women, through memories of his own childhood, through his close reading of Lucretius and other Roman philosophers, and through his own poetic imagination, he understood how early need creates problems for the type of political order he sought.

Human life, Rousseau understood, begins not in democracy but in monarchy. The baby, on whom caregivers ardently dote, has no way of surviving except by making slaves of others. Babies are so weak that they must either rule or die. Incapable of shared work or reciprocity, they can get things only by commands and threats, and by exploiting the worshipful love given them by others. (In letters, Rousseau made it clear that this was why he abandoned his children: he just didn’t have time to be at a baby’s beck and call.)

What emotions begin to take root in the infant’s unfolding life? In the womb it’s hard to speak of emotions, although toward the end there are eventually sensations—because emotions require some awareness, however confused, of external objects and some thoughts, however rudimentary and unformed, about those objects. Emotions, then, fit the post-birth world in which we are separated from the sources of good, longing for their presence, dimly aware that they are out there somewhere, uncontrolled by us. To the infant trapped in this nightmare scenario, one overwhelming emotion, and a formative influence on daily life, is fear. Adults are amused by the baby’s futile kicking and undisturbed by its crying, since they know they are going to feed, clothe, protect, and care for it. They respond to its evident need for comfort by holding it close, by speaking baby talk (known even in ancient Rome!), by making rocking motions, simulating the safety of the womb. But adults themselves don’t fear, because they don’t think anything bad is going on—unless there are other danger signals such as fever or inability to tolerate milk. The infant’s world, however, knows nothing of trust, regularity, or security. Its limited experience and short time horizons mean that only the present torment is fully real while it lasts, and moments of joyful reassurance, fleeting and unstable, all too quickly lead back into insufficiency and terror. Even the joy itself is soon tainted by anxiety, since to the infant it seems fleeting, all too likely to slip away.

DEFINING FEAR

Philosophers are fond of definitions, and so are psychologists. Within each field there is disagreement about fear, but a common ground of consensus has emerged, in the light of recent interdisciplinary research on both human and animal emotions. This consensus includes the idea that almost all emotions (in both humans and other animals) involve some sort of information processing about the animal’s well-being. Even non-linguistic animals have thoughts, in some form, of what’s good and bad for them, and these thoughts are incorporated into their emotions. Thus, emotions are not like mindless

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6Rousseau, *Emile: or On Education*, trans. Allan Bloom (New York: Basic Books, 1979), Book I, pp. 62–67, esp. p. 66: “Thus, from their weakness, which is in the first place the source of the feeling of their dependence, is subsequently born the idea of empire and domination.” Rousseau believes that one can begin resisting this fearful dependence very early, by encouraging free movement and self-sufficient care of self. I don’t follow the details of his views, but develop his initial insight in my own way, influenced by psychologists like Stern and especially by the views of Winnicott.
jolts of energy: they focus outward on the world and appraise objects and events in the world. Typically, they register our animal vulnerability, our dependence on and attachment to things outside ourselves that we do not fully control. (This is why the ancient Greek and Roman Stoics were in favor of eliminating almost all emotions, apart from some, like wonder at the universe, or a serene joy at one's own integrity, that did not seem to them to involve an unwise dependence on "goods of fortune.")

Fear is not only the earliest emotion in human life, it is also the most broadly shared within the animal kingdom. To have compassion you need a pretty sophisticated set of thoughts: that someone else is suffering, that this suffering is bad, that it would be good for it to be relieved. Some animals have this emotion (apes, elephants), but it requires relatively complex thinking. To have full-blown anger, rather than just irritation or primitive rage, you have to be capable of causal thinking: someone did something to me, and it was wrong. But to have fear, all you need is an awareness of danger looming. Aristotle defined fear as pain at the seeming presence of some impending bad thing, combined with a feeling that you are powerless to ward it off. That's pretty good. The thoughts involved don't require language, they only require perception, and some sense, however vague, of one's own good or ill. Something bad is looming, and I am stuck.

1 I build a case for this overall view, drawing on both philosophy and psychology, in *Upheavals of Thought: The Intelligences of Emotions* (New York: Cambridge University Press, 2001). Some parts of my picture are controversial, but not the general ideas expressed here.


What about feelings? Fear is certainly accompanied by some powerful subjective feelings; often people mention a "trembling" or a "shaking." Should we put that into the definition, saying that if that isn't there, the emotion can't really be fear? There are three reasons why we should not. First, different people experience fear differently, depending on their history and character. Do we really want to say that a courageous soldier must be trembling in his boots if he retains a normal human fear of death? Aristotle said that even the most courageous do fear death, and they'd be crazy not to.9 We don't want soldiers who hold life cheap. But in the case of the disciplined soldier, the awareness of danger isn't usually felt as a trembling.

