

Love is the Function of Death: Forster, Lagerkvist, and Zamyatin

Although they have 'nothing in common except youth,' Harold and Micky are somewhat alike in part I of E.M. Forster's short story, 'The Point of It.' Both young men are enthusiastic, daring, and carefree. They differ from each other mainly in two ways. First, Micky has a penchant for poetry, which is not shared by the scientifically inclined Harold. Second, Harold, who has chosen to beat the tide by rowing with all of his strength, retains his devil-may-care attitude and dies from exertion, while Micky, who has urged his friend on, loses this same attitude in a pang of concern for Harold's health and in a realization that he, Micky, does not 'see the point of it.' In part III, 'some one,' presumably the shade of Harold, is rowing the shade of Micky across the Lethean equivalent of the Thames in another race with the tide; and Micky, hearing a voice say 'The point of it...', feels a weight fall from his body as he crosses midstream. In both worlds the tide has been beaten and the stream has been crossed; but in the second world Micky apparently does not have to row the boat ashore, or up to the dock at least, as he must have had to do in the first world. The second difference between the two is eliminated by Micky's finally seeing 'the point of it.'

The elimination of the first difference between the two makes up the central panel (part II) of the story. This first difference, poetry vs science, is part of the visible first world, just as the second difference, the point seen vs the point unseen, is part of the insubstantial and mysterious second world. Surviving Harold, whose scientific bent was obliterated by a moment's burst of romantic daring, Micky loses his poetic imagination to a long life of tedious practicality. All of the differences, or both of them, between the short-lived Achillean Harold and the long-lived Ulyssean Micky are resolved in the conjunction of the two worlds. Not only do the co-ordinate worlds of life and death meet and intersect at a point, but also the afterlife worlds of Heaven and Hell define this point.

As an idiom, or as a conventional phrase or a cliché, 'the point of it' may be defined as 'the meaning.' To study the story solely from the sense of the conventional expression is to avoid or miss the music, the mathematics, and the depth of the work. Some critics, missing the counterpoint of the idioma-

tic and the literal, provide truistic points or generalities in attempting to meet the challenge of Forster's story; others take 'the point of it' to refer to the point of the story.¹

The word 'it' is here, not merely the indefinite pronoun of the cliché expression, but also the pronoun referent to Harold's choice. Micky does not see the point of Harold's choice to race the tide. Harold's last words are 'Well, you will some day.' There *is* a point, then; Harold sees it immediately and prehumously, while Micky will see it posthumously. The literal meaning of 'see' lends spatial context to the 'point,' the temporal context of which is established by Harold's last words. The mathematically literal meaning of 'point' is 'position without extension.' In calculus the attempted definition of a point results in a definition of function. A function is a relation between variables. Harold's choice identifies death as an independent variable (x) to which any value may be assigned and life as a dependent variable (y). The limit of the value of life (the function of death) is a point. In mathematics $y = f(x)$ is a number; in physics it is a position; and in poetry, as in idiomatic expression, it is a meaning.

Harold's choice of death is a decision to experience the limit of the value of life. Ultimately Micky makes the same choice, but only when it is impossible to do otherwise. On his death bed after a long, dull life as Michael (and as Sir Michael) he attends with bitterness to his brood's expression of indifference to his life and death:

If he chose, he could have risen from bed and driven the whole pack into the street. But he did not choose. He chose rather to leave this shoddy and ungrateful world.

The clauses which are italicized (not by Forster, but as a means of emphasis

1 For example: 'The point of it is: one must not pursue either Love or Truth to the exclusion of the other, but both together, for Love and Truth are one' – David Shusterman, *The Quest for Certitude in E.M. Forster's Fiction* (Bloomington, Indiana 1965) 56; 'The point of it seems to be that one should stay young in spirit, whole, unfragmented by analysis or specialization' – Wilfred Stone, *The Cave and the Mountain* (London 1966) 159; 'The point of the short story "The Point of It" is that man's salvation depends on the vision of youth and the memory of that vision' – George H. Thomson, *The Fiction of E.M. Forster* (Detroit 1967) 53. In *E.M. Forster* (Carbondale, Illinois 1967) 35, Norman Kelvin recognizes the 'point of it' as referent to Harold's choice: 'The point, then, is that Achilles made the right choice; as did Tennyson's Ulysses; as did, finally, the young man Harold of Micky's youth, who had not lost "the keen, heroic edge" and therefore gave his life in a "pointless" battle against the sea.' On this subject the most trenchant and valid comment was made by Lionel Trilling in 1943, in *E.M. Forster* (New York) 43: '[T]he point ... is that death and the value of the good life are related, that death is in league with love to support life; death, indeed, is what creates love.'

