

BOOKS FROM OTHER DISCIPLINES

## The Making of Measure and the Promise of Sameness

By Emanuele Lugli, Chicago: Chicago University Press, 2019. 312pp. ISBN: 978-0-22661-249-2 \$35

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\*This review is the first in a new series entitled 'Books from Other Disciplines'. The idea is to encourage reviews that 'read across' and relate work from other disciplines to legal scholarship. The focus is not on the strengths and weaknesses of the book in itself, but rather on its generative potential for legal scholarship, and also what legal scholarship could bring to the field it investigates. If interested in reviewing a book for this series, please e-mail Maksymilian Del Mar: [m.delmar@qmul.ac.uk](mailto:m.delmar@qmul.ac.uk). doi:10.1017/S1744552320000257

The language of measurement – its practices, its tools – pervades legal language. This becomes obvious when we trace the etymology of some of the most entrenched, and consequently often invisible, words in the legal lexicon: rules, for instance, can be traced back to the *regula* (or ruler) and norms can be traced back to the *norma* (or carpenter's square). The etymological traces, however, are just part of the story. The power of the hold of the practices and tools of measurement lie much deeper: they infuse the legal imaginary and, more broadly, normative and epistemic imaginaries. The extent and depth of this influence can be illustrated by noting the association – again, often not consciously brought to the surface – between goodness and straightness, and equally between knowledge and precision. Being upright and straight is associated with morally appropriate behaviour (even this language of 'appropriateness', or sometimes also 'correctness', has this connection to an aesthetic of straight lines). Similarly, clear-cut distinctions, or as we say in law 'bright-line rules', are associated with something both capable of being known and worth knowing (this kind of aesthetic is prevalent, arguably, also in certain styles and temperaments of philosophy, most obviously analytical philosophy). Paying attention, then, to the history of measurement can help us bring to the surface certain associations that might otherwise remain submerged. Should this be a history that is mindful of the very un-linear past of measurement – making clear that it is by no means a Whiggish tale of progress – then it might also help reveal the fragility of the pretensions of measurement, moral and epistemic, as above.

Is there such a history available? Is there a history of measurement that pays attention to its contingencies, and to the many ways in which the right to measure was fought over? Is there a history that charts the multi-faceted relations between measurement and politics and religion, and thus shows us how integral measuring has been to the practices of power and faith? Is there a history that is sensitive to the materiality of measuring, despite its thirst for making itself invisible, for disappearing into the smoke of abstraction? Is there a history that reveals the labour of measuring, and how the image of a universal measure, shorn of ideology, capable of bestowing certitude, required the work of many hands, with all the resources of obfuscation and mystification that such universalising ambition needs?

Such a history arguably remains to be written, but a very large leap in this direction has been made by Emanuele Lugli's *The Making of Measure and the Promise of Sameness* (2019). It is a remarkable achievement: written in short, pacy chapters, but underwritten by thorough scholarship (as the end-notes reveal), and full of surprising and entertaining insights into the stories and personalities – the particularities – of this complex history, this is a book that measurement has been waiting for. Lugli is an enthusiastic writer: one cannot help but to get caught up, as a reader, in his passion for the topic. At the same time, he is far from having been entranced by the moral and epistemic pretensions of

measurement. Indeed, this is undoubtedly the history of an imaginative sceptic – someone deeply sensitive to the underlying, and inescapable, materialities and embodiment of a practice that often pretends to be independent of messy realities, as much of tools as social relations.

The materiality of measurement, and how we, as bodies, interact with it, is foregrounded in each of the four parts of the book. The first, entitled ‘Safes’, points to the repositories that hide away tools of measurement, especially the famous Parisian meter. Hardly ever publicly displayed, the Parisian meter, made – very significantly, as Lugli shows – out of platinum, is hidden away, as if scrutinising it too closely might burst the bubble of inevitability and certitude it has created around itself. Helping us question its taken-for-granted status, Lugli points to how complicated the history of the meter was, including politically, such as how it took the whole of the 1790s to become a reality, but also how short-lived its initial success was. Associated with being ‘an innovation and a symbol of the Napoleonic empire, it was banned at the Congress of Vienna in 1814–15’ (p. 6). The meter went from being strapped to the backs of Napoleonic soldiers to being buried by Napoleonic trauma, only to emerge again, this time more resolutely triumphant, in 1840s France.

But the meter, and its materiality – again, as a platinum rod tucked away in a safe in Paris – has, as Lugli shows, much more in common with its predecessors, and other tools of measurement, than we might like to think. Part of the clue lies precisely in its materiality: that it exists as a material artefact. The rod in Paris, says Lugli, ‘aims at becoming a self-sufficient point of departure’ (p. 33); it claims ‘to be both timeless and universal’, employing ‘materiality to paradoxically withdraw from it’ (p. 39). But, once again, the meter’s materiality is not something it can escape from. Yes, platinum is the material that is most resistant to being altered and ‘the least expandable in the heat and least contractable in the cold’ (p. 36), but it is a material nonetheless, and thus very much situated in time and space. In its ambition, ironically, it reminds us precisely of the inevitability of its materiality and thus that ‘measurement standards breathe’ (p. 30), expanding and contracting, and thus never quite entering the pristine, heavenly world of Platonic forms. Retracing this history, of the fragility of measurement’s pretensions, is the golden thread of this book. Throughout, Lugli shows how ‘most scientists, surveyors, and mapmakers sooner or later recognised that measurements have a fragile core, even if in their reports they presented them as the foundation of certitude’ (p. 30).

