1. Generic Minds

Overview: There is no such thing as a mind, because 'mind' is not a thing. 'Minding' is a faculty that we attribute to some systems, to make sense of their choices and behaviors. Speaking loosely, a 'mind' is a system which acts autonomously, for its own reasons, and on its own behalf. Minds perform a minding function and can be said to have mindset and identity. We attribute minds to ourselves and others to anticipate and explain people's choices and behaviors in terms of their beliefs and desires – taking what Daniel Dennett called the intentional stance.

The concept of 'suggestion,' defined as 'attempted influence,' is introduced as a basis for human communication, and it is shown that suggestion is more fundamental than information. We discuss generic minding as the reception, evaluation and processing by a system to the suggestions that it receives, and its generation of responses to those suggestions.

Next, we define mindset as the pre-acquired structure that a system brings to the situations that it encounters, and to the minding it performs.[1] Mindset guides the minding process to decide how received suggestions will be handled.

We consider various types of composite mind that are found in nature: e.g. swarm minds, pack minds and stigmergic minds (like ant colonies).

Finally, with this background, we introduce the theme of this book: that some human groups may be seen and studied as minds in their own right.

> Nobody phrases it this way, but I think that artificial intelligence is almost a humanities discipline. It's really an attempt to understand human intelligence and human cognition.
>
> Sebastian Thrun

Given what we now believe or can surmise about animal minds; given our current projects to design and build artificial minds; given the attempts by radio astronomers to detect the presence of intelligent, alien minds elsewhere in the universe, it is no longer possible to think of 'mind' as an exclusively

1 These concepts are discussed more fully is some previous writings, all freely available on the Web. See especially *In a World of Suggestions* and *Who Goes There?*

human feature. To help us recognize other kinds of minds when we build them or meet them, today we need a generic definition of mind – of what it means to have or be one. Alan Turing's famous criterion[2] – roughly, that a computer must be considered intelligent if a human interlocutor cannot distinguish its written responses from those of a fellow human – is much too narrow, as it fails to acknowledge the possibility of an alien mind that isn't human, but is intelligent nonetheless. We write science fiction and make films about entities which clearly don't behave or speak as human beings do – but which demand to be recognized and treated with all the rights and respect that humans claim for themselves, and feel they owe to one another. In fact, such encounters have happened many times right here on Earth, as people of different tribes or races encountered one another and grudgingly came to accept their differences.

Nor can we restrict our notion of 'mind' to single entities like animals, aliens and robots. We now perceive that the colonies of ants and termites have composite minds of a sort. We recognize corporations as 'legal persons,' and habitually speak of many other groups and associations (e.g. nations or churches) as having group minds – collective beliefs, desires and intentions – of their own. The habit is ancient and indispensable for almost any kind of political, sociological or historical thinking. In the next chapter and the remainder of this book, equipped with the definition of 'mind' to be suggested here, I will argue that this way of speaking is worth taking literally, and not just as a metaphor. Human groups may have collective desires, beliefs and intentions just as we do. It is worthwhile to understand them in such terms, and to think through what they intend not just for outsiders, but for their own people.

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'Mind' is an abstract concept which can be played as broadly or narrowly as we wish. My own preference is to define this term in the broadest sense that's useful, and then distinguish different kinds of minds by their specific capabilities and characteristics. I want a concept that excludes merely cybernetic mechanisms like the thermostat of a room or the control system of a self-driving car, but that includes the minds of all, or all but the most primitive living creatures, and that includes the human groups of interest to this book. How to proceed?

Prima facie, there are three features that I would take as fundamental:

- First, a feature of *irritability* (or *responsiveness*). Any system with a mind will will actively respond to stimuli, and to the world around it. A stone does not have mind: It just sits where it is, or gets moved by

2 On the Turing test, see http://en.wikipedia.org/wiki/Turing_test and www.psych.utoronto.ca/users/reingold/courses/ai/turing.html

external forces. It can move and be changed, but it does not act.

- Second, *purposefulness* (aka intentionality, although this word has a different technical meaning as well). A minding system has beliefs and desires, and can act purposefully to realize them. Typically, its central purpose is to maintain itself, whatever else. After that, it may seek to grow, or live out the natural trajectory of its kind, or transcend itself in some way. Not content simply *to be*, it seeks *to become*.
- Finally, *autonomy*: A full-fledged mind acts on its own behalf. It may be influenced, but is not directly controlled by external signals, nor by any program that another mind wrote. The drone aircraft, however sophisticated, is not truly a mind, because its responsiveness and purposes are not its own. But Asimov's robots, actuated by his three Laws, could be considered minds – as they are capable of autonomous preferences and choices within the limits of those laws, and of their man-made 'positronic brains.'

These features will serve as a rough definition of mind, and we'll expand on them shortly. Yet children do not use a definition to recognize mind in other people or in themselves; they take a different approach entirely. In developing what psychologists call 'theory of mind' (ToM), normal chil-dren learn to attribute mental states – e.g. desires, beliefs and intentions – to themselves and others; and they come to understand that others may have desires, beliefs, intentions, *and perspectives* which are different from their own.[3] Deficits of ToM are proposed in explanation of various patho-logical behaviors, notably those on the autism spectrum. In short, *mind* is a quality that normal children and adults spontaneously attribute to entities which are too complex to be understood and dealt with as systems which have been designed to operate in predictable ways, or as physical relationships of cause-and-effect.

1.1 Minding

There really is no such thing as 'a mind,' because minds are not material entities or 'things.' Rather, we should think of '*minding*' as a process – as one of the functions of living organisms, and of some other systems as well. As I write, neuroscientists and artificial intelligence engineers are attempting to study minding in terms of information processing, but I believe that this is a mistake because the engineer's quantitative notion of 'information,' useful as it

3 Explanation through such attribution of intentions, desires and beliefs has been called "the intentional stance" (by Daniel Dennett), in contrast to the physical stance and the design stance.

is, is too limited to stand as a basis for human thought and communication. 'Bits' (binary digits) by themselves do not carry *meaning*. What gets exchanged between newborn and mother, for example, is not information as such, but rhythms, bodily sensations and attempts to influence. Without these '*suggestions*,' as I call them no communication of meaningful information is possible. We can speak of the suggestions taken up, accepted, believed or acted upon as 'operative suggestions.'

My suggestion here is that people are not so much passing information as trying to influence each other when they talk or write, or make pictures and diagrams – or when they touch each other with a fist, a caress, a handshake, a kiss, or in whatever fashion. If you turn to Appendix A, you will find a fuller exposition of this point.

