

CHAPTER ELEVEN: GARBETT'S EPISTEMOLOGY

Introduction

Even in 1850 when he was only 26, Garbett was no newcomer to the world of physics. Two years before the *Treatise* appeared, he published an article on Parhelia in *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science*. It is the first hint we get of an interest which was to remain with him throughout his life. Later he was to claim to have invented a method of colour-photography; during the 1880's he attempted to take out a patent (which was refused) for a new form of sextant, and earlier he had written to Charles Babbage about looking-glass signals. In short he considered himself something of an authority on the subject of science in general and optics in particular.

The extent of scientific influence on English culture in the nineteenth century has

been dealt with by many historians.¹ The object of the next chapter is to place Garbett within that sphere of influence and will concentrate on an analysis of his distinction between a sensual beauty and an intellectual beauty as discussed in the early part of the second chapter of Garbett's *Treatise*.

Science as a paradigm

Scientists in the nineteenth century, led by figures such as Lyell, Brewster and Herschel, worked on the assumption that nature developed in an orderly and purposeful

1. The principal work I have used to gain an insight into the pervading influence of science upon thinkers of the nineteenth century is Cannon (1978) which, by its treatment of the general preoccupations of the participating scientists shows their connections with general thinking of the period. Apart from that I have used Levine (1990); Heyck (1982); Ball (1972); Brett (1986); Levere (1981); Nicolson (1956); Paradis & Postlewait (1981); Stafford (1984).

fashion. They wanted to develop laws which expressed that regularity.² Garbett wanted an architectural theory in which that regularity was similarly expressed. He seized on the triumvirate of Vitruvian conditions for well-building as the foundation on which he would construct a system of architecture which could answer scientific laws. This was not so difficult if one separated out two of the three conditions, namely *Firmitas* & *Utilitas*, but Garbett's main aim was to subject all three, including *Delight* to such laws. *Delight* had to be controlled so that it could be reproduced on command.

With the demise of the *beau ideal* during the late seventeenth and eighteenth century, such an ambition could at best be called rash. Aesthetics was now dominated by the nomadic subjectivism of the association of ideas. To bring that under control Garbett needed a mathematics of psychology which could accurately predict human responses. The subjection of the

2. Boas (1973) p. 350.

psychology of perception to strict laws would allow him to impose a stringent framework for the perception and production of architectural beauty. The combination of psychology and optics posited a necessary relationship between qualities supposedly inherent in the object and the processes of perception. The raw materials for this idea Garbett inherited from Frances Hutcheson and John Locke. The philosophical framework they provided for Garbett was supplemented with the findings as published in Sir David Brewster's *Opticks* and Sir John Herschel's lectures on Light as well as Garbett's elaborate critique of the ideas of Archibald Alison.

The appeal of science during the nineteenth century had an effect on culture which was anything but straightforward. In fact it caused many to search out dubious paths towards an adequate epistemology. One significant side effect of the authority science enjoyed during the nineteenth century was the increased appeal of its language. Science's logical conventions lent a biblical authority

to almost everything that was written in that language, characterised as it was by laws and quantities. Another side effect was that the rigorous and critical methods of proper empiricism were by some readily cross-bred with the ideas, projections and hopes derived from preconceived ideas wrapped in the slick language of science. Many theorists, such as for instance D. Ramsey Hay and to a lesser extent George Field, let the promise of a beautiful coincidence and the beauty of Pythagorean harmonies do away with a healthy measure of experimental control.

Complex psychological and subjective processes had in 1850 not been sufficiently reduced to their constituent elements to make a mathematics of psychology possible. When attempts were made to subject psychological ideas to such a rigid logic, the resultant theories quickly became rather quaint and even absurd. The explanations which Garbett forged with regard to beauty in architecture, are made up of a bricolage of hybrid sciences and occasionally

contain strange non-sequiturs. To be disparaging about that, however, would be to miss the point. The example of science was to a large extent responsible for Garbett's vigorous and highly imaginative process of reasoning. Because of his scientific outlook Garbett not only managed to move the argument of architectural design away from the tired and shallow battle of styles, it also enabled him to come up with a number of highly provocative ideas.

