

JAMES JOYCE AND THE DARWINIAN
IMAGINATION

By

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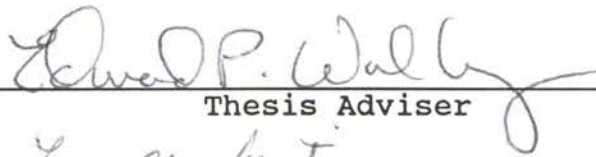
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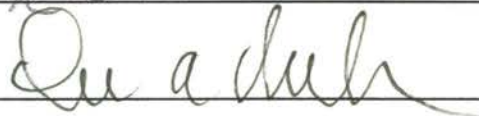
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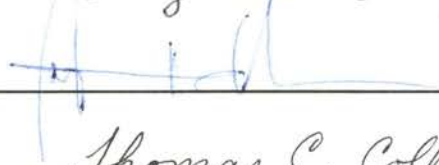
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INTRODUCTION

IN THE MOST LIKELY OF PLACES

Everyone born since the year 1859 has breathed in the ideas and opinions which make up the philosophy of evolution.

Leo J. Henkin
Darwinism and the English Novel

Are our libraries to contain only works of Science? Are Bacon and Newton to monopolize our shelves? and no place be found for Shakespeare and Milton?

James Joyce
"The Study of Languages"

Science. To compare the various joys we each enjoy.

Ulysses

Sifted science will do your arts good.

Finnegans Wake

George Levine, in his book *Darwin and the Novelists*, almost apologetically admits in his preface that anyone who starts out with the premise of examining Darwinian influences may discover that he can look virtually anywhere (13). Similarly, Gillian Beer (*Darwin's Plots*) argues we are never confined to an examination of those writers who have actually read *The Origin of Species* or *The Descent of Man*

when it comes to justifying a discussion of Darwinistic influences, any more than we are prevented from talking about Freudian elements in works written by authors who have never actually read *The Interpretation of Dreams*. Peter Morton deftly encapsulates what he calls the "yawning gulfs between interpretations" of Darwin's impact on the humanities when he observes that "as for Darwin's broader influence on the literary imagination, there has been no agreement at all--neither about the nature of that influence nor even (in the extreme view) whether it is to be found at all" (4). Leo J. Henkin, in *Darwinism and the English Novel*, attempted to solve the problem by strictly limiting Darwinian influence to the period 1860-1910, representing the "rise and decline of evolution as a literary theme" (260).

This is not to say, if I may scrutinize such conflicting anxieties of influence, that Darwin's ideas were so powerfully radical that they ranged willy-nilly across disciplinary boundaries, inexplicably capturing the imaginations of such prominent figures as Marx, Freud, Nietzsche, Zola, Hardy, and Lawrence. Rather, though it is a commonplace to marvel over the march of Darwinism into fields of knowledge supposedly outside natural history, I prefer to emphasize Darwin's ubiquity as a sign of his utter familiarity rather than as the effect of an aggressive proselytizing of evolution where it did not quite belong. After all, evolution as a concept (albeit, progressionistic)

was already part of the scientific, social, and political milieu before Charles Darwin came along, and he articulated his theory of "descent with modification" out of the same languages of politics, race, gender, and economics that guided other cultural discourses, although, as I will argue, with less than conventional results. So those of us interested in the effects of Darwin on literature often find ourselves in the enviable position of nervously wringing our hands over a feast.

I find it immensely comforting to recall, then, at the beginning of this study, that Joyce claimed that he did not believe in any science¹, although, as I hope to demonstrate, his lack of conviction did not prevent him from drawing on biological narratives, "sifting" through evolutionary science, in order to do his "art good." And although a few readers have been unwilling to let him wave off the whole of evolutionary influences (for instance, Cynthia Lewiecki-Wilson, in a recent book on family and gender, states that Joyce [and Lawrence] "are not far from Freud's evolutionary perspective . . . portray[ing] the human against the immense backdrop of a powerful natural world," 28) we have pretty much let the matter of biological evolution go with scant attention. Certainly, Vico's notions of historical evolution are important to Joyce's work, *Finnegans Wake* in particular, but we must remind ourselves that any consideration of evolution, organic or social, after 1859 has to take Darwin into account, as I argue Joyce

does. It is unlikely that Joyce, or anyone, can look back to Vico's treatise on the evolution of human language and civilization without looking through Darwin, whose revolutionary ideas, and lexicon of evolutionary terms, exist in the very fabric of our language no less so than Freud's. As John Paul Riquelme argues, when it comes to interpreting Joyce we "cannot separate the large historical and cultural dimensions from the more narrowly aesthetic ones" (45), and Darwinism certainly contributes to the historical matrix in which Joyce worked.

I do not wish to turn Joyce into a proponent of Darwinism, nor to offer Darwinian evolution as an explanatory rubric on the scale, or hermeneutic exclusivity, of Homeric parallels, Brunonian opposites, or, for that matter, Viconian cycles. Rather, I want to examine a few specific textual instances where the Darwinian imagination informs, and provides material, for Joyce's fiction, as well as how the Joycean imagination is itself partially forged within the vast metaphorical complex of evolutionary biology. I explore what Robert Spoo calls "verbal and conceptual synchronicities" (100), concentrating on a few tantalizing intersections between Darwin and Joyce.

I realize there are many avenues one might take when treating the rather daunting subject of Joyce and Darwin. My approach, however, remains fairly specific: how Darwin's sexual theory, or rather the twin evolutionary themes of sexuality and aesthetics, figure in the fictions of James

Joyce. In the first chapters I examine specific instances in *A Portrait of the Artist as a Young Man*, *Ulysses*, and *Finnegans Wake* where Joyce incorporates the language of Darwinian sexual selection into his own courtship dramas. In the final two chapters, I consider the effects of Darwin's evolutionary theory on language itself, from a treatment of language as subject to the dynamic forces of variation and selection, to the larger issue of narrative structure and the problematic of authenticity and origin in light of Darwin's refiguring of natural development. In these final chapters I also attempt to broaden the possible relationship of Joycean language to Darwinism by arguing that Darwin's influential treatise on evolution also lays an artistic foundation upon which Joyce constructs, among other things, a naturalized female narrative in the form of ALP's mysterious letter--a document designed to reflect the anonymity and endless variation that mirrors Darwin's own figuring of Mother Nature as essentially anonymous, fluid, and self-regulating.