In ordinary language, the word '*suggestion*' has a double meaning. If I say, "Let's have a beer," I am suggesting the idea of 'beer' to your mind, and suggesting too a familiar genre of social engagement. If I tell you to look into my eyes and count backwards from twenty, saying that you will feel increasingly relaxed and drowsy as you do this, and that when you reach zero you will be deeply asleep, we call this hypnotic suggestion.

For us, suggestion is a term of art which conflates both of these meanings. It is not meant to replace, but rather supplement the concept of '*information*,' by directing attention to a different aspect of the commun-ication process. The minding process can be conceived and analyzed as suggestion processing in this broad sense. Silent thinking can be understood as a form of autosuggestion: attempted self-influence or interpretive responsiveness to the 'suchness' of things as they appear before us. In this way, all thought and all communication can be seen to rely on suggestive influence and its effectiveness.

'*Minding*' now can be a transitive verb (as in the phrase, 'minding the baby' or 'minding the store'). But it can also be a noun, naming the process through which a baby, store, or anything else, receives attention from a system capable of giving it. While there is no such thing as 'a mind,' *minding* is one of the activities of any living organism, and of many systems which are not living organisms. Asimov's robots perform a type of non-human type of minding with their positronic brains. Ant colonies, beehives and flocks of birds or fish perform a type of minding. And so do human groups, as we'll discuss below.[4]

Our focus in this book is on the minding of various human groups (e.g. families, business firms, nations and whole societies) comprised of human individuals who compete, cooperate and exchange suggestions with one another. Before we get to such human groups in the next chapter, there are some points worth making about minding in general.

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4 This is a good place to remind the reader of the distinction (already drawn in the Preface) between a 'bevy' – a mere population or set of people like the passengers on a train or bus – and the true groups of interest here: those capable of collective minding.

1.1.1 Resonating Networks

Unless we believe that minding is somehow divine or supernatural, we are committed to think of it as a natural function performed by certain physical systems. Typically, it seems to be a function that occurs in resonating networks of some kind (e.g. in brains, ant colonies or human populations) rather than in computer hardware, which operates basically on the logic of a Turing machine. We know quite well how hearts pump blood, how stomachs digest food, and so forth. But the field of cognitive neuroscience is still in its infancy. On the other hand, we know how ant colonies work, and how some other minding systems function. We have Gerald Edelman's theory of neuronal group selection (NGS) which treats the brain as a system of replicating patterns of neural firing, which learns through some form of evolutionary, Darwinian logic. While this book makes little use of NGS theory, it's obviously thinking along NGS lines.

If minding happens in resonating networks of this kind, in which alternative patterns of activity compete for dominance, then there is no reason at all why the nodes of that network must be contiguous, or contained within a single envelope, whether of skin or steel or plastic. Dispersed populations, whether of termites, bees or people, also perform a minding function and are also minds of sorts. This book takes special interest in the group minds comprised of human individuals, but we learn a lot about these by studying group minds comprised of simpler entities.

1.1.2 Communication and Relationship

Minding networks use various modes of communication, and form various types of relationship amongst their members depending on the modes of communication used.

- Peer-to-peer communication allows and lends itself to reciprocity and trading, and to symbiotic relationships in general.
- Command-and-threat communication makes for dominant/submis-sive, extortive and/or parasitic relationships.
- Broadcast communication is indispensable for leadership on any large scale, and is useful too for holding a group together, and directing its activities.

A fourth type – stigmergic communication[5] – has only recently been recognized, though it is ubiquitous in nature, and has been used by humans since ancient times. In its original and usual sense, it is communication on a

5 '*Stigmergy*' from *Stigma* + *Ergos* – 'signs causing work.' See the Wikipedia article on this phenomenon, and further description of it Section 2.1.6.

'to-whom-it-may-concern' basis, through messages 'written' somehow on the environment,. At its most basic, it is the path through a forest (or across a lawn) that people follow just because they see that others have walked there before. Most generally, we can think of stigmergy as the communication received by a minding system from its local environment – a context in which it finds itself at the present time. As such, it is the basis of niche construction (used birds when they build their nests, or beavers when they build their dams). It is the basis too of all swarming behavior – e.g. the flocks of birds, schools of fish, or human mobs and crowds, where individuals are directed just by the behavior of those around them, without other guidance of any kind.

It turns out that stigmergy is a key feature of all collective minding – used much more powerfully and subtly by human groups than by the termites or ants. By its means, a great number of individuals can self-organize efficient collaboration in response to their common situation, with no direction whatever from a central source. It allows simple individual minds to come together as composite minds of almost unlimited size and complexity: ants into ant colonies; neurons into brains; human individuals into large human societies comprised of millions, and now billions, of people.

Through various forms of communication (and other modes of inter-action), minding entities enter into and withdraw from relationships with other minding entities – relationships of predation, competition, parasitism and symbiosis. The crucial point for us is that the regular interaction of a few or many individual beings (of whatever kind) generates a new system with new emergent properties, which thereafter set a context for the minding and behaviors of its individual members. In this way, a number of cars on the road create a traffic flow, a number of scholars working in a given field create an academic industry. The individual and the whole group engage each other in a 'loop of participation' formative for both.

1.1.3 Group Formation and the Loop of Participation

In biology, niche construction is one outcome of what Richard Dawkins called extended phenotype: an expression of a creature's genetic makeup which prompts it toward some active, advantageous modification of its habitat. The classic example is the dam-building of beavers – stimulated, it turns out, by the sound of running water. To turn off that noise, beavers cooperatively dam the stream – with the advantageous side-effect of creating a pond which provides access to food and some protection against predators. Likewise, niche construction is what humans are doing when we build homes and cities, write books, and generally modify the physical and cognitive environment for our advantage or pleasure.

By analogy with those beaver dams, human relationships and groups are habitats of a sort, social contexts in which we seek to thrive; and our construction and maintenance of these is a remarkable form of niche construction. Jointly, human individuals create a social and material context

which will hopefully work to their advantage, but to which they must then adapt. In such 'loops of social participation,' we create the environments which in turn shape us; and we see such loops on every scale from dating or mating couples to the human community as a whole. They are discussed further in Section 5.3, in connection with the collective learning of a newlywed couple. The crucial point there is that when two (or more) individuals regularly engage with one another, their inter-communication establishes what now constitutes a system in its own right. This new system can learn; it can build collective mindset; and it provides a social niche, a habitat, for its component individuals. This habitat has causal force for them, even as they create it. It's in such loops that we live our lives.