here) offer a sequence which is ambiguous only if one fails to observe that Michael was not given, during his many years of life, to making choices. 'If he chose,' that is, if he had been given to making choices, 'he could have risen'; but he had not been such a man, 'he did not choose,' and so he could not have risen. He did not choose to rise because he could not choose to rise; and he could not choose to rise because, while he lived, he did not choose. Forster has been careful *not* to say 'He did not *so* choose' or 'He did not choose *to rise*.' Harold had chosen when there were other options available to him. Michael can be credited only with having consciously accepted the only choice available to him, like Camus' Meursault under sentence of death. Although Harold and Michael make the same choice at different points on the co-ordinates of time and space, Harold finds the function of death by choosing to choose and Michael finds only the variable of death by merely choosing. Michael must pursue the point or position of function 'into the unknown,' in that 'just as he was grasping the full irony of the situation,' namely, that death is the function, not the end, of life, 'he died, and pursued it into the unknown,' where he chooses to see ('to open his eyes').

In the 'unknown' the axes of life and death become a single life-death axis, the axis of the independent variable (x); and the dependent variable (y) is now the Heaven-Hell axis. The limit of the value of Heaven-Hell (the function of life-death) is the meaning of Harold's choice of choice, 'the point of it.' This is the integral anticipated by the initial axes of poetry and science: the limit of the value of poetry (the function of science) is the ambiguity of 'matter.' Science is not matter; and, as T.S. Eliot observes in his inquiry into the relation between time and eternity, 'The poetry does not matter' (*Four Quartets*, 'East Coker' II). The scientist studies matter, and the poet looks for what matters. Neither science nor poetry exceeds the limitations of language, in which the function of a word like 'matter' (noun or verb) is determined by its context.

The musical term 'point' indicates 'time with extension.' The integral here is either the *punctus additionis* or the *punctus divisionis* as the function of *punctus perfectionis*. More importantly, Forster's *punctus contra punctum* (unseen meaning superimposed upon unseen position) involves, not axes and co-ordinates, but concentric circles as reverberant extensions of the mathematical 'point.' Initially, science (Harold) and poetry (Micky) are in the same boat. Micky (poetry) is the function of Harold (science) in bringing Harold to the limit of his value. From this point, which may be called the integration of poetry and science, the life-death circle ripples out toward the Heaven-Hell circle, which circumscribes it. The conjunction of the life-death and Heaven-Hell circles produces vibrations of value which Harold hears within time and which Micky will come to hear only outside of time. Ironically, Micky has provided the musical *punctus*, his urgent encourage-

ment and his recitation of lines from Tennyson's 'Ulysses,' which enables Harold to hear the *punctus contra punctum*, that music which ultimately Harold will make it possible for Micky to hear. At their reunion in eternity Harold has become poetry and Micky has become science; and both are once again in the same boat.

Forster, like Pindar, understood 'the mystic state that is the athlete's true though unacknowledged goal.' Harold was approaching this state as his thrill merged 'with his friend's voice': 'he was beginning to be. He achieved this 'state,' this 'being,' paradoxically, in dying. Micky achieves this state only after a lifetime of inconsequential, non-athletic activity, a lifetime of lovelessness. In this state he is redeemed by his love for Harold.

The nature of Michael's love for Harold is made clear by the 'pang of joy' that thrills him and disposes him to 'feel sure that our highest impulses have some eternal value.' He assumes that these feelings follow from his 'love of humanity.' The eternal value, however, is that which Harold had realized and will bring Michael to realize, once Michael finds himself (Micky) in eternity. The eternal value is the human salvation inherent in Micky's love of Harold. Micky cannot see that he is Patroclus and not Ulysses to Harold's Achilles. His inability during his life as Michael to love his wife Janet is written off as a love of humanity. It is difficult, if not impossible, to love one particular human when one loves all humanity. Michael, however, merely professes a love of humanity as a means of repressing the feeling of his love for Harold. This keeps him from brooding about death until death is upon him. His death is precipitated by his being slapped in the face with a dead fish. The fish, recognizably a Christ symbol, is the instrument that rudely awakens him to the fallacy of his professed love of humanity. Once awakened, he consciously chooses death, he himself having obscured all other choices, prior to the one now left him, by his repressed love for Harold. His children, Henry and Catherine, do nothing to expose to him his real feelings. They are the unloved children of his unloved wife. His son Adam, the first fully alive human being in Michael's family, is, however, too much an evocation of Harold's choice not to carry the threat of such exposure. Concerning Adam's departure to the Argentine Michael says, most significantly, 'I don't see the point of it.' The church to which he turns, with his 'love of humanity' transmogrified as 'sympathy,' vicariously slaps him in the face. The divine science, theology, is immaterial; but the dead fish is matter that matters. Put another way, the scientific mind is a function of matter; and what matters is a function of the religious mind.² The dead fish

2 After Samuel Butler: 'We shall never get straight till we leave off trying to separate mind and matter. Mind is not a thing or, if it be, we know nothing about it; it is a function of matter. Matter is not a thing or, if it be, we know nothing about it; it is a function of mind' – *Notebooks*, ed. H.F. Jones (London 1919) 67.

serves both to signify a religion that failed to shield him from what he did not want to know and to precipitate his fall into that knowledge.

