

GLASS AND THE RENAISSANCE: INDIVIDUALISM

It is widely accepted that, at a very general level, the rise of a specific form of individualism, often seen as a central feature of the Renaissance, was initially a west European phenomenon. Although it is clearly a gross over-simplification, Lowell's observation in 1888 has an element of truth in it. 'The sense of self grows more intense as we follow the wake of the setting sun... America, Europe, the Levant, India, Japan, each is less personal than the one before. We stand at one end of the scale, the far Orientals at the other. If with us the I seems to be of the very essence of the soul, then the soul of the Far east may be said to be Impersonality.'¹ Or, as a contemporary anthropologist, Jean La Fontaine, puts it, 'The Western concept resembles none of those described so far in other societies. Its unique character is not simply the result of greater sophistication or elaboration of conceptual thought but, as Mauss has made us aware, it derives from a particular social context.'² But what is that 'social context'?

Of course, it would be absurd to believe that there was a single reason for this, and it is easy to see the force of many of the explanations put forward to account for a re-orientation away from the group and towards the individual. One of the most important of these is religion. At a very general level, it has been suggested that the single soul posited by the Judaeo-Christian religious tradition leads to an individualistic view of life, starting with the single person who has an immortal essence within them. Thus the anthropologist Lienhardt suggests that whereas Christianity posits a single soul, African peoples allow 'for the presence of several distinct "souls" in each person'.³ The importance of Christianity is, indeed, stressed by most of those who have tackled the problem. Gurevich suggests that it is 'the concept of human personality, directly responsible for an individual's fate according to his choice of the way to salvation or the road which leads to perdition', in other words the concepts of sin and individual responsibility, are the key to the growing individualism.⁴ Morris also places Christianity at the heart of his account of the 'Discovery of the Individual'.⁵

The link could work in various ways. These include that exercise of choice and free will which is emphasized by a religion born out of oppression and founded on Christ's individualistic teaching - for example to follow Him and renounce one's family. The link between choice and individualism is obvious. According to the philosopher Stephen Lukes, the individualistic westerner 'exercises choice: as sovereign chooser, he decides between actions, conceptions of the good, plans of life, indeed what sort of a person to be. The will, choice, decision, evaluation and calculation are central to this picture'.⁶ Another link could be through the practice developed by the Catholic Church to deal with sin, namely that form of introspection known as the confessional. One could argue 'that the confessional tradition of Europe laid the foundation for the

¹ Quoted in Yapp, *Travellers*, 605

² In Carrithers (ed.), *Category*, 139

³ In Carrithers (ed.), *Category*, 147

⁴ Gurevich, *Historical Anthropology*, 88 - see also his book on *Individualism XXX*

⁵ Morris, *Discovery*, 10-19

⁶ In Carrithers (ed.), *Category*, 298

emergence of the modern personality as a self-reflective consciousness...⁷ Yet although this all seems to be a necessary condition, the variations in time and space do not just fit with Christianity; for example, Eastern, Orthodox, Christianity was far less individualistic. So people have pointed to other factors.

Some have suggested that the recovery of classical ideas was the catalyst.⁸ Others have argued that the growth of a market economy and particularly of money transactions disengaged the individual. Simmel's views on this have been paraphrased as follows: 'The increasing use of money in exchange and the gradual disappearance of barter also point to the emergence of the individual from the group and the development of the specialized personality... The historical unfolding of money is the historical unfolding of individual freedoms.'⁹ In earlier work, I linked rising individualism to the family system, property and the law.¹⁰ Yet even with this, and adding in other factors such as the growth of republican government and the middle class in Italy and the Netherlands, the full explanation of one of the greatest transformations in human history still eludes us. This is partly because none of these explanations seems to reach deeply enough down into the psychological realm where the changes occurred. Some extra factor, one feels, was needed - something which would not wholly account for the change in itself, but was one necessary catalyst.

This factor, some historians, have argued, was the development of fine glass mirrors, which proliferated at the very time and in the very area where the change took place and could have provided the final factor that was needed by allowing people to see themselves in a new way. In a chapter on 'The Renaissance and the Rise of Autobiography', Paul Delany considered the various theories for the rise of introspective individualism. These included the theory of Gusdorf who 'in his audacious and stimulating essay on autobiography, attributes the "discovery of self" in large part to the invention of good mirrors towards the end of the Middle Ages.'¹¹ Delany agrees that 'Improved mirrors were certainly a factor in the proliferation of self-portraits from the later fifteenth century onwards; and there is a close correlation between the development of self-portraiture and autobiography in the various European countries.'¹² He points out that 'Durer gives us the best example of how an early-Renaissance artist, exploring new inner realms, could use the mirror as an accessory to introspection'.¹³ It is worth pursuing this further, partly because Delany shows in a footnote that he was largely unaware of the early history of good west European mirrors, believing that 'Venetian glass mirrors were first produced in quantity from the early sixteenth century onward; before this polished metal was used...'¹⁴ It is hardly a polished metal mirror that we see, for example, in the Netherlands in the early fifteenth century painting of the marriage of Arnolfini by van Eyck.

