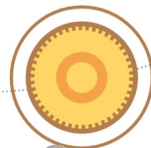
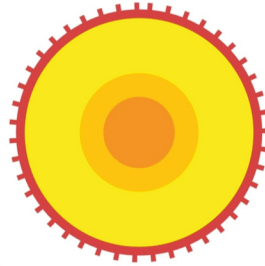
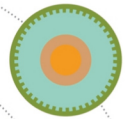
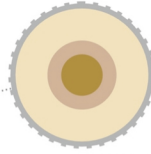


**CHRIS ABEL**

# **THE SELF-FIELD**

Mind, Body and  
Environment



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Routledge Research in Psychology



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# The Self-Field

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In this incisive study of the biological and cultural origins of the human self, the author challenges readers to re-think ideas about the self and consciousness as being exclusive to humans. In their place, he expounds a metatheoretical approach to the self as a purposeful system of extended cognition common to animal life: the invisible medium maintaining mind, body and environment as an integrated 'field of being'.

Supported by recent research in evolutionary and developmental studies together with related discoveries in animal behaviour and the neurosciences, the author examines the factors that have shaped the evolution of the animal self across widely different species and times, through to the modern, technologically enmeshed human self; the differences between which, he contends, are relations of degree rather than absolute differences. We are, he concludes, instinctive and 'fuzzy individuals' clinging to fragile identities in an artificial and volatile world of humanity's own making, but which we now struggle to control.

This book, which restores the self to its fundamental place in identity formation, will be of great interest for students and academics in the fields of social, developmental and environmental psychology, together with readers from other disciplines in the humanities, especially cultural theory and philosophy.

**Chris Abel** is an award-winning author of numerous interdisciplinary publications on the built environment and identity theory. He has taught at universities around the world, most recently at the University of Sydney and the University of Ulster, Belfast.

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# The Self-Field

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Mind, Body and Environment

Chris Abel

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In memory of my parents, Rose and Bill, who gave me life,  
and for Margaret Perrin, the love of my life, who changed it.

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## Preface

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This volume follows my previous book, *The Extended Self: Architecture, Memes and Minds*,<sup>1</sup> which explores the dimensions of a human self that extends beyond the limits of the physical body into the built environment – a theory that the present work builds upon, though with some crucial differences. In an earlier essay with the same title published in 2013,<sup>2</sup> searching for a more accurate description of the elusive self, I depicted it as a ‘field of being’, likening it to a magnetic field held together, ‘not by any physical force, but by an *existential force* with the body at its center’.<sup>3</sup> I repeated the analogy in the previous volume in conclusion of a discussion on extended cognition,<sup>4</sup> aware by this time, however, that the idea deserved far more attention and space of its own.

The outcome is this book, in which the self-field takes centre stage, integrating many of the key ideas floated in the earlier work, together with other new developments in my approach to the subject. My decision to open up my theory of the self to include other animal species as well as humans was driven in particular by my conviction – supported by recent research cited in this book – that, in order to have evolved to its present level of consciousness, other species, and not only those from which our own is descended, must *also* be possessed of a self, if only at different levels of self-awareness. In addition, I have been motivated to advance the idea of an extended self as basic to *all* animal life, by my belief that the commonly accepted view of the self as a uniquely human attribute, directly or indirectly provides a convenient excuse for treating the lives of other creatures as having no value other than what they provide for human needs. The consequent indifference to the interests of other life forms, while surely not the only factor responsible for the catastrophic or threatened loss of so many species in our time, is certainly, in my view, at least partly responsible for the much delayed and inadequate response to that tragedy. This may be obvious to some readers, but I doubt that attitudes towards other creatures will change much until we better understand the true nature of the self and, as I argue in this book, we recognise that, contrary to what we have been led to believe, having a self at all is actually what ties animals at all levels of evolution and development together, including *Homo sapiens*.<sup>5</sup>

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Where the former book also focused exclusively on human technological innovation and development as a vital element in the evolution of an extended self, in line with a broader concept of the self, the present work now includes coverage of the growing body of research on animal technological knowledge and skills, encompassing elaborate constructions as well as tool use and manufacture. While this book also continues some of the key discussions in the earlier work on human technologies and their environmental impacts – especially in the latter sections on systems of production and consumption – the former’s extensive coverage of architecture (my original profession) and its role in identity formation, also now gives way to a closer focus on the personalisation of homes, and the significance of other artifacts and material objects in the lives of their owners.