Michael/Micky falls into an eternity where darkness is God and which is harrowed by the painful song of light, the light that exists before choice, before the division of hardness and softness, and that existed 'in the days when truth was love.' Micky's submission to enlightenment, consequent upon his willingness to remember, is his second death. The awful rowing toward God, to use Anne Sexton's phrase, is now succeeded by a rowing across the vexatious tide of the distortions of love and truth toward birth. The point of Harold's choice is the point *at* which Micky arrives *when* he both sees and hears the song of truth: love is the function of death.

This is the music to which Pär Lagerkvist's Barabbas, Ahasverus, Tobias, and Herod cultivate a deafness.³ Tobias, like Micky, both sees and hears it after he submits to the enlightenment consequent upon his willingness to remember. In his early adolescence Tobias had loved a young girl who became pregnant by him. After her suicide, following the abortion forced upon her by Tobias's parents, Tobias became a wanderer and repressed all memory of his love. Reunited with her in a second world, *aftonland*, he re-experiences his love for her and finds the same kind of peace that Micky finds upon his reunion with Harold. Barabbas, Ahasverus, and Tobias cannot 'die' until each, in his own way and to the degree of which he is capable, suffers the painful enlightenment of the truth that is love. The truth is distorted either by a love of humanity, which, unchecked by a love for an individual, becomes a love of God, or by a love of God, whose darkness denies humanity. Lagerkvist's Herod and Mariamne die within the truth of love; but they destroy each other because Herod's love of Mariamne and Mariamne's love of humanity are mutually destructive.

Lagerkvist's early play, *Sista människan* (*The Last Man*), parallels Forster's 'The Machine Stops,' in the prospect of the end of the world, as well as Forster's 'The Point of It,' in the presentation of (1) death as the function of life and (2) love as the function of death.

In 'The Machine stops' humans exist in subterranean compartments where physical contact is all but eliminated. All life functions are provided by the machine, which, created by humans, comes to be worshipped by them as their dependence upon it becomes irreversible. When the machine breaks down, human life is destroyed save for the remnant of humanity that has managed somehow to subsist on the ravaged surface of the earth. The doomed subterraneans had lived according to the Book of the Machine, the new Scriptures, which parallels the Table of Hours (*Časovaja Skrižal'*) in Zamyatin's *My* (*We*). Kuno and his mother Vashti, with whom he has been

3 In the novels, *Barabbas*, *Sibyllan*, *Ahasverus död*, *Pilgrim på havet*, *Det Heliga landet*, and *Mariamne*

trying to sustain physical contact, know a moment of familial love before the end comes. Briefly they recapture life 'as it was in Wessex, when Aelfrid overthrew the Danes.' The moment can be retained no more than the last quarter of the ninth century in Britain could have been retained. Such moments, whatever their relative length, measure plateaus of existence during which love is *experienced* as the function of death. They either precede or follow perfection, which resolves and nullifies all of the processes that have brought it about, as the perfected Machine resolved and nullified the human efforts that brought it about. If an existential plateau of this kind could remain as a temporal position, or as a point of time, without extension, utopia would be realized. Utopian literature either expresses a nostalgia for such points of time or speculates upon their possibility with arbitrarily drawn co-ordinates of time and space. Ironically, the Machine perfects, and nullifies, human existence, which in turn nullifies the Machine.

Plateau periods, during which love is experienced as the function of death, are analogous in their ephemerality to periods of youth. Their value is appreciable only in retrospect. They are periods during which impulsion toward perfection is slowed. This impulsion seems to be inherent in humankind. Samuel Butler in *Erewhon* details a society's vain attempt to arrest this impulsion. The impulsion checks itself under certain undefined conditions, which conditions are a very real subject of utopian thought, but it is never halted or completely stopped. Just as an individual moves inexorably toward death, with the movement now and then slowed but never stopped except by death itself, and with the movement given fullness and meaning only by love, so human societies move inexorably toward perfection. 'Strange fate for man!' exclaims Samuel Butler in chapter XIX of *Erewhon*: 'He must perish if get that, which he must perish if he strive not after.' The Berdiaeff epigraph to Huxley's *Brave New World* ('Comment éviter leur réalisation définitive?' etc.) is the appropriate epigraph to most of what is now called 'dystopian' literature. Humankind, apparently, must burn itself out, like the sun; and Forster, Lagerkvist, and Zamyatin, among many others, indicate to us that our two most expeditious combustion chambers are deficient love and excessive technology.

