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# Spatial Humanities and Memory Studies: Mapping Edinburgh in the First Age of the Enlightenment

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**SPATIAL HUMANITIES AND MEMORY STUDIES:  
MAPPING EDINBURGH  
IN THE FIRST AGE OF THE ENLIGHTENMENT**

*Murray Pittock and Craig Lamont*

<http://www.gla.ac.uk/schools/critical/research/researchcentres/ndnetworks/robertburnsstudies/edinburghenlightenment/>

Disciplinarity in the academy causes many problems. In the name of protecting and intensifying what is asserted to be a set of unique skills and methodologies, it reinscribes a professional hierarchy who tend to seek their own reproduction through the process of granting of tenure to their successors, and who police—sometimes rigidly—the boundaries of their own field of enquiry. Foucault's *Surveiller et punir* is often as true of the academy as of the state: disciplines and punishment go together. Innovation, increasingly necessary and desirable as it is seen to be in our wider society, is difficult to achieve in the Arts and Humanities, because arguably no area of the university is so intensively siloed, despite the importance of creating unified fields of enquiry. It is true that one can never underestimate the power of culture to define the questions and stories that lie at the heart of different societies, but cultural comparativism (and even comparative literature) are difficult areas to make reputations in, because they cut across the perceived methodologies of traditional disciplines. Yet when the United States has 77% recidivism among its huge (and costly) prison population and Norway has 20% among its much smaller per capita number of prisoners, it is clear that American culture's retributive instincts trump the data.<sup>1</sup> Culture defies the evidence that could change policy, and that is why its exploration is an imperative, one which is widely frustrated by the narrow territorialism of disciplinarity, which itself serves to threaten the very future of Arts and

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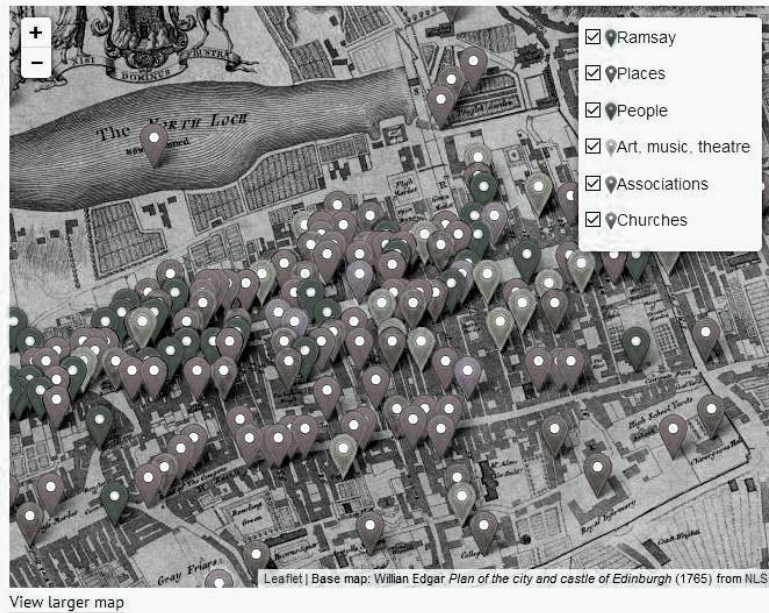
<sup>1</sup> Gregg D. Caruso, "Arrested Development," *RSA Journal*, 2 (2016): 42-46 (44).

Humanities by its turn—sometimes sadly a self-congratulatory one—away from relevance.

This risk is a real one for the Humanities, but given the huge strength and innovation of much Humanities research, it is also being mitigated by new approaches. In areas from History to the Digital Humanities, there has been wide if unequal recognition of this challenge, which has been addressed in many ways. The incorporation of the visual and material culture into our understanding of written, recorded or reported experience is one of these. Another is a better understanding of memory, and the role it plays in transforming, inventing and sustaining the stories that underpin both personal and national identities. A third, less well developed area, is spatial humanities.