Finally, in a brief conclusion, I offer a few thoughts on the larger problem of reading science as literature, or literature as science. Although I hope what follows sufficiently demonstrates that Joyce, like many authors before him, absorbed scientific notions into his fictions, exactly how to define the relationship between science and literature remains somewhat troubling.

NOTES

¹ According to Ellmann, when Joyce was asked by Tom Kristensen, in reference to Vico, if he "believed in the *Scienza Nuova*," Joyce responded, "I don't believe in any science, but my imagination grows when I read Vico as it doesn't when I read Freud or Jung" (693).

CHAPTER I

STEPHEN, DARWIN, AND THE GREAT FLANKS OF VENUS

He could speak more freely now. "There were several reasons against my telling you rashly. One was what I have said; another, that it was always impressed upon me that I ought not to marry--that I belonged to an odd and peculiar family--the wrong breed for marriage."

.

They stood possessed by the same thought, ugly enough, even as an assumption: that a union between them, had such been possible, would have meant a terrible intensification of unfitness--two bitters in one dish.

"Oh, but there can't be anything in it!" she said with nervous lightness. "Our family have been unlucky of late years in choosing mates--that's all!"

Thomas Hardy
Jude the Obscure (1896)

In *A Portrait of the Artist as a Young Man*, Stephen offers Lynch two hypotheses to explain male attraction to female beauty. Given that the "Greek, the Turk, the Chinese, the Copt, the Hottentot," Stephen says, "all admire a different type of female beauty," we seem caught in a "maze out of which we cannot escape" (P 208). One way out of this labyrinth of cultural relativity, and a path Stephen rejects, is to subjugate aesthetics to eugenics, where

every physical quality admired by men in women is in direct connection with the manifold functions of women for the propagation of the species. It may be so. The world, it seems, is drearier than even you, Lynch, imagined. For my part I dislike that way out. It leads to eugenics rather than to esthetic. It leads you out of the maze into a new gaudy lectureroom where MacCann, with one hand on *The Origin of Species* and the other hand on the new testament, tells you that you admired the great flanks of Venus because you felt that she would bear you burly offspring and admired her great breasts because you felt that she would give good milk to her children and yours. (P 208-09)

One might interpret Stephen's rejection of reproductive utilitarianism as a gesture designed merely to elevate aesthetics over biology. Yet, despite his reputation as the ultimate aesthete, as one who despises all things physical, Stephen does not reject scientific explanations of sexuality, or sexuality itself for that matter, *in toto*.

Consider, first, the initiating discussion of beauty and sexual attraction that begins with Lynch's challenge to Stephen's theory of a desireless art:

--You say that art must not excite desire,
said Lynch. I told you that one day I wrote my

name in pencil on the backside of the Venus of Praxiteles in the Museum. Was that not desire?

--I speak of normal natures, said Stephen. You also told me that when you were a boy in that charming carmelite school you ate pieces of dried cowdung.

--O I did! I did! he cried.

Stephen turned towards his companion and looked at him for a moment boldly in the eyes. Lynch, recovering from his laughter, answered his look from his humbled eyes. The long slender flattened skull beneath the long pointed cap brought before Stephen's mind the image of a hooded reptile. The eyes, too, were reptilelike in glint and gaze. Yet at that instant, humbled and alert in their look, they were lit by one tiny human point, the window of a shrivelled soul, poignant and selfembittered.

--As for that, Stephen said in polite parenthesis, we are all animals. I also am an animal. (205-206)

It is clear from the outset that Stephen is not denying the existence, or even value, of physical attraction. Rather, he tries to confine, for the sake of argument, the artistic impulse to the "mental world," to momentarily insulate it against what he sees as a lurking animality. Yet, despite this temporary separation of artist from animal, his

ultimate goal is to unite, not to divide further, the languages of artistic creation with that of sexuality and reproduction, so as to bring about the ideal "phenomena of artistic conception, artistic gestation and artistic reproduction" (P 209). And since much of the language of reproduction is generated within the science of sexuality, Stephen must somehow figure out a way to assimilate, not reject, that other "gaudy" language into his own aesthetics of sexuality. What Stephen discards, then, as artistically untenable is any explanation of human desire that fundamentally excludes aesthetic apprehension in favor of purely utilitarian means and ends.¹ Neither, however, can Stephen hope to create a sustainable metaphor of artistic creation without that language of reproduction.

As his theory of aesthetics develops, Stephen does in fact manage, and in clever fashion, to deny the validity of an aesthetically-valid eugenics without expunging his own argument of the necessary metaphors of biological process. By employing in his argument the image of Venus (a figure introduced, of course, by Lynch's act of desecration) as embodiment of *both* artistic as well as scientific ideals of sexuality, Stephen covertly suggests that even when mate selection is explained in the eugenicist's language of animal husbandry ("the great flanks of Venus") what lies at the center is still an object of desire produced, not by nature, but by an artist.

Stephen is therefore ready to admit that human sexual attraction may indeed be driven by such "dreary" utilitarian considerations as the desire for "burly offspring" or by the "reflex action of nerves" (204), while arguing that scientific accounts of sexual attraction, even if they deal with distinctly unaesthetic issues of evolutionary exigency ("the manifold functions of women for the propagation of the species") are still partially informed by artistically constructed ideals of beauty.

There is much more to Stephen's theory than a simple distinction between aesthetics and eugenics, applied Aquinas versus applied Darwin, artifice versus the animal body. His theory turns, rather, on a subtle negotiation, not an absolute division, between aesthetics and eugenics, art and science--or more specifically, the languages of art and science, *poiesis* and *techne*. After all, his theory, we must keep in mind, is informed not only by Aquinas, but also by Aristotle, the father of biology and definer of artistic modes.