Physical preference

The use of science in Garbett's *Treatise* is defended on the grounds of its promise of a rigorous aesthetics based on a secure phenomenology of subjective processes. An academically inclined art theory had to be able to project judgements a-priori in order to make possible the mechanical reconstruction of aesthetic responses. Garbett therefore had to deal with Alison's psychological explanation of beauty by protecting it against the arbitrary. The only way to do that was to bind that psychology

to physical laws as stringent as those working solely on the basis of physical forces. He had done this already to some extent by making a distinction between natural and acquired associations, i.e. ones which were inherent and therefore measurable and ones which were the result of cultural pollution and subjective. He had also briefly discussed the idea in the section on taste. But he wanted to go further. In the passage quoted below he revealed the true extent of the wealth that science might hold in store for mankind:

The discovery indeed of a physical reason for these preferences, in the case of two of the senses, sight and hearing, -the discovery why red is more pleasing than brown, (...) or the sound of a string than that of a stick,- that is the discovery of some describable quality common to the red and blue and other colours of the same class, and to the string and other musical sounds, which quality is not possessed by the dull colours and the unmusical noises, -must be considered one of the greatest triumphs of

*the inductive sciences. It is now perfectly known in what this difference consists, and, moreover, that it is the same in both senses.*³

This passage is significant because it reveals that Garbett believed he had discovered a direct link between psychological processes determining aesthetic preference and physics. The nature of certain preferences were found to answer to a measurable reality. The triumph became one of truly Pythagorean proportions when it was discovered that those measurements were able to establish correlations between the perceptive processes of two separate organs, the eye and the ear. Admittedly the reader had to accept as an unprovable axiom that red is primordially more pleasing than brown, and that the sound of a string is more pleasing than that of a stick. But once that cultural hurdle was properly ignored and side-stepped, a conscientious scientific theorist

3. *Treatise*, p. 35.

would be in a position to add and subtract the desires and myriad contradictory preferences of the human mind and come up with the mother of all architectural theories. This discovery would not only prevent aesthetics from degenerating into a slippery and uncontrollable subjectivism but it even held out the possibility that Taste would one day become a subject as sharply defined as geometry.

The cogency offered by the logic of analogy backed up by the measurements of physics was supreme in Garbett's world. The grand aim of the inductive sciences, as we can see from the passage above, was to establish such analogies beyond doubt or, alternatively, (as in the case of harmonic proportions) to explode them. How then could it be proven beyond doubt that red was more pleasing than brown, that the sound of a string was more pleasing than that of a stick?

Savages and children

Such supposedly objective preferences were proven by two of the most fascinating

and misused guinea-pigs in the history of speculation: the child and the savage. Nature was the standard by which man-made products could be valued, that much is already clear from the title of the *Treatise*. Before an evaluation of the natural could properly take place, nature herself had to be made measurable. This was particularly difficult with regard to psychological processes. But the problem was easily solved through the example of science. All one needed was an external standard of purity. The innocent, the unspoiled, the morally pure and the primitive could be employed to establish that standard for those who felt that the present civilisation was in many respects culturally degenerate and its people deadened to the pure and wholesome.

The use of consensus to establish the existence of truths, referred to in the previous chapter, is as old as Greek philosophy itself. The Stoics were convinced of the rightness of that which is universal and identified the true with that which is

universally believed.⁴ Consensus gave Garbett the authority to reinvigorate the existence of an absolute if permanently progressive standard of beauty. If one reads the relevant passages in the *Treatise* carefully it soon becomes apparent that Garbett's consensus with regard to certain judgements is presumed rather than supported by proper experiment. An example of this is when he assumes there to be a universal preference of curves to straight lines.⁵ Many of Garbett's so-called scientific hypotheses were never subjected to proper empirical control. Science turns out to have been a large word, large enough to incorporate into its meaning even the incidental confirmations of cultural prejudice. Such as the idea that primitive peoples would be free of cultural and moral prejudices, that they somehow lack a form of civilisation all their own.