The website referenced at the head of this article is the public site of a project, *Allan Ramsay and Edinburgh in the First Age of Enlightenment* (Principal Investigator: Murray Pittock), which in its second phase will give rise both to an edition of Allan Ramsay's work with accompanying digital and performative reconstructions, and to a study of Edinburgh in the first age of Enlightenment which uses the techniques of sociology, economics and urban studies to demonstrate the importance of space, circulation and networks to the development of innovation in the city between 1680 and 1750.

A preliminary and elementary visual witness to this is the current project map, <http://bit.ly/2bDnvJy>: an interactive, user-friendly snapshot of Edinburgh as it was in 1742, offering informative and reliable accounts of the city's social spaces and places of cultural interest dating back to the seventeenth century. Of course, Edinburgh had been mapped in previous centuries: the first useful view was published by Braun & Hogenberg in Cologne around 1582; and in 1647 James Gordon of Rothiemay's immersive, three-dimensional plan revealed new levels of urban congestion. As historically important as these maps are, they are only visually insightful and—being deliberately skewed—offer no reliable scale upon which georeferencing can take place. So in the name of accuracy and usability, the Edgar map currently in use remains the most workable. The National Library of Scotland's map department has helpfully georeferenced it, giving each of our map markers pinpoint accuracy in the narrow streets of old Edinburgh. This drive for tangibility across centuries can in fact reinforce spatial humanities by connecting the history of unstable ideas such as the Enlightenment to a living, changing world, but one circumscribed by a very limited space which still endures.



**Fig. 1: Edinburgh's Enlightenment, 1680-1750**

(interactive, colour-coded, original available at: <http://bit.ly/2bDnvJv>)

There have only been theoretical ventures into this connection before. In *Placing the Enlightenment* (2008), Charles Withers balances the merit of studying the Enlightenment locally (bringing the connectedness of that place into sharper focus) alongside the diverging notion that “working locally helps further reveal the Enlightenment as a collective intellectual, social, and practical enterprise without geographical boundaries.”<sup>2</sup> But of course these geographical boundaries remain more or less in place. As such, remembering the Enlightenment as a transcendental event or process should not encourage the forgetting of the subtler narratives that link places *within* a space.

It therefore seems timely to consider the line between a developing spatial humanities and the relatively advanced field of memory studies. The line itself can be easily drawn. One of the landmark terms in memory studies, “*les lieux de mémoire*,” came to being in the late 1970s during

<sup>2</sup> Charles W. J. Withers, *Placing the Enlightenment: Thinking Geographically about the Age of Reason* (Chicago: University of Chicago Press, 2008), 75.

Pierre Nora's revisionist history of the French nation. More recently, Jay Winter's theories on the "sites" of memory have been particularly influential. He charts an 'initial, creative phase, when [sites] are constructed or adapted to particular commemorative purposes' before they enter "a period of institutionalization and routinization of their use."<sup>3</sup>

The issue with "*lieux*" or "sites" in this sense, when specific to places such as towns or cities, is the predominant focus on the territorialisation of the space in question rather than the multiple meanings that simultaneously occupy it. Edinburgh's High Street/Royal Mile is one such space, yet it played host to several Scotlands centuries apart: a new Protestant nation with a Catholic Queen under siege; a nation at war with itself during the Jacobite uprisings; and an apparently unified nation clad in tartan for the visit of a Hanoverian monarch. The list goes on, overlapping rather than contradicting any one definitive meaning of the space. In such site-specific case studies as the concentration camps of the Holocaust, scholars of memory enter into a battle of reinterpretation revolving around so-called "trauma memory." But with emotive arguments rightly underpinning theory, the sites in question become necessarily connected to other similar, earlier or simultaneous sites, and the remembered relationships or spaces between them. In the discussion of slavery, the inherent mnemonic phrases ("middle passage," "triangular trade") reveal the spaces, rather than places, where memory can be understood. And this is where the line becomes less secure. Memory remains a rapidly expansive, interdisciplinary field. It cannot serve the needs of all disciplines, but its usefulness as an open forum for new experimental modes should encourage nearby doors in the humanities to open. That said, the focus on a space throughout time can tie down floating concepts for better interrogation across disciplines. Edinburgh in the First Age of Enlightenment is one such example.

