

Touch and value

For 'Negotiating Touch', 2nd meeting

Michael Bycroft, May 10, 2021

Touch (*le toucher*) can distinguish transparent corundum or an Oriental stone from bodies that are less hard and less precious. Before looking at the gem, I allow it to slide through my fingers, and I make an initial judgment based on the way in which these stones, though not greasy, try to slip through...I once established by touch alone (*au simple tact*) that a supposed Oriental stone, whose brilliance had seduced a jeweller, was in fact an inferior stone. It is well known that touch (*le tact*) can work wonders in the discrimination of objects.

This is from *Science des pierres précieuses appliquées aux arts*, a book written in the eighteenth century and published posthumously in 1826. The author was Antoine Caire-Morant, an obscure but interesting figure in the history of gem appraisal. He was a practicing gem-cutter, having been apprenticed to a cutter in Turin at a young age before setting up a royal workshop (*manufacture royale*) to make fashionable objects out of rock crystal. Like other late-Enlightenment entrepreneurs, such as the Montgolfier brothers, inventors of the hot-air balloon, he had one foot in the crafts and the other in the court of Louis XVI. He was also part of the French scientific establishment, presenting papers at the Académie Royale des Sciences and attending lectures on chemistry and natural history in Paris. He was on good terms with Voltaire, and once presented the philosopher with a gemstone engraved with his (Voltaire's) likeness. The upshot is that Caire-Morant's book on the "science of precious stones" is a learned and detailed account of the dark art of gem appraisal. As the quote shows, touch was as important as sight in the evaluation of gems. Caire-Morant determined the value of gems by running them through his fingers, weighing them in his hands, and feeling their resistance when he held them against the grindstone. This was a kind of connoisseurship – the word *connoisseur* appeared frequently in Caire-Morant's book – but it was not connoisseurship as we know it. "The eye of the connoisseur," to use a well-worn phrase from art history, was only one organ that mattered. The *hand* of the connoisseur was just as important.¹

Caire-Morant was an exceptional individual, but he was typical of eighteenth-century Europe in one key respect. This was a period when the distinction between "oriental" and "occidental" stones was the most important distinction in the evaluation of gems. "Oriental" denoted brilliance, richness of colour, and high prices. "Occidental" denoted dullness, mild colours, and low prices. There were "oriental" rubies as well as "occidental" rubies; "oriental" sapphires and "occidental" ones; and so on. The distinction has a long history – goldsmiths in Paris distinguished "Oriental pearls" from "Scottish pearls" as early as the thirteenth century – but it was generalised to all stones only at the end of the sixteenth century, as shown by travel narratives, jewellers' handbooks, and natural history books from the period. In the Enlightenment, with its enthusiasm for classification and for Asian commodities, the oriental/occidental distinction became even more pronounced in natural histories of minerals, now called "treatises on mineralogy."

¹ As art historians themselves have been saying recently. Kristel Smentek, "The Collector's Cut: Why Pierre-Jean Mariette Tore up His Drawings and Put Them Back Together Again," *Master Drawings* 46, no. 1 (2008): 36-60. Joachim Rees, "Les Mains de Michel-Ange," *Revue de Synthèse* 132, no. 1 (2011): 53-74. Ewa Lajer-Burchard, *The Painter's Touch: Boucher, Chardin, Fragonard* (Princeton University Press, 2008). With thanks to Guillemette Crouzet.

At first sight, the oriental/occidental distinction is a visual and geographical one, bound up with where stones come from and what they look like. But geography was always hard to determine – how did a jeweller in Paris know that the gem in front of him came from Pegu rather than Bohemia? And visual properties were often deceptive – the red of a garnet or spinel could simulate the red of the (much more valuable) ruby. In practice, the decisive criterion was not geography, colour or brilliance, but *hardness*. “Oriental” gems were the hardest ones, “Occidental” gems the softer ones. And the most reliable way of judging hardness, as everyone acknowledged – naturalists, crystallographers, jewellers and cutters – was to cut or polish the stone on the lapidary’s wheel. The easier the stone was to cut or polish, the softer it was. This was not just a matter of observing the rate at which the stone lost volume; it was also a matter of *feeling* the resistance of the stone against the hand doing the cutting. “The pressure on the hand measures the resistance” of the gem, as Caire-Morant wrote. The sensation of cutting rock crystal (for example) is different from the sensation of cutting sapphire with the same machine, just as the sensation of cutting through butter is different from the sensation of cutting through beef with the same knife.

