

What are Things?

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The term “thing” will need clarification as we proceed. For now, keep the following points in mind:

Things and “things” are closely related. First, a note about quotation marks. In the first sentence of this paragraph, the first occurrence of the five-letter string beginning with “T” and ending with ‘s’ points outside language, to what language is about; while the second occurrence points to language, specifically to the word that starts with “t” and ends with “s”. So similarly, we could say that Chicago is a city, and that “Chicago” contains seven letters. “Chicago”, however, is not a city; it’s a word. And Chicago doesn’t contain seven letters, because it’s not a word; it’s a city.

Next: the immediate relationship between “things” and things is that the former is the word which designates the latter. But the relationship I want to emphasize here is this: for now, we may consider the sentences “What is a thing?” and “What does the word ‘thing’ mean?” to be synonymous. In other words, asking what things are, and asking what “things” means, is asking the same thing.

Thus are ontology and semantics, in some sense, mirror-images of one another. Since I will sometimes be asking the first kind of question, and sometimes the second, it is important to understand this working equivalence. To take a more specific example: the questions “What is a customer?” and “What does ‘customer’ mean?” are equivalent. The information conveyed by a complete answer to one is the same information as that conveyed by a complete answer to the other.

There are things and types of things. Customers are things. But customer Mark Hawthorne and customer Eileen Baxter are also things. They are customers. So: the word “thing” sometimes refers to types of things, and sometimes to specific instances of those types. In general, I will reserve the word “*thing*” for the type, and “*instance*” for individual instances of a type. So: Mark and Eileen are instances of the type of thing we call a customer.

Things can be physical or abstract. An invoice is a physical thing. An equation is an abstract thing. But this isn’t very helpful, since the

boundary between physical and abstract things is often vague. Some would say that a customer is a physical thing, but an invoice is not, arguing that a paper invoice, for example, is not the invoice itself, but only a hardcopy of the invoice. Others would say that “invoice” is the name we give to a transaction, namely the transaction of asking for payment for goods or services delivered. Delivery of goods or services is an event. Asking for payment is also an event. Which leads us to events.

Events may also be things. One thing that is important about events, that distinguishes them from the kinds of things we were discussing up to this point, is that events don’t change. A bank deposit is an event. It happens, and then it’s over. No matter how little or how much time it takes, it has no history.

Another thing that is important about events is that an event is an abstraction from a slice of space-time. During the two minutes in which I was standing in front of the teller, handed a check and a deposit slip to him, and was handed back a receipt, many things changed. I spoke to the teller; he spoke back. I turned my head at the sound of a door opening. But those things are not part of the deposit event, even though they were co-located with the transaction event in both space and time.

Transactions are the records of events. The record of a deposit event is a deposit transaction. While the transaction will exist for as long as we keep it in our databases, the transaction is not the thing. The thing is the event itself. The transaction is data about the thing.

The data on the transaction may be wrong. For example, the teller may have recorded \$200.00 as the amount of the deposit, when it was actually \$2,000.00. In that case, we need to replace the transaction in error with the correct transaction. But this doesn’t change the event. The deposit event was my deposit of \$2,000.00. What the teller entered was part of another event, the event of creating the transaction that recorded the first event. The event happened, and then was over. Nothing about the event changed, or could change. Events are those types of things that can’t change. In other words, if something could change, we wouldn’t count it as an event.

Persistent objects are things. So what are the first kinds of things we considered, the ones that were not events? It follows from the definition of event that non-events are the kinds of things that *can* change. A customer may change his address. His customer status code may change from “excellent” to “ok”. He may become diabetic.

Notice that, like events, non-events are also abstractions. Just as a lot more happened during the two minutes just described than the deposit event,

Mark and Eileen are a lot more than customers. For example, both are parents, one is an engineer, and so on. But nonetheless it is true that Mark and Eileen are customers.

There seems to be no word for non-event kinds of things. However, object theory does have an expression – “persistent object”, meaning an object that persists over time.

Used in this way, we can say that persistent objects and events are two major categories of *being*. “Being” is the participle form of the verb “to be”; it is thus a literal translation of Aristotle’s term “ousia” (a participle form of the corresponding Ancient Greek verb for “to be”, namely “emmi”). So things that change over time are persistent objects. Things that don’t are events. Events are how persistent objects change; they are what happens to them. Persistent objects “participate” in events, thereby changing.

Ontology. This preliminary clarification of the term “thing” has introduced us to ontology. By distinguishing various kinds of things, we have started to *do* ontology, not just to define it, describe it or otherwise talk about it. In this aside, we have made a start at delineating the most basic categories of all the kinds of things there are that we can talk about.

But ontology is tough work. To illustrate: if every “thing” is either a persistent object or an event, then what about space and time? What about love or the sieve of Eratosthenes? What about properties or relationships? Of course, I’m not talking about the concepts of space, time, love or mathematics, properties or relationships. I’m not talking about those linguistic expressions either. Nor am I talking about the mental representation of those concepts in our minds. I’m talking about what it is that those concepts are about.

Figure 1. What Does “thing” Mean? A Brief Exercise in *Thinking Ontologically*.