This concept – of social participation as a loop of mutual influence between the individual entity and its group – explains how groups are formed (as will be discussed in some detail in Chapter 3), and how they become decadent and fall apart. Imagine some number of individuals, whether human or not, engaged with each other in some way. They may not even be aware of each other; certainly, they are not yet organized in any way. But somehow, they find themselves collaborating toward some common purpose – of which they need have no awareness at all. Such a team is what Kurt Vonnegut[6] termed a karass. Now imagine that these karass-mates get organized in such a way that their original purpose is lost. They will then be what Vonnegut called a granfalloon – a fundamentally meaningless association in which the individuals are bound. In human terms, the karass is a source of autonomous collaboration and freedom; the granfalloon is a source of role definition, identity and constraint. Most human associations have elements of both, but usually are much more one than the other. What starts out as a karass becomes increasing gran-falloonish with the passage of time.

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What I describe as a loop of participation is much the same as Albert Bandura's concept of reciprocal determinism (or reciprocal causation) – a situation that obtains in any complex system when the behaviors of its component parts are shaped in turn by the whole context which they comprise together. The paradigm case is a co-evolving ecosystem, in which the adaptations of each species alters the environment in which all must survive and adapt. Or it might be a real time-computer game with several or many players who modify their common environment (the playing board) as they make their moves. In the systems of interest here – a human group, or a whole society – there are many autonomous players who influence each other directly, of course, but are also influenced by their shared situation – which they create together by their individual choices and actions, but which is

6 In his novel *Cat's Cradle*.

affected too by natural events: climate change and weather, epidemics of disease, earthquakes, and whatever else.

In such systems, all simple ideas of causality break down because their causal webs are too complicated for description, and to shaped as well by 'butterfly effects.'[7] For such systems, we must speak of correlations and risk factors. We must conduct simulations (if we can) and try to estimate likelihoods. We cannot speak of simple cause-and-effect, and cannot predict, in the strict sense that an astronomer (for example) predicts an eclipse of the sun. The best we can do – what we try to do, in practice – is to *anticipate* the most important alternative futures, and gear ourselves up to meet them.[8]

1.1.4 Cybernetic Control: Calibration and Feedback

Minding subserves a function of homeostasis, the self-maintenance of a system which needs energy and other resources to continue in being, and whose equilibrium is constantly buffeted by external disturbances and threats. Minding does what it can to respond to these, and keep the system going. As well, minding subserves a function of homeorhesis, the ability of a system to return to a pre-set trajectory despite the forces pushing it off course. Either way, minding is intentional and self-intersted as we've said – oriented toward the setting and fulfillment of life-furthering goals.

This cybernetic aspect of minding has two phases: *calibration* (the setting of a target to aim at), and *feedback* (the aiming process itself). But, as Bateson pointed out,[9] it appears that a system's calibration is itself the outcome of cybernetic self-governance, a cycle of calibration and feed-back, at a more fundamental level. The setting of goals for a system is itself a dynamic process which also happens on the fly – in real time, though on a different time scale.

Feedback is a process of error correction. Calibration can be seen as a spontaneous breaking of symmetry.[10] In fact, (and this is Bateson's central point in this discussion), the fundamental pattern of all minds anywhere is a zig-zag ladder of alternating form and process, calibration and feedback – each level of different logical type from all the others.

1.1.5 Consciousness

What (if anything) are we going to say about collective consciousness – the self-awareness, the collective sensations and emotions, of our human groups? Is your family, or a business firm, or a whole nation jointly conscious, in any

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7 So-called from the paradigm example of the Chinese butterfly who flaps its wings – and thereby causes a hurricane in the Carribean.

8 This distinction between prediction and anticipation becomes crucial when we try to learn from experience, or from history. More on it below in Section 7.1.2

9 *See Mind and Nature: A Necessary Unity*, Chapter VII, *From Classification to Process*.

10 As described in Appendix B, Section B.1.2.

worthwhile sense? What does it mean to say that you, as a single individual, are conscious? Or that I am?

We will indulge a few speculations on the nature of consciousness much later on, in Section 5.2, in connection with group learning. Here there are just two points to make. The first is that it would be poor philosophical strategy to reserve the concept of 'mind' or minding for systems that are conscious. Doing so renders that notion circular and inexplicable. If we hope to understand and explain our experience of consciousness, we need to trace its emergence in networks of entities which, at the lowest level, have no consciousness of their own. Though some still feel that the phrase 'unconscious mind' is an oxymoron, a contradiction in terms, it is well established by now that most human minding happens automatically, without conscious volition or introspection. We digest our food and carry on all the other vegetative processes of life with no awareness at all of how we do it. We walk and talk automatically, conscious only of our intentions and meanings but not at all of the complex muscular coor-dination involved. We can drive our cars and carry on conversations. We do so much unconsciouly that is it is actually something of a puzzzle to explain why conscious is needed, and why it evolved at least in our own species, and probably (to some extent) in others as well.

A second crucial point is that our word 'consciousness' covers a num-ber of distinct features which need not be present simultaneously. For our purpose, we will distinguish just four of these features, which by no means exhaust the concept:

- To say that system A has access consciousness to system X means that suggestions from X are available to A. I have no direct access to what my friend (or anyone else) is thinking. I can only guess at what he is really thinking from what I hear him say.
- To say that system A has phenomenal consciousness ascribes to it what Antonio Damasio called 'the feeling of what happens.' It ascribes a quality of wakeful awareness and attention in that system's dealings with the world around it. To have phenomenal consciousness of something is to be awake, attentive and (to that extent) engaged with it. When neuroscientists speak about 'the hard problem' of consciousness, it is phenomenal consciousness that they have in mind.
- Representational consciousness is the capability of system A to build and keep and recall some representation (symbolic, graphic or whatever) of its own experience. If phenomenal consciousness is 'the feeling of what happens,' then representational consciousness is 'the remembrance of things past.'
- Finally (for our purpose), hypothetical consciousness is a kind remembrance of things that have not happened but are merely imaginable by extrapolation from things that have. It is a calling to mind of things (possible or impossible) which sufficiently resemble past experience to be conceivable.

In short, consciousness is not a single faculty, capable of study as such, that a system either enjoys or lacks. All animals (and probably any minding system) must have access consciousness – must somehow receive suggestions of what is going on. Most creatures with central nervous systems probably have some phenomenal consciousness. They remember their experiences to some extent, and it's probably 'like something' to be them.[11] Representational and hypothetical conscious are tied up with the use of symbols, and may well be uniquely human (or hominist[12]) until the AI project gets much further than it has to date.