Interestingly, an even more subtle negotiation between the language of art and the language of science takes place within Stephen's aesthetics. A comparison of Stephen's argument in *A Portrait of the Artist as a Young Man* with a selection from Charles Darwin's *The Descent of Man and Selection in Relation to Sex* suggests that Joyce also borrowed from Darwin when composing Stephen's deceptively simple dismissal of the science of sexuality. Darwin writes:

The senses of man and of the lower animals seem to be so constituted that brilliant colours and certain forms, as well as harmonious and rhythmical colours and sounds, give pleasure and are called beautiful; but why this should be so we know not. It is certainly not true that there is in the mind of man any universal standard of beauty with respect to the human body. It is, however, possible that certain tastes may in the course of time become inherited, though there is no evidence in favour of this belief; and if so, each race would possess its own innate ideal standard of beauty. The men of each race prefer what they are accustomed to; they cannot endure any great change; but they like variety, and admire each characteristic carried to a moderate extreme . . . If all our women were to become as beautiful as the Venus de' Medici, we should for a time be charmed; but we should soon wish to see certain characters a little exaggerated beyond the then existing common standard. (890)

Here is the material for MacCann's lectureroom, an aesthetic that can lead to eugenics, where the apprehension and appreciation of beauty generates a desire for further exaggeration, acts as impetus for both physical and mental evolution, and drives racial differentiation.² But the

passage is also characteristic of Darwin's blend of courtship and animal husbandry, and given the affinity of language with Stephen's argument (indeed, with many of the general aspects of Dedalus's famous Aquinian aesthetics) it is likely that Darwin's theory of the "standards of beauty" also provides material for Joyce.

Importantly, since it is aesthetic discrimination rather than a pragmatic choice to have "burly offspring" that plays a central role in Darwinian sexual selection, Stephen's rejection of utilitarian reproduction in favor of an aesthetically-mediated sexuality is itself mediated by the very discourse he discounts. Certainly, Darwinian sexual selection can lead to eugenics, since sexual selection is analogous to natural selection, a process, in turn, analogous to the selective breeding of domestic animals. But sexual selection, unlike natural selection, though sometimes like domestic breeding, is also motivated by the apprehension of that which is beautiful. Quite simply, Darwinian sexual selection is built around the capacity to appreciate beauty, the power of aesthetic discrimination.

Interestingly, in *Stephen Hero*, the seedground for what would later be revised into *A Portrait of the Artist as a Young Man*, we find a much more utilitarian, less Darwinian version of Stephen's aesthetic theory. Here, instead of addressing Lynch, Stephen lectures Cranly:

--No esthetic theory, pursued Stephen relentlessly, is of any value which investigates with the aid of the lantern of tradition. What we symbolise in black the Chinaman may symbolise in yellow: each has his own tradition. Greek beauty laughs at Coptic beauty and the American Indian derides them both. It is almost impossible to reconcile all tradition whereas it is by no means impossible to find justification of every form of beauty which has ever been adored on the earth by an examination into the mechanism of esthetic apprehension whether it be dressed in red, white, yellow or black. We have no reason for thinking that the Chinaman has a different system of digestion from that which we have though our diets are quite dissimilar. The apprehension faculty must be scrutinised in action. (212)

Stephen's discussion with Cranly is considerably more pragmatic than the exchange with Lynch in *Portrait*. In this early version, aesthetics is said to be rooted in a kind of "mechanism" of apprehension, revealing Stephen's naturalistic assumptions. He wants to treat the aesthetic sensibility as a "faculty in action," a virtual physiological process functioning independently of cultural contexts, and therefore open to objective, scientific investigation.

Indeed, in one of his early critical essays, a youthful Joyce argues forthrightly that language and literature are themselves worthy of scientific scrutiny, and the practitioner of the language arts worthy of scientist-like status. In "The Study of Languages," composed while he was a student at University College, an exuberant Joyce takes on those "obnoxious mathematicians" who would relegate literature, or the study of it, to some secondary intellectual pursuit:

For that which ennobles the study of Mathematics in the eyes of the wise, is the fact that it proceeds with regular course, that it is a science, a knowledge of facts, in contradistinction to literature, which is in the more elegant aspects of it, imaginary and notional. This draws a line of stern demarcation between the two; and yet as Mathematics and the Sciences of Numbers partake of the nature of beauty which is omnipresent, which is expressed, almost noiselessly, in the order and symmetry of Mathematics, as in the charms of literature; so does Literature in turn share in the neatness and regularity of Mathematics. (CW 28)

Literary expressions are "no mere flourishings of unkempt, beautiful ideas but methods of correct expression ruled and

directed by clear regulations, sometimes of facts, sometimes of ideas." As Joyce would seem to have it, literature, because it is made up of both facts and ideas, exceeds the capacities of mathematics itself.

There is nothing particularly striking in Joyce's youthful skirmish with science. "The Study of Languages" is an attempt to reclaim the Humanist position staked out by Matthew Arnold in "Literature and Science," a lively response to Thomas Henry Huxley's essay "Science and Culture," which was originally delivered as an opening address inaugurating the new Scientific College at Birmingham (1880). Arnold asserts that while science undoubtedly contributes greatly to our intellectual stores, only literature can transform those hard facts into a "desire for conduct" and a "desire for beauty" (Abrams, et al, 1476). Huxley, meanwhile, attacks those "Levites [like Arnold] in charge of the ark of culture . . . [the] monopolists of liberal education" who stodgily refuse to admit the physical sciences into the classically-rooted curriculum of most universities. He specifically targets the study of Latin and Greek, a waste of time for the budding scientist in his opinion, but the cornerstone of an outmoded "classical education." "If an Englishman cannot get literary culture out of his Bible, his Shakespeare, his Milton, neither, in my belief, will the profoundest study of Homer and Sophocles, Virgil and Horace, give it to him." Arnold responds:

Even if literature is to retain a large place in our education, yet Latin and Greek, say the friends of progress, will certainly have to go. Greek is the grand offender in the eyes of these gentlemen. . . . The instinct for beauty is set in human nature, as surely as the instinct for knowledge is set there, or the instinct for conduct. If the instinct for beauty is served by Greek literature and art as it is served by no other literature and art, we may trust to the instinct of self-preservation in humanity for keeping Greek as part of our culture. (Abrams et al 1480)

Matthew Arnold is shrewd enough to take on Huxley, certainly one of Darwin's most adamant defenders, in very Darwinian terms. Beauty is an "instinct" fed by Greek literature, an instinct implicitly tied to the larger instinct of "self-preservation." Arnold mentions Darwin several times, quoting him to reinforce the tie between the survival of Greek studies and the very well-being of the human species:

And so we at last find, it seems, we find flowing in favor of the humanities the natural and necessary stream of things, which seemed against them when we started. The "hairy quadruped furnished with a tail and pointed ears, probably

arboreal in his habits," this good fellow carried hidden in his nature, apparently, something destined to develop into a necessity for humane letters. Nay, more; we seem finally to be even led to the further conclusion that our hairy ancestor carried in his nature, also, a necessity for Greek. (Abrams et al 1481)

Although Joyce's defense of the value of literary and linguistic erudition in "The Study of Languages" owes its fundamental position (and much of its language) to Arnold's "Literature and Science," he is careful to distance himself by noting that "Matthew Arnold has his own little opinion about the matter, as he had about other matters" (CW 26).

And the difference between Joyce and Arnold in terms of science and literature turns out to be crucial. Arnold treats aesthetics as a vehicle for the translation of scientific knowledge into humanistic terms. The young Joyce wants aesthetic apprehension, in true scientific fashion, to have objectively definable properties that will permit both art and artist to make authoritative statements of the kind typically reserved for science and its practitioners. He wants, in other words, the authority to speak artistically in an age where all forms of knowledge, even the act of creating art (or defining human desire), is increasingly explicated by science.

In *Stephen Hero*, then, Stephen's theory of aesthetic apprehension reflects some of Joyce's youthful claims that literature has all the qualities of science, and with something left over. In the reworked passage appearing in *Portrait*, however, a more mature Joyce chooses to reconstruct Stephen's theory of aesthetic apprehension not against the mathematized sciences, nor as a parallel to mechanisms of physical processes like digestion, nor as a refined Arnoldian defense of the humanities, but rather against the background of a burgeoning scientific discourse on sexuality. The sheer specificity of the argument against "eugenics" in *Portrait*, along with the rather striking parallels to Darwin's own thoughts on the subject of beauty, indicates that Joyce becomes less interested in making literature scientific, and more interested in negotiating similarities between science and art precisely at significant points of discursive confluence--in this case, sexuality. He moves, and very noticeably, from an attack on scientific authority in his critical essays, to a borrowing on scientific authority in *Stephen Hero*, to an assimilation of Darwinian sexual science into *Portrait*.

The Power of Beauty

There are, as Stephen rightly notes in *Portrait*, eugenicist impulses in Darwinian sexual selection, a result due in large part to the considerable weight Darwin placed

on the analogy that brought together the selective breeding of domestic animals and natural selection. It was this very analogy, however, that proved to be one of Darwin's most brilliant argumentative strokes, offering a familiar activity, the reproductive manipulation of crops and livestock, as analog to the complex, and conceptually ambiguous, processes of speciation gathered under the rubric "natural selection." In fact, the analogy between domestic breeding and the mechanism of evolution proved such a powerful heuristic tool Darwin never abandoned it, and in *The Descent of Man and Selection in Relation to Sex* (1871), the language of animal husbandry plays a significant role in Darwin's second most important evolutionary concept--sexual selection. Here Darwin considers, following Schopenhauer's lead, "'the composition of the next generation'" (890):

Man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before he matches them; but when he comes to his own marriage he rarely, or never, takes any such care. He is impelled by nearly the same motives as the lower animals when they are left to their own free choice, though he is in so far superior to them that he highly values mental charms and virtues. On the other hand, he is strongly attracted by mere wealth or rank. Yet he might by selection do something not only for the bodily

constitution and frame of his offspring, but for their intellectual and moral qualities. Both sexes ought to refrain from marriage if they are in marked degree inferior in body or mind; but such hopes are Utopian and will never be even partially realised until the laws of inheritance are thoroughly known. Everyone does good service who aids toward this end. (918)

Thomas Hardy's *Jude Fawley* and Sue Bridehead consider doing their part to bring about Darwin's reproductive Utopia, weighing the question of marriage so carefully, and in such Darwinian terms, agreeing that at least equal effort be given over to choosing one's spouse as choosing one's horse.

Jude the Obscure is the consummate post-Darwinian courtship novel, with its meticulous cataloguing of the details of flirtation, a testament to woman's "craving to attract and captivate regardless of the injury it may do the man" (348), as evidenced by Arabella Donn's ability to produce dimples at will, or Sue Bridehead's "vivacious glance." Hardy adopts the conventions of domestic courtship and reconstrues them, following Darwin, within a socio-scientific frame of reference, revealing the institution of marriage to be a teeming mixture of social mores, hereditary concerns, and sexual desire. His characters genuinely worry about the relative physical and moral fitness of their potential partners, and the frightful consequences of a

mismatch--concerns informed by Darwin's theories of natural and sexual selection.

Roger Ebbatson argues that sexual selection provided Hardy with an imaginative matrix, a "Darwinian iconography" that "made available a whole range of modulations and variants" (27) on traditional themes of courtship, like male rivalry and female coyness. In describing the impact of Darwin's theory of sexual selection on Hardy's prose Ebbatson notes:

There is a fascinating contrast in the novels between the gradual social progress of formal courtship and naked display scenes in which sexual selection as theory gets transformed into symbolic action. The discourse of courtship gives place to the image of selection. (31)

One might also claim, however, that a similar and equally compelling discursive process occurs in *The Descent of Man* as well, where courtship plots informing Darwin's theory of sexual behavior are transformed into the language of evolutionary history.