Forster's Machine is excessive technology. In Lagerkvist's *The Last Man* it is deficient love that brings humankind to its end. Forster's Machine stops; Lagerkvist's Sun cools. The last humans beneath the dying sun are stunted and variously handicapped, themselves like machines in various stages of disrepair. Gama, who is to be the last man, is blind. Like Forster's Micky and Zamyatin's D-503, he does not see 'the point of it' because he will not see love for what it is. Until 'soul' (Zamyatin's *duša*) claps its hands and sings, Micky does not see the love that he has for Harold, D-503 does not sense the love that Ju brings to him, and Gama does not see that his love is with him.

The woman whom Gama had raped, who had torn his eyes out, is in his company all the while he attempts to reconcile his violence with his love by repressing his memory now of the one and now of the other. The woman is Vyr, who has borne him a son, Ilja. When he discovers that Vyr is the woman whom he had loved and brutalized, his unreconciled love and violence result in his strangling her. He calls for and curses his son Ilja, who, broken-hearted, drowns himself in the sea. Then only Gama is left, all of the other remaining humans having meanwhile died; and, bereft of his 'soul,' he dies like a mortally wounded animal. There is at the end of Lagerkvist's play no vision corresponding to that of Aelfrid's Wessex, in which Vashti and Kuno locate and see the point; there is no song of light such as that which Micky has finally learned to hear. There is only the end of the human race, which has missed the point: love, at its limit of value, is the function of death; concepts of a personal God, constructs of the Machine, forces of convention, and the violence of humans themselves devalue love and obscure its relation to death. The limit of the value of love (the function of death) is life.

Consistently, Lagerkvist presents characters like Gama, who do not want to die because they have not lived, or like Ahasverus, who *do* want to die because they cannot love. In his works, life does not love and death does not love; life is the point at which love and death meet; and its meaning is, not this point itself, but whatever exists at this point:

Livet har ingen kärlek till dig träd, livet har ingen kärlek till dig mänska, till dig blomma, till dig vagande gräs, utom då det menar just dig. När det inte längre menar dig, älskar det dig inte mer men plånar dig ut.⁴

At this point life is both love and death; and this point is a plateau period. In this context 'point' is both 'position' and 'meaning'; and 'period' is both 'interval of time' and 'full stop.' According to Lagerkvist, the human must gain the ability to see this point, inasmuch as life has no meaning other than whatever or whoever is at this point. T.S. Eliot sees it as 'the still point of the turning world': 'Except for the point, the still point,/There would be no dance, and there is only the dance' (*Four Quartets*, 'Brunt Norton' II), the dance of death set to the music of love. The secret of heaven, according to Lagerkvist, is that 'everything whirls around';⁵ and the secret of life is, then, the meaning that one becomes at the still point, the meeting point of love and death.

4 *Det Eviga leendet*: Life has no love for you, tree; life has no love for you, man; for you, flower; for you, waving grass – except at that point at which it means just you. When it no longer means you, it loves you no more, but roots you out.

5 *Himlens hemlighet*: Allting snurrar runt

'Everything whirls around' – always. Revolutions and cycles are endless. The Monopolis (Edinoe Gosudarstvo) of Zamyatin's *We*, instead of seeking the eye of the ineluctable revolutionary hurricane, would eliminate revolutions and cycles. Monopolitan technology is aimed at a perfect stoppage of the whirling by pushing irrational life beyond the Green Wall (Zelenoj Steny). The young man in Lagerkvist's *Himlens hemlighet* (*The Secret of Heaven*) tries to escape the whirling by leaping off the world into the outer darkness. In each case life is differentiated from death; and love, denied its limit of value, fails to serve as the function of death. In each case only a void remains.

The *Integral*, devised by the mathematical master-builder, D-503, is a machine, a spaceship that is to carry Monopolitan technology to other worlds as a means of extending the integration that is assumed to have been completed in Monopolis.⁶ Mechanical integration is one thing, but the integration of human beings is quite another thing. Their reduction to the state of machines is inhibited by symptoms of infinity that may be collectively identified as 'soul.'

Zamyatin reverses Plato's concept of the soul. The irrational appetite (to alogiston te kai epithymatikon) in the Platonic tripartite soul is an ineradicable negative which must be controlled by the rational element (to logistikon) in alliance with the energetic element (to thymoeides). For Plato, then, reason is the function of unreason at the point of energy. For Zamyatin the limit of the value of unreason is the function of reason. Like Plato, however, Zamyatin recognizes the ineradicability of unreason. Monopolis, accordingly, is misguided in its belief, a belief which Zamyatin satirizes, that unreason can be eliminated. In this belief Monopolis identifies the soul exclusively with unreason and seeks to perfect the human by excising the soul as though it were a malignant tumor. The excision eliminates, not human imperfection, but humanness; it is, in this respect, like the Ludovico Technique in Anthony Burgess's *A Clockwork Orange*.

