Shakespeare and the End of Life History

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What is the shape of a life, that is, a life that has a history? Haunting Shakespeare throughout his career, this question is a central concern as well for contemporary evolutionary biology, which is attempting to provide a set of definitive answers, and not for our species alone. The human life cycle is only one very small part of the larger enterprise, which has paid notable attention to such species as dandelions and cattails, parasitoid wasps, flour beetles, side-blotched lizards, salamanders, iguanas, mosquito fish, and Pacific sardines, along with a wide range of mammals, including our great ape cousins. At its core, in keeping with the overall discipline, the account of life history offered by evolutionary biology has a radically simplified focus on the struggle for reproduction. Reproductive fitness is all.

The principal variables in the pursuit of fitness—the recurrent traits in the life histories that the biologists study—are size at birth; growth rates; age and size at sexual maturity; the number, size, and sex ratio of offspring; age- and size-specific reproductive investments; and length of life. The traits are all quantifiable, which makes them suitable objects of scientific attention, and, as the language of investments suggests, the model bears a striking affinity with Adam Smith. The theory governing the overarching research project is a theory of trade-offs: trade-offs between survival and reproduction, between reproduction now and reproduction in the future, between the size and the number of offspring, and between both of these and their sex. Each trait or event in the life history of a species is constrained by varying material conditions, by a network of competitive and cooperative relationships, and by the individual fitness that determines the larger pattern of natural selection.

A scientific understanding of this pattern entails a vast effort of data collection and analysis, from which researchers surface occasionally to sketch the norms and still more occasionally to evoke the individual experiences in trees or wasps or fish of the process they are attempting to understand. Here, for example, is Stephen Stearns, probably the principal figure in what is called life-history theory, conjuring up one such individual:

In a forest just south of the Rhine, old and dense with oak and beech, a tree falls in an equinoctial storm. A beech seed germinates in the clearing left by the falling tree. It grows rapidly, escapes the attention of slugs during its first summer, overtops the competing grasses and shrubs, and pushes its crown into the narrowing circle of sky overhead. As its branches near the canopy, it begins to flower. It is 50 years old. Its growth then decelerates until, at more than 200 years of age, when it is two metres thick at breast height and fifty metres tall, further growth is no longer measurable. Every few years, it flowers heavily and sets abundant seed. Much is eaten by flocks of wintering bramblings. Some is scattered by winter storms. The seeds drop in various directions, more near the tree, a few at some distance. In the 154th year of its life, its pollen enters an ovule on a beech half a kilometer away whose seed survives to flower. In the 268th year of its life, a hornbeam falls about 80 metres away. One seed sprouts in the clearing and starts its climb to the canopy. Of the millions of seeds that the tree produces, only this one will survive to flower. It has produced two offspring that survived to reproduce, one through pollen, one through seed.

As the tree thickens with age, its grey bark wrinkles like the baggy skin of an elephant. It continues to flower and set seed in mast years, but all the seeds and seedlings die, eaten by birds, rotted by fungi, nibbled by slugs, grazed by rabbits and deer. Overshadowed by younger competitors, ageing, it flowers less and fails to repair wounds and resist the fungi that have been evolving within it. For centuries it has been shedding its shaded lower branches, leaving a clear column 10 metres to the lowest limb, but now even its trunk and main branches are invaded by beetle larvae and mould. Woodpeckers visit it frequently. In its 316th year it falls in a storm. An oak seedling invades its space. Eighty metres away, its offspring begins to flower. Half a kilometer distant, the tree produced from its pollen is into its second century of reproduction.¹

This exemplary life history, so eloquently evoked, is useful for my purposes as a literary critic largely for its differences—extremely long duration, patient growth, a kind of majestic stillness—from the turbulent human life histories in which Shakespeare was most interested. But the fate of Stearns's tree would by no means have been alien or incomprehensible to the early seventeenth century. Any Renaissance audience would have understand from poignant direct experience the extremely small survival rate of offspring, while the aged tree's wrinkled bark and its eventual inability to resist the inner and outer sources of dissolution will serve to

I. Stephen Stearns, *The Evolution of Life Histories* (Oxford: Oxford University Press, 1992), 1–2.

direct us ultimately to the pathos of senescence in *King Lear* and to the particular shape of the old king's life.