In fact, scientific explanations of sexual behavior, human or otherwise, tend toward re-statement of cultural norms, or a rewriting of texts--mediating stories that are naturalized, and then recovered through scientific observation.³ Darwin's lengthy and remarkable inaugurating treatise on sexual selection (which comprises a very large

portion of *The Descent of Man*) proves to be no exception. The theory of sexual selection itself, simply stated, is a close revision of his general theory of natural selection: sexual selection "depends on the advantage which certain individuals have over others of the same sex and species solely in respect of reproduction." (*Descent* 570) This "kind" of selection, which Darwin notes is "less rigorous than natural selection," depends "not on a struggle for existence, but on a struggle between males for the possession of the females" (*Origin* 136).

Generally, the most vigorous males, those which are best fitted for their places in nature, will leave most progeny. But in many cases, victory will depend not upon general vigour, but on having special weapons, confined to the male sex. A hornless stag or spurless cock would have a poor chance of leaving offspring. Sexual selection by always allowing the victor to breed might surely give indomitable courage, length to the spur, and strength to the wing. . . . (*Origin* 136)

The language Darwin uses to describe this other kind of selection is, nonetheless, very similar to that of natural selection, and his attempts to mark differences are often circular and unconvincing. But the strength of Darwin's entire evolutionary argument lies in just such a layering of

problematic analogies--artificial selection in relation to natural selection, sexual selection in relation to natural selection--analogies that not only create rhetorical and highly imaginative congruities between the various elements that make up the overall story of evolution, but also help to construct an account of Nature that adequately mirrors and reinforces familiar cultural discourses.

As Rosemary Jann puts it, Darwin "[projected] a version of the modern patriarchal family back across that border between animal and man" in order to establish an evolutionary continuity between species, as well as a parallel between biological and cultural development (289). In other words, Darwin constructed a theory of sexual and racial evolution conceptually and linguistically mediated not only by his own law of natural selection but also by physical anthropology, popular travelogues, domestic fictions, as well as the work of his eminent grandfather, Erasmus Darwin.⁴

The distinguishing facet of Darwinian sexual selection, however, and the one with which I am most concerned in my reading of Joyce, is the reliance upon what Nancy Armstrong terms "the power of beauty" (223), the linking together of domestic politics, art, and biology to construct a model of sexual evolution firmly rooted in aesthetic apprehension. Darwin's aim was to account for those physical characteristics of living creatures (usually male) that develop quite apart from the processes of natural selection,

as well as apart from primary reproduction. And although he admits that it is often difficult to "distinguish between the effects of natural and sexual selection" (*D* 570), he nevertheless argues, at great length, for just such a distinction, designating specific physical and mental characteristics that might fall under the heading of sexual selection:

There are many other structures and instincts which must have been developed through sexual selection--such as the weapons of offence and the means of defence--of males for fighting with and driving away their rivals--their courage and pugnacity--their various ornaments--their contrivances for producing vocal or instrumental music--and their glands for emitting odours, most of these latter structures serving only to allure or excite the female. It is clear that these characters are the result of sexual and not of ordinary selection, since unarmed, unornamented, or unattractive males would succeed equally well in the battle for life and in leaving a numerous progeny, but for the presence of better endowed males. We may infer that this would be the case, because the females, which are unarmed and unornamented, are able to survive and procreate their kind. (*D* 570)

There must be some other mechanism in operation to account for physical characteristics not shaped by the demands of basic survival, especially those that divide along sexual lines. Darwin's solution is to tie evolutionary excess to sexuality, supplementing a highly efficient, no-nonsense, and unconscious natural selection with varying degrees of aesthetic capacities in order to explain the non-reproductive characteristics of sexual dimorphism.

When we behold two males fighting for the possession of the female, or several male birds displaying their gorgeous plumage, and performing strange antics before an assembled body of females, we cannot doubt that, though led by instinct, they know what they are about, and consciously exert their mental and bodily powers. . . . Just as man can give beauty, according to his standard of taste, to his male poultry, or more strictly can modify the beauty originally acquired by the parent species, can give to the Sebright bantam a new and elegant plumage, an erect and peculiar carriage--so it appears that female birds in a state of nature, have by a long selection of the more attractive males, added to their beauty or other attractive qualities. No doubt this implies powers of discrimination and taste on the part of the female which will at

first appear extremely improbable; but by the facts to be adduced hereafter, I hope to be able to shew that the females actually have these powers. (570)

It is precisely such powers of aesthetic discrimination that subsequent researchers into evolutionary sexual behavior would dismiss as anthropomorphic in an effort to promote, instead, more intrinsic physiological differences between the sexes.

Patrick Geddes and J. Arthur Thomson, for example, in their highly influential and widely read treatise, *The Evolution of Sex* (1889), argue for a strictly metabolic explanation of sexual differences, a "deep difference in constitution" that "expresses itself in the distinctions between male and female, whether these be physical or mental" (286). Geddes and Thomson posit an essential "maleness" and "femaleness" in nature, so that features like the elaborate plumage of the peacock are simply colorful expressions, along with greater strength, courage, and intelligence, of maleness rather than an evolved result of any choice exercised by females. And in what is certainly the most infamous statement in the book, Geddes and Thomson proclaim: "What was decided among the prehistoric Protozoa cannot be annulled by Act of Parliament" (286). Sex roles (which includes a broad spectrum of physiological and sociobiological concerns, ranging from reproductive to economic)

are designated by the internal make-up of individuals within a species, and cannot be "corrected" by politically-minded attempts at equality.