D-503's soul-symptoms force upon him the realization that love is the function of death [$L = f(D)$]. His misfortune is that he loves I-330, but fears the death that she represents, and that he does not recognize love itself in the person of Ju. I-330 is the instrument of whirling, or of revolution (as personified by S-4711). O-90 loves life; she does not love D-503, by whom she greatly desires and manages to become pregnant, not because she wants to have a child by a man she loves but simply because she wants to have a child. None of these individuals sees 'the point of it.' One of them, D-503, does finally undergo, tentatively and in part, the experience of Micky in the

6 Cf. Winston P. Sanders, 'The Word to Space' (1960), a short story reprinted in *Other Worlds, Other Gods*, ed. Mayo Mohs (New York 1971)

world of the dead. Aboard the *Integral* as it leaves the earth's atmosphere during a lift-off that will be aborted, he finds an inverted world, sees a sun-filled night, and tries to *hear* a fantastic sun, which is like trumpets that can be seen but not heard: this is the song of light, but, unlike Micky, he does not apprehend it. Later, returned to earth, he believes that Ju has betrayed him; but actually her 'betrayal' was an act of love for him. Like Gama, by whom Vyr's love is seen as betrayal, D-503 wants to kill Ju; unlike Gama, however, he learns of the woman's love for him and his eyes are partly opened. His own increasingly dubious love of I-330 makes it impossible for him to do anything but pity Ju. Then, before he can work out his moral equation, he is divested of his soul by 'surgery' and remains among the ranks of Monopolitian anthropoids that are now helpless before the onrushing forces of life from beyond the breached Green Wall.

Lagerkvist's Gama and Vyr are Adam and Eve reversed as the last man and the last woman. Death proves to be the function of human life for the Biblical Adam and Eve as they are expelled from the light of Paradise and impelled toward the problem of love as the function of death. Lagerkvist's Paradise is the non-Biblical earth itself, from which humans expel themselves by their failure to see it. The problem toward which humankind is perennially impelled is presented as unsolved in Lagerkvist's play, which shows the light of a non-Biblical sun in self-expulsion from the presence of humankind. Zamyatin's Adam and Eve are D-503 and O-90.⁷ The Paradise of Zamyatin's novel is Monopolis; the Adam and Eve of this Paradise suffer an expulsion from a state of near-perfect integration. In this state the performers of functions are nearly translated *into* functions. If a human who *performs* a function could *become* a function, the human would be lost and only the numbered function would remain. Ostensibly this transformation has been completed in Monopolis. But in calculus delta-x never reaches zero; it only approaches zero: no function is absolutely achieved; no human can be completely transformed into a function. The Paradise of Monopolis is absolute function, a Paradise that is false because the assumption of absolute function is false and invalid.

In his twenty-fifth Note D-503 considers that he is a point, that his functional integration has been completed and that his humanity has disintegrated. If this were the case, then he would be unaware of it. He is merely delta-x near the point of function and still infinitely distant from zero. He remains aware that a point (točka) holds more unknowns than anything else and that, should it move, it would have multiple extension. By thinking

7 R-13 to D-503 in the eleventh Note: – Ax vy ... Adam! Da, kstati, nasčet Evy. His equation of O-90 with Eve follows immediately. In the context of the novel, O-90 is part of a collective Eve, whose other faces are I-330 and Ju.

about himself as a point he ceases to move toward the point that he thinks he is; the approach of delta- x to zero is thereby arrested.

The related variables in this problem are I-330 (the independent variable x) and Ju (the dependent variable y); O-90 is the meeting-point or intersection-point of their axes. Some of the characters in the novel are described as bearing a physical resemblance to their letters: I-330 is slender, like the letter 'I.' Her eyebrows form the upper angle of an 'X' (iksa). The association of I-330 with the letter 'X' is enough to suggest her analogous identity as the 'independent variable,' to which D-503 himself assigns the value of death. I-330's partial eyebrow-X superimposed upon her I-slenderness produces a sketchy chi-rho symbol of Christ and, in keeping with her 'death' value, Christ's death. The gill-like cheeks of Ju (I-O) sketch another Christ symbol, the fish; and Ju, evocative of Christ's love, must be the 'dependent variable' in the problem. Zamyatin's reading of $y=f(x)$ as $L=f(D)$ [ie, love is the function of death] may also be read as $Ju=f(I)$. As the analogues of mathematical integers, the three women – Ju, O-90, and I-330 – are respectively representative of love, procreation, and death. D-503, loved by Ju and loving I-330, establishes the relation of love and death. O-90 is the maternal impulse, a potential factor of both Ju and I-330. The limited value of love [Ju] (the function of death [I-330]) equals the life of D-503.