Throughout the 1680-1750 period, the Scottish capital (although physically indeed, in Youngson's phrase, a "very small town") was Great Britain's second largest city, with a population of some 47-54 000 in 1691 and (despite the initially economically dampening effects of Union) some 53-57 000 in 1755. In the seventeenth century, Scotland was "one of the least urbanised" of European countries, but its capital was still substantial in Continental terms, if not in the first rank of cities. Like all

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<sup>3</sup> Jay Winter, "Sites of Memory," in Susannah Radstone & Bill Schwarz, eds., *Memory: Histories, Theories, Debates* (New York: Fordham University Press, 2010), 312-324 (312).

Scottish burghs, the heart of Edinburgh was the High Street, from which “the principal streets led.” Its “ports” were also normative as was the “secondary space for service activities lying towards the edge of the burgh,” for example the Grassmarket. The “mercat cross” provided the “key site of authority” here as in other burghs until its removal in 1756, the avatar for a major relocation of urban power across the Nor’ Loch. Just as “spatial intentions are...the basis of all architectural decisions,” so the nature and power of that space and its use are determining factors in human behavior and circulation: as Manuel de Landa puts it, “the urban infrastructure may be said to perform...the same function of motion control that our bones do in relation to our fleshy parts.” This circulation—traceable although not stable, because of the immateriality of the social—produces communication. Edinburgh was densely populated, and as we shall see the population was not only closely clustered together, but quite diverse, with many more intersections which were professional or associational (clubs and societies) than those based solely on kin and family. Such associations in their turn eased the friction in daily transactions, whether social or economic, and helped to circulate innovation more rapidly.<sup>4</sup> Early modern Edinburgh was a place of instant communication by virtue of its dense living, rapid building, closely packed tenements (it was not unknown for one to be able to shake hands with a neighbour opposite, and the High Street itself was less than 5m wide at the Luckenbooths) and above all narrow space. The city proper measured only 900x500m from the Castle to the Netherbow, the West Port to the backs above the Nor’ Loch. Its “stacked apartments above merchant’s booths...rank being defined by storey” was far more European than English, and even in this context, “the houses stand more

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<sup>4</sup> Bob Harris and Charles McKean, *The Scottish Town in the Age of Enlightenment 1740-1820* (Edinburgh: Edinburgh Univ. Press, 2014), 28, 56, 105; I.D. Whyte, “Scottish and Irish urbanization in the seventeenth and eighteenth centuries: a comparative perspective,” in S.J. Connolly, R.A. Houston and R.J. Morris, eds., *Conflict, Identity and Economic Development: Ireland and Scotland, 1600-1939* (Preston: Carnegie Publishing, 1995), 14-28 (24); Manuel de Landa, *A Thousand Years of Nonlinear History* (New York: Swerve, 1997), 19, 28; Brian Boydell, *A Dublin Musical Calendar 1700-1760* (Dublin: Irish Academic Press, 1988), 24; Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford Univ. Press, 2005), 1, 30; Lindy Moore, “Urban Schooling in Seventeenth and Eighteenth-Century Scotland,” in Robert Anderson, Mark Freeman and Lindsay Paterson, eds. *The Edinburgh History of Education in Scotland* (Edinburgh: Edinburgh Univ. Press, 2015), 79-96 (80).

crowded than in any other town in *Europe*.” After the 1707 Union, more than any other British city outwith London, Edinburgh was populated by the professional classes, who drove many of its social networks. The remaining—and relics of the former—institutions of an independent state were overwhelmingly based in its capital: packed into a tight space, highly educated, underemployed and with a need to assert their importance to each other and the world, what Nicholas Phillipson terms “a local aristocracy and a dependent literati” trying “to find a way of asserting their importance in a kingdom becoming a province” were ripe agents and audiences for innovation and new intellectual approaches.<sup>5</sup>

