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The Palace of Rhetoric: Geometrical and Architectural Form in Ben Jonson

JONSON HAS ALWAYS HAD his detractors. We pay little attention now, except as examples of shallowness, to the standard Elizabethan Jacobean rankings of the poets of the time, but the following judgement in *The Return from Parnassus* is often quoted:

> A meere Empyrick, one that getts what he hath by observation, and makes onely nature privy to what he indites; so slow an Inventor that he were better betake himselfe to his old trade of Bricklaying; a bould whorson, as confident now in making a booke as he was in times past in laying of a brick.[1]

'Bricklayer' is a socially charged word, reflecting the crudest snobbery, but of course it is true that Jonson was the stepson of a 'master bricklayer,' a term which could cover an architect in brick (at least in smaller buildings), a building contractor or a supervising craftsman. The occupation of his stepfather is not of merely biographical interest, since Jonson knew much about architecture and imported ideas of architectural and mathematical form into poetic theory. He manages such ideas almost with the ease of a practitioner. In his controversies with Inigo Jones he has the confidence to take on England's greatest architect of the time, referring, without fear of contradiction or of attacks for pretending to a knowledge he does not have, to Euclid, Archimedes and Vitruvius, and

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[1] In *Elizabethan Critical Essays*, ed. G. Gregory Smith (Oxford: Clarendon Press, 1904) 2: 402. In old-spelling quotations, usage of i/j and u/v is silently modernized.

this at a time when Euclidean geometry was considered a form of higher mathematics. He has—the stage-directions of his masques indicate as much—a complete knowledge of the arts of the set-designer and designer of stage machinery, which in Italy at least were often the work of architects, and he discusses these arts, not as they were to be found in the popular theatres of London but as they were used in Italian court entertainments, their most technically sophisticated applications. It seems natural then to assume, proof being absent, that he had something of a head start, that he had learned in his youth more than the craft of laying bricks in a straight line.

For Jonson, as he says in *Timber*, "Whoever loves not picture is injurious to truth, and all the wisdom of poetry."[2] This means, as we discover on further investigation, that the "wisdom of poetry" comes to rest, so to speak, in the proportions of the visual arts, chiefly painting and architecture. These arts, in turn, rest upon geometry. There is an identifiable geometrical and architectural component in all Jonson's theories about the elements of dramaturgy. It is found even in his theories of characterization. One would have thought this element the most recalcitrant to geometrical interpretation, at least in words; but it is not so in portraiture, since a drawn or painted portrait must obey the same rules of composition as a landscape and the parts of the body or face were analyzed, by the painters of the time, in geometrical proportions.

Jonson's formalism of characterization is gracefully and wittily alluded to in *Cynthia's Revels.* In Act 2, Scene 1, the "shape-changer" Amorphus describes the "faces" of a variety of professions, as if they were emblems or geometrical forms. The face of the lawyer, for example, is "a contracted, subtile, and intricate face, full of quirks and turnings, a labyrinthean face, now angularly, now circularly, every way aspected."[3] Such a face, magnified, would become a strange and mazelike succession of spaces to be walked through. In Act 5, Scene 3 (the First Masque) Cupid thus describes

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[2] In *The Complete Poems*, ed. George Parfitt (Harmondsworth: Penguin, 1988) 420. All subsequent quotations from *Timber* are from this edition.

[3] In *Ben Jonson's Plays*, intro. Felix E. Schelling (London: Dent, 1940) 2: 169. As in most editions for 'the common reader,' lines are not numbered. All subsequent quotations from the plays are from this edition, with act, scene, and page numbers in parenthesis.

Storge, one of the four "fair virgins" in the masque:

> The first, in citron colour, is natural affection, which, given us to procure our good, is sometimes called Storge; and as everyone is nearest to himself, so this handmaid of reason, allowable Self-love, as it is without harm, so are none without it: her place in the court of Perfection was to quicken minds in the pursuit of honour. Her device is a perpendicular level, upon a cube or square. (5.3.233)

Such imagery well indicates how Jonson blended medieval allegorical and Renaissance emblematic imagery in what we may call his 'architecture of personality,'[4] but a debt to the old moralities, with their suprasensible virtues and vices, is also apparent. It has appeared to some that in his public theatre pieces he is edging towards cold naturalism and discarding all interventions of supernatural powers, but such is far from his intent. Figures standing for such interveners continue to appear throughout his work, most notably in *Cynthia's Revels* and *The Devil is an Ass*. Figures of old morality plays recur (Iniquity in *The Devil is an Ass*),[5] and we also have personages somewhere between 'real-life' characters and figures from morality plays, such as Pecunia in *The Staple of News*.

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[4] It is just *because* Storge is an embodied 'virtue' that she is able to bear an emblem of both geometrical and moral rectitude, that, while still being a 'fair virgin' in a court entertainment, she can represent an eternal moral quality present in the minds and actions of characters in the play proper. When I was with CBC Radio I produced a radio version of an anonymous morality-interlude, *The Nice Wanton* (c. 1550). As in Jonson's plays, the cast includes morality figures—Iniquity and Worldly Shame—along with the named characters who bear the story. No incongruity was apparent. The 'Vices' emerged as stronger or more 'crystallized' forms of tendencies present in the main characters, as legitimate entities in a tripartite world (Heaven-Earth-Hell) and as living forms of major rhetorical tropes already present in the text.