If we take D-503 to be delta- x and delta- y by virtue of his association with x (I-330) and y (Ju), taking O-90 as zero, we have a ratio:

$$\lim_{x \rightarrow 0} \frac{\Delta y}{\Delta x} = \frac{dJu}{dI}$$

The limit of $\Delta y/\Delta x$ as Δx approaches zero is dJu/dI . Change is a functional table; and change is what Monopolis as Paradise is supposed to have eliminated. Absolute function cannot be achieved so long as there is change: the functional (human beings, for example) cannot become function any more than D-503 can become a fluxion point. Christ's love is the function of Christ's death; Christ is both divine and human; but human beings are exclusively human: the absolute may touch them, conceptually at least, in the form of religion, but it cannot touch them in any other form, especially in the form of reason or logic, and most especially in the form of quasi-divine reason or logic.

Zamyatin's novel is a literary problem in integral calculus. The process of finding an integral is integration, the reverse of differentiation. Monopolis not only seeks an integral of human existence but also assumes that integration has been completed. This political and technological assumption, which amounts to mathematical hubris, is symbolically celebrated on the Day of Oneness (Dne Edinoglasija), successor to Easter and in its ritual a quasi-

Easter; fittingly, the sovereign of Monopolis, the Doer of Good (Blagodetelja), is a quasi-deity. The celebration is a reassertion of completed integration, but the very assertion reveals incompleteness and imperfection in the society's need *continually* to be perfected (bezgranično sovershenstvujtsja). In integral calculus an increase or decrease of either variable (x or y) is change; and function, $f(x)$, is the limit of value of y , a *hypothetical* or *arbitrary* changelessness. Monopolis assumes the elimination of change and yet continues to resist change. Perfection, or changelessness, is the end, or death, of a process. Perfection is finite in the material world. In mathematics infinity confounds the finite; and irrational numbers are involutions of infinity. The square root of minus-one is infinite because it exists without limitation only as itself and because it cannot be resolved. Initially, D-503 hates the square root of minus-one because he dimly realizes that this is the true mathematical symbol of the individual. Arthur Koestler expresses much the same idea in *Darkness at Noon* and in his statement that human beings 'behave like the symbols for zero and the infinite, which dislocate all mathematical operations.'⁸

D-503 wants to share the Monopolitan belief that human beings can be treated as units in operations of political and technological arithmetic; but the square root of minus-one, the symbol of his own individuality, brings home to him the unwanted fact that such treatment is not an elevation of human beings,⁹ that it is instead a vain attempt to reduce them to stable numerical functions. In the last Note before his noectomy (or psychectomy) D-503 cannot accept his bald neighbour's penultimate proof that there is no infinity. The existence of a finite universe, proof of which was available to Zamyatin in Einstein's mathematics, is not in itself sufficient to disprove the existence of infinity; D-503's last words before his operation are a question: what is out there *beyond* the finite universe? Function, never absolute, is always a relation between variables. Human beings are infinitely relative but are, at the same time, finite variables. Their finitude is established by death, the function of which is the limit of value of human love. Death equals zero (=perfection); and love is infinite, with its value being determined by the experience that limited (finite) beings have of it. As an integer, or object, an individual human being equals 1. At death, the individual is -1 . But the subjective *life* of an individual, by virtue of the individual's *mortality* (as an infinite *Sein zum Tode*, to invoke Heidegger), is $\sqrt{-1}$.

The male number in *We* appears to be 4, and the female number 3. The male name-numbers, all odd and following consonants, come out in digital

8 *The God that Failed*, ed. Richard Crossman (New York 1950); Bantam ed. (1952) 60

9 NB: ona uže ne byla numerom – ona byla tol'ko čelovekom (She was a number no longer – she was just a human being); Zamyatin's humour in this statement of diminution gives us to understand that the 'she' has emerged ascendant over the 'number.'

adding to divisibles of 4: 503 ($5 + 0 + 3 = 8$), 13 ($1 + 3 = 4$), 4711 ($4 + 7 + 1 + 1 = 13$; $1 + 3 = 4$). The female name-numbers, even and following vowels, come out to divisibles of 3: 90 ($9 + 0 = 9$), 330 ($3 + 3 + 0 = 6$). In Russian, as in English, there are four letters in 'Adam' and three in 'Eve': collectively, the seven main characters in the novel constitute an Adam-and-Eve reversal as last man and last woman. Four of the main characters are male, and three are female:

D-503		R-13	male
Ju	O-90	I-330	female
F		S-4711	male

The two males and one female of the left column are identified by Russian letters, the two males and one female of the right column by Roman letters. The female O-90 is identified by a letter which is both Russian and Roman; this further substantiates her axial role: she is part of an initial *ménage à trois* with D-503 and R-13 as well as, mathematically speaking, the already noted meeting point of Ju (y) and I-330 (x).