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Minding as defined here can occur in diverse forms and at different levels of sophistication from the single living cell to the human, and beyond. Purposeful agency requires suggestion processing that is adaptive and homeorhetic: directed toward some goal. Irritability requires the suggestions actually stimulate the system, and that its goals be sensitively chosen – selected appropriately, with reference to the system's internal and external conditions. Autonomy requires that the choices of goal are made by the system itself, and not by some external controlling agent.

To understand minding as suggestion processing compels a further recognition that this processing cannot be random. Though it may be useful for the system to thrash about sometimes, to explore its world and its possibilities, to be autonomous and purposeful it will need some internal guidance system to direct its minding process. It will be steered or guided in some way by a structure of internalized suggestions that we'll call mindset.

1.2 Mindset

To be capable of autonomous responsiveness and agency, a minding sys-tem must have certain physical channels and facilities for receiving, processing and acting upon suggestions. Also, it will need a repertoire of possible response-behaviors and some means of appropriately choosing from this repertoire. The structures that provide all these features are what we call its *mindset*. At a minimum, there will be a physical *architecture* enabling the system to sense and respond, both to its world and to its own internal state. And there will be a certain number of possible actions that the system can take. Living cells and simple multi-cellular organisms have tropisms to navigate in the environments for which they have evolved. Human groups have sufficient mindset to make themselves at home almost anywhere on the planet, and probably soon on Mars. Between these extremes of versatility,

11 See Thomas Nagel's famous paper, *What Is It Like To Be a Bat?*, or the Wikipedia discussion of it.

12 See Appendix C.

there are endless possibilities, a few of which will be outlined in Section 1.3 below.

A system's mindset is variable to some extent. By genetic evolution over successive generations, by collective learning and transmission and by personal learning also, new patterns and habits can be formed and old ones dropped and forgotten. Because these patterns compete, mutate and co-evolve, they comprise what Bateson saw to be a kind of ecology – an ecology of mental patterns which we'll conveniently term '*memes*,' following Richard Dawkins' coinage[13] – though their analogy with his 'selfish genes' is not as strong as Dawkins first claimed.[14]

In ordinary language, these memes are called skills, habits, memories, concepts, tastes, desires, beliefs, values and so forth. Here I will usually speak of them as memes for short, but sometimes as cognitive or ideational structures. I may even call them 'engrams' on occasion, to emphasize that they must be *written* onto brains in some fashion. Together with physical, sensory-motor architecture, these memes (however acquired and taken up) comprise a cognitive 'infrastructure' which turns pure attention (sometimes called *mindfulness*) into purposeful suggestion processing. Think of mindset as the buffer that any minding system must have between its world of raw sensations and its phenomenal world of meaningful things and behaviors.

1.2.1 The Physical Architecture

The physical component of mindset is so integral to human experience that we mostly lose sight of it, tending to think of ourselves as 'blank slates,' written upon by perception and practice. Actually, as Kant may have been the first to notice, the phenomenal world of appearances (the world we see around us) is not the world as it really is. This is the case for all minds, and not just human ones: Minding systems bring a great deal of evolved physicality to their experiences, which inclines them to meet and deal with the world according to the types of system they are. Bats meet a bat-world, and deal with it in a bat-like way. Fish meet and deal with a fish-world; worms with a worm-world; and so forth. Corporations see a world of suppliers, customers and legal constraints. States see a world of subject-citizens and of other states. Every system evolves a physical mindset to grasp and cope with a world that it inhabits and appropriates for its own survival.

The physical features of a given system's mindset include both the components or nodes of its network and the relationships and communication

13 See http://en.wikipedia.org/wiki/Meme and http://www.susanblackmore.co.uk/Chapters/awaken.html

14 Where genes are definite molecular structures admitting a clear distinction between genotype and phenotype, no such distinction can be drawn between a 'memotype' and its manifestation. But Dawkins was correct, I think, that cultural patterns, like genes, endure and propagate primarily because they are good at doing so, and not necessarily because they benefit their hosts. Some really harmful patterns, like holy war and the use of heroin, can flourish very nicely as effective replicators.

amongst these nodes. For a human brain, it comprises the the subject matter of neuroanatomy and neurophysiology. For an ant colony it is the queen and several castes of worker ant, and the way these inter-communicate. For a human group it includes physical infrastracture, and the established social institutions which govern the member's interactions and communications. We'll have much more to say about the physical architecture of the mindset of a human group in Chapter 6, where we review the situation in Europe on the eve of World War I as an example of dysfuctional mindset.

1.2.2 A Cognitive Toolkit

At the cognitive level, we can think of mindset as a repertoire and as a sort of toolkit. It provides the structure and patterning that a system needs to weigh and respond to the suggestions it receives. Overlayed on whatever physical structure, this cognitive layer of mindset provides an abstract system of memes and habit patterns to guide our feelings, thoughts and actions. Each such pattern guides the minding process to notice, parse, evaluate and respond to input suggestions for which it has been prepared and sensitized, whether by the evolution of its kind, or by its own past experience. Each pattern guides the minding process to broadly organize its planned responses (its *intentions* as we call them), and then to plan and co-ordinate the detailed implementation of these intentions in real time, as its situation changes and as further suggestions are received.

At a minimum, a system's mindset will include memetic patterns for:

- system homeostasis and homeorhesis, for metabolism, mainten-ance, growth and self-repair); and for
- coping with the typical situations of that system's ordinary existence.

In more sophisticated minds, mindset may also include patterns for:

- interpreting the system's lived experience and recording it for future reference;
- learning from experience by modifying its own patterns on the fly from past events remembered and interpreted;
- imagining and evaluating hypothetical situations analogous to those experienced in the past, but not expected to be precisely the same;
- developing contingency plans to meet such hypothetical situa-tions – triggered and implemented only as their conditions are recognized;
- etc.

With its cognitive toolkit, a system meets and copes with its world, but may also add to and refine the tools themselves. In effect, mindset constructs itself on the fly, through a self-referential process – like that legendary Texan who could lift himself off the ground by his own bootstraps.

1.2.3 To Eat Or Not To Eat

To understand the work of mindset more concretely, let's take the paradigm case of feeding behavior. Every living thing, faced with poten-tially edible morsels in the world around it, must decide whether to ingest or not. Young chickens start pecking at anything on the ground, soon after they are hatched. Human babies, crawling around on the floor, behave in much the same way, putting everything they find into their mouths. In this 'rug-rat' phase, it takes a lot of parental effort to keep them safe, and teach them to eat only what is given to them as food.

