

Preface

If you can't make one, you don't know how it works.

So said Fred Dretske in "A recipe for thought," and so I'm inclined to believe. He offered the slogan both as "something like an engineer's ideal, a designer's vision, of what it takes to understand how something works," and as an axiom at the heart of philosophical naturalism—one that applies as much to the mind as to anything else (Dretske, 2002).

Knowing how to make something, in Dretske's sense, entails knowing how to write a recipe for it. Such a recipe can't include, as an ingredient, the very thing it is a recipe for. "One cannot have a recipe for a cake that lists a cake, not even a small cake, as an ingredient," Dretske explains. "Recipes of this sort will not help one understand what a cake is." Likewise for intelligence: "if you want to know what intelligence is, you need a recipe for creating it out of parts you already understand" (Dretske, 2002).

The same points apply to imagination. We won't understand what imagination is—won't be able to *explain* imagination—until we can write a recipe for making it out of parts we already understand. What you have in your hands (or, perhaps, hard drive) is a compendium of such recipes.

What ingredients appear in the recipes? On my telling, they are other familiar mental states like beliefs, desires, judgments, decisions, and intentions. In different combinations and contexts, they constitute cases of imagining.

Granted, it might seem that we don't understand these ingredients themselves all that well. It's certainly true, in one sense, that we don't know how to write full recipes for *any* mental faculty, state, or process. There are no artificial minds widely agreed to be the equivalents of our own—no recipes for creating such. On the other hand, we aren't entirely clueless in that endeavor. There are longstanding research programs in philosophy and cognitive science for modeling human memory, perception, reasoning, and language in artificial systems. In tasks of limited scope, many of these systems have abilities far exceeding our own. We say that IBM's Watson knows the answers to Jeopardy questions, that Google Photos recognizes faces, that DeepMind's AlphaGo plans and executes creative strategies for winning at Go and chess. The question of whether we use the mental idiom literally in such cases grows more delicate each year.

We can at least call the products of these research programs *proto*-recipes for things like belief, memory, perception, inference, and the like. Their development is made possible by the fact that we know, at least roughly, what we need to make a system *do* so that it might qualify as doing something *like* remembering, something

like perceiving, something *like* reasoning, or something *like* understanding a question. Imagination presents a contrast. It's far less clear, at least on the face of it, what we need to make a system *do* so that it might qualify as imagining. That's why we can make progress on explaining imagination by breaking it into parts like beliefs, desires, judgments, and decisions, whose functions are better understood, and for which we already have proto-recipes.

Contemporary philosophers have implicitly granted as much in their theoretical accounts of imagination—accounts in which imagination is alternately described as “belief-like” (Currie & Ravenscroft, 2002; Nichols, 2004a; Weinberg & Meskin, 2006b) or “perception-like” (Currie & Ravenscroft, 2002; Goldman, 2006a). There's no point in emphasizing the likenesses of one thing to another, after all, if our understanding of each is equally opaque. The problem is that imagination nevertheless remains an unreduced phenomenon in each of these accounts—a mental state *similar to*, yet *entirely distinct from*, states like belief, perception, desire, and so on. The cake recipes still list cake as an ingredient.

Some may worry that the reductive approach I will recommend is dismissive, deflationary, or even *eliminative* of imagination proper. But that is a misunderstanding. My aim is to explain imagination, not to question its importance, or to make it disappear. Think how a master baker—the author of award-winning cookbooks—would feel if you told her she had written cakes out of existence! The real message is this: there can be no understanding of the human mind without an understanding of imagination. And, because we already have the beginnings of an idea of how to make something with beliefs, desires, perceptions, memories, and so on, then—if the recipes offered herein succeed—we already have an inkling of how to make something with an imagination as well. This seems like good news to me.

I'll conclude this preface with a brief user's guide. Admittedly, this isn't a short book; but neither does it ask that each chapter be read in sequence. All *approved* itineraries begin with Chapter 1, which serves as a *précis* for the book as a whole. It sets out the terms of the debate, responds to the most obvious objections, and provides thumbnail examples of reductive explanations developed more fully in subsequent chapters. Thereafter, chapters can be consumed *à la carte*. This isn't to say that they are unrelated; to the contrary, they build on each other and pursue the same goal in much the same way. The point is that you should feel free to dive in where you like—to let your interests guide you—after having read Chapter 1.

Chapter 2 is a meditation on the nature of the ingredients used in later chapters: just what *are* beliefs, desires, intentions, and other folk psychological states? Are they mental representations? Dispositions? Neurobiological states? I discuss the ambient options and explain how the position one adopts influences the project of explaining imagination. Chapters 3 and 4 turn to mental imagery, investigating its nature and relationship to imagination generally. I develop a framework in which mental-image-involving states can be seen as beliefs, desires, judgments, decisions, and the like. Thereafter, the book focuses on four key contexts where imagination

is commonly held to play an explanatory role: *conditional reasoning* (Chapters 5 and 6), *pretense* (Chapters 7 and 8), *fiction consumption* (Chapters 9, 10, and 11), and *creativity* (Chapter 12). Reductive “recipes” are sought for the imaginings at work in each context.

Like any philosopher, my deepest, most irrational desire is that each claim in this book—no matter how heterodox—will be believed by all. But I’ll be satisfied if the general *strategy* defended here gains traction—the strategy of breaking imagination into smaller, more recognizable parts. I dream of a world where the question is not whether a reductive approach to imagination is possible, but which reductive approach is *best*. In this fantasy, the kinds of non-reductive theories criticized here still have a seat at the table. Sure, I think they’re untenable in their current iterations. But they may have a redemption story of their own.

It seems to me that the conversation is just beginning.