The use of consensus-monitors as the child and the savage was, of course, not

4. Boas (1973) p. 349.

5. *Treatise*, p. 46.

new. John Locke had relied on the evidence of savages. He used the civilised elements in Western society, to refute ideas of natural goodness and the existence of innate ideas.⁶ He gave, be it pejoratively, quite a significant role to the primitive in originating principles of morality.⁷ Children are much older as indicators of unthinking action. They perform in didactic examples as old as the bible. A significant example of the use of children's supposedly instinctive behaviour to support an argument is contained in William Paley's *Principles of Moral and Political Philosophy* of 1785:

Amongst the causes assigned for the continuances and diffusion of the same moral sentiments amongst mankind, we have mentioned imitation. The efficacy of this principle is most observable in Children; indeed, if there be any thing in them which

6. Aldridge (1973) p. 346. See also Locke, *Essay*, I, iii, 9.

7. Locke, *Essay*, I, xi, 22.

deserves the name *instinct*, it is their propensity to imitation.⁸

The main surge in the use savages and children as monitors came after 1750 with the rise of a systematic anthropology.⁹ Adam had been supplanted by a different set of first men, namely the aborigines found in the other continents. It is the Western perception of these men that determined their philosophical relevance.

It is similarly important not to forget the influence of Daniel Defoe's Robinson Crusoe within this context. Crusoe had to unlearn civilisation to survive. There was, however, nothing particularly noble about the savage which Garbett used as his scientific instrument. Garbett's monitoring savage had little if anything in common with either Robinson Crusoe or Laugier's

8. Paley (1824) p. 10. the origin of the idea is Aristotle (1975) p. 35.

9. On the rise of anthropology see Stafford (1984), Vidler (1987) pp. 7 ff.

highly sophisticated savage. Garbett's monitoring savage is wild and instinctive, closer to the popular contemporary assessment of the aboriginal tribes of British colonies, who were perceived as being childishly eager for brightly coloured beads and pretty little mirrors. That apparent childishness in their behaviour, was considered truly primitive.

Laugier's savage, with his miraculous foresight as a rational designer, his easy and instant understanding of *la simple nature*, is conceptually far closer to the thoughtful genius of Garbett's mythological architect Dorus, the first and greatest architectural rationalist and the sole inventor of the most impressive of the Greek orders. (See Chapter 17) Indeed, Laugier's savage is more like Garbett's projection of a super-civilised class, designated as *the thinking few*. That class forms an aesthetic nobility which developed their intellectual maturity, like Robinson Crusoe and like Rousseau's Emile, by *unlearning* the

prejudices cultivated by society.¹⁰ They had gone full circle, achieving a sublimated savage- or child-like state by going beyond civilisation. The label super-civilised, although not used by Garbett, is in this sense peculiarly appropriate. They had supposedly succeeded in transcending the narrowing effects of the prejudices pervading contemporary English society. Those prejudices were caused by the contingent as well as habit-driven connections of acquired associations. By being able to distinguish consciously between the natural and the acquired, *the thinking few* were in a position to appreciate complex, higher, poetic truths and beauties with the same directness with which the child and savage were thought to prefer bright colours and simple melodies subconsciously.

To return to the empirical role of the child and the savage in Garbett's theory we find a rather crude system of intersubjective

proof rigged up to support the desire for a mechanical aesthetics. A phenomenology based on the empirical or rather quasi-empirical authority of the fresh and unpolluted minds of the child and the savage. That projection rested on the implications inherent in Locke's *tabula rasa*. The minds of children started off clean. Gradually their brains would become smudged with the baser aspects of culture and civilisation during the process of growing up. The mind of the savage on the other hand remained suspended in ignorance, itself a form of intellectual cleanliness.