While much of the previous book was also written on a metatheoretical level, as indeed were many of my earlier interdisciplinary works, the inclusion of other animal species in my search for a viable theory of the extended self, along with the much-enlarged evolutionary perspective that has entailed has, in turn, necessitated a higher-level approach, as reflected in the concept of the self-field and its origins. Based upon a fusion of field theory and self-organising systems, the metatheoretical framework advanced in this book thus links together the many and diverse elements of an extended self, with all its different forms and levels of expression according to whichever species is involved.

While in many ways, therefore, this volume represents a considerable development beyond my previous works in this area, my basic approach has remained much the same ever since, as an architecture student in the 1960s, I first investigated cybernetics and systems theory in the belief that such an important aspect of human development as architecture, cannot possibly be understood solely from any *single* professional or disciplinary viewpoint. Consistent themes of that earlier research, as they have been of most of my work ever since, were the underlying processes by which new forms and technologies of building evolve over time, together with the cognitive and cultural processes involved in that evolution. As I learnt from my first explorations in self-organising systems and cognitive theories of innovation during that period, new ways of building, like new ideas, do not spring miraculously into being out of nowhere, but are the fruit of some new combination of previously developed forms and ideas. The same insights underpin my theory that the self has evolved out of similar self-organising processes governing the most basic forms of self-awareness common to all sentient creatures, the individual identity of which is crucial to those processes.

Together with *The Extended Self* and the new edition of *Architecture and Identity*,<sup>6</sup> a collection of published essays recording my research and writings since those tentative explorations as an architecture student, the present volume thus completes a trilogy of books focused on the complex factors shaping the evolution and identity of the self and its place in a changing world. My debt to all who have supported the previous works has already been gratefully

acknowledged in the first two volumes, so it just remains for me to thank the editorial and production teams at Routledge: Aiyana Curtis, Emilie Coin, Will Bateman, Swapnil Joshi, Paula Devine and Neelukiran for seeing through this third and wholly independent work of theory and scholarship into print and for the care and patience they showed during the whole process.

*Chris Abel*  
*Champigny sur Marne.*

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# Introduction

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This book addresses certain vital questions concerning the nature of the human self: what it is, how it has evolved and functions, and to what extent it makes us uniquely different, if at all, from other species; questions to which the many theories and investigations cited in the following chapters provide only partial answers. That might seem like a tall order – and it is – but, as with so many other intractable problems that have long evaded any solution, I have come to believe the reason that the self remains so little understood is that the wrong questions have been asked of it. This is partly due to the standard anthropocentric treatment of the subject, which insists on the singularity of the human self, and partly to a lack of appropriate theories which could provide an evolutionary and developmental framework for the self which encompasses other species. More recently, we have also been told that the self is an ‘illusion’ or ‘myth’ concocted by the brain to keep us happy, for which no concrete evidence has ever been found – a viewpoint I vigorously dispute, not least for the reason that it diminishes any practical or moral responsibility individuals might have for their own fate or the fates of others.

In pursuing a fresh approach, my starting point has been that, while accepting there are indeed special aspects to the human self, we shall never fully understand what makes us different from other creatures unless we also understand what we have in common. What is needed now in support of that belief, I argue, is a *metatheoretical framework* for the self that embraces what is both specific to humans and to other species, and what is common to them all. Such a framework may be found in a combination of field theory and self-organising systems I call the ‘self-field’, a cognitive domain extending beyond the physical body, including any artifacts as well as other selves and social factors that may be integral to a functioning, personal self. In short, the self is neither a ‘thing’ nor an illusion; it is a purposeful, *self-organising system of extended cognition* common to all forms of animal life, the principles of which this book sets out to establish.