Edinburgh had a distinctive social and institutional pattern among British cities outwith London: as we shall see later, this distinctive pattern was itself prominent in the social clashes over ownership and innovation in the Scottish capital. Vic Gatrell’s case in *The First Bohemians* that “locality and community determined what was known and talked about” in a place where “stellar talent and workaday street life...were closely compacted” is at least as true of Edinburgh as of Gatrell’s beloved Covent Garden, and the case he makes for “the absence of serious cultural competition from other British cities” to London will be challenged on a broad evidence base from cosmopolitanism to medical care by Murray Pittock’s forthcoming “Edinburgh in the First Age of Enlightenment: How the City Changed its Mind, 1680-1750.”<sup>6</sup>

Gatrell is however correct in his observation that “locality and community determined what was known and talked about and provided the patronage, market and service networks upon which creative people depended.”<sup>7</sup> In this, although Edinburgh was highly concentrated, it was perhaps less concentrated than Amsterdam, where “virtually all the information needed to do business on a world scale was concentrated in an area roughly 250 by 500 metres.” As at Edinburgh, “the concentration of such a vast amount of information in such a small area is the key to understanding the explosion of... activity and creativity in Amsterdam,” where concentration “made it easier to overcome the obstacles to the

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<sup>5</sup> Nicholas Phillipson, quoted in Roger L. Emerson, *Academic Patronage in the Scottish Enlightenment* (Edinburgh: Edinburgh University Press, 2008), 3.

<sup>6</sup> Harris and McKean (2014), 56; Vic Gatrell, *The First Bohemians* (London: Penguin, 2014 [2013]), xiii, xv, xxiii; Hamish Coghill, *Lost Edinburgh* (Edinburgh: Birlinn, 2014 [2008]), 18.

<sup>7</sup> Gatrell (2014 [2013]), xiii.

reception and application of new information.” The “infrastructure of the flows of information” was the key to their circulation and triumph.<sup>8</sup>

Edinburgh was similar. Richard Sher has recently stressed “the uniqueness of the city’s intellectual life in the urban congestion of the Old Town.” Insofar as there were comparators, after the 1707 Union (and arguably before) the Scottish capital was “a colonial centre like Dublin, Philadelphia, or Boston” rather than a provincial city: distinct but dependent, for even before the Union an independent parliament in the era of a powerful Crown was not the marker of sovereignty it would be today. Edinburgh was also the main locus of routine interchange and exchange between Scotland, England and Ireland, and indeed between Scottish cities.<sup>9</sup>

In arguing for the innovation of early modern Amsterdam, Clé Lesger draws on the insights of J.A. Schumpeter’s original approach to the theory of innovation, which in its more contemporary guises will be utilized in Murray Pittock’s forthcoming study. Like Amsterdam, Edinburgh enjoyed—and this is a relatively neglected element in histories of the city—a cosmopolitan social structure. In such circumstances, the benefits of compactness are enhanced. Not only does “the geographical concentration of information” make it “easier to obtain,” but when it is “concentrated in a small space, it...became much easier to estimate its value by face-to-face contact with the sources.” The more cosmopolitan their background, the more difficult it is to channel or repel this process, as “new information becomes easier to absorb and apply when it reaches potential users from various directions and is continually renewed.” Information in short becomes more rapidly socialized in diverse societies, because their heterogenous groupings are more accustomed to circulation and find a commonality in its language and the language of innovation that more homogenous groupings find in family or social ties. Such a flow of information accelerates in a small space, as “spatial concentration” underpins the “localization advantages” of information flows, and gives them more strength to resist “legal prohibitions or active opposition from forces that consider their vested interests under threat from...change.” This opposition happened in Edinburgh, just as it