[5] Jonson's debt to literary allegory and the morality play is still a matter of controversy, the dispute turning on whether he valued these conventions or satirized them. Robert N. Watson, *Ben Jonson's Parodic Strategy* (Cambridge, MA: Harvard UP, 1987), favours the negative side. James A. Riddell and Stanley Stewart, *Jonson's Spenser: Evidence and Historical Criticism* (Pittsburgh, PA: Duquesne UP, 1995), would have him an admirer of *The Fairy Queen*, on the basis of a volume of Spenser's works plausibly annotated by him.

The half-way position of Pecunia is worth looking at. Is it not altogether appropriate that Money should appear as a walking and talking character in a play about an attempt to corner the market in information? And about usury and prodigality, in which evils money appears to acquire a dynamism of its own? But she is half-way in a more direct sense, in that she is really an automaton, a soulless being, like the mechanical ballerina in Offenbach's *Tales of Hoffmann.*

In this play, so obviously indebted to the moralities, Jonson has solved, while using the easiest and most natural language, the difficult problem of blending the philosophical view of character, which is what allegory is about, with the psychological. One scholar has found Pecunia inconsistent and confusing;[6] I see her as the visible trace of a subtly manipulated running image, which Jonson has used before. It is the multiple image of money, which responds on its own meagre level of being—this is why Pecunia has no fixed character—to all motions of the moral and social hierarchy. As a medium of exchange, money can represent speech in general, an insight which anticipates Turgot; as gold, a beautiful and rare metal, it can represent the highest values; as 'filthy lucre,' hoarded or badly used, it is, in an image misinterpreted by Edmund Wilson and his admirers, a form of excrement.[7] *The Staple of News*, a beautiful piece of plain or low-intensity dramatic poetry, is particularly helpful in the context of this part of our argument, as an aid towards the understanding of Jonson's symbolic method. It illustrates, more clearly than his earlier and more richly-textured plays, that his characters are as architecturally framed as his plots.

In other words, his morality-like figures, though they have an ancestry in the old allegorical morality plays, are now generated by the much more complex logic of the Renaissance world theatre. I believe we may call this logic 'dialectical,' as producing not only conclusions but syntheses.[8]

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[6] John Gordon Sweeney III, *Jonson and the Psychology of Public Theater: To Coin the Spirit, Spend the Soul* (Princeton, NJ: Princeton UP, 1985) 191–93.

[7] Sweeney 238–39.

[8] For an older study with insightful remarks on Jonson's monetary imagery, see Edward B. Partridge, *The Broken Compass: A Study of the Major Comedies of Ben Jonson* (New York: Columbia UP, 1958). I cannot agree with him that the personification of money as Pecunia is "too obvious and simplified" (185–86). It is almost

Though many of Jonson's innovations died with him, some survived till our day. We may see that Jonson was the direct ancestor of Restoration theatre (where of course we also find French and some Spanish elements) and, by way of the influence of the eighteenth- and nineteenth-century stages on the comic novel, of the tradition which gave us Dickens. Both of these have modern descendants. He also invented, for English at least, the art of building non-allegorical characters on the ground of a rhetoric of characterization, a rhetoric based on a theory. For, whether or not we like the word 'rhetoric,' that is how characters in modern dramas or novels are made, though the theories (psychological, sociological) are now constructed by scientists and presented ready-made to writers. Naturally I do not mean that Jonson invented characterization as such. This is as old as the folk-tale and in the *Characters* of Theophrastus acquires a certain theoretical dimension. I mean only that, in English, his method was ancestral to our own. The minute detailing of his characterization showed later writers how to realize actions of a purely this-worldly kind.

This means that the description of Jonson, in *The Return from Parnassus*, as a "meere Empyricke," is completely off the mark. Yet we can see how, to the unknown author(s) of the Parnassus plays, Jonson should appear to merit this term. We cannot be sure that the author has picked his words of abuse with any keen sense of their meanings, but 'empiric' was generally used at the time to refer to persons who relied on experiment rather than the authority of ancient texts. It was particularly applied to quack doctors. This meaning would immediately have taken hold in the mind of an auditor.[9] There can be only one sense in which Jonson

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too much the other way. Pecunia is a shape-changer and a will-less one at that. She does what is expected of her and is thus the embodiment of the *collective will* of the characters about her. Yet Partridge does recognize the continuing value of Jonson's analysis (a dialectical one, I believe) of nascent capitalism. He says in his concluding pages (236), that *Volpone* and *The Alchemist* "are particularly relevant in an age, like the present one, in which life has been turned into what Brooks Adams called 'something resembling a usurer's paradise'."