Given such a framework, which intentionally covers *any* species that, as a basic matter of survival, must be able to distinguish between their own species and behaviour and that of other species, we can re-frame the differences between human self-consciousness and the self-awareness of other creatures as *relations*

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*of degree*, rather than absolute differences. We now know, for example, from the growing body of research into animal cognition and tool use cited here, that some apes, together with a handful of other creatures, are capable of forms of abstract thought and learning previously thought to be exclusive to humans. The principal question that needs to be addressed, therefore, is not whether human beings are capable of reflective and rational thought beyond anything other creatures are capable of, but *to what extent that ability is actually exercised*. To which the answer must be – as the evidence presented in this book indicates – not nearly as much as we like to think.

In raising such questions I do not wish to cast doubt upon the power of human thought and creativity; there is plentiful evidence in the history of architecture alone to prove that. Instead, my aim is to focus attention upon the reasons why, despite those ample gifts – of which language invariably figures large – individuals, as well as organisations of all kinds, are apparently so *resistant to change* to the point that, even when faced with environmental and civilisational collapse,<sup>1</sup> we nevertheless cannot bring ourselves to recognise our individual and collective responsibility for our fate until it is too late to change course.

Clearly, both spoken and written language offer powerful platforms for self-conscious reflection and rational enquiry, whether individually or in groups, that is not available to even our closest ancestors in the evolutionary chain, *if* they are used as such. However, except for those philosophers, scientists and other individuals who make it their business to question what the rest of us are doing and why we are doing it – and even they have their own fixations and blind spots, as recounted in these pages – most people, it would appear, are content to coast along on autopilot, rather than focus attention upon their own personal beliefs and behaviour and their whys and wherefores, unless compelled to do so.<sup>2</sup>

As Michael Polanyi<sup>3</sup> – whose thought permeates much of the present volume as it does my previous work<sup>4</sup> – has taught us, given the reliance we all have upon tacit as opposed to explicit knowledge, that might, in other circumstances, be regarded as perfectly normal. However, these are anything but normal times, and running on autopilot alone is no guarantor of survival, if, indeed, it ever was. Such problems, which have their origins far back in evolutionary history, require more than just an exploration of existing research and sources, though that is an essential part of a project such as this. They also require a *re-working* of key theoretical approaches. Though both field theory and self-organisation have a respectable twentieth-century history as influential theories, each of which affords a metatheoretical approach, neither has been applied directly to the idea of the human self, either separately or in combination, let alone, as in this book, to a more general theory of the self that can be applied to other species. The former has its origins in the physical sciences before being developed as a psychological theory by Kurt Lewin<sup>5</sup> in the 1930s, and later, by Pierre Bourdieu and others as a major theory in social psychology; their aim being to broaden

the scope of enquiry from psychologists' focus on individual characteristics to *all* those factors which might affect or influence personal development in some way. The latter theory of self-organising systems grew out of the birth of cybernetics and general systems theory in the 1950s before being given new life as an evolutionary metatheory in the philosophy and science of *complexity*. It is also now commonly associated with *emergence*, as the spontaneous generation of new phenomena (i.e., chemical, biological or behavioural) out of existing systems is called; an approach that has attracted a great deal of attention across many disciplines.

Free of anthropocentric restrictions, a metatheory of the self-field, as I expound in this book, allows us to see what is now commonly described as 'tribal' behaviour in modern societies for what it is: a form of group behaviour little different from that of *Homo sapiens*' ancestors, whose identity and security was dependent upon membership of and loyalty to a group of fellow creatures. Furthermore, in asserting that all sentient creatures are possessed of a self, I argue that it is in the nature of self-organising organisms at *any* level of development that their ultimate priority is the *conservation of the self* through its transformations, no matter what internal and external pressures it might endure. The self is thus an inherently *conservative* system operating mostly at unconscious or semi-conscious levels involving tacit knowledge and skills, only reluctantly changing habits of thought and behaviour when faced with some threat to its stability that it neglects at its peril.