In charting the peculiarities of human life history, the favored comparison group for biologists is not trees, of course, but other primates. By setting statistics drawn from our evolutionary next of kin against statistics drawn from extant populations of human hunter-gatherers, researchers have identified what they take to be certain key features of our own lineage.² These features are historical artifacts, not only in the sense that they are generated by the particular questions that time-bound, historically situated researchers ask but also in the sense that they emerged over time, the immensely long time of human evolution.

All the mammals of the order to which we belong-the order of the great apes that emerged some 5-7 million years ago—are characterized by single births, as opposed to litters, and to the intense, prolonged parental care that such births enable.³ Humans have carried this prolongation of offspring dependency to an extreme, even in relation to our closest primate kin. Though human infants are weaned much earlier than other primates-the average age for an orangutan is 7 years, a chimpanzee 4.5 years, and a human 2.8 years—it takes us much longer to gain the size and learn the skills we would need to forage competently for ourselves. Chimpanzees get their molars well before weaning, thereby preparing them to masticate solid food. Our molars do not erupt until we are more than 6 years old, so that long after weaning we depend on food being specially prepared for us by adult caregivers. Sophisticated modern studies of the teeth growth of Neanderthals suggest that, from an evolutionary perspective, Homo sapiens arrived at this pattern quite recently.⁴ While Neanderthal offspring could be launched into the world alongside comparably aged primates, only our kind lingered in helplessness, relying for survival on a massive, extended parental investment of care.

4. The research, conducted jointly by scientists at Harvard University, the Max Planck Institute for Evolutionary Biology, and the European Synchrotron Radiation Facility, is described in "Teeth Marks," in *Harvard Bulletin*, November 15, 2010.

^{2.} On hunter-gatherers, see Paula Ivey Henry, Gilda A. Morelli, and Edward Z. Tronick, "Child Caretakers among Efe Foragers of the Ituri Forest," in *Hunter-Gatherer Childhoods: Evolutionary, Developmental, and Cultural Perspectives*, edited by Barry S. Hewlett and Michael E. Lamb (New Brunswick, NJ: Transaction, 2005), 191–213.

^{3.} See Paul H. Harvey and T. H. Clutton-Brock, "Life History Variation in Primates," in *Evolution* 39 (1985): 559–81; and Cheryl Knott, "Female Reproductive Ecology of the Apes: Implications for Human Evolution," in *Reproductive Ecology and Human Evolution*, edited by Peter T. Ellison (New York: Aldine de Gruyter, 2001), 429–62.

Such extravagantly slow and costly dependence seems linked to the development of our brains, our acquisition of language, and our painstaking mastery of complex cultural codes, all of which require considerable time and a massive, extended parental investment of care. Compared to other primates, humans do not begin to reproduce until very late. The mean age at first birth of female gorillas is 10 years; for chimpanzees and bonobos in the wild the figure is roughly 13 years. Human females in foraging populations have their first child at a mean age of 19.5 years.⁵

This late commencement of reproduction is offset by one of the prime consequences of early weaning: humans have relatively brief interbirth intervals. A chimpanzee averages 5.46 years between offspring, an orangutan 8.05 years, but the human average among hunter-gatherers is 3.69 years. (The use of wet nurses in the Middle Ages and Renaissance enabled upper-class European women to diminish the interval still further: John Donne's wife, Anne, was pregnant a dozen times in 15 years.) If we recall that human infants are very slow to develop nutritional independence, these births in quick succession mean that human mothers are able, as one biologist puts it, to "stack" their offspring. And this stacking in turn means that human survival draws upon the particularly intense gregariousness of our species.

