

Part I

Human Exceptionality

Introduction to Part I

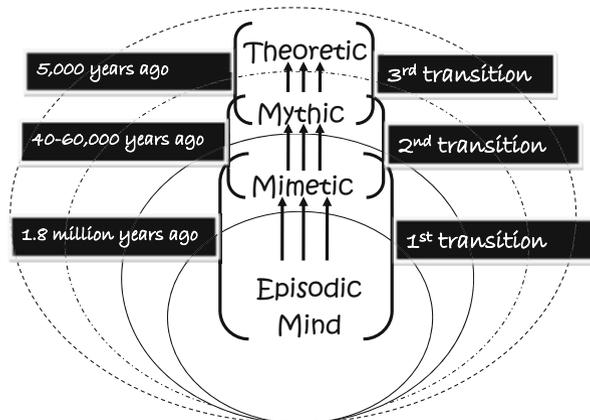
In Part I, we investigate the basis of our success as a species, our unique consciousness, as the reason for our exceptionality. Far more than any other animal, we have an obsessive need for information from the world around us, because we have an added layer of consciousness that other species don't have. This obsession is not only for information to ascertain our place in a hierarchy, a social or work group, or even in our intimate relations with others, but for the fundamental need to find out our relationship with the world. It is this fundamental type of information need we are talking about in this book because it is the basis of the link between information search and new knowledge production.

We cannot design intuitive search engines for information searches whose objective is new knowledge production until we begin to design for this fundamental level of information need. We begin to show how we can do this in the Conclusion to Part I. But Part I builds the argument slowly, starting from setting information need in its widest possible perspective: information need as a driving force of human consciousness, which includes its evolution. Over the hundreds of thousands of years of human evolution, driven by our information need faculty, humans have become more attuned to information in the world around us.

Our information-sensitive consciousness is the basis of our exceptionality.

The narrative device upon which we build our investigation of human consciousness is evolutionary psychologist Merlin Donald's (1991) groundbreaking book *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Donald sets out a theory that divides the evolution of our consciousness into four phases and three transitions, illustrated in Fig. 1. We give a rough timeline for the phase transitions on the left-hand side of the figure. Each phase has a different type of cognitive architecture that defines human consciousness for that particular phase, which Donald calls the "Mind." What Donald means by "mind" is the way the outside world enters our brain, is stored there, and is constantly recalled and used by

Fig. 1 Donald's four-phase, three-stage transition theory of the evolution of human cognition (with approximate timeline for each transition on the left), which remain as layers in our present-day consciousness



us to shape and determine, not only how we think and what we think about, but also the way we interact with the world and each other.

Each new “Mind” phase engenders a new human lifestyle, a new way of living—a new “culture” to use Donald’s term. This is because the “epigenetic influence” (the nongenetic influence on genetic expression) exploits the “latent cognitive potential” in a given culture phase (Donald 1998, p. 1), which drives the evolutionary transition to the next mind phase. We presently live in the Theoretic Culture, but the Episodic Mind phase of our brain’s evolution is still present as the base-layer of our memory system and consciousness. In fact, it gives the name to our primary memory system concerned with how we experience the world: episodic memory. The episodes we experience and then store in episodic memory provide the vehicle or channel interface between the reality of the outside world into ourselves, what is inside us. That is, we remember and think about our intersection with the world in the unit of episodes of experience.

If you think about it, a lot of our culture, the way we do things, the way we relate to each other, and the way we experience and represent ourselves in the world to others, is based on the episode. It forms the basic structure for our literature, our TV, our movies. But the episode is also how we frame our experience of life to ourselves.

We get up from bed in the morning and the shower is ruined by the hot water heater breaking down. When we remember the episode, and recount it to someone else, there is a story-like quality with a beginning, middle (the climax), and an end—a cause-and-effect structure if you will. The same is true of a lovely moment the first day of school when our frightened child turned to us and held our hand, tight, before being taken away by the kindergarten teacher. You say to yourself: “I didn’t want to let her hand go.” Or you say: “I told her in my tight grip to be strong; she can do it.” These reactions of ours to our experience, contained within the episode, codify how we feel about ourselves and who we are. We go over and over again in our mind our experienced episodes—Donald’s second layer of consciousness, the Mimetic Mind—trying to understand them. But because the episode is the vehicle through which we connect ourselves to the outside world, by mimicking the episode in our mind over and over again, we are also trying to understand the world and our place in that world.

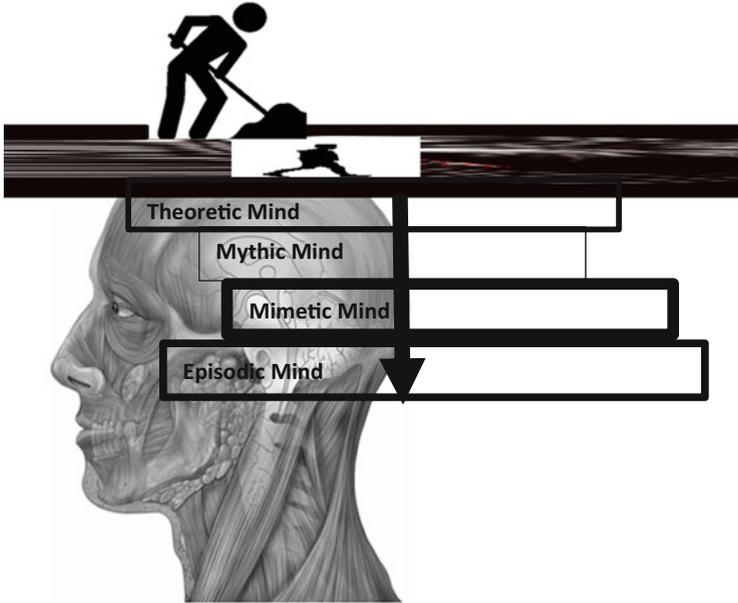


Fig. 2 The layers of human consciousness: Digging down to the fundamentals of human consciousness, to get to our first evolutionary self

The Mythic Mind, Donald’s third layer of human consciousness, underlies a sort of parallel narrative in all our literature, movies, theater, and paintings. All our best movies—Ridley Scott’s *The Blade Runner*, Lucas’s *Star Wars* saga, Fellini’s *La Dolce Vita*, Bertolucci’s *The Conformist*, Coppola’s *The Godfather*, or this year’s *Dunkirk*—all these movies set the narrative of their characters’ lives in some sort of spiritual or mythic dimension. To most people, this spiritual or mythic dimension of our lives is more relevant than the Theoretic Mind.

The Theoretic Mind, Donald’s fourth and final layer of human consciousness, marks our present-day society as a culture that is constantly moving forward, progressing scientifically and technologically as we come to fully understand our world in terms of scientific laws, models, and theories.

As shown in Fig. 2, Part I is a digging operation through the four evolutionary layers to establish a definition of human consciousness as it is today. In this book, and in Part I in particular, we spend a lot more time and effort examining the Episodic Mind layer of human consciousness than Donald does. Donald’s theory focuses on the third layer, the Mythic Mind layer. We spend a lot of time on this third layer as well. But it is the Episodic Mind layer of consciousness that forms the basis our examination of information need and information search.

The Fig. 1 diagram serves as a navigation guide for the following chapters in Part I.