Darwin, on the other hand, takes a very different approach. Certainly, he does not fail to reinforce the ubiquitous cultural notion that females are inherently passive, males inherently aggressive, but Darwin's is more a model of performance than predetermination, a natural history of sexual theatrics as opposed to a kind of chemical complementariness (what Geddes and Thomson label "katabolic" [male] and "anabolic" [female]).⁵ Sexual selection, in Darwin's formulation, operates as a subset within the general economy of nature while affecting its own unique system of exchange based not upon the general habits of life, whereby certain favorable variations promote the survival of evolving species, but rather upon the premise that courting individuals "consciously exert . . . mental and bodily powers" for the sole purpose of gaining favor with the opposite sex (*D* 570). In fact, and this is especially relevant among higher organisms, most prominently among primates, such "power to charm . . . has sometimes been more important than the power to conquer . . . " (*D* 583); thus the principle of sexual selection rises to challenge even natural selection under specific and highly gendered circumstances. The trials of subsistence are momentarily replaced with the art of seduction.

As we will see in the "Sirens" and "Nausicaa" episodes of *Ulysses*, as well as in the "Mime" chapter of *Finnegans Wake*, Darwinian sexual elements take on a variety of functions within Joyce's fiction beyond what we only briefly encounter in *Portrait*. In *Portrait*, Stephen's utilization of scientific discourse is meant to offer us, or Lynch, or Stephen himself, a choice of paths when it comes to explaining sexual attraction: one can take the route of the eugenicist or that of the aesthete. I have suggested, however, that the choice, at least as Stephen constructs the dichotomy, is really a false one, since Stephen's own aesthetics of sexuality borrows from Darwinian sexual selection, which is itself rooted in aesthetic concerns.

The science of sexual selection forms a part of Stephen's intellectual material--material he absorbs and employs as readily as the philosophy of Thomas Aquinas, the teachings of the church, or the mythology of ancient Greece. Much like Darwin's own theories, Stephen's theory is also generated out of a variety of available discourses, including the discourse of science he wishes to diminish, or at least decide against, in favor of more artistic intentions.

Stephen's aesthetic theory has received little or no attention in regards to its relationship to Darwinism. It is not surprising, then, that little attention has been paid to other instances where the influences of Darwinian sexual selection are felt in Joyce's fiction. Yet, given the

interest Joyce shows in comparing literature and science in his critical writings--the passage in *Stephen Hero* that formulates aesthetics as subject to a naturalistic, if not scientific explanation, and then the revision of Stephen's aesthetics to include a specific reference to Darwin--perhaps we have allowed Stephen to steer our reading too much toward Aquinas, and too far away from the lectureroom that takes as one of its primary texts Darwin's *The Origin of Species*.

Of course, we also have to consider what follows *Portrait*. In both *Ulysses* and *Finnegans Wake*, Joyce also incorporates the language of Darwinian sexual selection into his scenarios of human courtship. Joyce's figuring of sexuality as a kind of dramatic performance not only borrows from the courtship plots of novels, but also suggests a kind of Darwinian scripting of human sexuality. Sexual beings perform for each other, sing for each other, display for each other in Joyce's work, much like the creatures, including *Homo Sapiens*, that inhabit the pages of Darwin's *Descent*.

By recontextualizing science within fiction Joyce creates more than an uneasy blend of dichotomous languages. His interweaving of fiction and the science of sexuality does not merely result in a conflation of disparate elements, although it does result in texts more suitable for MacCann's lectureroom than Stephen's attempt at a rarefied aesthetic theory. Neither does the discourse of Darwinian

sexual science function within Joyce's books as impure or adulterated science, but rather as a science that operates in its most compelling form--as narrative, as drama, as language. If anything, Joyce rewrites the science of sexuality in its most affecting Darwinian context--well within the domain of performance, whether that performance takes place, as we will see in the following chapters, in a pub, on a beach, or as the courtship games of children.

NOTES

¹ In a recent article on Joyce and homosexuality ("A Womb of One's Own: Joyce's Sexual Aesthetics," *James Joyce Quarterly* 31 [1994]: 207-231) David Weir offers a compelling argument for a "larger alignment of aesthetics and sexuality in Joyce's work" (208) and subsequently traces the development of Stephen's theory of art and sex through Joyce's later works by focusing on the popular association between homosexuality and artistic tendencies. Weir also notes, as others have, the presence of Havelock Ellis's sexual theories in Joyce's fiction, but does not consider that the initiating figure for Ellis, as well as other influential researchers often perjoratively referred to as "pseudo-scientists," was none other than Charles Darwin. In fact, Ellis, along with Patrick Geddes and J. Arthur Thomson (*The Evolution of Sex*, 1898), built their careers by their attempts at redefining Darwin's theories of sexual selection

in physiological and psychological terms.

² At one point in *Portrait*, Temple asks Stephen, "Do you believe in heredity?" (230) to which Stephen offers no reply, but later thinks to himself, "How could he hit their conscience or how cast his shadow over the imaginations of their daughters, before their squires begat upon them, that they might breed a race less ignoble than their own?" (238). Stephen imagines, then, his own kind of eugenics program, a eugenics of the imagination that would seem to reintroduce the animal husbandry model he rejects earlier.

³ For excellent discussions of sexuality and the biological sciences see especially Cynthia Eagle Russett, *Sexual Science: The Victorian Construction of Womanhood* (Cambridge: Harvard UP, 1989), Anne Fausto-Sterling, *Myths of Gender: Biological Theories About Women and Men* (New York: BasicBooks, 1985), Linda Birke, *Women, Feminism and Biology: The Feminist Challenge* (New York: Methuen, 1986), Ruth Bleier, *Science and Gender: A Critique of Biology and Its Theories on Women* (New York: Pergamon Press, 1984), Evelyn Reed, *Sexism and Science* (New York: Pathfinder Press, 1978), and Janet Sayers, *Biological Politics* (London: Taviston Publications, 1982).

⁴ For a discussion of the connection between Erasmus and Charles in relation to sexual selection, see Stephen J. Gould's "The Sexual Politics of Classification" (*Natural History* 11, November 1993, 20-29).

