manifestations of that presence—shaped the conditions of life for those to come. The ancestors *are* their stories, and it is the role of descendants to carry these stories on.

The same goes if we throw our net more widely, to embrace relations of kinship not only within the human sphere, but also of humans with the manifold other-than-human beings, or 'earthlings', with which—or rather with whom—they co-inhabit the planet. 'All earthlings', writes cultural theorist Donna Haraway (2016, 103), 'are kin in the deepest sense'. This deep sense, however, is not to be found in the calculus of identity by descent, which reckons our kinship with other species in terms of genetic proximity, or how far back we have to go in the chain of inheritance to find a common ancestor. Although with such reckoning it is possible to slot every creature into place, in relation to every other, within an overarching diagram of evolutionary phylogeny, this comes at the expense of cutting it out from the matrix of relationships within which it lives and grows, and treating it as an isolate, attributed to its class on the basis of covert characters encoded in advance of its entry into any real-world environment. And it is precisely in the relational matrix of life and growth that the deep sense of human kinship with other earthlings resides. Such kinship is neither given nor constructed. It is rather continually produced and performed as creatures go about their lives together, both begetting and being begotten, from within the microbial flux of a worlding world. 'Earthlings—our kinfolk', as the writer Gavin Van Horn (2021, 2) puts it, 'come in all shapes and sizes, from the bacterium swimming in your belly or lying on the tip of your tongue to the vibrant collective breath that sweeps across your face and into your lungs'. Kinship, in this sense, is an index of the fact that living organisms are not discrete, externally bounded entities but rather processes, ways of being alive, that have a habit of running in and out of one another.

We would do better, then, to speak of 'kinning' than 'kinship' (Van Horn 2021, 3; Frieman & Schuster, this collection). This is kinship in action, as verb rather than noun, practised—as Beth Scaffidi writes here—'in the messy middle between birth and death'. Yet it is equally important to acknowledge that the field of kinning, especially where humans are involved, is highly differentiated. We and our fellow earthlings, both human and other-than-human, may all be kin, but we are not all kin *in the same way*. A kinship system, in the classic anthropological sense, is above all a system of differences. Anthropologists of a structuralist bent might even argue that in any society, the system is pre-installed into the heads of its members, as a kind of template that governs interactions with others of their kind. And if we ask of our colleagues how, exactly, this installation occurs, they are likely to answer, as do Alissa Mittnik and Alex Bentley in this collection, that they are simply inherited, albeit not genetically but through a parallel process of cultural learning. Let us then imagine the young child, surrounded by other people of varying juniority or seniority, figuring out from what she sees and hears how to address these different people and to behave towards them. Is this not itself a way of kinning? If so, then kinship systems, far from being inherited ready-made, are continually produced and reproduced by way of differential attention and response in the very milieu of social life. It is surely here, in the 'messy middle', and not in some mixture of genetic and cultural inheritance, that we should finally look for them.

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References

Haraway, D.J., 2016. *Staying With the Trouble: Making kin in the Chthulucene*. Durham (NC): Duke University Press.

Ingold, T., 2024. *The Rise and Fall of Generation Now*. Cambridge: Polity Press.

Kleeman, J., 2025. 'I think we brought the wrong one home': one mother's search to find her lost son. *The Guardian*, Saturday 22 February.

Moss, L. 2002. Deconstructing the gene and reconstructing molecular developmental system, in *Cycles of Contingency: Developmental systems and evolution*, eds S. Oyama, P.E. Griffiths & R.D. Gray. Cambridge (MA): MIT Press, 85–96.

Van Horn, G. 2021. Kinning: Introducing the kinship series, in *Kinship: Belonging in a world of relations*, eds G. Van Horn, R.W. Kimmerer & J. Hausdoerffer (5 volumes). Libertyville (IL): Center for Humans and Nature Press, 1–11.

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