Man is a social animal, wrote Aristotle. Being social means, among other things, being organized in groups that feed, shelter, and instruct swarms of extremely dependent young. Mothers bear the brunt of the parental investment in offspring, but human males differ from the males in other great ape species by routinely, if not altogether reliably, helping to provide the food that is eaten by women and children. Human females differ from the females in other great ape species by routinely, if not altogether reliably, living for years after menopause.⁶ On average human

^{5.} These figures are from Shannen L. Robson, Carel P. van Schaik, and Kristen Hawkes, "The Derived Features of Human Life History," in *The Evolution of Human Life History*, edited by Kristen Hawkes and Richard R. Paine (Santa Fe, NM: SAR Press, 2006).

^{6.} The maximum recorded female life span among our ape relations—orangutans, gorillas, bonobos, and chimpanzees—ranges from 50 to 58.7 years; for humans the maximum life span for hunter-gatherers is 85 years. For human beings in all societies, the maximum reasonably reliable recorded age seems to be 115 years. For current statistics among primate populations, see P. H. Harvey, P. Martin, and T. Clutton-Brock, "Life Histories in Comparative Perspective," in *Primate Societies*, edited by B. Smuts et al. (Chicago: University of Chicago Press, 1987), 181–96; N. Rowe, *The Pictorial Guide to the Living Primates* (East Hampton, NY: Pogonias Press, 1999); and A. Hakeem et al., "Brain and Lifespan in Primates," in *Handbook of the Psychology of Aging*, edited by J. Birren, 4th ed. (New York: Academic Press, 1996), 78–104. I am grateful to Meredith Reiches for assistance with these figures and, more generally, for expert guidance through the thickets of evolutionary biology.

males too greatly outlive their knuckle-walking cousins—and outlive, for that matter, just about every other animal except for Indian elephants and Galapagos tortoises.

There must, the evolutionary model suggests, be some reason for natural selection to have favored this remarkable longevity. One current theory, at least for postmenopausal survival, is that experienced females are thereby available to provide help to mothers coping with multiple offspring.⁷ No comparable theory has been proposed to explain the longevity of human males. Their hunting and fighting skills certainly do not continue without abatement. But unlike women their reproductive potential declines only slowly, and in natural conditions a variety of accidents presumably contrived to keep the number of extremely old males to a minimum. The key point—and the reason that human postmenopausal longevity needs an explanation at all—is that there is in virtually all species a clear evolutionary link between the end of reproduction and senescence.

From an evolutionary perspective, old age cannot be explained by the simple "wearing out" of parts, since for a considerable length of time our bodies are able to rejuvenate themselves, repair damage, and replace cells. In a remarkably influential scientific paper, published almost fifty years ago, the biologist George C. Williams argued that "natural selection may be said to be biased in favor of youth over old age whenever a conflict of interests arises."⁸ This bias means that genes that have beneficial effects early in life will be selected, even though those same genes have cumulative bad effects later on.

The principle, which Williams called *antagonistic pleiotropy*, is part of the larger system of trade-offs that govern the whole life process.⁹ The fact that there is a price to pay is irrelevant; from an evolutionary perspective, all that matters is to enhance the likelihood of survival through the reproductive period. Given the very slow development of human young,

8. George C. Williams, "Pleiotropy, Natural Selection, and the Evolution of Senescence," *Evolution* 11 (1957): 401.

9. Stearns, Evolution of Life Histories, 182.

^{7.} It is not the individual mother alone who enables her offspring to survive but rather a network of kin, beginning with the mother's own mother and other experienced female relations. See Rebecca Sear and Ruth Mace, "Who Keeps Children Alive? A Review of the Effects of Kin on Child Survival," in *Evolution and Human Behavior* 29 (2008): 1–18; Kim Hill and A. Magdalena Hurtado, "Cooperative Breeding in South American Hunter-Gatherers," in *Proceedings of the Royal Society B* 276 (2009): 3863–70; and Alyssa N. Crittenden and Frank W. Marlowe, "Allomaternal Care among the Hadza of Tanzania," *Human Nature* 19 (2008): 249–62. Older children also play a role in this collective breeding practice. See Karen L. Kramer, "Children's Help and the Pace of Reproduction: Cooperative Breeding in Humans," *Evolutionary Anthropology* 14 (2005): 224–37.