⁵ The term "complementary" is invoked often in *The*

Evolution of Sex in order to reinforce the ideal model family, and, more specifically, to maintain what the authors see as the "natural" gender divisions attacked in the name of economic, social, and educational opportunities for women. "The social order," Geddes and Thomson insist, "will clear itself, as it comes more in touch with biology." (289). One such biological point of clarity, according to the authors, is that "[it] is generally true that the males are more active, energetic, eager, passionate, and variable; the females more passive, conservative, sluggish, and stable" (289).

CHAPTER II

MEDITATIONS OF EVOLUTION INCREASINGLY VASTER

The chirping of insects, the croaking of frogs,
the calls of mammals, the songs of birds,
illustrate both the bathos and glory of the love-
chorus.

Patrick Geddes and J. Arthur Thomson
The Evolution of Sex (1914)

Every fellow for his own, tooth and nail

Ulysses

The art of love, being an art that Nature makes,
is the same now as in essentials it has always
been, and it was well established before woman
came into existence.

Havelock Ellis
"The Art of Love"

--That can be explained by science, says Bloom.

Ulysses

J.W. Burrows, in his introduction to the Penguin
Classics edition of *The Origin of Species*, quotes from one
of Charles Darwin's clandestine notebooks in which the young
naturalist assiduously, and privately, built up his argument
for natural selection over a period of twenty years before
publishing. One of Darwin's notations reads:

When one sees nipple on man's breast, one does not say some use, but sex not having been determined. So with useless wings, and modified. If simple creation merely, would have been born without them. (13)

Such records indicate Darwin's early fascination with apparently non-functional rudiments--male nipples, the wings of flightless beetles--features that point to a literal descent with modification. But it is Burrows's comment on Darwin's note that is most interesting: "This sounds oddly like the ruminating, inconsequential curiosity of Joyce's Leopold Bloom, except that Darwin's curiosity is anything but inconsequential" (13). For one interested in Leopold Bloom, in James Joyce, in the textual materials out of which Joyce constructed the scientifically-minded Bloom, Bloom's ruminations are anything but inconsequential.

In *Ulysses*, Leopold Bloom, as we are forthrightly told in the "Ithaca" episode, represents the scientific temperament, and functions as counterpart to Stephen's artistic nature (U17.560). To the reader of the entire novel such a pronouncement, coming as it does so late in the work, is anti-climactic since Bloom speculates, from the moment we meet him, on the whys and hows of various natural phenomenon, from the usefulness of a cat's whiskers (U4.39-42), to the rate of falling objects (U5.44), to meditations on celestial movements, of "evolution increasingly vaster:

of the moon invisible in incipient lunation, approaching perigee: of the infinite lattiginous scintillating uncondensed milky way" (U17.1040).

More importantly, as we are concerned with Joyce's textual relationship to Darwin, we are informed that a once youthful Bloom "advocated during nocturnal perambulations the political theory of colonial expansion and the evolutionary theories of Charles Darwin as expounded in *The Descent of Man* and *The Origin of Species*" (U17.1642-1645) And it is Bloom who, in "Oxen of the Sun," an episode dominated by the trope of evolution, refers to Mr. Costello as a "cropeared creature of a misshapen gibbosity . . . the missing link of creation's chain desiderated by the late ingenious Mr. Darwin" (U14.854-859)--an insult brought on by Costello's calling nurse Callan a "monstrous bit of fine cowflesh" (U14.807).

Bloom's scientific sensibility (which is fraught with humor, e.g., the "uncondensed milky way") also leads him to some very Darwinian speculations on the nature of sexual behavior. As Garry Leonard points out, "Leopold Bloom, in his own pseudo-scientific way, is . . . as much an amateur sexologist as he is an amateur astronomer. His efforts to find material that will stimulate Molly show that he too is participating in the turn-of-the-century obsession to discover 'what women want.'" (651). The desire to know what women and men want is entirely relevant to Bloom's occupation as a canvasser of advertisements, and he

recognizes the economic benefits of linking product to sex in order to lure consumers. At one point, for example, he conceives of an advertising gimmick for Hely's, a stationer and printer, involving "a transparent showcart with two smart girls sitting inside writing letters, copybooks, envelopes, blottingpaper" (U127.131-133). But Bloom's speculations on the phenomenon of sexual stimulation occupy his thoughts beyond issues of making money, or even providing stimulation for his wife, Molly. He is more often concerned with his own arousal, which, of course, includes his pondering of sexually-suggestive advertising as well as the erotic novel he purchases for Molly.

The degree to which Bloom concerns himself with sexual materials during his perambulation around Dublin is quite evident, for example, in the "Lotuseaters" episode. On his way to the post office, he recalls the "walk" of the woman he recently followed out of the butcher's shop, a woman he imagines being cuddled by an off-duty constable (U5.47, U4.179). In the post office, he ponders a recruiting poster and concludes that women are drawn to the showy uniforms of soldiers (U5.68-69). On his way out of the post office, where he has received a letter from Martha Clifford, his mistress-by-correspondence, he catches sight of a woman leaving the fashionable Grosvenor Hotel:

Mr Bloom gazed across the road at the outsider drawn up before the door of the Grosvenor. The

porter hoisted the valise up to the well. She stood still, waiting, while the man, husband, brother, like her, searched his pockets for change. Stylish kind of coat with that roll collar, warm for a day like this, looks like blanketcloth. Careless stand of her with her hands in those patch pockets. Like that haughty creature at the polo match. Women all for caste till you touch the spot. . . . Reserved about to yield. . . . Possess her once take the starch out of her (my ellipses, U5.98-106).

In addition to his stimulation by means of Martha's letter (in which she calls him a "naughty boy" and threatens to "punish" him, U5.247), and his speculations on the sexual allure of military clothing, Bloom also finds occasion to act as voyeur. When the wealthy woman climbs into the tram, he briefly catches sight of her stockings ("Watch! Watch! Silk flash rich stockings white. Watch!" U5.130) before his view is immediately blocked by a passing tramcar. The incident, the frustration at having his line of sight impeded at the "very moment" her undergarments are most fully revealed, spurs memory of another occasion when a "[girl] in Eustace street . . . was . . . settling her garter" (U5.133-34), only to have her friend cover her up when she caught Bloom looking.

