

BRAINBUILDING

NOTE: What follows is the draft introduction to a book to be titled Brainbuilding, a book I had intended to unite various of my writings about how brains are built. Brainbuilding was to include Dragon Puzzle Story, and in fact the book's broader scope was to be a return to the scope of Dragon Puzzle Story's First Edition. However, I came to feel that my dense writing style was better suited to short essays if I hoped the words ever to be read, and that the nature of the book's inferences demanded I share responsibility for composing it, as I am now doing. Since shelving the project I have scavenged it for parts, some of which you may recognize in other of my essays.

Introduction

If the universe is doing anything it is building brains:

- The universe is building text-building brains that build brainbuilding texts.
- The universe is building brains, now also through conscious human agency.
- Spiritual practice arises in and affects brains, and is an aspect of brainbuilding.

This is a brainbuilding text, and those are previews of its inferences.

When we speak of enlightenment we speak of truth and compassion, even of divine love, but we also speak of choices and behaviors that build brains. To build families and societies to hold them is to build brains. To balance competition and cooperation through constitutions and laws is to build brains. To stem overpopulation, to care for planets that are the nurseries of brains, and to forestall global catastrophe are all to build brains. To build artificial brains in laboratories—that is, to create artificial intelligence and intelligent artifacts—is to build brains. All that the universe does and that humans do are facets of brainbuilding.

A charismatic leader crying that an invisible being commands humans not to kill each other thereby influences the survival of brains *whether or not the invisible being exists*, and regardless of whether the cry brings peace or strife. So it is that spiritual practice is an aspect of brainbuilding regardless of whether there are spirits, and whether or not the effects are benign.

From the perspective of brain science, spiritual practices like meditation and turning to God, and practice generally, are things that brains do. They are acts that affect the stability of individual brains and, significantly, of brain societies. The nexus of brain and practice is a main theme of this book. Later we shall examine whether brainbuilding itself suggests anything about practice that helps brains to survive and thrive.

In this book I talk of brains as understandable and buildable things, and I also talk of God. I do not relegate brains and God to disjoint realms, but I rarely use the word *God* as an explanation for anything. To my taste that would be presumptuous. *God* to me is more a matter of relation and obligation than of explanation. I wouldn't even mention the word

if I didn't respect many people who have used the word humbly and kindly, or if talk about the word hadn't helped me and countless others.

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This book has three main themes. The book's first theme is augmentation of Darwin's famous theory, making it more predictive by tracing how the inevitable properties of everyday objects necessarily constrain evolution. This *A Priori Object* theory shows something about how brains are and can be built—but at a price: It exposes systematic differences among human brains.

The second theme is *autocatalytic text*, and the possibility of constructing a self-building brain theory. In this very book I try to assemble the core of such a theory, a core theory that asks *Is there self-developing text?* The exercise shows more about how brains are and can be built. The idea can bring good or ill: Which of the two is up to us. The idea also invites people to attempt the potentially uncomfortable—to see revered texts not only as wise and powerful, but as physical catalysts like enzymes or nucleic acids, and to observe what they are catalyzing.

I sometimes say that I have had one and a half ideas in a lifetime. Autocatalytic text is the one, and the A Priori Object is the half.

The book's first two themes inspire the third and preeminent theme, the relationship between brainbuilding and spiritual practice. This third theme traces how we humans can continue to thrive even as we face troubling facts about our brains, and as we come to share our world with intelligent artifacts of our own (and later their own) design.

This book is dense, closely reasoned, and of perhaps beguiling simplicity. Be warned that one could write entire volumes about many of the paragraphs that follow. Often my own eyes glaze over when I re-read it. When that happens I stop and move about or sit zazen, and I encourage drifting readers to do the same.

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I live in times of danger and collapsing human attention span. Recently I canvassed peers and found that many agree that if we humans continue on our present course then within the lifetimes of our children we are likely to cause a catastrophe that will kill at least a third of the human population. It would seem to be a time for reflection about the peril we face. Unfortunately the proliferation of electronic entertainment, and perhaps the ease of life relative to earlier times, have widely atrophied the faculty of attention needed for such reflection.