In fact, the problem is universal: all living creatures and minding systems must decide what to ingest and what to avoid; and it is only the structures of mindset – some 'built-in' and instinctive, others personally learned – that can help them choose what to desire, pursue and appropriate. The tempting morsel presents itself as a suggestion to eat, which must be weighed on its merits and either taken up or declined. As Shaw wrote somewhere, "The secret is to learn not to be tempted by things that are bad for you." Through genetic and cultural evolutiion and then from individual experience, such learning occurs on three, very different time scales.

About food items and whatever else, mindset makes the necessary judgment, whether to take something or leave it. A suggestion to be declined may replaced by a counter-suggestion will be accepted. Sug-gestions may get bundled together to produce a compound, more complex suggestion. One suggestion may change the weight, the relative desire-ability of another. In this way, the traveller may have a choice between the high road and the low one, and may prefer the former as more scenic until someone suggests that the latter would be quicker and easier to drive. Mindset will make the difference whether speed or beauty is preferred.

An executive committee faced with a decision of some kind may hire consultants to prepare a shortlist of options and make a recommendation, based on which a collective decision will be made. Mindset will figure at every stage of this process – in the selection of a consulting firm, in the feasibility study and identification of alternatives, in the selection of evaluation criteria for weighing these alternatives, in the preparation of a report with the consultants' short list and their recommendation, and in the committee's end decision as the outcome of this process. With a single option selected, group mindset will then construct a plan for implemen-tation, knowing very well that this plan will have to be modified on the fly as conditions change.

Of course, the role of mindset is similar for every minding system and every type of decision: In each case, mindset's task is to direct or guide – but never really *control* – the course and outcome of the decision process. We may speak loosely of control, but must stay mindful that mindset tenders suggestions, and that suggestions only *influence*. Their influence may be very strong, but it is never strong enough to rule out the possibility that other suggestions, and other brute realities, may supervene.

1.2.4 Sufficient Trigger

A key feature of any collective mind must be that system's collective mindset which guides the processing of suggestions along prepared lines. What happens, broadly speaking, is that the system begins to move or resonate as a whole, in response to a suggestion received and accepted. This may be no more than a tiny local stimulus which somehow propa-gates through the whole system, co-opting resources and deploying them for some collective purpose. We can imagine this process of suggestion, acceptance and propagation on the analogy of a pyre or bonfire, built in advance, as a structure of logs (painted, perhaps, with pitch or kerosene) and ignited, when the time comes, with a small match, or just a spark.

How is this possible? How does a spark become a bonfire? The answer is that any fire grows and spreads because that process has been prepared in advance somehow, by a fortuitous or deliberate assembly of flammable materials. A campfire, for example, does not just happen. It has to be built with tinder, kindling and fuelwood assembled in such a way that the match will ignite the tinder to make a little flame sufficient to start the kindling which can be fed incrementally until the fuelwood is burning. A pyre or bonfire is typically built hours or days in advance, so that the fire will spread automatically, once that match is applied, until the whole structure of firelogs are burning.

Thinking of mindset in this way helps us to understand why some suggestions fizzle quickly while others produce substantial effects. By analogy, if there is not enough oxygen in the atmosphere, or if the air is too damp; if the wood is green or wet, if the flame is smothered with too much wood, or spread out too far so that the heat dissipates before it can ignite further burning – in all these ways, your fire may fail before it gets properly started. And even well started, you may shortly find that you have not gathered enough wood to keep it going. It is similar with group behavior: if the public mood and/or political institutions are focused elsewhere; if the media and its 'talking heads' remain uninterested, if the players can make no gains on this matter, but only lose political capital by taking it on – then the suggestion will go nowhere. Conversely, if the conditions are right, a suggestion that would otherwise go unnoticed may be taken up as a faddish lifestyle or a mass movement.

When I saw aikido for the first time, I knew at once that I wanted to master it and teach it some day, though I never had that feeling about any other art or sport. Something about the collective setting of neurons in my brain at that time must have prepared for this ignition. Similarly for the whole of North American society, catchy memes like hula hoops, Smurfs and Pepe the Frog run like a forest fire through the culture, just because they are good at spreading.

Analogously, in Chapter 6, we'll review how the murder of an Austrian nobleman and his wife at Sarajevo sufficed to start the First World War. Everything depended, as we will see, on the ideas and mood in Europe at the time, on the games that were being played, and on the specific political and military dispositions. In general, we can think about the mass behavior of an ant colony, or of any minding system in these same terms – as the effect of a suggestive 'spark' on a mindset prepared to accept it.

1.3 Composite Minds in Nature

Before passing on to human associations, in the next chapter and for the remainder of this book, let's review some familiar examples of composite mind in nature:

- swarm minds, comprised by herding, flocking or schooling animals (like cows, sheep, and many species of birds and fish);
- pack minds, comprised by social animals like wolves, lions, dolphins, and chimpanzees;
- hive minds comprised though the interactions of social insects like ants, bees and termites;
- and finally, the *hominist* minds[15] (as I will call them) like those the numerous hominid species, most of which are now extinct, who were not yet fully human, but generally evolving in that direction.

In each case it will be seen that both minding (suggestion processing) and mindset are features of the composite entity in question. It will be seen too that human groups and societies make use of all the devices we'll mention.

1.3.1 Swarm Minds: The Herd Animals

Very many species, of every conceivable habitat and lifestyle, exploit the strategic fact that there is safety in numbers. Fish, birds, mammalian browsers like gazelles, reindeer, sheep and goats, and the arboreal monkeys ancestral to the hominids and eventually to Man himself, come together in groups, for the whole or much of their life cycles, to defend collectively against their

15 See Appendix C, Section C.1.1.

predators.[16] English has many collective nouns for such groups: We speak of a *school* of fish, a *flock* of birds, a *herd* of antelope or cattle, a *swarm* of insects, a *crowd* or *mob* of people. Here I write generically of 'herds,' but with all such associations in mind. One characteristic of a herd is that its members hang together for safety. Also, they move and act together, using neither central coordination nor stigmergic guidance, with each member paying attention and basing its activity solely on what its neighbors are doing. Though some herd animals – sheep, for example – may submit to leadership as well, the pure swarm minds are leaderless. Each member of the swarm just patterns its own behavior after the behavior of those around it, pursuant (as it appears) to a few very simple rules that can be simulated on a computer.[17]

There is controversy whether herd behavior is primarily cooperative, or primarily selfish, but no good reason to choose between these alternatives, since it could easily be both. Selfish herd theory[18] posits that each individual in the group seeks to minimize the danger to itself by moving as close as possible to the center of the group, thus ensuring that a predator will pick off some other, more accessible victim. Dominant individuals strive for and attain the safer central positions, while those who are weak or lower in rank are left more exposed. A contrary approach looks for significant mutual awareness and coordination amongst the members of a herd, beyond their individual fear or self-interest. In human groups, both principles seem to operate. In any case, we make extensive use of the swarming mechanism – to fight, to flee, and to manage our investments.[19] The results are not always happy, but the mechanism itself can be very strong.