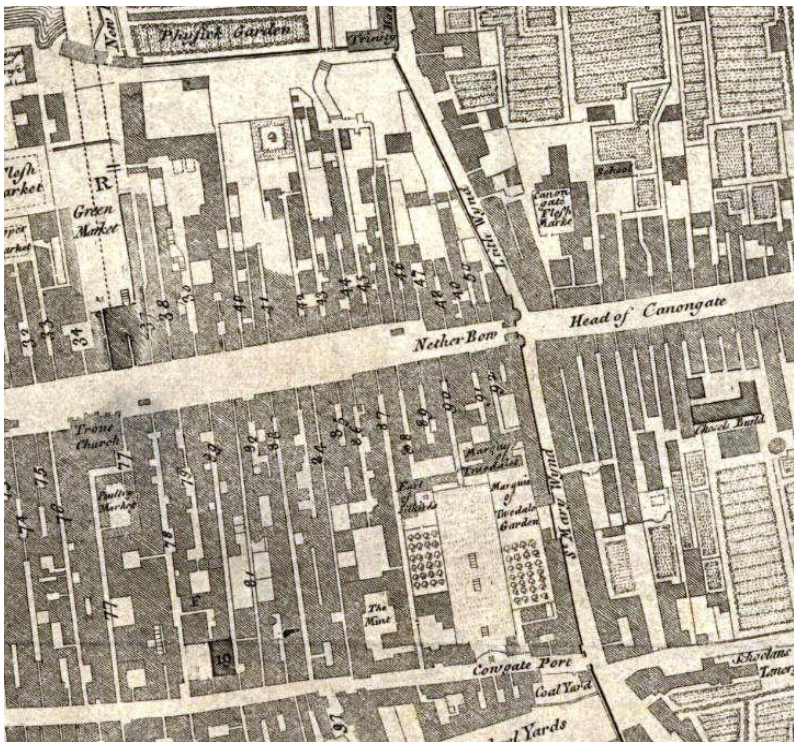
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<sup>8</sup> Clé Lesger, *The Rise of the Amsterdam Market and Information Exchange*, tr. J.C. Grayson (Aldershot: Ashgate, 2006), 238-45

<sup>9</sup> Richard B. Sher, *The Enlightenment and the Book*, (Chicago, IL: University of Chicago Press, 2006), 110; Hugo Arnot, *The History of Edinburgh* (Edinburgh: Creech, 1779; repr. Edinburgh: West Port Books, 1998), 317-19.



happened in Amsterdam. But because of Foucault's *loi de rareté*, the instantiation of memory and memorialization on a limited and homogenous ground, the complexity of this process has not been analysed fully in our cultural memory of the phenomenon dubbed "The Scottish Enlightenment." The evidential base of Edinburgh's intellectual development in 1680-1750 stresses the importance of the heterogenous and cosmopolitan to innovative outcomes, in the early modern as in the contemporary city: but memory looks for homogenization, community, the validation of an imagined present by an imagined past, Edinburgh's "golden age," "age of the philosophers," "hotbed of genius," and the like.



**Fig. 2: Section from William Edgar's map of Edinburgh, 1765, showing density of housing inside the city and immediately outside, in Canongate.**

Reproduced with the permission of the National Library of Scotland:

<http://maps.nls.uk/view/74400010>

But this ethno-cultural self-congratulation has little to do with the immensely exciting Edinburgh of 1680-1750 revealed by quantitative analysis rather than cultural autobiography: a cosmopolitan world, a diverse and compact city, an Amsterdam or a Berkeley more than the capital of a monocultural Enlightenment. And in revealing that city, modern theories of urban development and economic and cultural innovation will be validated by data three centuries old.<sup>10</sup>