⁷ Abercrombie et al, *Sovereign*, 47

⁸ This is the other major explanation given by Morris, *Discovery*.

⁹ Abercrombie et al, *Sovereign*, 22

¹⁰ Macfarlane, *Origins*; I hope to pursue and modify this in relation to legal and social relations in 'Secret of Modern Civilization', XXX

¹¹ Delany, *Autobiography*, 12

¹² Delany, *Autobiography*, 12

¹³ Delany, *Autobiography*, 13

¹⁴ Delany, *Autobiography*, 12, n.17

Although he might be regarded as putting an extreme case, it is worth drawing attention to the earlier arguments of Lewis Mumford, which was in turn influenced by Innes, who wrote for example that 'In Florence the new conception of space was transformed into artistic terms as a counterpart of the modern notion of individualism'.¹⁵ Mumford wrote that 'If the outward world was changed by glass, the inner world was likewise modified. Glass had a profound effect upon the development of the personality: indeed, it helped to alter the very concept of the self.' He links this principally to the development of mirrors, and particularly the development of Venetian mirrors. 'Large mirrors, accordingly, became relatively cheap and the hand-mirror became a common possession.'¹⁶

The consequences, Mumford argues, were immense. 'For perhaps the first time, except for reflections in the water and in the dull surfaces of metal mirrors, it was possible to find an image that corresponded accurately to what others saw. Not merely in the privacy of the boudoir: in another's home, in a public gathering, the image of the ego in new and unexpected attitudes accompanied one... the mirror spread from one room to another in the bourgeois household. Self-consciousness, introspection, mirror-conversation developed with the new object itself... the sense of the separate personality, a perception of the objective attributes of one's identity, grows out of this communion.'

Mumford proceeds to argue that the 'use of the mirror signalled the beginning of introspective biography in the modern style: that is, not as a means of edification but as a picture of the self, its depths, its mysteries, its inner dimensions. The self in the mirror corresponds to the physical world that was brought to light by natural science in the same epoch: it was the self **in abstracto**, only part of the real self, the part that one can divorce from the background of nature and the influential presence of other men. But there is a value in this mirror personality that more naive cultures did not possess. If the image one sees in the mirror is abstract, it is not ideal or mythical: the more accurate the physical instrument, the more sufficient the light on it, the more relentlessly does it show the effects of age, disease, disappointment, frustration, slyness, covetousness, weakness - these come out quite as clearly as health and joy and confidence.' Rather than taking Durer, Mumford then describes some of the work of Rembrandt, 'the greatest of the introspective biographers'. He 'came to the core of his art in the series of self-portraits he painted: for it was partly from the face he found in the mirror, from the knowledge of himself he developed and expressed in this communion, that he achieved the insight he applied to other men.'¹⁷

The timing of the causal link is right; good mirrors developed in almost exact pace with the development of a new individualism between the thirteenth and sixteenth century. The geography is right; the epi-centres of Renaissance individualism in painting and other art forms were Italy and the Netherlands, the two most advanced areas of mirror-making and using. The psychological link is plausible; people saw themselves in a new way, and a way that detached them from the crowd and allowed them to inspect themselves more carefully. We can see the process at work in a number of great artists. Yet like all elective affinities there are doubts. Most cultures have mirrors and one wants to know more about how mirrors are used, the relative clarity of metal and glass mirrors and so on.

On the question of use, it is clearly important to discover the way in which mirrors are

¹⁵ Quoted in Giedon, *Space, Time and Architecture*, 31

¹⁶ All of the following quotations from Mumford come from *Technics*, 129-30

¹⁷ Give Refs XXX

regarded. In the west they were largely looked into to see the person. This was both a cause and consequence of growing individualism. In China and Japan and perhaps other civilizations mirrors were used for different purposes. It is worth examining one example in a little detail to see the differences that glass and culture could make.