By whatever mechanism, the normal outcome of herd behavior is generally adaptive for the group as a whole – though it was possible for primitive humans to hunt such animals by stampeding them collectively over a cliff. But the same instincts would allow the group, even a human group, to move toward a food source, or run from a predator that only a few of the creatures had seen or smelled. Swarm minds are not terribly sophisticated, but swarm behavior has been useful enough to persist even in minds as sophisticated as our own.

1.3.2 Pack Minds

The difference between a herd and a pack is that the latter has leadership. The members of a swarm mind (of a herd, that is to say) take their cues from what their immediate neighbors are doing. The members of a pack take their cues from an 'alpha' member (or members) to whom everyone pays attention. For that reason, the size of packs is often (but not always) limited by line-of-sight

16 See http://en.wikipedia.org/wiki/Herd_animal
17 See http://www.red3d.com/cwr/boids/, for example.
18 See http://en.wikipedia.org/wiki/Selfish_herd_theory
19 See http://psychcentral.com/news/2008/02/15/herd-mentality-explained/1922.html and http://www.ddb.com/pdf/presskit/Eprint_Contagious_SwarmTheory.pdf

or conditions of visibility. Herds have no such limitation. Also, the 'leadership' of packs is typically a prerogative which must be won through competition. The same competition may allot other perks (notably mating privileges) as well. For this reason, packs may be organized hierarchically, according to status, or 'pecking order.' Packs typically show dominance/submission behavior as the herd does not.

Like swarm minds, and overlapping considerably with them because many species use both modes, pack minds are also common in nature. Wolf packs are probably the best known example, but dolphins, killer whales and some birds of prey are also pack hunters,[20] searching, chasing and finally taking down and eating their victims in fairly small groups. Unfortunately, the degree of centralized coordination in these species is not known for certain. On one hand, they seem to be following and taking their cues from an alpha animal, or (in the case of gray wolves) from a mating pair. On the other, wolf packs behave like small herds in some respects; and it can be shown that just two simple rules can model the behavior of a wolf pack chasing a single animal: First, chase the prey until you get within a certain critical distance. Once within that critical distance, move away from the other wolves. These two rules together suffice to bring about the the typical chasing and circling behavior of wolves pursuing an elk, for example. A third rule might require more awareness of the other hunters: Once the victim is surrounded, move in together for the kill.[21]

What advantage is gained for a group and/or its members by following a leader? We can see at least three general advantages that leadership may afford:[22]

In any animal or human group, a first function of leadership might be described as *symmetry breaking*: the elimination or drastic reduction of painful, costly uncertainty. An effective leader points the way. With every flourish of authority, he selects one from a potentially infinite number of possibilities, and sets his followers working at this particular task, or marching in that direction. If the leader is wise or experienced, his whole group will have the benefit. But even if the leader's decisions are wholly arbitrary, made completely at random, his followers do not know that. So long as they trust their leader, so long as his leadership goes unchallenged, they can enjoy a singleness of purpose and sense of confidence that would not otherwise be possible.

Second, recognition and emulation of a leader sets an example and a standard that all the other members will have to try to live up to. Thus, ethologists have shown that older elephants, dolphins and several other species not only learn from their longer experience, but become useful

20 See http://en.wikipedia.org/wiki/Pack_hunter and www.wolfweb.com/facts-pack.html

21 See www.bcamath.org/documentos_public/archivos/actividades_cientificas/TalkBCAM20110304CM.pdf

22 See http://www.professormarkvanvugt.com/files/Ch5_VanVugt.pdf

exemplars for their groups.[23] Also, competition for the leadership role will normally put the strongest, wiliest and/or most driven candidate into the alpha role, with the rest of the pack then having to follow his example. The same phenomenon will also encourage the diffusion of advantageous learned behaviors, as these are introduced by the leader himself, or taken up by him from a subordinate. Or possibly, learned by a subordinate, who then becomes the leader through the advantage of this new trick.

Finally, the presence of a leader toward whom every animal's attention is turned creates a possibility of cued coordination. That of a symphony orchestra under the baton of a great conductor would be a highly developed example of this advantage. But some animals may allocate and cue tasks in a similar way, though I have found no clear examples. At any rate, the possibility is there.

Both for the individuals concerned and for the group as a whole, there are clearly risks and costs associated with the phenomenon of leadership. Chapter 4 (*Politics as a Thought Process*) explores the concept of leadership in some detail.

But a final note is in order: We humans can build huge organization-minds by using leadership recursively, by making the designated leader of each group subordinate to the leader one level above. Such organizations can be assembled from the bottom up as representatives from each group come together to form management committees of various kinds; or they can be configured from the top down, by staffing out an 'org chart' of pre-designed responsibilities and duties. The technique is amazingly powerful, though subject to well-known drawbacks and pathologies. To the best of current knowledge, no other animal can build organizational hierarchies in this way.

1.3.3 Stigmergic Minds: The Social Insects

The adaptive intelligence of an ant colony is much greater than that of any individual ant. The same is true for termites and bees, and for the social insects in general. Considered singly, the ant is a very limited creature: a small robot, programmed by evolution to respond like an automaton to a very limited number of situations. But as a colony, ant capabilities are remarkable. Cooperatively, they can forage, fight, and build and maintain their nests without any central coordination at all,[24] relying instead on the stigmergic communication already mentioned.

It works like this: When a foraging ant finds food, it leaves a chemical trail on the ground, marking its way from the food source back to the nest. Ants from the colony follow this trail in the reverse direction to retrieve more food, and these reinforce the trail on their return trip. The more food there is, the stronger the trail becomes, and the more ants are recuited to fetch it back.

23 See http://news.discovery.com/animals/animals-elephants-age-leaders-110315.html
24 http://en.wikipedia.org/wiki/Ants

When the food source is exhausted, the trail is no longer reinforced, and its scent dissipates. The ants stop following it, and look for food somewhere else.

