In an undergrad philosophy course, I was introduced to the Law of the Hammer: give a kid a hammer and everything needs pounding. The Law is applied so ubiquitously that it has become self-describing. Our first child illustrated it literally and expensively. Instead of a hammer, he had a screwdriver that he carried and used everywhere, ultimately to pry open a locked car. My personal hammer is more benign: spatial thinking, which I see everywhere. Note: see everywhere.

An op-ed by Crispin Sartwell in the November 24, 2018 issue of *The New York Times* provides a delightful example. How Would You Draw History? he asks in the title, and proposes a series of increasingly complex spatial conceptions: linear, a one-way left-to-right arrow that is essentially a time line; circular, an arrow that returns to itself, loop, a spiral; zig-zag, dialectics, Hegelian thesis and antithesis; a Big Bang expanding sunburst; and last, what he calls a loop-spiral, a Spirograph, for those who remember that mesmerizing childhood toy. History is a sequence of events that are points on a line; the path that line takes is a view of history. Like a route: places on a path. Like data points on a dimension. Like a chain of thought: ideas and relations between them. Our minds move between ideas the way our bodies move between places. Those points are really boxes that can be filled with the rich set of diverse things that constitute places or memories or ideas. To express those paths through places, times, and ideas more directly, more efficiently, we draw them on a page. Or in the air. They form routes and timelines and line graphs and ultimately networks connecting places or memories or ideas.
Our representations of thoughts and actions of the mind and our representations of places and actions in space mirror each other in many ways. People can be close or distant and ideas close or distant just as places can be close or distant. Ditto central or peripheral. Even up or down, though these are special; they depend on gravity, not just geometry. Going up takes resources: health, strength, power, money. So, on the whole, good things go up. To the heavens. She’s on the top of the heap; he’s fallen on hard times. These uses aren’t metaphors or analogies or figures of speech; those abstract relations are as core to the meanings of the concepts as the spatial relations. You can check your dictionary. Or check your brain. Places and episodes in the hippocampus. The same hippocampal structures that store the past allow imagining and planning the future (Addis & Schacter, 2012). Right next door to the hippocampus and richly interconnected with it: the grid cells in entorhinal cortex that represent the relative locations of places in space. It turns out that they also represent the relative locations of events in temporal space, people in social space, and ideas in conceptual space (Epstein, Patai, Julian, & Spiers, 2017; Garvert, Dolan, & Behrens, 2017; Milivojevic, & Doeller, 2017; Moser, Kropff, & Moser, 2008; Tavares, Mendelsohn, Grossman, Williams, Shapiro, Trope, & Schiller, 2015).

Now that we have arrays of places or memories or ideas in space, we can take a perspective on them. One perspective is from outside, from above; that gives us an overview, like a map. That outsider perspective provides the overall structure of the space, if without details. It allows us to see many possibilities, many interconnections, many solutions. But so many possibilities can be overwhelming. Maybe all we need is a view from inside, how to get from where we are to where we need to be, in real space, in conceptual space. We need a particular path from a particular point, ours: a route to get from the train station to the hotel or the string of events that awaits us when we arrive or retracing the path that led us from one thought to another to arrive at a solution. For that, an insider view.

Once inside with a clear view of what’s in front and behind and around us, we can take our own perspective, but we can use that to imagine those of others. You might be at a different hotel and we need to find a place to meet; you might have gotten to the same solution by a different path. If I know where you are and how you are oriented in the network of paths, the landscape, around you, then I can jump into your shoes and take your perspective.

The nuances of insider perspective-taking are endlessly fascinating. Jumping into your shoes turns out to be something people can do for spatial perspectives. This in spite of the fact that it was assumed almost as a truism that our own egocentric perspective is primary and that taking someone else’s requires extra effort. That view has been eroding; for one thing, the fact that from exploring routes we — and rats — can form mental overviews that are egoless, cognitive maps, was famously demonstrated by Tolman, whose rats found shortcuts. More recently, a slew of studies showing that when we explain to others where something is or how to get somewhere or how to do something, we take their perspective far more often than our own (e.g. Schober, 1993). More surprisingly, when viewing someone in action, we are more likely to take the actor’s opposing perspective than our own, even when the actor is present only in a photo and our presumed conversation partner has the same perspective as we do (Tversky & Hard, 2009; Cavallo, Ansuini, Capozzi, Tversky, & Becchio, 2016). Taking the perspective of the actor might allow us to better understand and learn the action; it should also allow us to better prepare our own actions. Think of batters and pitchers, or boxers or, in another realm, debaters.

Which brings us to social and emotional perspective-taking, of enormous importance in these divided days. In face-to-face encounters, when I can see your face or hear your voice, a degree of social and
emotional perspective-taking seems to happen by itself, mediated by the mirror system (e.g. Iacoboni, 2009). But what about in the imagination? Spatial perspective-taking works in the imagination. So far, to my knowledge, no one has found a close relationship between spatial perspective-taking and social or emotional perspective-taking. On reflection, that makes sense. We can’t see the social and emotional and semantic landscapes of others, so that kind of perspective taking has to be in the imagination. Still there are illuminating parallels. To take your spatial perspective, I need to know the spatial landscape around you, where you are in it, and how you are oriented. Similarly, to take your social or emotional perspective, I would need to know the social, emotional, or conceptual landscape around you as well as your place and orientation in it. Knowing the social or semantic or emotional landscape around you and your orientation in it is complicated and challenging, especially when the ground is shaky.

Back to paths and places — in particular, our own. We don’t sit in place for long, not in real space, not in conceptual space. Here and Now keep changing and we keep moving, to the future, but, like Janus, also to the past. Past paths guide future paths. Past paths create the threads from which we braid the everchanging stories of our lives: places, people, events, and ideas, intertwined with those of others.

My very best wishes to each and all for the coming year. May your paths be graceful and take you to wonderful places.

References


