When we start to think about describing a system, there are a few key components, a few key ideas or heuristics that we use just to get an initial handle on what a system would look like, even if we think about it as just a snapshot of the system.

We want to think about variables or what we might call components of a system. These are the objects which make up the system. In the case of variables, they are the measurable and changing elements, what words you use to describe or measure the state of a system, or a class of objects which perform the same function. These are the bits and pieces that make up a system. Those are the variables or components.

Next, we talk about this idea of structure, and in this way we're talking about the way that these components or variables are interconnected and the way that they might be represented, for instance, in a system diagram. That's the idea of structure. These are the interconnections, the way that the various components or variables are connected to each other.

Next, and we mentioned this earlier with referencing the example from Mario's book, is the idea of a system boundary. This is a really important piece when you're trying to describe a system. What is your boundary? It helps to identify what your perspective and your purpose is. It is an imaginary line, and I emphasize that because, as I mentioned earlier, systems thinking is itself a lens. It doesn't necessarily reflect reality. It's a way of thinking about the world, a way of approaching problems. It's an imaginary line that we draw which separates the things, the variables, the components within the system to those outside, always remembering that these boundaries, especially when you're talking about social, ecological, economic, political boundaries, that energy, material, information, these all continue to flow across the boundary. They don't stop it.

What the boundary does for us, is it helps us to bound the system in a way that's useful for us so that we don't get lost in all of the details. It creates a logical place within which we can start thinking about the system so we don't continue to look for connections. It really, effectively, is a mental tool to help us put a boundary on complexity, at least temporarily.

The idea is that you can change your boundary depending on your perspective and your purpose. If you're finding that a particular boundary isn't really useful for elucidating or helping to describe a system, you might need to change it. You might need to expand it.

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