As primordial organs of sensual perception, both the child and the savage were able to serve as monitors of a certain level of aesthetic response; a level which was physiologically separate and therefore unaffected by *mind*. The child and the savage were supposed to have the ability to perceive directly, without the interference of *mind*, what the normal Western gentleman could only perceive through a haze of culturally determined

10. *Treatise*, p. 30.

prejudice. The reason for this was that the former lived according to nature, reacting to things wholly instinctively rather than intellectually. On this basis, if the response was consistent, they could prove the distinction between things natural and artificial, things necessary or inherent and things acquired. Those who had acquired the stains of culture could only respond through the film of their cultural accretions. Being arbitrary and bound only by habit and custom such responses could tell us little. The Child and the savage, being clean, were uniquely qualified to function as accurate and reliable scientific instruments whereby a civilisation could measure its value against a zero, a fixed standard. That is the essence of empirical science.

But why do they play such an important role in Garbett's theory of perception? What were they able to prove?

Mind over matter

At the basis of Garbett's theory lies the apparently unshakeable dichotomy between mind and matter. The dichotomy is represented by the difference between intellectual and sensual processes. These were processes differentiated according to the traditional division of the brain into its several functions of sensory perception, memory, imagination and intellect. These were all functions which had as their goal the increasing spiritualisation of matter into mind. As a result they were arranged in a hierarchy whereby the processing of raw sensory percepts of matter stood on the lowest rung.¹¹

The hierarchical classification of the brain, itself a variation of the chain of being, also determines the arrangement of Garbett's chain of beauty. Superimposed on that arrangement are a series of oppositions, or conceptual symmetries which exist because of a seemingly inherent desire for duality. These oppositions are forced to cohabit in a paradoxical

11.Russel (1972) p. 134, 303.

relationship to each other. They exist exclusively by virtue of their ability to destroy each other. This means that in Garbett theory the projected perfection of a certain aesthetic quality is achieved through the internecine balance of extremes.¹² The nature of principles such as unity amidst variety as adopted from Hutcheson or contrast and gradation as developed from the ideas of Hogarth and Jopling as discussed in the next chapter are cases in point.

The first step in that process of opposition, however, is the dualism calling into life a sensual as opposed to an intellectual beauty.

Frances Hutcheson

There can be no doubt that Frances Hutcheson's influence on Garbett was much larger than the latter admits to. While he quotes Alison extensively, Garbett mentions Hutcheson but once and that is in connection with the idea of beauty being

12. *Treatise*, p. 52.

the experience of pleasure upon the discovery uniformity amidst variety, a principle discussed in the next chapter. Hutcheson's definition of beauty, however, is one that Garbett certainly took to heart. Beauty, according to Hutcheson, consists in the experience of pleasure upon finding a relation in perceived sensible ideas accompanied by their concomitant intellectual ideas.¹³ Beauty consists in the discovery of uniformity amidst variety, or, conversely, the discovery of variety amidst uniformity. To arrive at that idea Hutcheson, like Garbett, subscribed to the standard division of the brain into three distinct processes: sensation; imagination; and pure intellection. A sensation perceived by a sense organ cannot by itself effect a sensation of beauty. The imagination retains in memory an impression of a previously perceived sensation and is able to juxtapose and integrate different sensations. The process of intellection concerns itself with ideas without images

13. Michael (1984) p. 245.

which are acquired by reflection and comparative abstraction.