Concerning the use of mirrors in Japan, one of the shrewdest anthropological writers on Japan suggests that 'Japanese feelings about the mirror are derived from the time before the 'observing self' was inculcated in the child. They do not see the 'observing self' in the looking glass'.¹⁸ When Arthur Koestler visited Japan he came to the conclusion that the 'mirror in ancient Japanese tradition was a symbol that meant almost the opposite of what it means to us. It was not an instrument of vanity, but of contemplation, and is often seen in Shinto shrines. The person gazing into the mirror does not do so to examine his appearance, but to gaze through the 'door of the soul, his eyes reflected in the glass, into his innermost self'.¹⁹

Both these are attempts of westerners to understand the difference. Another attempt, but now allowing some voice to the Japanese, is reported by David Riesman the famous sociologist of western individualism when he went to Japan. 'Yamazaki added that in America mirrors are part of our mixture of narcissism and individualism: one looks to see who he is; whereas in Japan society is the mirror of the individual, and he exists only in the reflection of his actions on others.'²⁰ The problem is that all these are inter-tangled, like a hall of mirrors.

Both the material out of which mirrors were made and the use was thus different. Mirrors were sacred objects in Japan. They were kept in shrines. They also, it would appear, were kept for special use, in particular grooming oneself, but not hung on the walls of ordinary rooms. This was noted early on by Thunberg: 'Mirrors do not decorate the walls, although they are in general use at the toilet'.²¹ Thunberg also noted that among the things not found in people's apartments were 'looking-glasses'²². Thus the function, the place it was kept and what it was made from were all different. Again, Thunberg wrote, speaking of mirrors, that 'Of glass there are none made in the country: but both the smaller and larger sort are made of cast steel.'²³ According to Inouye, 'when glass was unknown or very rare, a metal disk highly polished on one face and with a handle was set on a stand.'²⁴ It appears that one reason for this was that the superb workmanship in steel of the Japanese allowed them to make steel mirrors of high quality. 'The Japanese are extremely skillful in polishing steel, and all other metals. They make metal mirrors, which for their object, are scarcely inferior to our looking-glasses.'²⁵ In fact, the use of steel may have limited their size (perhaps up to a foot across) and possibly their effects on the viewer. The fact that they tended to be convex, may also be important in limiting the amount that could be seen in them - they were basically for hair-arranging, plucking, teeth blackening in domestic use.

The Japanese metal mirror only reflects back about twenty per cent of the light that hits it and

¹⁸ Benedict, *Chrysanthemum*, 202

¹⁹ Koestler, *Lotus*, 173

²⁰ Riesman, *Conversations*, 273

²¹ Thunberg, *Travels*, iii, 284

²² Thunberg, *Travels*, iii, 284

²³ Thunberg, *Travels*, iii, 284

²⁴ Inouye, *Homes*, 121

²⁵ Glownin, quoted in Macfarlane, *Japan*, 263-4.

is slightly coloured. It is usually slightly convex and because brass cannot be polished like glass (which is so hard), the mirrors are often scraped and hence not absolutely even. It could thus be argued that because the eye is so sophisticated and appreciates visual perfection, the difference between a very good, silver backed, glass mirror of the kind being made in Europe from the thirteenth or fourteenth century, and a quite good metal mirror is not just one of degree, but of kind. A subtle change in the artefact permits a different perception of life. With lens and mirror optics there is a point of precision where everything clicks into place and transforms the vision and the mental image.

Thus it could be argued that what we call a 'mirror' in most cultures encouraged imagination and stimulated thought, but not a deep staring at what was portrayed. The western glass mirror showed what appeared to be a real slice of life, even though it was in fact almost magically twisting and turning things. It represented three-dimensional space on an apparently flat surface, encouraging the eye to see foreground and background. The trick was performed because in fact one does not look at the mirror, but through it at the image which is three dimensional.

Mirrors are indeed extraordinary and it is not too fanciful to believe that the development of the glass mirror in only one civilization not only altered its art, which we can show, but gradually altered the whole perception of what human beings are.²⁶ One certainly has an 'elective affinity': individualism and high quality mirrors grow together. Yet one cannot see a simple and direct causal link of a necessary and sufficient kind. Glass mirrors, on their own, would not have affected the huge transformation which we call Renaissance individualism. Yet they may have been one of the necessary, enabling, causes, without which the abstraction of the individual from the group would have not taken the course it did.

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So we have three major ways in which glass and an increase in reliable knowledge and representation in the fourteenth to sixteenth centuries may have been dependent on chains of glass. One was through the influence of medieval optics and geometry on the perspective art of fifteenth century architects and painters. A second was through the influence of glass, particularly mirrors and windows and panes of glass, on the technology of enchantment and illusion. Thirdly, through the effect of mirrors on concepts and representations of the individual.