This can take many forms across the evolutionary spectrum, from survival-driven changes in foraging habits to the delayed conversion to a new paradigm by the tradition-bound scientists described by Thomas Kuhn.<sup>6</sup> Disparate as they might seem, however, I contend that the fundamental pattern of self-organisation underlying those transformations is common to *all* evolving selves. Contrary to the neo-Darwinist picture of environmental determinism, therefore, the adjustments required to maintain the organisational stability of the self through life's changes are *not* generally imposed from outside, but, as with all self-organising systems, they *emerge spontaneously* from within the self to meet these new challenges. What may at first appear to an external observer as irrational behaviour, therefore, may be judged from a self-organising perspective as being perfectly rational – at least as far as the organism *itself* perceives things at the time.

Exactly how the actual process of emergence works, however, is a source of as much contention amongst emergentists – as its advocates are called – as it is amongst its critics, and provides one of the principle themes running through this book, closely related as it is with self-organisation. What can nevertheless be said with reasonable assurance is that changes in self-organising systems emerge as a result of some mixture of *upward and downward pressures* (influences, impacts or effects) from factors arising at different *levels* within the system, from the genetic and neurological level at one end to the social and cultural level at the other. Whether explained in mechanistic or other terms, it may also be

reasonably claimed from all the related investigations on evolving systems cited here, that the emergence of novel features invariably involves some *combination or re-combination* of pre-existing features. This applies as much to the self's social and technological *extensions* within the self-field as it does to the biological self at its centre; a process that begins with the acquisition of language in early childhood and the *external* manipulation of toys and other objects in a spatial environment, by which the child first learns to classify *things* as well as other living beings within that first small universe.

The same combination and recombination of personal, social and technical elements in the nascent self-field also introduces the child to a material and technological world the future adult will spend his or her entire life relying upon – a world which, the philosopher Bernard Steigler<sup>7</sup> argues, defines us as uniquely *technical beings*. Given the engineering skills as well as the widespread use and manufacture of tools by numerous other creatures recorded here, that claim is questionable, to say the least. However, there can be no denying that human life is saturated by and dependent upon technology to a degree that far exceeds that of any other species, the effects of which humanity now struggles to control.

For Stiegler, the primary reason for that struggle is that the *speed* of technological development outstrips that of other aspects of human culture, which might otherwise contain it, but now lag behind. However, the relative speed of that development does not explain technology's momentum, which, as others argue in this book, to all extents and purposes has a life of its own. I have also written elsewhere on the idea of technological and cultural products such as building forms and automobiles evolving as *self-producing types* and *assemblages* of artifacts, the combination of which has generated whole urban patterns and ways of life – a combination, with its dependence upon fossil fuels, which has had a dire effect upon the planetary environment.<sup>8</sup>

In this book I go further, however, in explaining how the generally conservative character of the human self has contributed to the environmental crisis. The problem lies not just with the common resistance to ideas and events that might challenge the integrity of the self, or of those groups and institutions individuals identify with most, but with the deployment of humankind's advanced technological knowledge and skills to shape the natural environment *solely in favour of human interests*. While niche construction theorists have argued that other creatures also employ their technological capacities in modifying the natural environment to suit themselves, the vital difference between their relatively modest efforts and that of humankind's is that the environmental impact of other creatures is mostly confined to a small area. In stark contrast, supported by a highly effective combination of organisational and technical skills – the two factors are virtually interdependent – *Homo sapiens* has effectively turned the whole planet into a giant exercise in human niche construction, at the expense of practically every other form of life on Earth, a geological transformation which now has a name of its own: the Anthropocene Age.<sup>9</sup>

We must now contemplate the very real possibility, therefore, that in addition to the usual suspects – the fossil fuel industries, the corrupt politicians and a voracious global economic system – there might also be something in the fundamental nature of the human self-field and the self-organising system that holds it together, that is at least partly responsible for the crisis. Neither, as is all too clear, are there any easy solutions to hand. It is alright to suggest we have to change our modern ways and technologies to save both ourselves and the natural resources we depend upon. However, when the human self is so embedded in those same modern ways and technologies that it is nigh on impossible to separate them, this is proving more difficult to achieve than many might have assumed.