The idea of beauty then is an idea of internal sensation (i.e. of the mind, rather than a proper sense-organ) and antecedent to the moral sense in that it formulates the icons to which the moral sense aspires. The sense of beauty is excited by reflection on an attitude of the mind. Beauty has to be deduced from a number of indirect presences. Hutcheson defines beauty as being the idea raised in us. A sense of beauty, or taste, is our capacity to receive that idea. The perception of beauty is an intellectual process, incapable, according to Hutcheson, of being raised in us by a simple or solitary sensation. Beauty is always complex:

The proper occasions of perception by the external senses occur to us as soon as we come into the world. It is probably some time before children reflect upon proportion and similitude.¹⁴

14. Michael (1984) p. 246.

Sensual versus ocular beauty

This sentence might have suggested the possibility of an ocular beauty to Garbett.

New-born babies may not be capable of perceiving the relations on which the idea of beauty depends, but children are incontrovertibly attracted to bright colours! Hutcheson, though directly contradicting Garbett's rather naive ocular beauty, may have partly provoked the idea in Garbett to account for this supposedly instinctive attraction.

Sensual perception then, according to Hutcheson's view, can only be part of a larger process of perceiving beauty. The child who is attracted to bright colours is starting out on a development with only a rudimentary sense of beauty, foetal but not fragmented. Ocular or sensual beauty, writes Garbett, is independent of memory and imagination; it is physical and directly present, deriving its philosophical basis from a peculiar physiological understanding of

epistemology whereby the senses and the initial processing of sensory perceptions occurs independently of the mind.¹⁵

In Garbett's system a simple percept can be beautiful at all sorts of levels, even on the mechanical level of sensory perception which precedes the muddling tricks which the imagination and other intellectual processes perform at a later stage. A sensual beauty is thought to need no, or very little translation by the brain to achieve its effect; it is a beauty which soothes the senses physically. Very bright light, which is sensuously injurious, is therefore also sensuously ugly. The disturbing optical illusions of closely set parallel lines and the moiré effect are also sensuously ugly. Bright and cheerful colours, on the other hand may be classed as sensuously beautiful. Garbett's aesthetics at its most elementary level, is based on the physiology of the traditional pain/pleasure principle popular in contemporary utilitarian

philosophy. Pain in this system is equal to ugliness.

The dirt of associationism; object versus subject

Garbett's aesthetics is based on a necessary correspondence between qualities inherent in the object and the processes of perception. To stem the fluidity of associationism and give beauty a physical basis, Garbett needed to identify a level of beauty which was independent of mind and therefore independent of association.

Associationism, even for Garbett who made much use of the theory, had attached to it still some of the dirt with which Locke had plucked the idea fresh from the ground, using it to illustrate the worst effects of arbitrary connections and intellectual habit.¹⁶ Addison, Hartley and Alison had succeeded in playing down Locke's fears or at least using them to good effect.¹⁷ Nevertheless Garbett felt that if

15. *Treatise*, p. 33 ff.

16. Locke, *Essay*, II, xxxiii.

17. *Ibidem*. sections 3 ff.

associationism was allowed to have its way, it would have given aesthetics over to the uncontrollable contingencies of the mind, those processes of the imagination and habit which caused the encrustation of the worst cultural norms such as copyism in architecture etc. Such contamination would seriously undermine the usefulness of definitive axiomatic laws in design. It was essential to separate the arbitrary from the necessary and prove that beauty at its most elementary level had a physical and measurable cause.

To dispose of the implied subjectivism in associationism then, to protect beauty against the arbitrary, Garbett leaned towards the common sense doctrine. He decided that the processes governing the mind had their foundation in a mechanical reality. Every person was born with an instinctive or rudimentary aesthetic sense which was subsequently educated or perverted by the acquisition of cultural norms and values. That aesthetic sense originated in the physiological mechanics

of the most rudimentary sensory perception.