After Amsterdam, Edinburgh was arguably the most compact major city in Europe in 1700. In 1660, the “Guid Toun” and royal burgh of Edinburgh was a very compact city, no more than 900 by 500m, clustered in deep narrow closes round the spine of the High Gait or Street, divided from the burgh of regality of the Canongate at St Mary’s Wynd; Leith, effectively subordinate to Edinburgh, lay further off. In 1751, there were 6845 houses in Edinburgh proper, with a further 2219 in the Canongate, which was the location for many of the city’s “Bawdy Houses” which promised the infection of “Canon-Gate *Breeches*.”<sup>11</sup> This eastern burgh, which ran down to Holyrood Palace, was also traditionally the residence of the nobility and of some of the foreign embassies. It was slow to change in this respect, with noble families with town residences there as late as the 1760s. However, this group were becoming increasingly isolated, owing to the “growing poverty” in the rest of the burgh being recorded from the 1720s.<sup>12</sup>

In Edinburgh proper, tall flats or “lands” stretched up to fifteen storeys from the ground. Although these were socially stratified, with the wealthier residents on the lower or middle floors above the ground, and although there were certain areas of the capital with townhouses or smaller lands which were sought by the well-to-do, it remained the case that the nobility, professionals and poor of the city lived next to each other. With much of daily life carried on out of doors (not least due to fire regulations and lighting issues), poor and rich inevitably mixed. Thus the spatial arrangements of the Scottish capital—both horizontal and

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<sup>10</sup> Lesger (2006), 139n, 140, 246-48

<sup>11</sup> William Maitland, William Edgar, *et al.*, *History of Edinburgh from its foundation to the present time* (Edinburgh: Hamilton, Balfour, and Neill, 1753), 217; James Ray, *A Journey Through Part of England and Scotland Along with the Army Under the Command of his Royal Highness the Duke of Cumberland*, (London: Osborne, 1747), 84.

<sup>12</sup> R.A. Houston, “The economy of Edinburgh 1694-1763: the evidence of the Common Good,” in S.J. Connolly, Houston and Morris (1995), 45-63 (54).

vertical—helped to promote the intensely networked life for which it was later to be known. As Christopher Berry observes, for Adam Smith, and indeed Lord Kames, “market-extent, and thus intensity of specialisation, is a function of population density.”<sup>13</sup> In few places was the population so dense or the human institutions and associations which were its infrastructure so specialized and complex as in Edinburgh. But the Scottish capital was also much more of a capital city in its development and facilities than anywhere else in Great Britain outside London: in Edinburgh eyes, if the English city was “capital City of the Southern Part of *Britain*,” then Edinburgh was “the Chief City in the Northern Part...and second Town in this Island.”<sup>14</sup>

Edinburgh was certainly by far the wealthiest city in Scotland, paying in the range of 32-40% of the country’s taxes in the years between 1649 and 1705 while only having 5% of the country’s population in its greater urban area. Leith alone was responsible for 63% of French wine imports and Edinburgh wine importers dominated the Scottish market, while 80% “of the vessels in the Dutch trade sailed to and from the Firth of Forth.” As early as the 1620s, 50% of Scottish imports were from the Netherlands or France, almost a third overall from the Netherlands. By 1660, the goldsmiths “were making loans and dealing in foreign exchange from their booths round St Giles and were commonly issuing bills of exchange,” also developing an “arbitrage and futures business,” whereby the Edinburgh goldsmiths gained on exchange rates and interest rates in purchasing assets for delivery from the Highlands. Commercial schools were set up from the 1690s following the establishment of a two-way flow with the Netherlands; by 1705, Edinburgh had a “burghal accountant.” Within Scotland, there were closely aligned rates of exchange between bills from different cities, but London bills might fetch up to a 15% premium in Edinburgh, though such peaks were relatively rare: for example 2.5% was the premium in the second half of 1681. The Scottish Exchange on London was important to the country’s trading prosperity within the British Isles, for “on the eve of the... Union... around one half of the total export trade of Scotland was already directed towards England” (this figure was 64% in 2014, not that much of an

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<sup>13</sup> Christopher J. Berry, *The Idea of Commercial Society in the Scottish Enlightenment* (Edinburgh: Edinburgh University Press, 2013), 73.