These, then, are the principle themes running through this book. Some of them will doubtless be more familiar to certain readers than others. Taken all together, however, what this book offers is a new way of looking at the self, which allows us to see and understand what we have not seen and understood clearly before – namely that the individual human self has evolved from and is driven by the very same self-organising and emergent forces that have created all living creatures on this planet: the invisible but indispensable medium, as I explain it, maintaining mind, body and environment as an *integrated field of being* throughout life's changes.

Far from being what divides humans from those other creatures, therefore, the self is actually what *unites* us with them all. What really *does* set us apart is the unprecedented accumulation of organisational and technological power that has allowed our species to dominate life on Earth, and which now threatens humans with their own destruction, together with all those other life forms already threatened with extinction, for which nature's normal checks and balances were ill prepared.

Much like the combinatorial process of innovation described in these pages, the structure of the book itself brings together concepts and theories from numerous separate disciplines, combining them in new ways, from which, step-by-step, a metatheory of the self that is common to all animal life is constructed. Some of these ideas, like extended cognition, surface repeatedly throughout the book, and, along with field theory and self-organisation, provide the mainstay of my approach. While, at this stage of the venture, such theories may fall short of a full causal explanation – not surprising, given the questions raised in this book about the very idea of causation itself – I take the longer view of the value they offer in explanation of the complex interactions between organism and environment described in the following chapters; interactions that no mechanistic explanation of the animal brain and nervous systems alone can fully account for, and may indeed *never* be able to account for.

That said, though the purpose of this book remains focused on illuminating the bigger picture, due respect is paid throughout to the significant discoveries in the neurosciences and other fields that have thrown light upon many of the more specific aspects of human and non-human animal cognition and

behaviour. Discoveries such as the spontaneous expansion of personal body maps involved in the handling of tools and other objects, for example, not only open up new avenues of research into the practical nature of the self-field, but may also, as in this case, support the earlier insights of philosophers into the same phenomena – what Polanyi in particular described in remarkably similar terms as the ‘absorption’ of objects by the body.<sup>10</sup>

The accommodation of empirical research of this kind at the neurological level, together with the numerous studies of cognition at intermediary and higher levels of human and non-human behaviour referenced in this book – all of which is essential to explaining how the various pieces of the jigsaw puzzle that is the self-field come together – requires frequent shifts of perspective between the micro and macro levels of enquiry. As with the primary theories of self-organisation and emergence, the approach works somewhat like an adjustable camera lens, the focus of which can be changed from close-up to wide-angle and vice-versa, but which always returns to the latter position.

Given the very broad range of topics required of the field view of self-organisation I advocate, my selection of research is also purposefully limited to those studies, whether by famed pioneers or lesser-known researchers, which I believe best illustrate the different arguments and evidence mustered here and the problems they raise that are in need of resolution. Any attempt to provide a more complete survey of the literature on each topic would have required several more volumes, and perhaps more than one working lifetime. It would also defeat the purpose of this book, which is to provide a metatheoretical framework illustrating the various dimensions of the self-field and the processes underlying its evolution and development across animal species. I trust more specialised readers will therefore be content with the references listed here which they can mine for further research, should they so wish.

Equally, no attempt has been made to gloss over any differences of language and style of exposition in the approach and findings of individual researchers, as is often the case, especially with overviews of research where alternative epistemologies are ironed out. On the contrary, the strength of any true metatheory lies in its capacity to embrace those differences within a common schema, while at the same time questioning any anomalies in the research, as in the counter-claims, for example, made for ‘mirror neurons’ and what they may and may not tell us about empathy. The focus on selected researchers also has the advantage of offering more space for an explanation of their contribution than might otherwise be possible – an important consideration if the different backgrounds and approaches involved are to be understood.

Just as important, especially in a work with a strong psychological content, in the spirit of my concept of a living, vital self, it allows individual researchers sufficient room to explain their beliefs and approach to what, for all science’s rigours, is still a human enterprise. As Polanyi – who was an established biochemist before he turned to philosophy – reminds us, scientists are not wholly detached from their work, but are very much personally and emotionally

committed in their pursuit of knowledge, the value of which those emotions also signal:

The personal participation of the knower in the knowledge he believes himself to possess takes place within a flow of passion. We recognise intellectual beauty as a guide to discovery and as a mark of the truth.<sup>11</sup>

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