Ontology and the manifest image

"Ontology" comes from the Greek word for thing. In philosophy, it refers to the set of "things" a person believes to exist, or the set of things defined by, or assumed by, some theory. What's in your ontology? Do you believe in ghosts? Then ghosts are in your ontology, along with tables and chairs and songs and vacations, and snow, and all the rest. It has proved more than convenient to extend the term "ontology" beyond this primary meaning and use it for the set of
"things" that an animal can recognize and behave appropriately with regard to (whether or not animals can properly be said to have beliefs) and—more recently
—the set of "things" a computer program has to be able to deal with to do its job
(whether or not it can properly be said to have beliefs). Vacations are not in the
ontology of a polar bear, but snow is, and so are seals. Snow is probably not in the ontology of a manatee, but outboard-motor propellers may well be, along with seaweed and fish and other manatees. The GPS system in your car handles
one-way streets, left and right turns, speed limits, and the current velocity of your car (if it isn't zero, it may not let you put in a new target address), but its ontology also includes a number of satellites, as well as signals to and from those satellites, which it doesn't bother you with, but needs if it is to do its job. The ontology of the GPS was intelligently designed by the programmers who built it, and the R&D process probably involved a lot of trial and error as different schemes were attempted and found wanting. The ontology of a polar bear or manatee was designed by some hard-to-sort-out combination of genetic
evolution and individual experience. Manatees may have seaweed in their ontology the way human babies have nipples in theirs, instinctually, genetically designed over the eons. Any manatee with outboard-motor-propeller in its ontology has gained that from experience. We human beings have extremely varied ontologies. Some believe in witches and some believe in electrons and some believe in morphic resonances and abominable snowmen. But there is a huge common core of ontology that is shared by all normal human beings from quite an early age—six years old will capture almost all of it.

This common ontology was usefully named the manifest image by Wilfrid Sellars (1962). Consider the world we live in, full of other people, plants, and animals, furniture and houses and cars … and colors and rainbows and sunsets, and voices and haircuts, and home runs and dollars, and problems and opportunities and mistakes, among many other such things. These are the myriad
"things" that are easy for us to recognize, point to, love or hate, and, in many cases, manipulate or even create. (We can't create sunsets, but in the right conditions we can create a rainbow with some water and a little ingenuity.) These are the things we use in our daily lives to anchor our interactions and conversations, and, to a rough approximation, for every noun in our everyday speech, there is a kind of thing it refers to. That's the sense in which the "image"
is "manifest": it is obvious to all, and everybody knows that it is obvious to all, and everybody knows that, too. It comes along with your native language; it's the world according to us.[15] Sellars contrasted this with the scientific image, which is populated with molecules, atoms, electrons, gravity, quarks, and who knows what else (dark energy, strings? branes?). Even scientists conduct most of
their waking lives conceiving of what is going on in terms of the manifest image.
("Pass the pencil, please" is a typical bit of communication that depends on the manifest image, with its people and their needs and desires; their abilities to hear, see, understand, and act; the characteristic identifying marks of pencils, their size and weight, their use; and a host of other things. Making a robot that can understand and accede to such a request is far from trivial, unless you make
a robot that can "understand" only that sentence and a few others.)
The scientific image is something you have to learn about in school, and most people (laypeople) acquire only a very cursory knowledge of it. These two versions of the world are quite distinct today, rather like two different species, but they were once merged or intertwined in a single ancestral world of "what everyone knows" that included all the local fauna and flora and weapons and tools and dwellings and social roles, but also goblins and gods and miasmas and
spells that could jinx your life or guarantee your hunting success. Gradually our

ancestors learned which “things” to oust from their ontologies and which new categories to introduce. Out went the witches, mermaids, and leprechauns, and in
came the atoms, molecules, and germs. The early proto-scientific thinkers, such
as Aristotle, Lucretius, and, much later, Galileo, conducted their inquiries without making a crisp distinction between the ontology of everyday life (the manifest image) and the ontology of science, but they were bold proposers of new types of things, and the most persuasive of these caught on. Undoing some
of their most tempting mistakes, while creating the ontology of the scientific image, has been a major task of modern science.
Unlike the term “ontology,” “manifest image” and “scientific image” have not yet migrated from philosophy to other fields, but I’m doing my best to export them, since they have long seemed to me to be the best way I know to clarify the
relationship between “our” world and the world of science. Where did the prescientific manifest image come from? Sellars concentrated on the manifest image of human beings or societies. Should we extend the concept to other species? They have ontologies, in the extended sense. Do they also have manifest images, and how might they differ from ours? These questions are important to our inquiry because to understand what a great feat Darwin’s strange inversion of reasoning was, we need to understand what Darwin was inverting and how it got that way.

15 In fact, Sellars distinguished a “pre-scientific, uncritical, naïve conception of man-in-the-world … [which] might be called the ‘original’ image” (1962, p. 6ff) from what he called the manifest image, a “refinement or sophistication” of that original image. What he was mainly getting at in this distinction is that philosophers have been reflecting critically on the naïve conception for millennia, so the manifest image was not just folk metaphysics.

Sellars, Wilfrid. 1962. Science, Perception, and Reality. London: Routledge and Paul.

This is an excerpt (page 60-63) from:
Dennett, Daniel C. 2017. ***From Bacteria to Bach and Back: The Evolution of Minds.*** New York: W. W. Norton. xviii, 496 pages.