[9] In opposition to this reading , one might cite George E. Rowe, *Distinguishing Jonson: Imitation, Rivalry, and the Direction of a Dramatic Career* (Lincoln, NE: U of Nebraska P, 1988) 14. Rowe says that Jonson was described as an 'empiric' because of his close association with historians who rejected allegorical interpretations of ancient historical texts, such as Camden and Selden.

could be said to resemble a quack doctor, particularly in the context of 'observation of nature,' which in a dramatist means observation of human character. It would lie in his having advanced his quasi-medical theory of personality, his 'theory of humours.' The abstract components of this psychology, as we shall see later in a quotation from *Every Man Out of His Humour*, are flow and static infixing ('wetting'), or fluxure and permeation. The quality of flow is the quality of time, the quality of static fixity is the quality of space, while the two in combination give us a transformationist space-time continuum (of course not in the sense of modern physics). 'Wetting,' permeation or soaking-in is in ideal representation a vertical movement, from high to low, while fluxure is a movement along a surface, thus ideally horizontal. The notions of synchrony and diachrony, or of simultaneity and successiveness, are therefore present, and this gives us a connection with thought and language. We cannot be sure that Jonson carried his idea through to such a degree of abstraction, but we may correctly say, I believe, that he approached it closely, even if he remained content with the intuitive rightness and neatness of his pictorial diagram, which stands at the point where rhetoric, by way of an active/passive logic, turns into a form of geometry. This geometry, in turn, has a quasi-cosmological meaning, since the four humours now begin to resemble the four elements of medieval (and pre-Socratic) physics.

We note, for example, that as the characters are the more 'immersed in matter,' so does their concern with the minute details of everyday material life become more obsessive. His noble or generous-spirited characters, such as, say, Virgil, Horace or Ovid junior in *The Poetaster*, are not so encumbered. They are presented as free, their rational or impulsively affectionate natures at ease in their bodies and the gross material world, which they have more or less mastered. Even though the poets in this play may be led astray by their senses, it is always in the direction of generous love. The comic, low or vicious characters have the duality of their condition. On the one hand, as submerged in particularities over which they have no control, their personalities tend to disintegrate. On the other hand, as tending towards viciousness, they approach essences of evil, a trend most apparent in the 'grand' villains, the self-directed and cunning ones, such as Volpone and Sejanus.

There is nothing improper, therefore, in the occasional appearance of figures resembling the Vices of the old moralities, which are now used in a richer context. They are malignant spiritual forces concentrated to a point, summed up in the varying forms of a particular sin, and their appearance (however comic) has the inevitability of nightmare. They are called up when evil or dangerous folly are concentrated in a particular form in the world of the play. Symbolic forces of good are less overtly represented, outside the masques, but the morality Virtues are also there: Augustus in *The Poetaster* has full historical verisimilitude but somewhere behind him is the 'Good Emperor' of medieval romance and allegory.

My argument implies that Jonson's theory of humours has been generally misunderstood and also that it has a truly logical function in his dramatic architecture. This may be seen in the prologue to *Every Man Out of His Humour.* What we have here can only be called a form of philosophy. We may find it archaic but it possesses an impressive rationality and is far from a mere technique for constructing caricatures. It can still make sense, for all that its imagery appears strange to us, when we see Jonson working it out as a theory of obsessive behaviour. To quote:

> Why, humour, as 'tis *ens*, we thus define it,
> To be a quality of air, or water,
> And in itself holds these two properties,
> Moisture and fluxure: as, for demonstration,
> Pour water on this floor, 'twill wet and run:
> Likewise the air, forced through a horn or trumpet,
> Flows instantly away, and leaves behind
> A kind of dew; and hence we do conclude,
> That whatso'er hath fluxure and humidity,
> As wanting power to contain itself,
> Is humour. So in every human body,
> The choler, melancholy, phlegm, and blood,
> By reason that they flow continually
> In some one part, and are not continent,
> Receive the name of humours. Now thus far
> It may, by metaphor, apply itself
> Unto the general disposition:
> As when some one peculiar quality

> Doth so possess a man, that it doth draw
> All his affects, his spirits, and his powers,
> In their confluctions, all to run one way,
> This may be truly said to be a humour.
> But that a rook, by wearing a pyed feather,
> The cable hatband, or the three-piled ruff,
> A yard of shoe-tye, or the Switzer's knot
> On his French garters, should affect a humour!
> O, it is more than most ridiculous. (Induction 62–63)

He could not have made it clearer that a humour is not a superficial affectation, but a link to Renaissance ideas of the basic architectures of mind and matter. The moisture of water has two opposite qualities here. Part of it 'wets' (that is to say, permeates) a receptive substance; part of it is rejected by that substance and therefore flows ('runs') over the surface. Fluxure exhibits the same two properties but this time the substance is non-permeable, a metal horn or trumpet. Now the fluid, a gas with water vapour in it (air), flows as before but does not permeate. Rather, it leaves a deposit of water on the surface, while its gaseous part "flows instantly away." As in the case of the permeable substance, an active/passive binary is implied. Air is more active than water and has a tendency to separate into its two constituent parts, pure air (gas) and contained water, while water, which always moves downwards, does not separate into parts, is more passive and has greater power of permeation.

We have here two forms of the active, the downward movement of heaviness or weight and free movement in any other direction; and we have two forms of the passive or receptive, absorption and rejection. These may be related to Pythagorean binaries but also to other binaries of Graeco-Roman and medieval philosophy.[10]

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[10] *Ens* is a term of medieval philosophy. It refers to some abstract thing which we imagine in a non-substantial, nonfunctioning or even potential condition until, by taking on defining substance, function and actual form, it becomes an entity. This entity may be one either of matter or mind: it may be a physical thing but it may also be a poetic image or a logical notion.