By writing chemical to-whom-it-may-concern messages onto their environment in this way, the ants constitute their group as a composite mind, able to respond collectively and appropriately to the changing conditions in their world, as no individual ant could manage. Individual humans are much more intelligent and versatile than ants, of course, but we use his same trick of stigmergy to constitute our own associations. To this day, roads and highways are built along the same routes that caravans once travelled, and that paleolithic hunters travelled before the caravans. We leave signs for each other to point the way, and to issue specific instructions. Our buildings show us how to work and live; our tools (and the instruction manuals that come with them) tell us how they are to be used. Every book, like this one, is an exercise in stigmergic communication; and the collective knowledge accumulated in this way fills libraries and gets posted on the Internet to be consulted as desired by human individuals who automomously direct their attention.

As with the ants, quite a large part of what we take to be our own knowledge, skill and capability has been 'pre-written' for us as features of our environment. This knowledge is not really our own, except as we are part of the group that shares it. Like the ants' chemical trail, it will fade and vanish eventually – as technologies become obsolete, as artifacts wear out and as language changes – to be replaced by other markings. But while the markings last they stand as relatively stable features of a society's group mindset – some so stable as to be essentially permanent.

1.3.4 Hominists

All the great apes including humans are classed as *hominids,* but only some of these species evolved in the direction of full humanity.[25] It would be convenient to have a term for those hominids *and other beings* not only capable of language-enriched mindset, but committed to this trait as a specialized strategy; and I will coin the word *hominist* for this purpose. There could be hominists in other biological families (if we could find some); there could be alien hominists (with a completely different genetic code and body chemistry) on other planets. For now, however, we can reserve the term *hominist* for the hominids that made a specialty of group minding and mindset, as our pre-human ancestors did.

About six million years ago, the line leading eventually to modern *Homo sapiens* diverged from that to modern chimps. One difference was that the proto-chimps foraged and built their sleeping nests in trees, where hominists, at some point, began to forage and build their shelters on the ground. Just what we mean by humanity (and 'hominism') will be discussed in some detail in the next chapter. Here I only want to introduce the concept, and point out that the only hominists within our ken at present, we ourselves, are ultrasocial

25 See Appendix C, and http://en.wikipedia.org/wiki/Hominid

creatures who *also* use stigmergy like the ants, swarm like sheep, and pack-hunt like wolves. The full significance of the hominist strategy isn't clear yet. Modern humans are not perfectly adapted to the hominist life style. In fact, it could be said that we are not yet fully human; and it is possible that we will destroy ourselves before we become so – that hominism will reach a tragic dead end on this planet, at least in the present phase of evolutionary history. In any case, however, we are surely hominists of a kind – commited to a hominist strategy and lifestyle strikingly different from that of any other creature we know of.

1.3.5 Emergent Minds In General

From its beginnings, a central riddle of philosophy has been the so-called Mind-Body Problem: How is it possible for a physical system to think and feel? While we have certainly not solved that problem as yet, the idea that minding is a function that can emerge in a system of inter-communicating mindless automatons certainly makes the problem seem less intractable, and brings its solution nearer.

The distinction between *minding* and *mindset* also helps. Minding is a function, a process – a capability that some physical systems evolved to have, and that some are now designed to have. Mindset is a structure – partly physical, partly abstract and suggestive – which supports and guides the minding process. In organisms, the physical part of mindset is a matter of anatomy and physiology – the structures of a living body. In human groups, this physical part is a matter of infrastructure and other stigmergic features. In minds of all types, the abstract part of mindset is a matter of learning – of recorded and digested experience. What we mean by minding is a handling, weighing and origination of suggestions, and a responsiveness to them. The mindset which guides this process can be imagined as a structure of 'frozen suggestions' – suggestions congealed (so to speak) into some more or less durable shape. This mindset is itself a source of suggestions. It provides the 'values' against which other sugges-tions are weighed, and the learned skills and habits from which responses are fashioned. For minds as fancy as our own, it provides the concepts, beliefs, theories and 'worldview' by which we live. Some of the most interesting aspects of mindset depend on language, but most do not. Some aspects are directly concerned with homeostasis and system survival. Some seek more remote objectives. Not surprisingly, the mindset of a composite mind may be contradictory and conflicted within itself. It may be large and contain multitudes, as Walt Whitman said. But mindset as a whole is teleonomic in nature, orienting a system toward its future and setting goals for its behaviors.

1.4 Human Groups

> Only the small secrets need to be protected. The large ones are kept secret by public incredulity.

- Marshall McLuhan

From this chapter's discussion of generic and composite minds, it should now be at least plausible that *some* human groups and organizations are worth considering as minds in their own right – roughly analogous (in some respects) to the social minds of ant colonies and bee hives. For convenience, we'll speak of *groups* only for sets of people that we decide to treat as minds; we'll speak of mere sets or *bevies* otherwise. Think of the passengers on a bus, the audience at a concert, or a crowd of people in the street. Each of these sets may have interesting collective properties, which we may have occasion to consider. As the substrate for such properties, we'll call the set a *bevy*, not a *group*, because it is too transient and too lacking in collective purpose to be treated as a mind.

Admittedly, the distinction between a mere bevy and a minding *group* can be fuzzy. The audience in a theatre, or at a sports event, surely responds collectively to the performance – to suggestions collectively received. It has some common mindset, but makes no common decisions. In some emergency, however, as we'll discuss in Chapter 3, a bevy may swiftly become a group and learn to see itself as one.

With true groups (e.g. cohabiting families, business firms and nation-states), there is no question: such associations don't endure if they cannot both hold themselves together and then respond with some coherence and competence to situations that befall them. In the remainder of this book, we'll be speaking of such human groups almost exclusively. Our task is to justify and get our heads around this way of thinking about ourselves and our societies.

Our position is that a human bevy becomes a group – a recognizable and interesting mind – to the extent that it behaves like a self-interested open system, acting from reasons rather than causes through collective minding based on a collective mindset. Typically, such a group will have the following properties, on top of those definitional properties of irritabil-ity, agency and autonomy from the beginning of this chapter:

- The group will be re-entrant and homeostatic. It will contrive to end each cycle in position to begin a new one. It will maintain its critical parameters at semi-constant values, ensuring that these do not stray too far from their correct values.
- The group will make collective choices and engage in collective, coordinated activity. It will mobilize, organize and exploit the powers of its members to undertake and complete projects far beyond their powers as individuals.
- It will exercise some degree of control over its membership, welcoming some new members while

rejecting others. It will encourage and recruit potential members that it wants, while recognizing and ejecting, or otherwise discriminating against individuals it does not want. Through context pressures (as dis-cussed in Chapter 8, it will maintain itself as the group it is.

