

Lorraine Daston and Katharine Park, *Wonders and the Order of Nature 1150-1750*. 511pp. New York: Zone Books. 0 942 299906.

Curious about the nature of light, Robert Boyle spent a series of late nights taking detailed observations of shining veal shanks, stinking fish, pieces of rotten wood which glowed in the dark, and a 'noctiluca' distilled from human urine. Once, report Lorraine Daston and Katharine Park, with "only a foot-boy" to assist him, Boyle put a luminous diamond to the nocturnal test, "plunging it into oil and acid, spitting on it, and 'taking it into bed with me, and holding it a good while upon a warm part of my naked body'".

In this vast, ambitious history of marvels, Daston and Park delight in bizarre investigative practices like this, and the wonderful objects of such intense attention. They locate in Boyle's lifetime, at the heart of the 'Scientific Revolution', a brief, magical period in which all facts were strange. Taking undisguised pleasure in singularity, they offer a critical tour for the curious through rare nooks in the histories of European aesthetics and theology, of medicine, mechanics, and museums. Their book, in a gorgeous Zone Books production, is itself an object of fascination: it is hard to resist the urge to run one's fingers over the jacket's surreally coloured and textured images of a "hairy man", Petrus Gonsalvus, and his hairy daughter in rich 16<sup>th</sup>-century dress.

The analysis of medieval and Renaissance wonders enforces a productive distinction between monstrous individuals and wondrous species. Species like enormous ants, or the barnacle geese which grew on trees, and races like the dog-headed Cynocephali, were enduring features of the natural world. As "regular anomalies", they could be classified with the topographic wonders of Africa and the East. Such local marvels, often in the margins of medieval maps, occupied pockets of difference, each the same as it ever was in a spatially heterogeneous world. They were marvellous only perspectively, due to European ignorance; and they were not supernatural, but the products of ungeneralizable conspiracies of causes.

Individual prodigies, on the other hand, marked temporal singularities which, like the awesome discontinuity of the gospel story, demanded interpretation. Hybrid births, comets, or rains of blood were "sudden irruptions of the marvellous", ferrying messages into the natural course. This single signficatory function, according to Isidore of Seville, explained why true prodigies died immediately after birth. A 'modern' concern with reliable testimony and the verifiability of strange reports was thus, the authors demonstrate, already a feature of 15<sup>th</sup>-century stories of portents. They reject the idea of a global pessimism driving a panic fear of monsters as the expression of God's wrath at an age of wickedness, showing instead that whether a monstrous birth was greeted with horror or fascinated pleasure was tightly indexed to local political and economic stability. News of a winged, horned hermaphrodite would augur imminent civic doom only if, as at Ravenna in the early 16<sup>th</sup>-century, enemy forces were already bearing down on the city.

Daston and Park's brave identification of a zenith of the history of wonders in mid- to late 17<sup>th</sup> century natural philosophy rests on the ubiquity of the astonishing in journals and reports of the new scientific societies. Marvels and "strange facts" were "the prototypes of the very idea of the factual", exemplarily unique particulars for cautious

empiricists to describe without explaining. While many historians of the Royal Society agree that institutional energy was often spent on worrying at the edges of nature, the claim that causal hypotheses about natural oddities were outlawed, or carefully segregated from the unadorned facts of experience, is more controversial. In closely following Steven Shapin and Peter Dear on this point, without a great weight of examples of untheorized strange reports, Daston and Park perhaps neglect the possibility that Hooke and other contemporaries of Boyle could have seen nature as thoroughly “peculiar”, a patchwork rather than a single cloth, without thereby relinquishing the desire for systematic insight into its marvellous crannies.