Finally, in the physical illustration, the mixture of fluxure and humidity is described as "wanting power to contain itself," that is, to form well-structured solid matter with its distinct outlines and forms. The 'humorous' personality has a combination of instability ('airiness,' or, to use an old definition of 'vapour,' he is afflicted by 'unreal fancy' and 'vain imagination': consider also the old term for melancholia, 'a fit of the vapours') and obsession, the permeating quality of the humour. The terms are those of ancient medicine but only the terms are left. The geometrical structure of the argument is much more important and it could be represented on a modern graph with little difficulty. Jonson would not do so; his mathematical/symbolic thought (of which Pythagoreanism was only one part), based on the properties of number, did not require Cartesian graphs; but it is the precision of his thought which leads to this impression.

We conclude then that the Jonsonian theory of humours is almost exactly the opposite of what it is commonly assumed to be, the ground of a technique for creating caricatures. It is not constricting; the theory, based on four-element, thus cardinal-point formalism (see note 17), is too general to tie the writer's hands. It does not arise from a distorted view of human nature, since, rather obviously, it assumes a norm of rational behaviour from which obsessional behaviour departs; Jonson's plays contain many characters which exemplify the qualities of the noble and well-integrated personality as he sees it—dignity, harmony and grace. Such qualities are aristocratic; but they have their counterparts among ordinary folk: good humour, common sense and honest dealing.

Though Jonson's formulation of it is unique, the opinion or conviction that the deep foundations of human nature may be related to the four classical elements was a common idea of the time. Along with this, though, he does have an unusually strong physical response to the textures of words and thoughts. For example, he has a particularly acute sense of the solid, both of the geometrically ordered and polished solid, which is a component of the architecture of good order, and of the friable, weakly structured or misshapen solid, out of which nothing can be made and which cannot be polished without crumbling. This vision not only stands behind his quasi-geometrical idea of the large forms of theatrical and literary works; it gives him an extraordinary visual and tactile sense of the smaller forms of the sentence and period, which at

times are described as if they were earth-forms traversed by the reader. Two quotations from *Timber* illustrate this:

> The vicious language is vast, and gaping, swelling and irregular; when it contends to be high, full of rock, mountains and pointedness: as it affects to be low, it is abject, and creeps, full of bogs and holes. (435)

But:

> Some men are tall and big, so some language is high and great. Then the words are chosen, their sound ample, the composition full, the absolution plenteous and poured out, all grave, sinewy and strong. (435)

(His use of the word "absolution" is now obsolete; it refers to the mode of delivery of speech.)

A poet with this strongly visual and tactile response to words will not make structures like those of poets whose sense of language is almost entirely temporal or, as we say often too loosely, 'musical.' Jonson is certainly aware of temporal continuity, of the flow of time in speech, but he wishes to control this, rather than to submit to it. Thus the arts he chiefly wishes to borrow from are painting and architecture. He likes structures which are full of internal movement, but these movements are so intertwined and balanced that they come to rest before the mental eye, like pictures, buildings or landscapes. As he says in *Timber*:

> Whoever loves not picture is injurious to truth, and all the wisdom of poetry. Picture is the invention of heaven, the most ancient, and most akin to nature ... Picture took her feigning from poetry; from geometry her rules, compass, lines, proportion and the whole symmetry. ... If a man would build a house, he would first appoint a place to build it in, which he would define within certain bounds: so in the constitution of a poem, the action is aimed at by the poet, which answers place in a building, and that action hath its largeness, compass and proportion. But as a court or king's palace requires other dimensions than a private house; so the epic asks a magni-

> tude from other poems; since what is place in the one, is
> action in the other. The difference is in space. So that by
> this definition we conclude the fable to be the imitation
> of one perfect and entire action, as one perfect and en-
> tire place is required to a building. (420, 454)

Since "picture took her feigning from poetry," what the poet has to learn from the painter must be 'geometry.' A hard saying, if what Jonson means is that we must study Euclid before we can write good poetry, but since he has nothing more to say about geometry as such this cannot be his intent. He is referring to some kind of geometry to be found in poetry itself and indeed in all language. The purpose of studying quantitative mathematics is to sharpen one's sense of this verbal geometry. This is not a notion new with him; but we are still inclined to dismiss traditional discussions along these lines as 'mystical' or as medieval 'flowery language.'

Though the context may appear to be neo-classical, Jonson had no truly ancient source for most of his arguments. The best he had to go on was a statement by Vitruvius (introduction to the fifth of his *Ten Books on Architecture*) that the Greek poets used cubic proportions in their plays. It has been stated that this amounted to little more than a vague suggestion of affinities between "solid geometry and verbal and numerical description."[11] Jonson was probably working as well from very late classical and medieval analogies between physical and mental structures such as we find in the arts of memory and some rhetorical treatises. We must also look to the Bible, whose mathematical symbolism is inexhaustible. Non-Biblical Jewish and early Christian literature are full of references to symbolic numbers, as also to temples, houses and cities as representing states of the individual and collective minds.