We may conclude by trying to assess the weight of these links by asking a number of questions. If one asks, is it possible to have a reasonable perspective drawing without optical glass (mirrors, lenses, windows) being widespread in a civilization, the answer is yes, it is possible, though it requires great skill to get far. If one asks, is it possible for such a realist, perspectival, way of representing the world to come to dominate a civilization without much optical glass, all one can say is that we know of no such case and one can see reasons why it is unlikely. If one asks whether having glass optical instruments, mirrors, lenses, prisms, glass panes in profusion is bound to lead to realist, perspectival, art, then again the answer is probably not. There is no necessity. The Islamic case, although they did not have all of these instruments, provides one reason why not. If there is instituted icono-phobia, or even a different role for art, then such a development may never occur. Traditional forms of Indian, Chinese and Japanese art have continued and flourished after the importation of western glass technologies and

²⁶ For an excellent introduction to mirrors and their mysteries, see Gregory, *The Mirror in Mind*.

western perspectival art. This leads us to the conclusion that one needs many other things as well as glass. Glass is not a necessary and sufficient cause.

Yet it might well be argued that it is a necessary one. If one asks whether it would have been possible for the art of the Renaissance to have reached the realism that we find in Van Eyck, Leonardo, Durer or Rembrandt in a civilization without glass, the answer seems to be that it is difficult to imagine. Firstly, the geometry and knowledge of optics which laid the foundations for their work, as is so evident from their own writings, would have been missing. This geometry and optics was dependent on medieval European glass-influenced experiments and philosophy. Secondly, the refinements to the medieval knowledge from Van Eyck and Brunelleschi onwards, frequently required experiments with glass, with mirrors, lenses, flat panes of glass. That is to say the usual cycle of improved reliable knowledge, innovation of better artefacts, the feeding back of these artefacts into further knowledge, could continue. If it had been halted, as it would have been if Europe had been in the largely glassless situation of China and Japan, or the Islamic world after 1400, then it is difficult to see how that vast revolution which we call the Renaissance could have occurred.

So the development of glass did not cause the Renaissance directly. Yet without it, something very different would have emerged. It would have been a civilization which, for better or worse, lacked the desire and the ability to analyse and represent the natural world in such fine detail that it anticipated one of the finest glass instruments of the twentieth century, the colour camera.

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All of this was, of course, a giant accident. High quality mirrors, excellent flat glass, lenses - these were originally not designed to push a civilization away from its inherited cosmology, to encourage individualism, the dethronement of God, the disassociation of sensibility, a new and more accurate knowledge of the 'real' world. They were toys of vanity or comfort, just like fine porcelain. So if Europeans had mastered the secret of porcelain, or been able to cover their windows with paper from the paper mulberry, probably none of this would have happened. There would almost certainly have been no Leonardo, no Renaissance reversal of vision, no classical scientific revolution. The unintended consequences of that strange, light-bending, transparent substance, glass, gave people new eyes to see and what they saw changed the whole world.

It changed our world not only in itself, but also because it was, like the first scientific revolution described in the previous chapter, a link in the chain leading up to the classical scientific revolution of the seventeenth century. If the essence of the scientific revolution was precision of detail, accuracy of recording, understanding of the nature and relations between things, and curiosity driving people on to deeper probing through 'experiments' to see how man and nature were intertwined, then all these constituents are present in the Renaissance. The most obvious example is Leonardo da Vinci himself. If one asks whether such a change is likely to make the observation of nature more 'reliable', one could scarcely do better than compare a painting or drawing by Leonardo to a Mughal miniature or Japanese painting of the fifteenth century.

Leonardo's depictions are struggling to get at the essence of the underlying laws of nature; they are all 'experiments', as much as Newton or Boyle's experiments. And each of his successful drawings advances anatomy, or physics, or optics. Reciprocally, the urge to try to represent nature as it is, not as it appears deceptively to us, forces Leonardo on into all branches of knowledge. He needs to understand anatomy, botany, geography, hydraulics, mechanics and

so on in order to paint properly. If science is the extension of reliable knowledge, then the developments in painting and architecture in the fifteenth century were in many ways as great a step forward as was the more famous scientific revolution of the seventeenth century. Without those developments, it is impossible to envisage the work from Galileo to Newton. The essential foundation had been laid, but only in western Europe. In other parts of the world, as we shall see, the conjuring with glass and mirrors and later with lenses to deceive the human eye into seeing things more clearly did not occur.