<sup>14</sup> Edgar, *History of Edinburgh*, dedication, p. [iii]; Lisa Kahler, “Freemasonry in Edinburgh, 1721-1746: Institutions and Context,” (unpublished Ph.D, University of St Andrews, 1998), 19.

increase for 300 years of Union). The Scottish Exchange (which persisted after the Union) was a sign of Scotland's "own commercial law and separate economy," giving the country "some of the elements of a foreign exchange as well as an inland exchange," even after 1707. Inevitably, as the forthcoming larger study will demonstrate, fluid and volume trading of goods is accompanied by population exchange: there was no single market or freedom of movement in 1680, but the same connectivity between trade and labour was present. It was to play a major role in triggering the Enlightenment in Edinburgh.<sup>15</sup>

Edinburgh was a wealthy city. In 1694-95, almost 10% of Edinburgh's households "had stock valued at 10 000 Scots merks or above": about £150 000 at 2016 prices. Mean wealth was around 4500 merks in the Old Town, 1800 merks in the Canongate and much less in Leith. At the heart of the city, over 20% of the population belonged to the social elite, with 6% belonging to the gentry/nobility, 12% merchant and 14-15% professional by background at the close of the seventeenth century. Scotland was more like France than England in that ca. 2% of the population might rank as noble by rank, title or close relationship. While in England the size of the gentry was estimated at 15000 in the eighteenth century (0.3% of the population), with the nobility proper numbering only a few hundred, the nobility made up 1-5% of the French population and reached 50% in some pockets of Spain. Scotland's foreign trade was "still largely... in the hands of Edinburgh merchants," of whom 20-25%, or over 600 people in greater Edinburgh, were involved. At the same time, the professional groups that Edinburgh boasted were proportionately significantly more influential than those in London, Edinburgh's 380 lawyers being in aggregate wealthier than its 600 merchants. Although the English capital was ten times the size of its Scottish counterpart, the professional classes-even in inner London-did not exceed 6-7% of the population. Edinburgh's professionals reached

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<sup>15</sup> T.C. Smout, *Scottish Trade on the Eve of Union 1660-1707*, (Edinburgh and London: Oliver & Boyd, 1963), 132, 188; Thomas Piketty, *Capital*, tr. Arthur Goldhammer, (Cambridge, Mass: The Belknap Press/Harvard University Press, 2014), 251; Christopher J. Berry, *The Idea of Commercial Society in the Scottish Enlightenment*, (Edinburgh: Edinburgh University Press, 2015 (2013)), 73; Murray Pittock, 'John Law's Theory of Money and its roots in Scottish culture', *Proceedings of the Society of Antiquaries of Scotland* 133 (2003), 391-403 (396-98); L.M. Cullen, 'The Scottish Exchange on London, 1673-1778', in Connolly, Houston and Morris (1995), 29-44 (29, 33).

this figure across the greater urban area (population up to 55000) as whole, and were significantly higher in the core city of 45 hectares. As Helen Dingwall notes, “Compressed by geographical constraints into a tiny area, the burgh had nonetheless a surprisingly complex social and economic composition.”<sup>16</sup>

It is a modern truism that innovative cities “are highly productive, specialized in a range of knowledge intensive innovative sectors, and benefit from a concentration of skilled labour.”<sup>17</sup> The Innovation Cities programme assesses cities on three major criteria: cultural assets, human infrastructure and networked markets.<sup>18</sup> Today Edinburgh ranks 68<sup>th</sup>: in 1680-1750, it arguably stood much higher. In 1680 it was far from being a small city in European terms, and its compactness, cosmopolitanism and intensive cultural and professional concentrations and networks gave it a potential it would amply realize in the years that followed.