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[11]G.L. Hersey, *Pythagorean Palaces: Magic and Architecture in the Italian Renaissance* (Ithaca, NY: Cornell UP, 1976) 49. I do not find Vitruvius's statement vague so much as very economical: his subject was not poetry, after all. A modern scholar has discovered structural mathematical proportions, particularly Golden Mean ratios, in the *Aeneid* (George E. Duckworth, *Structural Patterns and Proportions in Virgil's* Aeneid [Ann Arbor, MI: U of Michigan P, 1967]). Duckworth also finds them in Lucretius, Catullus, Horace and "perhaps ... Ennius?" (75–77). Vitruvius was roughly contemporary with all these except Ennius, but, so far as I know, we cannot be sure how much common intellectual ground this fact implies.

The first point to be drawn from the architectural analogy is that, as Jonson says of the epic, "what is place in the one is action in the other." Since narrated or performed action occurs in mental time, it is here a question of imitating a spatial pattern in time, but this amounts to one of the distribution of place-like parts, of formal (i.e. not merely descriptive) imitations of spaces within the temporal flow of described or performed actions. In the public theatre, of course, place is represented by the stage-set, no matter how simple it may be, and there is no need for it to be fully described in words; but the formal need for the space-like distribution of parts within the text of the play is still there. Here Jonson adapts a familiar sentence from Aristotle's *Poetics*. 'Beginning, middle and end,' which in Aristotle have the sequentiality of logical arguments and of events in time, is applied, in an unexplained leap, to the form of a building.

> Whole we call that, and perfect, which hath a beginning, a midst and an end. So the place of any building may be whole and entire for that work. (455)

We may ask in what sense a building may have a beginning, a midst and an end, and he answers this in the form of a response to the question: "What we understand by whole and entire."

> Now that it should be one, and entire. One is considerable two ways: either as it is only separate, and by itself, or as being composed of many parts, it begins to be one, as those parts grow or are wrought together. That it should be one the first way alone, and by itself, no man that hath tasted letters ever would say, especially having required before a just magnitude, and equal proportions of the parts in themselves. Neither of which can possibly be, if the action be single and separate, not composed of parts, which laid together in themselves, with an equal and fitting proportion, tend to the same end; which thing out of antiquity itself hath deceived many, and more this day it doth deceive. (456)

The answer is not direct but is there all the same. Poetry, as an art in time, can only represent space in terms of time (a point made, as we know, by Lessing in *Laocoon*). Similarly, a building can only represent time in terms of space. The reference here is not, as we might expect, to the movements of the eye over the building, since such movements may start at any point and go to any other, depending on the whim and placement of the observer: the temporal motion is in him, not the building. The reference is rather to the planning and building *process*, which is as much in time as it is in space. Hence the reference to the building as being composed of many parts, which begin to be one "as those parts grow or are wrought together." The analogy to a dramatic or epic action now becomes clear. At the beginning of the play, the ground of the action and the characterization is sketched out: this corresponds to the laying out of the plan, the preparation of the foundation and so on. In the middle, as the structure is being erected, it grows in both complexity and unity, though the final beauty of the building is not yet apparent. In the end, as the structure is completed, this beauty becomes evident.

We can see from this that Jonson is far from being the pure neo-classicist, subservient to the Greek and Roman past, he is sometimes taken to be. He simply rejects Aristotle's statement that the fable should be single, along with various disputable extensions of the *Poetics*, such as the neo-classical doctrine of the 'unity of time and place.' Nonetheless, he is truly taking into account the Aristotelian conception of dramatic form as based on both logical and temporal sequentiality. This means that he has searched for, and empirically has found, some wide notion of form which includes logical, rhetorical and geometrical structures. In his day the most refined and abstract forms of rhetoric offered a loose approach to such problems. To refer merely to one of the foundational bases of what was an immense and sometimes very shaky and improvised structure of thought, every student of traditional logic and rhetoric was aware that certain words were used both of linguistic structures and pieces of space and time. The Greek *topos*, from which we get 'topic' and the time-word 'topical' (it is a space-word in medicine, as in 'topical application'), is at once a limited space and the subject of a discourse; the derivatives and various usages of Latin *locus* relate both to physical and to mental spaces and times,

such as a part of a text or a legal 'position.' If such connections were made use of, even unsystematically, rhetoric ceased to be a codification of persuasive oratorical and literary devices and approached mathematics and philosophy. This elementary consideration alone introduces one to a rich if confused dialectic, which poets of the time could use in an intuitive fashion. For, to paraphrase Hegel (No. 261: *Encyclopedia of Philosophical Sciences*), place is at once the identity of space and time, when they are considered together, and their contradiction, when they are considered separately. This idea was not entirely strange to the philosophies of late medieval times and the Renaissance, though, so far as I know, it was never expressed this succinctly.