This fragility is beautifully illustrated in the second part of the book on ‘Squares’, as in the squares of medieval towns, where measurement tools were visible in the open (measuring was to be done under the Sun), in the form of incisions made into the sides of buildings, mostly churches. In this period, in medieval Italy, churches often ‘worked as an extension of the market, where transactions took place under watchful saints’ (p. 59). This is why the pillars of these churches were often incised with standards, such as the ‘pertica’ and the ‘braccio’. Manual labour was closely intertwined with these incisions: the rods that were inserted into the incisions to check they were accurate had to be ‘folded and unfolded’, taken ‘in and out of buildings, carried through fields and into towns, laid on the ground, or pressed against walls’ (p. 63). Incidentally, this practice of inserting artefacts into moulds was widespread in medieval Italy and it is what inspired Giovan Battista Basile’s seventeenth-century version of the *Cinderella* story. As Lugli puts it, ‘Basile turned a market test of dimensional correctness into the climactic revelation of a mysterious woman’s identity’ (p. 69). Measuring rods, then, were artefacts and, in this period, gained their legitimacy from being fitted into incisions made in church walls. But already here measurement standards attempted a disappearing act (echoed, later, by the Parisian meter, though in a different way). For it is significant that medieval Italian standards were negatives: holes, absences, made in walls. ‘To render measurements in the negative,’ says Lugli, ‘was a way to make them appear as something abstract’, as if they were ‘deprived of matter’ (p. 70). We see, here, precisely this ambition, or drive, to self-sufficiency, or abstractness, that is crucial to the establishment of its authority, making itself invisible when it is there in plain sight, chiselled in stone, laid bare in the market square and gleaming in the Sun.

I mentioned above that some of the standards in this period were called ‘braccio’ and it is significant to note that this is a language that echoes bodily parts, in this case ‘braccia’, or forearms. Indeed, the body – and especially the king’s body – was often an inspiration for the language of measurement.

In the UK, we know this of course from the terminology of ‘feet’, but this was also the case in medieval Italy, where not only ‘piedi (feet)’ were used, but also ‘dita (fingers)’ and ‘palmi (palms)’ (p. 47). There is a connection to be mined here between the duality of the king’s body, as traced by Ernst Kantorowicz and others since, and the character of measurement, as both material and, in its ambitions, abstract or ideal. The king’s body, as Lugli notes, ‘was exalted as both average and extraordinary’ (p. 47), as both real and imaginary, and this duality, this tension, was, and remains, a large part of the arts and technologies of power. There are, in addition, other connections between measurement and the power of kings: the right to measure was claimed, for instance by Frederick Barbarossa in 1155, as part of his regalia – that is, as one of the king’s privileges (p. 77). Measurement, it seems, was not just related to power by language, but it was also a kind of power-maker, or ‘power conductor’, as Lugli names it: it distributed power ‘through all those involved in maintaining them in existence’ (p. 82).

For those of us interested in the visual history of law and justice, there is a wonderful account in Lugli’s book of the iconography of measurement in one of the most well-known and most influential of political images: Lorenzetti’s frescoes, in Siena, of *The Allegory of Good and Bad Government* (1338–1339). Often mistakenly described, the tools that the two figures of justice (Distributive and Commutative) give to (or receive from?) the merchants are ‘Siena’s standards of measurement: the stajo, the pasetto, and the longer canna of six braccia’ (p. 89), very carefully depicted by Lorenzetti to comply with the statutory requirements for making them (e.g. in iron rather than copper). Measurements, here, appear as tools of justice, as weapons of power, but also as instruments of judgment. Indeed, this is very significant for seeing the value of this kind of history for legal scholarship. Awareness of the materiality of measuring and its many imperfections (e.g. in this period, with rods being ‘chipped, their surfaces eroded, their wooden bodies bent more than surviving records care to admit’ (p. 95)) can help bring to the surface a different epistemology of judgment: not one in which there is a correct way, with everything else being an error, but instead as a process of estimation and approximation, deciding case by case, comparing and relating, and thus very much a careful, particularistic art, though practised by someone steeped in this kind of manual, craft-like expertise. In other words, recovering the lost history of measurement – with attention, as Lugli bestows, to materiality and labour – can help recover an equally lost, or at least neglected, history of judgment, precisely as a material craft. Such a history can also remind us of the fragility of our tools – such as rules or principles – and that none can aspire to self-sufficiency, or ‘bright-lines’, for all are imperfect, incomplete, rough and, analogously, expanding and contracting, breathing in the open air.