O-90's relation to D-503 and R-13 is personal; her relation to I-O and I-330 is mathematical, the angle formed by the axes of love (y) and death (x); her relation to F and S-4711 must be inferred from the two preceding relations, each of which defines a set-theory, a many-one relation. Each of the three Russian-lettered characters is an adherent of the many (We=Monopolis). Each of the three Roman-lettered characters is assertive of the one (I=the individual), R-13 with his poetic subjectivity and I-330 and S-4711 as agents of revolution. The Russian- and Roman-lettered O-90 defines the extremes of the many and the one; she is the zero between plus-one and minus-one.

D-503, the mathematician, dutifully upholds the many (We) against individualism, the subjective identity manifest in the poet R-13. In never referring to himself simply as D, he jealously guards the number that identifies him; but the 'him' emerges ascendant over the 'number.' His set is the domain of Monopolis, and R-13 is an element in that domain. In Monopolis the set that is poetry has become a point in the set that is mathematics. The mapping *function* from mathematics to poetry is the correspondence which associates with each point x in mathematics a unique point $f(x)$ in poetry. The unique point is the *image* of x .

R-13, then, is the image of I-330 (or x): poetry and revolution are both detrimental to Monopolis. He is also the reverse image, the alter-ego, of D-503. The contrapuntal equation here, with D-503 as mathematics (M) and R-13 as poetry (P), would be $M=f(P)$. The reversal, $P=f(M)$, is the equivalent of $L=f(D)$, in that mathematics is Zamyatin's Death symbol and poetry his Love symbol. D-503, committed as a loyal Monopolitan to $D=f(L)$, the

equivalent of $M=f(P)$, sees in the mirror of poetry the reverse of his committal. He stands before a mirror (Ja – pered zerkalom), in the eleventh Note, and sees himself clearly for the first time; immediately R-13 enters and proceeds to read D-503's thoughts to him. With R-13 as his second mirror, or as an extension of the mirror, D-503 now *hears* himself clearly for the first time. Zamyatin introduces an alphabetical play on the Roman letter R as the mirror image of the Russian Я – Ja (Russian for 'I,' the nominative first-person singular pronoun). R-13 is the image of the individual that D-503 is compelled to recognize in himself, the image of the first-person singular that is even implicit as the English pronoun in 'I-330.' D-503's love for I-330 is symptomatic of his individualism, or his soul, which R-13 subjectively diagnoses and which, in the sixteenth Note, the Monopolitan medics objectively diagnose. The two medics, one short and fat and the other very thin, are in their physical juxtaposition, the mirror image of Ju (=love).

It should also be noted that Zamyatin's alphabetical play offers two combinations of 'I' and 'O': by juxtaposition (I-O[Ju]) and by superimposition ($\Phi[F]$). I-330 could return D-503's love if she had for him the maternally-informed desire of O-90, which desire O-90 takes to be love; it may be inferred that such is the nature of I-330's feelings for F. Literally, $Ju=F(I)$, or, implicitly, $F(I, Ju)=0$.

In the mirror-image scene, mathematics, in the figure of D-503, sees poetry, in the figure of R-13, as the reflection of itself. Given that alter-egoism works both ways, mathematics is also to be understood as the reflection of poetry. When R-13 leaves, D-503 considers that he is now alone with the other self that R-13 has exposed to him. The other self, the other 'I' (drugim 'Ja'), is the reflection that he does not want to see and cannot help but see. The triangle, heretofore formed by the relations of D-503, O-90, and R-13, is now broken. D-503 has purged R-13 of O-90, and R-13 has inculcated in D-503 a sense of love which displaces the mathematician's relation to O-90. 'Mathematics,' says Scott Buchanan,¹⁰ 'is analytic, seeing wholes as systems of relations; poetry is synthetic, seeing wholes as simple qualities. The qualities that the poet sees are due to relations, says the mathematician. They need purgation. The relations that the mathematician sees are concrete and factual, says the poet. They need appreciation and love.'

D-503 is afraid of I-330 because he is afraid of death.¹¹ To love her is to

10 *Poetry and Mathematics* (1929); Keystone ed. (New York and Philadelphia 1962) 135

11 From the twenty-fourth Note in *We*: ...ja i bojus' I, ja borjus's nej, ja ne choču. No počemu že vo mne rjedom i 'ja ne choču' i 'mne xočetsja'? V tom-to i užas, što mne xočetsja opjat' ètoj včerašnej blažennoj smerti. (...I am afraid of I[-330], I fight her, I don't want to. But why within me is this 'I don't want to' conjoined with 'I want to'? That is the whole horror; I yearn once more for yesterday's blissful death.)

court death, to lose the self that he finds in the act of loving her. Love is a surrender of the self to the beloved; but one can find one's self, in this sense, only by experiencing the love that brings about the death of self. Forster's Micky finds himself in death. Lagerkvist's Gama consistently blinds himself to his tentative discovery of self. D-503 yearns for the death he does not want. The death that love brings about is prerequisite to the resurrection of self. Micky's 'resurrection' restores him to the company of Harold, and he hears 'The point of it...', which point he has now located. Gama aborts his love and precludes his resurrection: he *is* the last man. D-503, in Zamyatin's characteristically effective reversal, is 'crucified' (tied to a table and operated upon) *after* his resurrection.