it is important to grasp that this "reproductive period" must extend beyond the birth of the youngest child to the time when that child is selfsufficient. Humans adults cannot afford to die off as soon as they have brought their complement of offspring into the world but need to survive if at all possible until the last-born child is ready to fend for himself or herself and to begin the cycle anew. After that moment—often marked in human societies by rituals of various kinds—the postreproductive individual who has transmitted the genes and helped the offspring achieve self-sufficiency has no further purpose and can in effect be discarded. In the memorable words of King Lear, "Age is unnecessary."¹⁰

These words are not a cool assessment of biological truth; they are meant to be an absurdity, the parodic expression of an abasement that King Lear regards as virtually inconceivable. His daughter Regan has proposed that he return to Goneril, from whose house he has stormed away, and admit that he has been at fault. Lear explodes:

Ask her forgiveness? Do you but mark how this becomes the house: "Dear daughter, I confess that I am old; Age is unnecessary." (2.4.145–48)

By *age* here he presumably refers to himself, an old man, as when the aging speaker in sonnet 138 declares that "age in love loves not to have years told." But he also articulates the very fact of senescence, counting for rhetorical effect on all the ways in which his culture—not the culture of prehistoric Britain but that of Shakespeare and his audience—proclaimed that by every natural impulse and moral code, honor and reverence were due to the elderly.

As an attempt to awaken Regan to the preposterousness of her suggestion, Lear's little rehearsal of abject humiliation is a failure. "Good sir, no more!" she says, responding as if to a child's tantrum. "These are unsightly tricks" (2.4.150). But as so often in this play, the king's wild utterance—centered on that terrible word *unnecessary*—speaks some larger truth, or rather some deeper fear.

Lear is responding not only to Regan's idea that he should apologize to Goneril but also to her attempt to make him understand precisely

^{10.} *King Lear* 2.4.148. All citations of *Lear* are to the conflated text in *The Norton Shake-speare*, edited by Stephen Greenblatt et al., 2nd ed. (New York: W. W. Norton, 2008).

where he stands. She wants her father to grasp the reality of his situation, both in relation to the particular postretirement arrangement that called for him to sojourn for a fixed period of time with each daughter in succession and in relation to the larger, still more inflexible arrangement of nature itself. "Oh, sir, you are old," she has told him—five simple syllables in which Coleridge professed to find an "excessive horror." Why should it be monstrous to express this simple, honest truth or to go on, as Regan does, to spell out exactly what she means?

O, sir, you are old; Nature in you stands on the very verge Of her confine. You should be ruled and led By some discretion, that discerns your state Better than you yourself. (2.4.139–43)

Later in the play Regan will behave in a way that amply justifies Coleridge's horror, but why should her words at this point be so disturbing, particularly since they seem only to reinforce what her father himself has publicly acknowledged?

The play opens with Lear's decision to divide his kingdom equally among his offspring, a decision that, as befits an absolute monarchy, brings together in the closest conjunction the story of a state and the story of a life.