We can go even further: in many cases people have fear without even being aware of it. Every day, most of us are motivated in quite a lot of what we do by the fear of death. We don't walk in front of cars (unless we hold our smartphones dearer than life!). We try to guard our health, we go to the doctor, etc. The fear of death is often very useful, but it is usually non-conscious, just like the belief in gravity, or the belief in the solidity of physical objects—non-conscious, but everywhere relied on.

We don't need a psychoanalytic doctrine of repression to tell us that fear often lurks beneath the surface of the mind. But I think that we can, and should, go further: it is of the essence of peaceful daily life that we push that fear to the back of our minds. Lucretius, probably the first theorist of unconscious fear, remarks that this effort sometimes becomes a burden.

9Aristotle, *Nicomachean Ethics* III.9, 1117b7–16.
So instead of a trembling, we may have a feeling of a "large mountain sitting on our chest." Or we have frenetic avoidance behavior, restless activity that seems aimed at nothing but self-distraction. Think of air travel. Some people have a conscious fear of flying. Many more of us, however, push that fear to the back of our minds but still feel an inner weight or tension, and a more than usual need to distract ourselves with email, or food, or aimless conversation. We may be simply more irritable than usual, or less able to concentrate.

Finally, scientists tend, these days, to agree with Aristotle, who was a great biologist and who theorized a lot about the emotions of animals: all animals, not just humans, feel fear of something bad out there that seems likely to harm them.10 It's generally believed that fear evolved because of its role in keeping animals alive. But if we are to talk about the way fear feels to a rat, what should we say it feels like? We can be sure that animals have rich subjective experience, but it would be very rash to pretend to know what they feel.

Fear does involve feelings, then, but it's hard to define fear in terms of any particular type of feeling. We are on safer ground when we stick to the sort of awareness of objects as good or bad that seems an unavoidably central part of fear, and necessary to explain animal behavior. So, let's by all means say that the subjective side of fear is important, and let's call poets and novelists to our aid in describing its many types and instances. But let's focus, for now, on the awareness of objects that holds all the cases together.


What about the brain? Here we need to learn from recent research. In his important book *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*,11 neuroscientist Joseph LeDoux has given a masterful account of how the emotion of fear has a particularly close connection with the amygdala, an almond-shaped organ at the base of the brain. When creatures report fear, or their behavior is reasonably explained as fear, the amygdala is aroused. And LeDoux has also shown that certain specific triggers elicit fear-related responses in humans, no doubt through stored evolutionary mechanisms: the shape of the snake, for example, always gets the amygdala going.

The amygdala is an unusually primitive organ. All vertebrates have it, no matter what the level of the rest of their perceptual and cognitive apparatus, and have it in recognizably the same form. Clearly, the role of the amygdala helps explain why fear belongs to all animals. In experiencing fear, we draw on a common animal heritage, and not just a primate or even vertebrate heritage. Fear goes straight back to the reptilian brain.

LeDoux is careful not to say that fear is "in" the amygdala, or that knowing about the amygdala's role fully explains fear. First of all, he has not experimented on humans. Second, he is perfectly aware that in all animals, fear relies on the entire network and that the amygdala functions only in virtue of its role in a more complex system. If this is true in rats, it is all the more likely to be true for humans. Humans' information about danger comes from many sources, perceptual, linguistic, intellectual. Moreover, the human brain is reasonably plastic, and
there are likely to be many differences among individuals in the ways their brains process a single emotion.

We can't have a good account of fear by simply describing brain states, then. A good account will need to speak about creatures' subjective awareness of objects, and their vague or inchoate thoughts of situations or objects as bad for the self (which might itself be a vague inchoate concept in most animals and in human infants). This awareness is mediated, as time goes on, by learning. We learn the map of our world, and learn what is good and bad in it. This makes fear seem more human and less primitive. Still, it's worth emphasizing that fear is an emotion that a rat can have in not too different a form from a small human. Rats too have a mental map of good and bad, though without language or higher thought. And even if our first primal experiences of fear are followed, later, by complicated, learned forms of that emotion, LeDoux emphasizes that early fright conditioning has lasting effects on the organism; it proves very difficult to undo. We all know how fear swells up in times of danger, how it drives our dreams.

FEAR'S POLITICS

Fear is not just primitive, it is also asocial. When we feel compassion, we are turned outward: we think of what is happening to others and what is causing it. We don't ascribe compassion to an animal unless we think that it is part of some rich social network. Dogs, apes, and elephants probably do care compassionately about the fortunes of other creatures in their world. Scientists who work on these species conclude that they have complicated