Let's Talk about Momentum

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Maybe fernand braudel was on to something when he spoke about the tides of history. Every scholar knows his comments about the different speeds of history in *La Méditerranée*. Braudel introduced the *longue durée* into the vocabulary of our profession and juxtaposed it to *l'histoire événementielle*: in his opinion, events were "surface disturbances, crests of foam that the tides of history carry on their strong backs."[1] It is typically read as a statement on the pace of times past, but maybe there is a materialist dimension in play, too. Waves are a material force if ever there was one, and if they reach a certain size, they dwarf human powers, as everyone who has been on a beach or out at sea will know. Jane Bennett invited us to an encounter with "vibrant matter," but that sounds like an ambiguous undertaking in the face of the tides of history.[2] Clever helmsmen learn to ride the waves, but they better not get overexcited about human supremacy. Waves can make you fall, struggle, and worse.

The dynamism of the material is huge but also strangely invisible. According to the Food and Agriculture Organization of the United Nations, the world produces more than 750 million tons of wheat and more than 500 million tons of rice each year, but who really has an idea of what that number means in substantive terms? It is far more than anyone can eat or store in a silo, and data on production and trade tend to cater to merchants and food security experts. But what about the sheer material heft of masses in motion? The literature speaks of material properties, of the categories that we use for measurements, and of the enchanting quality of the power of the material. But where is the power of masses that sweep you away? Modern commerce has unleashed a veritable global deluge of stuff, agricultural commodities among them, but it seems that scholars struggle to acknowledge this deluge as a force in its own right.

According to the laws of physics, masses gain momentum if set into motion, and that has been a loaded word in historical circles since Thomas

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P. Hughes introduced it into the history of technology. Hughes invoked momentum in his study of electric power networks, arguing that once networks reached a certain size, they were driven not just by the decisions of humans but also by sheer momentum. As conceptual metaphors go, it was one of the murkier ones, not least due to its whiff of technological determinism. Hughes tried to invoke momentum in a study that explains the rise and consolidation of electric power systems, but that brought him perilously close to a circular argument. In his reading, growth generates momentum, and momentum generates more growth.

Hughes stressed that "technological momentum, like physical momentum, is not irresistible."[3] But if momentum meets another force, there is usually a price. In Hughes's study, this price is about the balance sheet of power companies, but penalties are of a more nefarious quality when it comes to food. If material flows come to an end, people will starve, and if the flow stops for an extended period of time, people will starve to death.

It was a normalcy of sorts in premodern times. "Famine recurred so insistently for centuries on end that it became incorporated into man's biological regime and built into his daily life," Braudel wrote in the first volume of *Civilization and Capitalism*.[4] Yet the absence of food is a strange omission in our debate, and one that I record with a sense of mea culpa: I realized this when it was too late to make changes. Maybe we would get a different take on the New Materialism if I had invited scholars of Asia or Africa to this conversation, or really anyone whose scholarly realm lies outside modern history. As it stands, our comments tend to reflect an enchantment with the material that is probably a tough sell beyond the world of plenty.

When Braudel wrote about the nonhuman world, he conceived "a history whose passage is almost imperceptible." In the sixteenth-century world of Philip II of Spain, change in the natural environment was about "constant repetition, ever-recurring cycles."[5] That made sense half a millennium ago, but since the dawn of modernity, the waves have grown enormously in scale and scope. They became huge, global, they often went in the same direction and hence accumulated force, and there was more than one wave underway. It might be a worthwhile effort to imagine the flow of agricultural commodities around the world as exactly that: an undercurrent of modern history in the most literal sense. And those who have been out at sea in rough waters know that you should never underestimate the power of undercurrents.

None of this is meant to challenge the points made by other contributors to this conversation. Quite the contrary: the place of the material in

history becomes even more significant—but also more frightening—if we introduce the dynamism and the momentum of stuff in motion. Maybe there is a place for a view of modern history that takes Braudel's hydraulic metaphor seriously: where material flows gradually turn into forces in their own rights that dwarf human wishes, sensibilities, and modes of control. In such a history, humans would be out at sea, constantly trying to maintain and increase momentum, if only for lack of a choice. It may be a type of history that we cannot tell in the classic mode of historical narration, with a clear start and end and a more or less straight path between the two. We may not even be able to tell this history with our traditional understanding of cause and effect. If humans and material flows intertwine, and if maintaining the flow becomes akin to a categorical imperative, it may prove futile to inquire who is controlling whom. There certainly cannot be a real end in such a history, as the dynamism of the material shows no sign of relenting in the twenty-first century. We are in the midst of the materialist vortex that we have unleashed.

The waves of history may not be to everyone's taste. They certainly challenge our understanding of history, in which humans still claim an outsize role at the center of the stage. Those who are not into conceptual metaphors may find all of this exceedingly watery. But maybe that is where we end up when we finally take stuff seriously.

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Notes

1. Braudel, *Mediterranean and the Mediterranean World*, 21.
2. Bennett, *Vibrant Matter*, x.
3. Hughes, "Technological Momentum," 113.
4. Braudel, *Structures of Everyday Life*, 73.
5. Braudel, *Mediterranean and the Mediterranean World*, 20.

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