There is no space to pursue these spatial humanities questions here. But the issues this short paper has sought to raise regarding spatial humanities are those focused on memory, quantitative data and social science theory. By divorcing Arts and Humanities from the quantitative, we restrict the range of questions it can ask and sometimes as a

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<sup>16</sup> Helen Dingwall, *Late Seventeenth-Century Edinburgh: a demographic study*, (Aldershot: Scolar Press, 1994), 9, 10, 20, 64, 71, 121, 142-43, 175, 279; Dingwall, *Physicians, Surgeons and Apothecaries: Medicine in Seventeenth-Century Edinburgh*, (East Linton: Tuckwell Press, 1995), 20; R.A Houston, *Social Change in the Age of Enlightenment: Edinburgh, 1660-1760*, (Oxford: Clarendon Press, 1994), 105; Richard Leppert, *Music and Image*, (Cambridge: Cambridge University Press, 1988), 9; Mark Greengrass, *Christendom Destroyed*, (London: Penguin, 2015 [2014]), 136; T.M. Devine, ‘The Merchant Class of the Larger Scottish Towns in the Seventeenth and Early Eighteenth Centuries’, in George Gordon and Brian Dicks (eds), *Scottish Urban History*, (Aberdeen: Aberdeen University Press, 1983), 92-111 (93, 96-98, 107); Devine, *Scotland’s Empire 1600-1815*, (London: Allen Lane, 2003), 8, 31; Helen Smailes, ‘David Le Marchand’s Scottish patrons,’ unpublished paper, (1996), 2; Richard Savile, *Bank of Scotland: A History 1695-1995* (Edinburgh: Edinburgh UP, 1996), 11; Houston, in Connolly, Houston and Morris (1995), 48; *The Edinburgh Gazette*, 6-9 November 1699.

<sup>17</sup> For this particular formulation, see Lizzie Crowley, *Streets Ahead: what makes a city innovative?* (Lancaster, The Work Foundation, November 2011), executive summary (p. 5).

<sup>18</sup> Ranking criteria (calculated from 167 more specific indicators) from The Innovation Cities™ Index, developed by 2thinknow, founded in Australia in 2006: <http://www.innovation-cities.com/indexes>.

consequence it asks the wrong ones altogether, as William St Clair has sought to demonstrate in a different field.<sup>19</sup> By failing to examine the processes of memorialization or the rhetoric of memory (as in the shared guilt of slavery, often free of precise location) we again may begin in the wrong place, assuming premises from our wider culture rather than challenging them. By not taking into account the powerful work of behavioural economics and its associated datasets, where academic work has reached a mass audience,<sup>20</sup> we limit the questions that can be asked in historical rather than contemporary contexts.

James Clerk Maxwell was a great inheritor of the age of Enlightenment Edinburgh. He was born in 14 India Street, the son of an advocate of the family of Clerk of Penicuik and nephew of the 6<sup>th</sup> baronet. His was a classic Enlightenment social background, and he went on to be professor at Marischal, King's College, London and Cambridge. As a child he repeatedly asked (in Scots) "what's the go o' that?" or "show me how it doos." Growing up in a world before disciplinary specialization altered the Scottish university curriculum for ever, his questioning takes us into the sphere of a unified field of enquiry, where of course Maxwell was at home, not a box of disciplinary practices, where he might have made himself more comfortable.

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<sup>19</sup> William St Clair, *The Reading Nation in the Romantic Period*, new edition (Cambridge: Cambridge University Press, 2007).

<sup>20</sup> See for example Daniel Kahnemann, *Thinking, Fast and Slow* (London: Penguin, 2012); Richard H. Thaler and Cass R. Sunstein, *Nudge* (New York: Penguin, 2008); and Stephen D. Levitt and Stephen J. Dubner, *Think Like a Freak* (New York: Penguin, 2014). These authors, who hail from institutions such as Chicago, Princeton and Harvard and include one Nobel prizewinner (Kahnemann), demonstrate both the power of academic work to reach a global audience and the increasing success social science is enjoying in doing so by comparison with many areas of the Humanities.