- It will process and learn from its experiences and, in doing so, evolve collective mindset, sufficient to provide it with an effectively shared sense of common interest and purpose. It need not decide unanimously, but must be capable of collective action, effectively marginalizing or suppressing any dissent.
- Withal, the group will maintain and project what we can recognize as a common identity.[26] Seeking to act as a coherent entity, it will get individuals and other groups to perceive and respect it as such.

We are the more inclined to recognize some bevy as a group, the more of these functions it performs, and the better it performs them.

Typically, a group will have some form of governance (collective deliberation and choice), but need have no formal government. Typically, there may be some dissent and deviance. The policies and choices of some individuals and sub-groups may not coincide with those of the group as a whole. Thus, a group may have criminals, heretics and rebels; it may have factions; it may be in a state of civil war. It remains a minding group, even as it comes apart, so long as we still find it convenient to think of it as one – that is, so long as it is still making some important collective decisions. Think of a failing state, (e.g. Somalia, as I am writing) which has not yet disintegrated completely, or been taken over by outsiders, but is still trying to save itself.

1.4.1 Why Talk About Collective Minds?

It may be asked what this notion of collective mind really contributes. Even when the group is seen as a distinct entity – as Margaret Thatcher famously refused to do – we may ask if anything gained by attributing autonomous mind to this system, beyond the separate minds of its individual members? Our answer will be that doing so allows our appli-cation of what Daniel Dennett called the 'intentional stance' to the collective choices of these systems, and to their (often oppressive and even lethal) impact on the lives of their individual members.

To understand a bridge or a solar system, you take a *physical* stance in Dennett's terms: You compute a vector resultant for the system given the physical forces applied. To understand an automobile or a laptop computer, you take a *design* stance: Unless the system breaks down, you ignore the detailed physical interactions, and consider only how the system was designed to behave – when you turn *this* wheel or push *that* button. But to anticipate how people (and other minds) behave, you ask them what they intend to do.

26 This concept is discussed in Section 2.3.

Or you put yourself 'in their shoes' (as we say), and consider what you yourself would do if you had their beliefs and desires: what you think a 'rational' agent *would* intend and do, having its beliefs and desires under the given conditions.

For a collective mind like a family or a corporation or a country, this intentional stance works very well – and is habitually used as metaphor, without the justification that we'll attempt to supply: You think about what the system collectively wants, or *should* want – what would be in its best collective interest. You think about its world and its circumstances, and its understanding of these. And then you impute intentions to that group: You guess at what this social system collectively intends and plans, given the beliefs and desires you think it holds.

Obviously, such calculations may yield misleading results. You may be wrong about the system's collective beliefs and values. Its rulers may have – are quite likely to have – personal desires and interests, quite different from those of the system as a whole. For the sake of tactical deceit, they may deliberately choose a sub-optimal line of play, knowing that this will be harder to predict. You will allow for such possiblities as best you can, not always successfully. Fallible as it is, however, this intentional approach is still the simplest and probably best that you can do. You attribute collective beliefs and desires either to the group as such or to its authorities, its governing institutions, and proceed to estimate what your own intentions would be if you believed and desired as they do.

Habitually, we use the notion of collective mind as metaphor. We speak of what Google and Amazon are doing, and of what the Chinese or Russians or Americans intend. By analyzing and justifying that metaphor in detail, we may gain more confidence and more precision in using it. Through this stance of 'group intentionalism,'[27] we may cut down to a finer level of detail in our study of their collective choices when we think of their important factions and political movements as negotiating players.

At the same time, seen as minding systems, such groups have causal force in the lives of their members. As minds, they not only behave from a collective mindset, but also set a context (not always sane or healthy) for the lives and mindsets of their members. As minds in their own right, they engage their members, outsiders and other groups not just as loci of coercion but as interlocutors. They become intelligible as such, and can be judged in such terms, when we accept them as minds in their own right.

1.4.2 Internal Conflict and Working Dispensation

One common-sense objection to this program – of treating groups as minds and taking the intentional stance to their desires, beliefs and behaviors – is that groups are rarely even approximately unanimous in their desires, beliefs and

27 Not to be confused with the literary intentionalism which views the author's intention as a guide to the interpretation of their text.

intentions. Most often, they are seriously conflicted in these respects, with one bloc successfully imposing its views on the whole group, as the outcome of a political struggle. Even then, dissenters will remain – perhaps a majority even – not sufficiently coherent in their opinions, or sufficiently well organized, or well armed, to make their wishes prevail. In the face of such dissent and political conflict, how can we speak of collective mindset – collective beliefs, desires or intentions – for the group as a whole? We'll discuss that issue at length in Chapter 4 on politics as a thought process. For now, however, please note that we face this same problem even with so-called 'individuals,' who are not always coherent or single-minded in their desires and beliefs, and may be paralyzed or radically conflicted in their intentions.

We know very well what it means 'to be of two minds' about something. The problem of *akrasia* – *How is it possible to act against one's better judgment?* – was a stumbling block for Plato – and for all proponents of the notion that Man is a rational animal.[28] We understand quite well what someone means when they talk about their 'inner committee.' Indeed, in the extreme case of Dissociative Identity Disorder (DID) we talk about multiple personalities or seemingly different minds inhabiting the same body.

Thus, it seems unnecessarily restrictive to insist that a mind, whether of a group or an individual, must be coherent and unanimous. Instead, we must allow that group minds can be divided against themselves, even to the point of civil war.[29] To make this allowance, we need the concept of a *working dispensation* – often called a 'working consensus,' though it may have little in common with true consensus. For a working dispensation, the deviant, dissident and/or exploited members of a group are usuallly marginalized or suppressed so that a 'power elite' can have its way. Introduced here, the notion of working dispensation will be developed in Section 3.3.3 below, and will be crucial for our discussion of the European mindset in the run-up to World War I. In this way, we can understand how a group that's divided against itself (even to the point of total war) in its desires and beliefs and plans, can still function (in some respects) as a coherent entity.

28 See also this discussion of "Weakness of Will" in the Stanford Encyclopedia of Philosophy.

29 In which the sides still comprise a single system, perhaps with significant common interests, even while they are fighting each other.