Gama fails completely to see that love is the function of death. Micky fails constantly up to the moment of his death. D-503 succeeds, but he fails to understand his success because he cannot understand or appreciate the selflessness of Ju. He is ready to hear the song of light, but the brightness of Monopolitan reason deafens him to the tones of truth.

The song of light in Dante's *Paradiso* and that in act iv of Shelley's *Prometheus Unbound* are the conclusions of progressions: in the one, humankind progresses to the presence of God; in the other humankind completes its own apotheosis. Forster, Lagerkvist, and Zamyatin use the device of reversal to arrest progressions of this kind and to indicate that the song of light can be seen and heard by humans only if they hear the music of love within themselves. In the *Paradiso* universal love is the *primum mobile*. In *Prometheus Unbound* human love, unbound from love of the divine, transforms humankind into an immortal species. Forster, Lagerkvist, and Zamyatin keep human love within the human sphere. Death is conquered and eliminated in the *Paradiso* and in the *Prometheus Unbound*, although the humanistic Shelley retains sight of labour and pain in his apocalypse of the transformed human species. Forster reverses the roles of life and death in 'The Point of It' and, in 'The Machine Stops,' those of humankind and the machine. Lagerkvist reverses the beginning and the end of humankind. Zamyatin reverses the roles of poetry and science. The reversals in each instance produce an equation of the pairs and an exposition of the function of death as the limit of the value of love. Dante and Shelley never put the vehicles of their progressions into reverse; they are representative of an idealistic or angelic utopianism that is finding decreasing numbers of adherents in the twentieth century. Angelic utopianism appears, vestigially at least, to have descended to occultism and palaeoastronautology.

Forster, Lagerkvist, and Zamyatin, with the works which they wrote or published during the first quarter of the twentieth century,¹² have broken

12 'The Point of It' and 'The Machine Stops' were written before 1914; *The Last Man* was published in 1917; *We* was written well before its first English translation in 1924, probably

ground for much subsequent existentialist fiction, antiheroic literature, serious science fiction, 'dystopian' literature, and, most importantly, literature which incorporates the other arts and the sciences,¹³ not as embellishments, but as inherent complements. Thomas Mann's *Doktor Faustus*, for example, is not merely a novel about serial music; it is a serial-music composition in itself.¹⁴ Anthony Burgess's *Napoleon Symphony* is offered as a novelistic score of Beethoven's 'Eroica.' In *Gravity's Rainbow* Thomas Pynchon ingeniously formulates fiction as the function of science.

The basic sense of 'comparison,' with either *comparo* or *confero* as our etymological source, is 'bringing together.' When literature and science (or music, etc.) are brought together in a literary work, such that each inherently complements the other, literature is the function of its complement. The basic motive of the calculus is fluxion, or confluxion, by which variables are brought through relation toward a point. Again, the relation of the variables is a function. What we have in the works of Forster, Lagerkvist, and Zamyatin is similar to an *ars poetica*, that is, to a *genuine* poem which is itself a course in the composition of poetry – similar, but more complex, because these works bring together literature and science, or literature and another or other arts, and become the fluxion about which they offer empirical instruction. Consequently, themes in works like these are recognizable as variables brought toward a 'point.' In Forster's 'The Point of It' and 'The Machine Stops,' in Lagerkvist's *The Last Man*, and in Zamyatin's *We*, the themes of love and death are major. In these works the limit of the value of love (the function of death) is life: this, their authors intimate, is all there is; and this, they would have us understand, is quite enough for those who see the point because they can hear its music.

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in 1920. (In preparing this article I have used the Harcourt Brace Jovanovich edition of *The Eternal Moment and Other Stories* by E.M. Forster, the Inter-Language Literary Associates edition of *My*, and the first Bonniers Förlag edition of *Sista mänskan*.) Lagerkvist's *The Secret of Heaven* was published in 1919, *The Eternal Smile* (*Det Eviga leendet*) in 1920; his later novels, *Barabbas*, *Sibyllan*, etc. (see note 3 above) appeared during 1950–67.

- 13 Lagerkvist's preoccupation with cubism in painting and literature was intensified, for example, by his recognition in that mode of the principles of architecture. He also recognized that all forms of art have a mathematical basis: 'Men bygger icke jupast sett all konst på matematisk grundval' – *Ord-konst och bild-konst* (Stockholm 1913) 41.
- 14 'Ich fühlte wohl, dass mein Buch selbst das werde *sein* müssen, wovon es handelte, nämlich konstruktive Musik' – *Die Entstehung des Doktor Faustus: Roman eines Romans* (Amsterdam: Bermann-Fischer 1949) 60