'tis our fast intent To shake all cares and business from our age, Conferring them on younger strengths, while we Unburthened crawl toward death. (1.1.36–39)

Lear is not dying; he is not ill; he does not even show signs of any conspicuous weakening of vigor. (His vigor remains strangely intact: later in the play Regan will exclaim, in exasperation, "I pray you father, being weak, seem so" [2.4.196].) But he has reached, or believes he has reached, the point in which the principal work of his existence has come to an end. The absence from the play of any Mrs. Lear only confirms what we can presumably see from looking at him and what he himself recognizes: he is beyond any productive or reproductive life, and he wishes to free himself from the burdens that he has borne in fathering and caring for his children and in ruling his kingdom. Lear's concern is not, it should be noted, with what awaits him beyond death: there is no imagined afterlife in his world, no ghosts who haunt the living, no Elysian Fields or Tartarus. His death will be the end of him. But he wants to preside over the close of his own life history, thereby making his destiny his choice. He chooses to do so at the symbolically charged moment at which, his oldest children being already mated, his youngest child has reached what his culture recognizes as the point of self-sufficiency:

The princes, France and Burgundy, Great rivals in our youngest daughter's love, Long in our court have made their amorous sojourn, And here are to be answered. (1.1.43–46)

For biologists, the self-sufficiency of the youngest offspring is the moment that defines the end of any living organism's extended reproductive period. Hence the special appropriateness of Lear's intention to distribute everything he possesses to his children. Why should he hold anything back? His life's labor is finished. As he recognizes, almost in spite of himself, "age is unnecessary."

But, as so often in Shakespeare, the play opens with a conclusion here the definitive biological resolution of a life history—that then completely unravels.¹¹ Lear decides, apparently impulsively, to stage a contest: "Which of you shall we say doth love us most?" He wants, he says, not simply to hear his daughters' gratifying declarations of love but to weigh them one against another and to decide on that basis which should receive the largest share of his resources. His impulse to do so seems entirely irrational, since we have learned, in the opening moments of the play, that the precise terms of the distribution have already been fully disclosed. Though everyone understands that Cordelia is Lear's favorite, it is not clear that her intended share is any larger than that of Goneril or Regan; indeed, there may be an unspoken presumption that Lear has chosen to prevent "future strife" by an equitable distribution. In any case, it is all settled.

What, then, accounts for his impulse to stage the love test? Lear wishes to experience for one last time what all parents with more than one

^{11.} This is a recurrent pattern: examples include *All's Well, Richard III,* both parts of *Henry IV, Titus Andronicus,* and *Macbeth.*

dependent child routinely encounter: the intense competitive claim on their investment. As he makes clear, the issue is a struggle for a larger share of whatever he has to bestow, and the test will be which of his offspring makes the most convincing display of the signs he finds most compelling.

Those signs are not, as with newborns, cries of distress, cries that say at once "I need food to survive" and "I am strong and healthy and thus worth significant parental investment." Rather, they are the linguistic equivalent of the gratifying signaling that infants learn long before they acquire language: the smiles, the upraised arms, the looks of adoration. It is perhaps understandable enough that Lear craves this particular gratification, as he makes his final grand gift. The sweet signs—"Sir, I love you more than words can wield the matter" (1.1.53)—are among humanity's deepest pleasures: we adults are designed by nature to melt when we encounter them, and we quickly learn to solicit them and to long for them, like a drug. Their diminishment—at first gradual and then, during adolescence, precipitous—is a form of painful reverse weaning, a weaning that can easily produce parental anxiety, melancholy, and anger.

But there is another reason, apart from pleasure, for anyone in Lear's position to extract declarations of love from his children. The bond between parents and their dependent offspring makes complete sense, from a biological perspective; it is, as it were, part of what Saint Paul calls the law in the members. But the bond between offspring, once they are self-sufficient, and their parents is less obviously compelling. It does not take an evolutionary biologist to observe the decisive change in the relationship from the moment that the children have themselves reached reproductive capacity: "Therefore does a man leave his father and his mother and cling to his wife and they become one flesh."