This was the basis for the modern methods of quantifying hardness that emerged after 1800. The “scratch test,” now taught to mineralogy students everywhere, was an extension of the cutters’ practice of scratching a gem with an iron file to determine its hardness. The “scratch sclerometer,” the standard nineteenth-century instrument for measuring hardness, was anticipated by Caire-Morant, who measured the hardness of gems by the weight that must be added to a cutting machine in order to scratch them (fig. 1). In this way, he literally weighed gems in the balance. “The balance will be the judge of their primacy,” he wrote, “whatever their country of origin.”

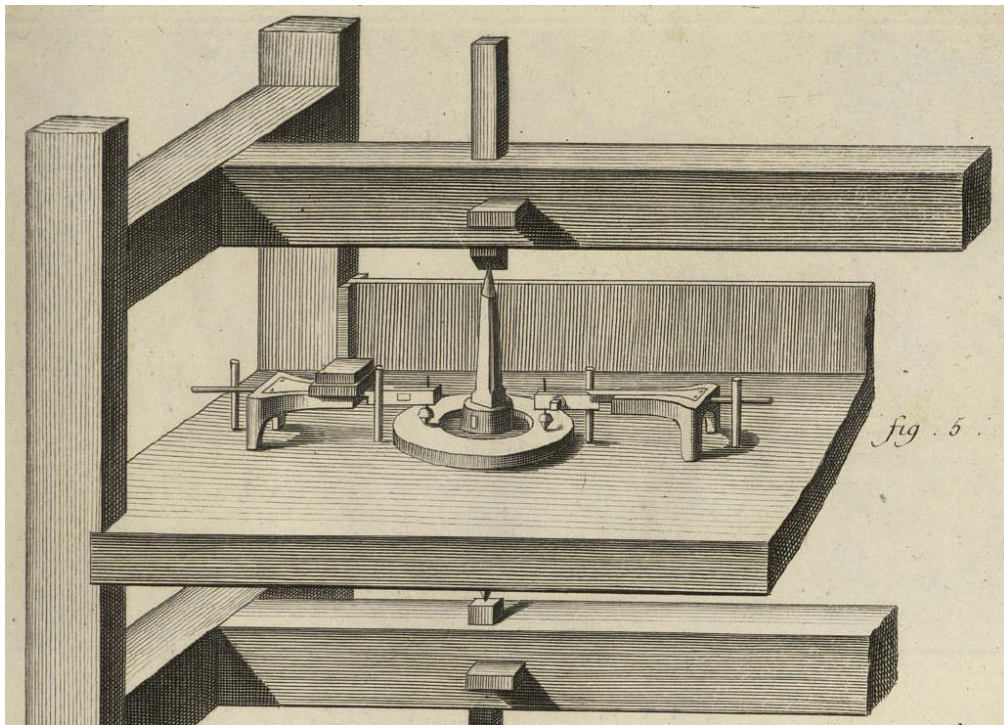


Fig. 1. Diamond-cutting machine from the *Encyclopédie* of Diderot and d’Alembert. The diamonds are held against the doughnut-shaped object, which is a rotating piece of iron. There are two diamonds in the image; the one on the left is weighed down with two blocks of iron.

