

Descartes' Error and the Future of Human Life

Essay by Antonio R. Damasio

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1. **A**t the beginning of the 1950s, in an impassioned speech inspired by the threat of nuclear destruction, William Faulkner warned his fellow writers that they had forgotten the problems of the human heart in conflict with itself." He asked them to leave no room in their workshops "for anything but the old verities and truths of the heart, the old universal truths lacking which any story is ephemeral and doomed—love and honor and pity and pride and compassion and sacrifice."

2. Although the towering nuclear threat of four decades ago has assumed a less dramatic posture, it is apparent to all but the most absent-minded optimists that other clear and present dangers confront us. The world population is still exploding; air, water and food are still being polluted; ethical and educational standards are still declining; violence and drug addiction are still rising. Many specific causes are at work behind all these developments, but through all of them runs the irrationality of human behavior, spreading like an epidemic, and not less threatening to our future than was the prospect of nuclear holocaust when Faulkner was moved to speak.

3. I have always taken his words to mean that the rationality required for humans to prevail and endure should be informed by the emotion and feeling that stem from the core of every one of us. This view strikes a sympathetic chord, because my research has persuaded me that emotion is integral to the process of reasoning. I even suspect that humanity is not suffering from a defect in logical competence but rather from a defect in the

emotions that inform the deployment of logic.

4. What evidence can I produce to back these seemingly counterintuitive statements? The evidence comes from the study of previously rational individuals who, as a result of neurological damage in specific brain systems, lose their ability to make rational decisions along with their ability to process emotion normally. Their instruments of rationality can still be recruited; the knowledge of the world in which they must operate remains available; and their ability to tackle the logic of a problem remains intact. Yet many of their personal and social decisions are irrational, more often than not disadvantageous to the individual and to others. I have suggested that the delicate mechanism of reasoning is no longer affected by the weights that should have been imparted by emotion.

5. The patients so affected usually have damage to selected areas of the frontal, temporal and right parietal regions, but there are other conditions for which a neurological cause has not yet been identified, whose characteristics are similar in many respects. The sociopaths about whom we hear in the daily news are intelligent and logically competent individuals who nonetheless are deprived of normal emotional processing. Their irrational behavior is destructive to self and society.

6. Thus, absence of emotion appears to be at least as pernicious for rationality as excessive emotion. It certainly does not seem true that reason stands to gain from operating without the leverage of emotion. On the contrary, emotion probably assists

reasoning, especially when it comes to personal and social matters, and eventually points us to the sector of the decision-making space that is most advantageous for us. In brief, I am not suggesting that emotions are a substitute for reason or that they decide for us. Nor am I denying that excessive emotion can breed irrationality. I am saying only that new neurological evidence suggests that no emotion at all is an even greater problem. Emotion may well be the support system without which the edifice of reason cannot function properly and may even collapse.

7. **T**he idea that the bastion of logic should not be invaded by emotion and feeling is well established. You will find it in Plato as much as in Kant, but perhaps the idea would never have survived had it not been expressed as powerfully as it was by Descartes, who celebrated the separation of reason from emotion and severed reason from its biological foundation. Of course, the Cartesian split is not the cause of the contemporary pathologies of reason, but it should be blamed for the slowness with which the modern world has recognized their emotional root. When reason is conceptualized as free of biological antecedents, it is easier to overlook the role emotions play in its operation, easier not to notice that our purported rational decisions can be subtly manipulated by the emotions we want to keep at bay, easier not to worry about the possible negative consequences of the vicarious emotional experiences of violence as entertainment, easier to overlook the positive effect that well-tuned emotions can have in the management of human affairs.

8. It is not likely that reason begins with thought and language, in a rarefied cognitive domain, but rather that it originates from the biological regulation of a living organism being on surviving. The brain core of complex organisms such as ours contains, in effect, a sophisticated apparatus for decisions that concern the maintenance of life processes. The responses of that apparatus include the regulation of the internal milieu, as well as drives, instincts

and feelings. I suspect that rationality depends on the spirited passion for reason that animates such an apparatus.

9. It is intriguing to realize that Pascal prefigured this idea within the same 17th century that brought us Cartesian dualism, when he said "It is on this knowledge of the heart and of the instincts that reason must establish itself and create the foundation for all its discourse." We are beginning to uncover the pertinent neurobiological facts behind Pascal's profound insight, and that may be none too soon. If the human species is to prevail, physical resources and social affairs must be wisely managed, and such wisdom will come most easily from the knowledgeable and thoughtful planning that characterizes the rational, self-knowing mind.

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