Humans may have some natural, that is, genetic, predisposition to aid their aging parents; they certainly give evidence of a psychological inclination to do so, an inclination reinforced by a wide array of cultural injunctions.¹² In proverbs, sermons, stories, pictures, plays, rituals of respect, and the like, Renaissance culture endlessly reiterated and reinforced the obligation of children to parents. But the pervasiveness of the message in this period and the recurrent invocation of metaphysical support for the rights of the old did not preclude parental anxiety; on the contrary, the

^{12.} These injunctions are what Richard Dawkins famously called "memes." A term obviously modeled on *genes*, memes are replicators, units of cultural transmission or imitation. Richard Dawkins, *The Selfish Gene*, 2nd ed. (New York: Oxford University Press, 1989), 192ff.

ceaseless repetition seems an expression of unappeased and surprisingly widespread insecurity.

Although love of their offspring is "imprinted" in parents by nature, as Montaigne puts it in his essay "Of the Affections of Fathers to Their Children," a reciprocal affection of grown children for their parents is much less part of the natural design. "And forasmuch as nature seemeth to have recommended" instinctual parental love "aiming to extend, increase, and advance the successive parts or parcels of this her frame [*machine*], it is no wonder if back again it is not so great from children unto fathers."¹³ Montaigne characteristically refuses to register this lack of reciprocity as a tragedy or a sign of human depravity. Nature's goal has nothing to do with sentiment; it has to do with the advancement of a machine. The love of parents for children to the emotional life of the begetters, except insofar as that emotional life advances the mechanism. The reciprocal love of children for their aging parents serves no comparable natural purpose.

Shakespeare had certainly read Montaigne's essays; their fingerprints, in Florio's translation, are all over *King Lear*. But the play is far more sympathetic to the gnawing fears of the aging and to their half-conscious understanding that the gratitude they expect from their children may have little or no basis in nature. Small wonder that Lear, at the point of exhaustion and as a hedge against a bleak future, should engage in a final ritual solicitation of love.

Lear is ostensibly staging the contest so that he can distribute his bounty to whichever daughter most deserves it, but his motivating fear is already close to the surface and shows itself in his words to Regan, "Age is unnecessary." That outburst is followed immediately by what he thinks it implies for elderly parents: "Age is unnecessary. On my knees I beg/That you'll vouchsafe me raiment, bed, and food" (2.4.148–49). The infantparent relationship has been reversed—as the Fool constantly and cruelly

O most small fault, How ugly didst thou in Cordelia show! Which, like an engine, wrench'd my frame of nature From the fixed place. (1.4.243–46)

^{13.} Michel de Montaigne, *Shakespeare's Montaigne*, translated by John Florio, edited by Stephen Greenblatt and Peter Platt (New York: New York Review of Books Classics, 2013), 2:8. "Et, parce que nature semble nous l'avoir recommendee, regardant à estendre et faire aller avant les pieces successive de cette sienne machine, ce n'est pas merveille, si, à reculons, des enfants aux peres, elle n'est pas si grande." Florio translates Montaigne's "*machine*" of nature as *frame*, a term Shakespeare adopts in Lear's expression of regret:

reminds his master—and it is the parent now who must cry, plead, and cajole for whatever it takes to survive.

The problem is that it is not at all clear that children have the natural instinct that routinely leads parents to engage in costly trade-offs on behalf of their offspring. Hence Lear's demand for an extravagant display of love and hence too his catastrophic misreading of Cordelia's response to this demand: "I love your majesty/According to my bond, nor more nor less" (1.1.91–92). What does her "bond" amount to? We know, and the tragedy makes amply clear, that Cordelia's altruistic love for her father is incalculably deeper and more authentic than her sisters' hollow protestations.¹⁴ But that incalculability is the point: though Lear extorts professions of adulation, though he rages against "filial ingratitude," and though he cries out to the heavens to protect old men, he never discovers—and the play never establishes—whether there is any natural basis for the love he has demanded from his children.