Where Part I of Lugli’s book focuses on safes in which rods are kept secure and Part II on the standards incised into church walls, Part III zooms in on ‘Cities’ and especially on the role of religious orders in administering and practising measurement. As Lugli notes, ‘for religious orders, measuring became a powerful vehicle of conversion and political participation’ (p. 138). Indeed, it is in part through the involvement of religion in practices of measurement that we inherit the association, mentioned above, between moral behaviour and an aesthetic of straight lines and smooth and even surfaces. For instance, the sermons of Giordina da Pisa in fourteenth-century Italy are full of advice to ‘behave straightly and without deceit: your tunic ... and everything else: please make them straight’ (p. 139). For Giordano, ‘precise, straight borders’ were ‘an indication of moral conduct’ (p. 139). It is important to notice here that measuring is thus not only a commercial activity: it is also a religious one and becomes, in religious practices, closely associated with not only morally appropriate behaviour, but also with access to the divine. ‘Measurements,’ as Lugli says, ‘became tools not just for trading, but for praying and thinking about God’ (p. 113), with measuring sometimes being spoken of as ‘God’s creative reasoning’ (p. 114). The role of measurement in religious culture – including in religious sermons and texts – had and continues to have profound effects on our normative language and imaginary. It arguably informs, for example, the imagery of balance, and balancing (familiar to scholars of rights and constitutional adjudication), as in the idea that wrongdoing could be, and had to be, measured, with any sin ‘to be matched by a penance of equal weight’ (p. 112). ‘The gates of heaven,’ as Lugli adds, ‘could only open the moment Archangel Michael’s scales were evenly balanced’ (p. 112). Scales, after all, continue to dominate even contemporary iconographies of justice.

Further, scales and the state, but also processes of balancing, along with rulers and carpenter squares, and dreams of perfectly straight lines, yield a rich repository of affectively valenced imagery, which runs through the language and practices of legal reasoning. Part of the point here is that unearthing these genealogies of imagery, including in iconography, cannot be done without recognising both the key role of the history of measurement, but also its connections to religion.

The key role of measurement is also explored, though in yet another context, in the fourth and final part of Lugli's book, which is devoted to 'Fields'. Here, Lugli focuses on the spatial arts of land surveyors and the practices, in Italian communes, of producing spatial order, linked as this was, of course, to political economy. The measurement of fields was necessary for enabling, regulating and ultimately also legitimising the payment of tithes and taxes, which were proportional to the size of the field. The production of spatial order, as we know also from the work of other historians of power (such as Charles Maier or James C. Scott), is integral to the practices of government. Measurement practices, including treatises about them, such as about land surveying, play a crucial role in such a history. Lugli points to some of them, such as the *Codex Arcerianus*, a sixth-century manuscript that also includes some incredible visual depictions of land, 'scored by lines and geometrical shapes' (p. 177). Lugli here points to the mouth-watering prospect of an aesthetic and material history of land surveying and its complex links to political economy and statecraft. He also hints at some of its transnational, if not also imperial, dimensions, with his discussion of a visual guide (composed by Fibonacci, a mathematician from Pisa, in the early thirteenth century) to communicating measurements in hand signals, used by traders to overcome linguistic barriers (see Chapter 29).

Throughout this fascinating history, measurement emerges as an intensively contested practice, shot through with imperfect materials, worked on by multiple bodies and linked closely, indeed integrally, to the technologies of power and faith. Such contestation continues today: think, says Lugli, 'of the opposition of Americans to the metric system, or the centrality the London Stock Exchange derives from relying on the meridian zero' (p. 213). Measurements may pretend to look innocent, or natural, and this pretence is an important part of their history. But this is also a pretence that has to be interrogated and cross-examined both at close range, zooming in on particular practices in particular times and places, as well as on a broad chronological canvas, where insights often emerge in the shifts and changes from one measurement practice and set of instruments to another. As Lugli emphasises, and as he also shows, it is important to look measuring tools in the face: to confront, and de-naturalise, the 'purported simplicity' and 'unassuming form of geometrical diagrams, stone incisions and metal bars' (p. 214), and to show how much is hidden underneath such pretensions.

This is important history and it is a history that has some surprising, and surprisingly powerful, links to law. One such link is the one that Lugli ends his book with: 'sameness,' he tells us, 'is never a product of measuring; you need to believe in it before any measuring is even undertaken' – the point also being that such belief 'is constructed through discourses and forms and practices that lie outside of measuring' (p. 215), such as practices of power and faith, amongst others. This is no less so for measuring as it is for law: paying attention to the complex multiplicities hidden under the surface of certain pretensions (legal ones too) could help us reveal another kind of epistemology, and another set of values – one that recognises the fragility of our judgments and how steeped they are, despite claims to the contrary, in embodiment and materiality, and in contestation and power.