Jonson therefore wishes to make poems which, in some fashion or another, seem to stand firmly in mental space, poems which have, to put the matter in another way, solidity. In his day it was most practical to begin the endeavour with the imitation of architecture. Renaissance and early-Baroque architecture were based on so-called Pythagorean ratios, many of which were the same as those used in the construction of musical scales and consonances, others of which were found in the distributions of rhymes and line lengths in poetic stanzas.[12] Because the geometry of the Pythagoreans was based on the properties of numbers, from which all points, lines and enclosed figures were derived, anything made up of countable elements contained an implicit geometry. But Jonson need not have been confined to Pythagorean thought. Geoffrey of Vinsauf's *Poetria Nova* (c. 1210) was not widely read in his day, but many of its lessons had been passed on from Chaucerian times. The chief of these was the presentation of poetic rhetoric as a kind of mental map, another derivative of the 'Art of Memory.' We find in Geoffrey a remarkably precise description of the oration or the

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[12]Pythagorean number-symbolism is based on provable mathematical relationships (see Nicomachus of Gerasa's *Introduction to Arithmetic*), and their extension into physics by way of musical acoustics. Like any system of mathematics or logic, Pythagorean mathematics can support many philosophical structures and what we call the 'Pythagorean philosophy' is only one of these. It should be remembered that Pythagorean geometry is, by Euclidean standards, arbitrary and incomplete, though there is no space to discuss this objection, and the counterargument (there is one), here.

poem as a journey through an idealized landscape with gardens, castles and forests.[13]

Jonson has indeed given us buried mathematical ratios, in the direct geometrical sense, in his work. This has been demonstrated, for the poems and masques, by A.W. Johnson.[14] But the use of Pythagorean ratios does not guarantee beauty, even in architecture. It was assumed at the time (there are plausible arguments against this assumption but they were not advanced) that such relationships, entering the mind subliminally, could give the poem a hidden beauty. Jonson doubtless believed this, but he must also have been aware, since it is obvious, that if these ratios are used mechanically, they can either be lost from perception or actively subvert the order of the surface. He does realize, as we may learn from *Timber* and comments on his art found in his plays and masques, that a certain set of notions of beautiful form are to be found behind all the arts he knows. Two of these arts stand out, poetry and architecture. He does not in any way reject the quantitative and musical aspects of the poetic surface, as his complex stanzaic verses beautifully demonstrate, but he wishes to go deeper. He has a non-quantitative idea of beauty and decorum, which is concerned with the marriages of ideas, the interplay of characters, the interlacings of actions and so on. These belong in the sphere of logic and rhetoric, where they become quasi-quantitative, descending as they do into the 'matter' of words. This is to say, as pointed out above, that he is not imitating the hard forms of material buildings, much less the dusty clutter of an architectural work-site, but the *ideas* of buildings. And I believe it must be said, though the notion is strange to readers who, in spite of all advances in modern mathematics, still find non-quantitative thinking 'vague,' that he is working as precisely as the architect who deals with visual measurements.

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[13]Geoffrey of Vinsauf, *Poetria Nova*, trans. Jane Baltzell Kopp, in *Three Medieval Rhetorical Arts*, ed. James J. Murphy (Berkeley, CA: U of California P, 1971). Cf. the architectural analogies in Geoffrey's introduction. Geoffrey compares the planning of a poem to that of a house; the builder first measures out his work "with his heart's inward plumb line ... and his building is a plan before it is an actuality" (34).

[14]*Ben Jonson: Poetry and Architecture* (Oxford: Clarendon Press, 1994).

Perhaps we may understand this better if we return to the idea that he is imitating the architectural *process*, which goes forward in a series of clear steps and in which everything the architect does, even to his drawing of plans and elevations, is a procedure in time. Here, however, it is an idealized process which is realized in the play, one in which process is as clearly outlined and beautiful as a dance, and, furthermore, one in which the architect and his workers are invisible. The effect is therefore that of a building realizing itself 'from the ground up.'

The art of poetry, in Jonson's philosophy, is much more than rhetoric or logic, but it must contain them. Poetry may be seen as an ordering mirror, that is, a transforming but not a distorting one. In this mirror, imagery is reflected in a hierarchical fashion. At the top of the ladder of degrees we have the imagery of exalted mental characteristics (sun, moon and stars, the noble animals etc.); at the bottom we have the imagery of debased ones (mire, excrement, noxious insects and reptiles etc.); and there is a range of images in between. Furthermore, the whole hierarchy may be present in miniature within the narrow limits of a simple entity, no matter what the position of that entity in the universal scale (see the earlier discussion of Pecunia in *The Staple of News*). In logic we have, at the top of the ladder, the rational syllogism and its moralistic embodiment in the 'sentence' (sententious statement); at the bottom we have the chaotic and indecent utterances of irrational men. The image of poetry as a mirror is, as we know, a commonplace of the time, but it becomes the more philosophical as it is better defined. The 'ladder of degrees' is a necessarily schematic representation, also a commonplace of the time. When we put the mirror, which is a plane, together with the ladder, which is a vertical, we have a full graphical analogue of geometrical space, with horizontals, verticals and, implicitly required, diagonals.