Montaigne, for his part, is deeply unsympathetic to parental resentment of the supposed ingratitude of their grown children, and he gives powerful voice to the resentment of the young: "It is mere injustice to see an old, crazed, sinew-shrunken, and nighdead father sitting alone in a chimney-corner to enjoy so many goods as would suffice for the preferment and entertainment of many children, and in the meanwhile, for want of means, to suffer them to lose their best days and years, without thrusting them into public service and knowledge of men." This geriatric avarice can make children despair, driving them "to seek, by some way how unlawful soever, to provide for their necessaries." Far from producing dutiful obedience, a parental policy of clinging to wealth and treating the younger generation sternly only "maketh fathers irksome unto children; and, which is worse, ridiculous." How could it not have this effect? As Montaigne coolly notes, children in fact "have youth and strength in their hands, and consequently the breath and favor of the world; and do with mockery and contempt receive these churlish, fierce, and tyrannical countenances from a man that hath no lusty blood left in him." The best solution, Montaigne thought, was for the old to give away most of their

14. In *Comeuppance: Costly Signaling, Altruistic Punishment, and Other Biological Components of Fiction* (Cambridge, MA: Harvard University Press, 2008), William Flesch, taking the conception of signaling and trade-offs to an extreme, argues that "Lear's rage is the cost Cordelia shows him she is willing to pay as a signal of her trust and love in him. His rage is her signal to him" (115). In the manner of the psychoanalytic readings that interpretations based on evolutionary biology often resemble, this argument seems to me at once subtle and selfenclosed. The house, as it were, always wins. possessions to their children. They should retain enough for themselves to live reasonably comfortably and simply reserve the right to reclaim their possessions, if the children turn out to behave badly.

Shakespeare seems to have regarded these notions as exceptionally naive. In *King Lear* the old, half-dead father does not cling to his possessions; he gives them all away, retaining only the right to reside, with his retinue, at his daughters' homes. But his gift affords him neither protection nor gratitude. "I gave you all," he says to Regan, who replies, "And in good time you gave it" (2.4.245). As for taking anything back, the idea is a pathetic fantasy.

The strongest claim to a direct allegiance with the forces of nature is made by the bastard Edmund. For Edmund, what most matters is the energy he possesses in abundance, an energy he traces back to the sexual vitality of his conception:

Why brand they us With base? with baseness? bastardy? base, base? Who, in the lusty stealth of nature, take More composition and fierce quality That doth within a dull, stale, tired bed, Go to creating a whole tribe of fops, Got 'tween asleep and wake? (1.2.9–15)

What for Augustine had been the infallible sign of human depravity and fallenness—the "lusty stealth" of intercourse—is for Edmund the sign of vigor.

Nothing in *King Lear* unequivocally falsifies this vitalism, which is set against both foppish weakness and the artificial constraints of social custom. Those constraints stigmatize illegitimate children, reducing parental investment in them regardless of their native fitness, and honor the elderly, protecting their authority and material well-being regardless of their diminished strength or utility. In terms Shakespeare adapted from Montaigne, Edmund gives voice to his unwillingness to accept the suppression of the natural interests of the young: "This policy and reverence of age makes the world bitter to the best of our times; keep our fortunes from us till our oldness cannot relish them. I begin to find an idle and fond bondage in the oppression of aged tyranny; who sways, not as it hath power, but as it is suffered" (1.2.44–49). These are parricidal sentiments that Edmund is foisting on his legitimate brother, in order to destroy him, but everything in Edmund's subsequent behavior suggests that he himself regards the "reverence of age" as intolerable. When he decides to betray his father to the murderous Earl of Cornwall, Edmund articulates what he takes to be the natural principle: "The younger rises when the old doth fall" (3.3.22).

But if, with its closing spectacle of Cordelia's lifeless body, *King Lear* emphatically does not endorse the view that nature rewards altruism, neither does it endorse the adaptive value of ruthlessness. To be sure, ruthlessness has its virtues. Through his fierce hunger, ambition, and cunning, Edmund rises from the status of social outcast—"He hath been out nine years," says his father at the play's beginning, "and away he shall again" (1.1.30–31)—to a position of enormous wealth, power, and erotic appeal. He displaces his older brother in his father's love, accedes to his father's title and lands, leads the army that defeats the French invasion of the kingdom, and has power of life and death over the captured Lear and Cordelia. Goneril and Regan feverishly compete with each other for his sexual favors. But the play sets harsh limits on the value of this life strategy as well: at the end Edmund is dead, along with Goneril and Regan. None of them has left behind a successor; the story of their lives is definitively over.