Why does this matter? What do Caire-Morant and other eighteenth-century gem connoisseurs tell us it about touch and value in general? Here are some thoughts:

- evaluation is a kind of labour. It's not just a matter of making snap judgments, or of exercising good taste. It requires skill, training, instruments, and manual dexterity – good touch as well as good taste. It is often done by people in unglamorous jobs, even if the objects they judge are glamorous - gem-cutters were not very prosperous in early modern Europe, much less so than goldsmiths. Indeed, in some contexts, jobs were unglamorous precisely because they involved good touch.²

- evaluation is often hidden. It is certainly hidden in value theory, a branch of political economy that says which kinds of economic activity are valuable. Production, circulation, distribution, and consumption, are all prominent in theories of value (fig. 2). Evaluation not so much. The *practice* of putting a value on things has little place in *theories* of value.

- evaluation is also hidden in another way that is exemplified by touch and gems. On the face of it, gems are valued by what they look like – their colour, brilliance, chatoyance, etc – not for how hard they are. But hardness is a good proxy for these valuable properties. Sometimes hardness is *more* reliable than colour as a guide to the identity (and hence value) of a gem. Evaluation sometimes relies on properties that are valuable, not in themselves, but as a means to detecting other properties that *are* valuable in themselves.

- production is sometimes evaluation in disguise. The machine in figure 1 looks like a productive machine. Certainly, its main function was to change gems so that they were more valuable – to give them facets so they became more symmetrical, polish them so they were more brilliant, and so on. But this was also an evaluative machine, since it judged gems by hardness. It *determined* the value of gems as well as *increasing* their value (usually, it did both at once).

- one other way evaluation – by touch especially – is hidden: it is often done with specific gestures, and gestures are not easy to find in the historical record – not as easy to find as instruments or objects, at any rate. There are plenty of diagrams of eighteenth-century gem-cutting machines, and some of these machines survive in museums. There are scholarly articles on these machines. But there are no diagrams that show how to run a gem through one's fingers, and very few texts that mention the practice (Caire-Morant's is the only one I know). The history of touch is the history of gestures, not just of the senses – especially if we pay attention to “active touch,” not just “passive touch.”³

- evaluation has a history, though this is not always obvious. There is something ahistorical about the practice of using the hardness of gems to identify them. This practice is common to many different periods and peoples. Anyone who cuts or polishes gems is going to be aware of the variation in hardness from one gem to another. But

² Cf. Alexander Cowan, "'Not Carrying out the Vile and Mechanical Arts': Touch as a Measure of Social Distinction in Early Modern Venice." In *The City and the Senses: Urban Culture since 1500*, edited by Alexander Cowan and Jill Steward, 39-59. Aldershot, UK: Ashgate, 2007. With thanks to Rosa Salzberg.

³ Elizabeth Hsu, 'Towards a science of touch, Part I: Chinese pulse diagnostics in early modern europe.' in *Anthropology & Medicine* 7.2 (200): 251–268. With thanks to Anne Gerritsen.

there's also something historical about this practice. In Europe, the practice became more relevant to the value of gems when the brilliance of gems became more important than their colour, and this only happened after the invention of the brilliant cut for diamonds in the 17th century. Also, the hard/soft distinction piggy-backed on the oriental/occidental distinction, which was bound up with early European orientalism. So hardness – and hence the touch that determined it – does have a history.

- touch and distance sometimes go together. Touch happens, by definition, when two things are close to each other. But the point of touching gems in the eighteenth century was often to say something about their geographical origin, which was often a distant origin. In Paris, people cut gems to determine whether they should be called “oriental” or “occidental” – whether a red stone was a garnet from Bohemia or a ruby from Pegu, to use the earlier example.

To sum up these thoughts: evaluation is important but overlooked, and the case of evaluation by touch suggests some reasons for this. It is unglamorous, practical, and gestural; it is mixed up with other things, such as production and geography; and it is so common that it sometimes appears ahistorical.