It is well known, but for some reason ignored, that Greek rhetorical terms define quasi-geometrical operations in non-metric space and time (we have words meaning 'circular repetition,' 'parallelism,' 'ascent,' 'descent' and the like), as well as forms of logical transformation. Logical sequences themselves, as chains of consequences, are operations in non-measured time. When we put together these three elements—hierarchies of imagery, rhetorical quasi-geometry and logical sequences in non-measured time—we

have, or can have if we follow the argument through, a two-dimensional graph of reality (see the earlier discussion of humour theory). When the right words are used, this becomes a picture, which then contains, as Jonson says in *Timber*, "all the wisdom of poetry."[15]

We now encounter another problem. Jonson's notes in his mathematical and architectural books, which are discussed in the first chapter of A.W. Johnson's beautiful study, *Ben Jonson: Poetry and Architecture*, show that he studied mathematical form in a serious manner but not how he related it to verbal composition. And this is the question we need answered, particularly since the *primary* rationale of 'Pythagorean proportions' is musical rather than architectural. This is to say that their use as hidden form in poetry produces not a spatial but a temporal order, similar to that of buried rhymes and stanza sequences. As I hinted earlier, but now state in a stronger way, to say that a play is like a building, but not to indicate how the static, quantitative and spatial proportions of architecture are translated into the dynamic, non-quantitative and temporal properties of language, is to avoid the chief problem in this field of enquiry.

It is probably safest, until some evidence to the contrary turns up, to assume that the final form of Jonson's architectural analogy was the result of his own inspired intuition. If the reader refers to earlier quotations from *Timber* he will see that Jonson describes language forms in words suggesting size, shape and distribution in space: vast, gaping, swelling, irregular, high, full, pointedness, low, abject, creeps, bogs, holes, tall, big, high and great, ample, full, plenteous and poured out. Such words may be found in the rhetoric manuals but it is unusual to find them so concentrated. Jonson had, as indicated earlier, a strongly physical sense of

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[15] The reader may, by this time, be growing more and more uncomfortable with my use of the word 'logic.' The system of logic I am referring to is not Aristotelian or scholastic (though it may contain these logics), but Lullian. Lullian logic in its pure form was understood by very few, but in adapted and perverted forms it had a great influence on Renaissance thought, much of it 'underground.' Frances A. Yates is the best-known English-language student of this adapted Lullism, and her book, *The Art of Memory* (Chicago: U of Chicago P, 1966) is a good introduction to a complicated and controversial subject.

language, to a degree unusual even among poets. He also had a very acute sense of visual order and a corresponding visual memory. This is apparent in his descriptions of the settings and costumes of the masques, so vivid and precise that, with some knowledge of period style, they could be reconstructed from his words alone. Finally, to refer to just the fact which attracted the contempt of snobs, he had practical experience in the building trades.

He had, it seems, come to the conclusion that, if the visual and physical forms of architecture are to be translated into verbal forms, they must first be considered in terms of function.[16] This is something we do in ordinary language. Take, for example, the idea of a pillar. We can write a poem in the form of a pillar, but this is a mere typographical game of the kind set out by Puttenham in his *Art of English Poesy* (1589). We can describe a pillar, but description is not what we want. Yet we know exactly what we mean—it is even a cliché—when we speak of the 'pillars of an argument.' We mean the most important rational statements which 'uphold it,' and this is another architectural image in which the completed argument is seen as a roof (we may also speak of the 'crowning argument'). If we arrive at a frustrating impasse in a series of thoughts we talk of 'reaching a blank wall.' We say of a writer who illuminates something that he or she 'opens a window' on it. In Jonson's and Dryden's days, if not in ours, critics would talk of a writer's 'Doric' (plain and severe) or 'Corinthian' (ornamented or delicately-worked) style.

One key to understanding this idea of function as more basic than visual shape is found in A.W. Johnson's quotation of a statement in Jonson's *Discoveries*: "the Episodes, and digressions in a fable, are the same that household stuff, and other furniture are in a house" (32). An episode is part of a story or other plotted fictional structure which may be considered as separable, yet only in analysis: generally, when the plot is unfolding before us, we

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[16] See Riddell and Stewart (*Jonson's Spenser* 115) where they quote Walter Davis to the effect that Spenser's description of the Castle of Alma should be read as based on analogies of function rather than appearance. See also the discussion of *The Fairy Queen* in Jorge Checa Cremades, *Gracián y la imaginación arquitectónica* (Potomac, MD: Scripta Humanistica, 1986) 67–74.

take the episode to be an integral part of the plot. A digression, on the other hand, we are usually aware of as such. Now "household stuff" and "furniture" are above all movable and thus Jonson's simile at first appears inappropriate: an episode or digression which could be moved to any part of the plot would be a useless excrescence and would best be abandoned. If, though, each room were strictly designed according to function and its furniture to suit that function, the latter could not be moved very far. A room of state will not contain the furniture appropriate to a dining-room or a bedroom and, if the room is well planned, there will only be a degree of latitude in the placing of the furniture.

This means, in the end, that if we wish to construct a play which resembles a palace or great house we must first find or invent parts of the dramatic structure which correspond, but in function rather than shape or ornamentation, to parts of the building. A dining-room may correspond to a place where intellectual nourishment is taken, e.g. a scene which contains much sententious moralizing or, for that matter, festively witty conversation. A bedroom is a place of rest and thus may correspond to a quiet scene following a very busy one, but it is also a place of lovemaking. A great hall is some climactic scene where all the characters are gathered together, such as the scenes of judgement we often find in Jonson's plays, where the evil are punished and the good vindicated. If we consider these ideas in more detail we can see that such qualities may be represented completely in temporal terms: the speed, texture and rhetorical gravity or agility of the language, the length of the scene and its subdivisions, the number of speaking parts and their relative importance in the hierarchy of the scene.