On this striking perspective, early modern reality was (seen as) sporadic in both time and space, the world dotted with islands of uncertainly-related particulars. Those who wrote and read reports in learned journals of “an Extraordinary Mushroom”, or of “a Girl in Ireland, who has several Horns growing on her Body”, sought what might be thought of as objective knowledge of idiosyncratic reality. As Locke laboriously recorded daily weather conditions for years, Sydenham the course of London’s diseases, and Hooke his every orgasm, so provincial correspondents collected uncommon information for the admiration of the ingenious. Daston and Park evoke the fragility of these facts: “in contrast to the ‘hard facts’ of the Victorians, the problem was to make them stay, not to make them go away”. Not every hypothetical entity, as Paul Feyerabend noted of Aphrodite, will meekly hang around waiting to be observed. The assumption driving Hooke’s ideal of “a perfect Knowledge of all Particulars” need not, it seems to me, have been that descriptions must be “scrubbed clean of conjecture” (as Daston and Park describe the Baconian empiricist programme), but that all systematic insight must respect the plurality of nature, the idea that causes come in local clumps or thickets which may not all untangle in the same way. It’s disappointing that Daston and Park’s initial announcement that early modern philosophers used monsters to “challenge natural kinds” is followed up only in incidental remarks about fuzzy categories, and not in more sustained reading of, for example, Locke’s distinction between real and nominal essences.

A wariness about trying to do historical philosophy, on top of their magnificently interdisciplinary history, also hinders the realization of Daston and Park’s most interesting ambition, to write the history of the passion of wonder as well as that of the objects of wonder. They want to catch emotions like horror, fear, and delight not just through moralizing or theorized attitudes towards the passions, but even in “their texture as felt experience”. Thus, rewriting their own influential 1981 paper on monsters, they replace a narrative of the inexorable medicalization of prodigies by tracing the overlapping paths of three emotional complexes: horror at, pleasure in, and repugnance towards wonders.

These are hints at a cognitive historiography of the passions, in which historical evidence can sit side by side with anthropological reports in a newly contextualist cognitive science. But they are as yet little more than hints, for Daston and Park’s historical ontology still relies mainly on classification neatly to chart, for example, the slow rise of ‘curiosity’ to Enlightenment respectability, and the corresponding decline of ‘wonder’ from powerful, excessive awe or amazement into the vulgar stupor of the gawking mob. It is odd that they do not draw more here on the rich psychophysiological accounts of emotions across their period. This is perhaps due to their conviction that wonder was a *cognitive* passion, not to be reduced either to

private feeling or to physiological process. Yet, as Renaissance and Enlightenment psychosomatic theorists alike accepted, cognitive and physiological characterizations of emotion are not mutually exclusive. Turbulent internal dramas in which animal spirits and other body fluids, charged with affective energies, melded and clashed in vessels and pores, were a feature of embodied emotional experience, not just of old theory, through to the 18<sup>th</sup> century. Even in the mechanical accounts of the body developed by those who revived what Lucy Hutchinson called “the foppish casual dance of atoms”, a strangeness remained within, thanks to the reality, psychological and neurological at once, of passions like surprise and hatred.

Notwithstanding their rhetorical rejection of a linear history of wonders, Daston and Park admit to “one sharp rupture” in their narrative. It occurs, strangely, at the end of their story, with the rejection of marvels and of mixtures by Enlightenment intellectuals on related metaphysical, aesthetic, and political grounds. The authors’ insistence on a decisive shift of attitude at this point is unsettling, with the same late 17<sup>th</sup>-century thinkers illustrating sometimes the old respect for wonders, sometimes the new decorous neglect. But Daston and Park do lay to rest the easy assumption that wonders and monsters were marginalized by the ‘rise of science’ or a simple ‘triumph of rationality’: marvels were not successfully naturalized by Cartesian mechanism, but neutralized by Enlightenment moralism. Monsters came to “affront not truth but taste”. This allows a lovely twist on the notion of a “wistful Counter-Enlightenment”. Daston and Park quietly locate themselves, despite hesitation about present-centredness, not with those who regret a technological secularization of pre-modern enchantments, but against the legacy of 18<sup>th</sup>-century moral snobbery: this book, learned and light in equal measure, reminds us of the costs of becoming a “self” sufficiently “fortified by reason and will” to disdain true knowledge of marvellous particulars.