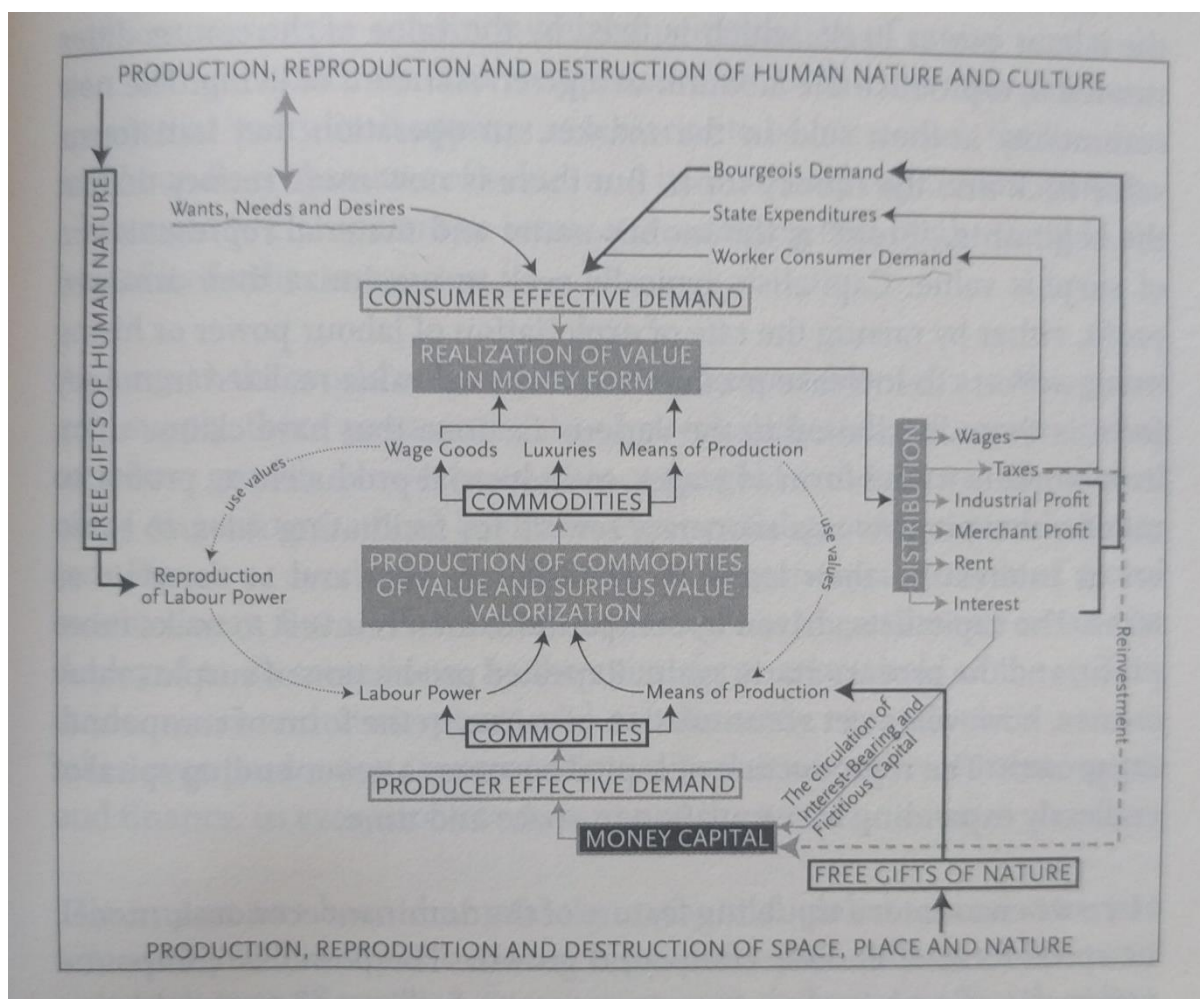


Fig. 2. Diagram showing a recent (Marx-inspired) view of economic activity. From David Harvey, “Value in Motion,” *New Left Review* 126 (Nov/Dec 2020): 99-126. Lots of production, reproduction, distribution, and consumption – but where is evaluation in the theory of value?