I had hoped to reserve for concluding chapters suggestions about how we might alter our course for the better. However, I think urgency does not permit the delay, and so I shall outline right now what I think can help generally—understanding that the book later elaborates and gives grounds for the suggestions. Of course I may be mistaken about all

of them, and in any case I expect they will serve primarily to encourage people who have already arrived at similar practices on their own.

I speak three languages fluently—the languages of zen, God, and science. I strive to remove obstacles, delusions really, that divide these three. Please understand that in doing this I do not judge or coerce anyone: I simply lay out what has helped me resolve conflicts. Others are free to use the results or not as they choose. I have no authority beyond experience and this to make the following suggestions.

Even though I would describe my relationship with God-beyond-existence as central in my life, if I were to utter one syllable to avert global catastrophe it would be *Sit*. Just sit. Just sit, upright and still. Just sit, upright and still, alone and with others. Just sit, upright and still, alone and with others, regularly. Just-sitting intently enough, how can one fail to notice what does and does not exist? *In running from sitting find the cause of all troubles*. Here is what is good—to sit down and to sit up together, with anyone and with everyone.

Just-sitting may be necessary to profound help, but the practice does not pander to desire and few do it with any diligence. In any case just-sitting is not sufficient. With your continued indulgence, then, my next suggestion is to *study*. Study your own behavior and motives. Without making a show of it, cultivate the capacity to describe in detail your own behavior and how it affects others. Study and test these five precepts (and their positive complements): **Don't kill, steal or lie, and don't misuse sexuality or intoxicants**. Study how brains are built, and all the realms of knowledge that entails. Foremost, study and apply the Golden Rule to treat others as you would be treated, without making virtues of your quirks.

My final opening suggestion is directed to any curious about God and prayer. People who question the existence of God rarely question whether they themselves, or rocks for that matter, exist. *Even assertions that these exist are ultimately species of instinct*, and the instinct to love and serve God can be as powerful as any of them. No amount of zen or science will ever erase this native drive, for those that feel it strongly, and those can freely pursue the instinct without fear that zen or science forbid it. **You can justly turn to God for no other reason than that you find it beautiful to do so**—*allowing that harming others in the name of God is ugly*. Furthermore, there is no need to divide zen, God and science, and their union is not fabricated with Procrustean logic. Peaceably exploring all these matters with humility and care distinctly helps steer the human course away from catastrophe.

I pray without insisting that others do the same. May we feel safe, cared-for, and responsible—safe enough for our temperaments, cared-for enough to sweeten life, and responsible enough to give us kind purpose. These are gifts no person can give, but they are available. Yours and other peoples' responsibilities are not my business, but I do offer this suggestion: If an act of responsibility harms anyone it probably is not the responsibility I am talking about. To zen students I note that responsibility is a dualistic notion, and that without it we may well be doomed. Are we our brothers' and sisters' keepers.

Those then are my basic suggestions for steering clear of catastrophe, or at worst for learning from catastrophe we cannot avoid. I may be misguided in all of it, of course, and with any luck my peers are wrong about the likelihood of catastrophe. If so please excuse my ignorance and presumption, and I hope I have done no harm.

As for the decaying human attention span, comprehending this book is about as good an exercise in cultivating attention as you are likely to find.

I look forward to and value working together, however difficult it may be for this isolate.

Concluding Introduction

What is it to be human? Are we humans simply stupider versions of the intelligent artifacts we build? Can unbiased general intelligence actually exist and does it have only one variety? Do we humans have anything but intelligence to recommend us? How can we survive our artifacts, and ourselves?

There is much unknown, and perhaps unknowable, about human nature. However, if human nature affects human well-being then it's reasonable to learn what we can about it. The human brain is so complicated that it seems possible that human nature exists entirely within its structure. In this book I explore how brains are built, and even how to build them. The general study of how brains are built, and the process of building them, both natural and artificial, I call *brainbuilding*. This book's brainbuilding labor may or may not contribute to the actual building of brains, but in any case it ultimately returns full circle to what is remarkable about human nature.

As a benediction upon setting forth I note that almost universally people cannot tell what is so from what they want to be so: Thus every serious investigation must begin with an honest answer to the question, "What do I *want* to be so?" Before studying together what is so, at every turn may we first silently admit to ourselves what we want to be so.