The relationship between form and natural expression had already been shown to be intrinsic to the object and the viewing subject alike. As Hume had said, the structure of the creation was likely to bear a close analogy to human intelligence, thus doing away with the need to distinguish between an objective and subjective aesthetics wherever the two could be shown to behave according to the same or correlated scientific laws, and where the one could be seen as a confirmation of the other.¹⁸ The mind, after all could only perceive that which is in some way analogous to itself, that which corresponds to its own structure:

...if it be the mind that sees, -the mind that is pleased with a fine building, or displeased with the reverse, -how can it be pleased or

18.Willey (1946) pp. 134-5.

displeased with any qualities but mental ones?¹⁹

If the child or the savage could perform adequately by responding visibly to bright colours in preference to dull ones, then that automatically provided Garbett with proof that the appreciation of colours in the abstract was an *ocular* beauty, that is not an *intellectual* one; the assumption being that children and savages appreciate certain levels of beauty immediately, without the interference of mind:

Children and Savages, who, in the choice of colours, consult nothing beyond the immediate gratification of the eye, invariably prefer a certain class of colours - those termed crude or positive- to another class, those which we term dull colours or tones. Now, that the preference shown to the former is purely a matter of sensation, with which the mind has nothing to do, will be plain from the fact that the mind has,

19. *Treatise*, p. 7.

these and most other cases, no knowledge whatever of what constitutes the difference between these sensations: it knows nothing of any physical resemblance that may exist between the colours included in each of these classes.²⁰

This is a highly complex but dubious piece of reasoning. How does he mean to distinguish between sensation and mind? What does he mean by the *immediate gratification of the eye*? Garbett's idea was that the child does not think, it just responds directly to a physically soothing sensation in the eye. The way the evidence is presented makes one suspect, however, that no experiment has actually taken place and that the evidence supposedly provided by the child and the savage is part of a body of accepted cultural beliefs loosely confirmed by selective experience.

The behaviour of the child and the savage, even on the basis of contemporary premises, does not prove the existence of

20. *Treatise*, p. 34.

an ocular beauty in which the mind plays no role. It is dubious to talk of a preference in the response of a child to bright colours as there is no evidence of a clear choice in the matter. He may not even perceive dull coloured objects properly. And even if it was a case of preference, that would certainly not prove that the child responds only to the physical sensation itself without that response having been subjected to some form of intellection, however rudimentary. Preference implies a process of intellection, as it necessitates choice. Ocular beauty as it was defined by Garbett was a misnomer, a mistake of category.

The positing of a sensual beauty as something fundamentally separate from the process of intellection was unsound. Nor would it help him to say that he did not mean to use the word *sensation* as a form of sub-conscious reasoning. That would have been inconsistent with his definition of a feeling, prerequisite to complex and higher beauties, which, we may remember, was a process of reasoning so much abbreviated and made so quick by habit

that we are not able to reconstruct its exact path. Therefore he does here mean sensual beauty to be distinct from the processes of the mind, physiologically separate that is.

It was essential for Garbett to establish that perception was a matter of physics, because proof of such between science and aesthetics would help to extend the cogency of his arguments elsewhere. Once a correlation between the preference for red and the measurement of its frequency was established the possibilities were endless. But the dualism between sense and mind disappeared almost as soon as it was invoked. Ocular beauty dissolved before any unacceptable demands which would expose its difficulties could be made upon it. Garbett himself to some extent anticipated the logical problems he was courting by saying that the mind starts involving itself with the judgement of beauty even at a very low level.²¹ Even colour when it is no longer pure, must, in

21. *Treatise*, p. 44.

order to excite beauty, be liable to contamination by the intellect.

The idea of an ocular beauty was not just a non-sequitur, it was something of a non-starter. It did however have an important function. It became a logically extended extreme to impose an acceptable sequence on the rest of his theory. Whether it actually existed or not, was not really relevant to the subject of architecture. An ocular beauty became, quite simply, a beauty of the lowest order. The spectrum separating ocular and intellectual beauties ranged from those which came nearest to being exclusively ocular, i.e. those which need least reasoning to be able to feel them, colour, spacing etc. to such things as the beauties of truth, unity and poetry, beauties, that is which needed the aesthetic nobility to appreciate fully. The move up the ladder was determined by the gradual and progressive infiltration of mind in the evaluation of increasingly complex percepts.