We are left now with two processes or a structure in two times. This is just what we want, because the simultaneous presentation of two or more time-streams gives us another quasi-spatial diagram, as in the time-graph or, to use a representation closer to Jonson's time, as in one of those great clock-faces which, in addition to the minutes and hours, also show the movements of sun and moon, with allegorical figures appearing to strike the hours. In one process, discussed earlier, the building as a whole is being erected from the foundation up, an imaginary vertical. In the other, rooms are being completed one at a time, an imaginary horizontal.

I can well imagine Jonson saying: "I didn't tell you my analogy was an easy one, did I?"[17]

Proceeding in this manner we shall eventually arrive at a dramatic form which resembles the ordered structure of a building, except for quantitative matter such as materials and measurements. The resemblance is indeed skeletal, but we need no more. The method involves all the standard techniques of 'good play-making,' but they are now poetic rather than mechanical, because the structure itself is a rhetorical figure. We may or may not choose to incorporate quantitative (Pythagorean) elements which suggest relative sizes or proportions. If we do, their beauty cannot but be integrated into the form of the work. They will have poetic meaning because fitted to a well-planned structure which respects the nature of language.

If we imagine, as we have, a form self-developing on a time-graph with vertical and horizontal axes, and if, furthermore, it grows evenly along both axes, it will be, in simplest form, a growing square. In three dimensions it will give us an analogue of the simplest architectural unit, the cubical box.

I do not believe that Jonson worked with a time-graph of the type I have described. The notion of a time-graph, its axes synchrony and diachrony or two rates of movement, is anachronistic for the time. I believe that he worked intuitively, as I have said.

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[17] The best-known poetic representations of spaces in terms of interwoven times are narrative structures based on the figures of the zodiac, the seasons of the year and the times of day. The rising of the constellation of the spring (Pisces or Aquarius in modern times) and the direction of sunrise determine, after the necessary calculations, the east, the other points on the horizon circle and, by extension, the zenith. In the end we have a complete graph of space: maps are based upon it. This is a universal 'subliminal' pattern, found not only in ancient myth but in nineteenth- and twentieth-century works such as Tennyson's *Idylls of the King* and Lowry's *Under the Volcano*. One such poem in Jonson's day was *The Fairy Queen*, whose intricacies have been analyzed in a masterly fashion by Alastair Fowler in *Spenser and the Numbers of Time* (London: Routledge, 1964). This procedure may be 'mystical,' 'magical' and 'astrological,' but not necessarily so, since the basic diagram is known to navigators, astronomers and calendar-makers in a purely practical sense. Jonson's architectural analogies, original in the working-out, were thus by no means without precedent; the fundamental principles on which they were based were known to poets learned in their craft and were, furthermore, internationally known (see Checa Cremades, note 16).

Nonetheless, we know that he studied Vitruvius with great care and he must have known the following passage, famous in his day, from the introduction to Book V of *The Ten Books on Architecture*. After explaining that the Pythagoreans composed their books in "cubical form," Vitruvius says:

> A cube is a body with sides all of equal breadth and their surfaces perfectly square. When thrown down, it stands firm and steady so long as it is untouched, no matter on which of its sides it has fallen, like the dice which players throw on the board. The Pythagoreans appear to have drawn their analogy from the cube, because the number of lines mentioned will be fixed firmly and steadily in the memory once they have settled down, like a cube, upon a man's understanding. The Greek comic poets, also, divided their plays into parts by introducing a choral song, and by this partition on the principle of the cubes, they relieve the actor's speeches by such intermissions.[18]

It is hard for the modern mind, particularly the modern *poetic* mind, to see the beauty Renaissance poets found in such geometrical comparisons, notwithstanding Edna St. Vincent Millay's, "Euclid alone has looked on Beauty bare ...." Either we shall insist mathematics has nothing to do with poetry or, if we admit that it may have, we shall argue that modern mathematics has taken us far beyond such 'naïve' ideas of refined order and beautiful form. These are matters for separate discussion, of course. It is the case of Ben Jonson which is before us. I believe we shall never understand his genius unless we put such objections aside, at least while we are

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[18] *The Ten Books on Architecture*, trans. Morris Hickey Morgan (New York: Dover, 1960) 130. The "number of lines" referred to is 216, derived from the cube in a way I need not explain here. The best-known Renaissance commentators on this passage were Cesariano, Barbaro and Serlio and their explications would have given Jonson's intuition ample ground to work on. They do not use time-graphs either, but Daniele Barbaro's commentary is based on the idea of motion: the moving point creates a line, the moving line a plane and the moving plane a solid (Hersey, *Pythagorean Palaces* 49–51). Of course there can be no motion which does not involve time, whether real or ideal.

hearing or reading him, and surrender to such a vision of rational beauty as we find in an emblematic representation of Reason, from his *Masque of Hymen*. She is depicted as a venerable and white-haired personage, wearing blue starry garments and a white girdle covered with mathematical figures, an allusion to "that opinion of Pythagoras; who held all Reason, all Knowledge, all discourse of the Soul, to be mere Number."[19] Here, as in a beautiful theorem of mathematics, the depths are hidden in the clarity.

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[19]Quoted in Johnson, *Ben Jonson: Poetry and Architecture* 213.