"Is there any cause in nature that makes these hard hearts?" (3.6.71-2), the anguished Lear demands. The ingratitude of his selfish daughters had seemed to him incomprehensible: "Is it not as this mouth should tear this hand/For lifting food to 't?" (3.4.16-17). But though the parent and his offspring share the same "blood," as Lear puts it, he learns to his horror that their bodies and their interests are not identical, indeed that they may be in mortal competition. Still baffled, he dreams of some scientific investigation that might lead to an answer—"Let them anatomize Regan; see what breeds about her heart" (3.6.70-71)—but the play leaves his question unresolved.

In one of his geriatric rages, Lear disowns Goneril (as he had earlier disowned Cordelia), only to recognize in dismay some kind of continuing biological relationship:

But yet thou are my flesh, my blood, my daughter; Or rather a disease that's in my flesh, Which I must needs call mind. Thou are a boil, A plague-sore, an embossed carbuncle, In my corrupted blood. (2.4.216–20) The significance of the ongoing biological relationship is never resolved. At its best, the sense of a destructive, parasitical physical bond is played off against a flickering recognition of the independence of offspring, most movingly when Lear, awakening from a long, drug-induced sleep, acknowledges the identity, at once autonomous and linked to him, of his daughter:

Do not laugh at me; For, as I am a man, I think this lady To be my child Cordelia. (4.7.69–71)

Though such an acknowledgment feels like a psychological and moral achievement, it comes, as the play relentlessly demonstrates, at a horribly high cost, and it is quite unstable. A few minutes later, captured by his enemies and led off to prison, Lear indulges in the fantasy of an unbreakable bond between himself and his daughter, united in their cozy den:

Have I caught thee? He that parts us shall bring a brand from heavens, And fire us hence like foxes. (5.3.21–23)

Cordelia weeps and says nothing.

Though the term *nature* is used again and again, though the tradeoffs are ceaselessly questioned, the strategies tested, the consequences weighed, *King Lear* cannot or will not adjudicate the relationship between altruism and selfishness or establish basic norms for the successful negotiation of the stages of life history or settle whether the atrocious pain suffered by parents and children serves any meaningful function. "Unaccommodated man," says the mad Lear, contemplating the naked figure of Poor Tom, "is no more but such a poor, bare, forked animal as thou art" (3.4.98–100). But what kind of animal this is remains unclear.

Senescence is a tragic burden; that much is clear. "We that are young," says Edgar in the final lines of the play, "Shall never see so much, nor live so long" (5.3.324–25). Though I have thought about these lines for many years, I never fully understood them, always taking them for some inarticulate, almost mute gesture toward the incomprehensibility of everything that has passed. They are such a gesture, I think, but they are also a simple recognition of the fact that Lear's extreme old age, in the world depicted in the play and in the world Shakespeare and his audience inhabited, is a very rare event. As Montaigne reminded his readers, natural death if by that they meant death brought on only by the consequences of senescence—seems hardly to have been part of nature's plan. It is weird.

This weirdness is the basis for Shakespeare's tragedy. He is interested precisely in the fact that age is unnecessary, that is, that senescence makes so little sense, from the perspective of the young and even from the perspective of the old themselves. And he focuses his astonishing powers of attention on the aspect of senescence that is least relevant to the biological processes of life history: that is, to the consciousness of an aging figure fitfully aware that his mental as well as physical powers are waning and anxious about the support he will receive from his offspring as they are entering their own reproductive lives. This consciousness has no claim on the attention of the evolutionary biologist; it is, like the nonreproductive bodies of the very old, a kind of meaningless leftover. But for Shakespeare—and for literature—it is the thing itself.