He also imagines himself as an object of voyeurism. At the end of the Mass he attends at All Hallows, for instance, he stands up, realizes two buttons of his waistcoat are open, and thinks, "Women enjoy it" (U5.453). And after purchasing lotion for Molly from the chemist, as well as a bar of soap in preparation for his visit to the bathhouse, Bloom engages in a reverie of self-voyeurism:

Enjoy a bath now: clean trough of water, cool enamel, the gentle tepid stream. This is my body.

He foresaw his pale body reclined in it at full, naked, in a womb of warmth, oiled by scented melting soap, softly laved. He saw his trunk and limbs riprippled over and sustained, buoyed lightly upward, lemonyellow: his navel, bud of flesh: and saw the dark tangled curls of his bush floating, floating hair of the stream around the limp father of thousands, a languid floating flower. (U5.565-572)

The conflation of the Eucharist with his own body only adds to Bloom's self-titillation since the host itself has been sexually charged by Bloom after witnessing the priest place it in the mouths of women. Even the non-specific language used to describe the priest's movements is, within the larger matrix of sexualized imagery, made masturbatory ("The

priest went along by them, *holding the thing in his hands*,"
[my italics] U5.344-345).

The number of sexual details that accumulate, not only in "Lotuseaters," but in every other episode in which Bloom plays a significant part, makes it counterproductive to try to list them all. Suffice it to say that Bloom puts into circulation much of the sexual language found in *Ulysses*.

Bloom's preoccupation with sexual stimulation while roaming Dublin during the daylight hours also carries over into the nightmarish "Circe" episode, where his deceased father, Virag, arrives to proclaim himself, appropriately enough, one of the founders of the science of sexology:

Virag

(*prompts in a pig's whisper*) Insects of the day
spend their brief existence in reiterated coition,
lured by the smell of the inferiorly
pulchritudinous fumale possessing extendified
pudental nerve in dorsal region . . . You shall
find that these night insects follow the light. An
illusion for remember their complex and
unadjustable eye. For all these knotty points see
the seventeenth book of my Fundamentals of
Sexology or the Love Passion which Doctor L.B.
says is the book sensation of the years.
(U15.2411-2424)

Virag is presented here as both ghostly projection and source of Leopold's scientific mindset, the paternal origin of Bloom's desire to demonstrate that "[every] phenomenon has a natural cause" (U15.2795), including sexual attraction. Virag, who identifies himself as "the Virag who disclosed the Sex Secrets of Monk and Maidens," makes numerous scientific-sounding remarks throughout "Circe," and the fact that he is the author of seventeen volumes collectively entitled "The Fundamentals of Sexology" suggests his identification with Havelock Ellis, author of the multivolume work, *Studies in the Psychology of Sex*. Significantly, Virag appears in "Circe" shortly after reference is made to Disraeli's response to Darwin, that when one has a choice between apes and angels one should "Be on the side of angels" (U15.2197-98). Virag, then, is connected with both Charles Darwin and Havelock Ellis, and serves as biological and scientific father to Bloom.¹

But Leopold Bloom, the child of Virag, of Ellis, of Sacher-Masoch, also has his sexological and discursive roots in Charles Darwin's *The Origin of Species* and *The Descent of Man and Selection in Relation to Sex*, who, as Nancy Armstrong rightly argues, first "raises the question that would preoccupy modernist authors so diverse as Yeats, Lawrence, Joyce, Woolf, and Freud: the question of what women desire" (224). But the manner in which sexual attraction is conceived and interpreted by Leopold Bloom, with his concern with what (usually) women want, as well his

scientific genealogy offered in "Circe," suggests he is not only fabricated along the lines of Charles Darwin but also cut from the ideological cloth of Darwin's own discursive children, including, among others, Havelock Ellis.

In the following sections, I examine the "Sirens" and "Nausicaa" episodes in terms of Bloom's sexological disposition, and consider, in greater detail, some important aspects of the mediating texts that the scientifically-minded Bloom brings to *Ulysses*.

As noted in the previous chapter, Darwinian sexual selection is often predicated upon a kind of sexual choreography, ritualized performances coupled with the power of aesthetic discrimination. Potential mates act out their respective roles as either performer or spectator. Darwin's linguistic model for animal courtship comes from, not surprisingly, the courtship plots of novels he was so fond of reading, or having read to him by his children.² As Ruth Bernard Yeazell has pointed out, Darwin concentrated not on the "marriage arrangements" of various species, a polite way of signifying consummation, but on courtship itself, so that Darwin "quietly shapes their history after the plan of the novels" (225). Darwin constructs a scientific narrative encoded according to the features of nineteenth-century fictions of desire.

I would argue that Joyce's figuring of sexuality in terms of performance in *Ulysses* also owes something to Darwin's scientific dramas of wooing. As we will see in

"Nausicaa," Joyce's Gerty MacDowell enacts a courtship display, and her performance is witnessed by none other than Leopold Bloom. Before turning to "Nausicaa," however, we must examine an earlier episode that features vocal performances of a Darwinian sort--the singing barmaids of "Sirens."

Songs of Love: Darwin's Birds, Joyce's "Sirens"

Birds were a favorite subject for Darwin in his discussion of sexual behavior, and avian species serve as the hub of his most illustrious arguments on the subject. Birds, perhaps more than any other species, engage in elaborate vocalizations and displays that make up their courtship behaviors. Darwin was an avid pigeon fancier, and frequently sent questionnaires to other fanciers, gathering information on pigeon sexual behavior. He also drew a good deal of information from J. Gould's *Handbook to the Birds of Australia* (1865), Dr. Jerdon's *Birds of India* (1863), along with the ornithographical work of the American artist and naturalist James Audubon. For Darwin, birds provided the best of all glimpses into our own species' courtship plots:

Secondary sexual characters are more diversified and conspicuous in birds . . . than in any other class of animals. I shall, therefore, treat the subject at considerable length. Male birds

sometimes, though rarely, possess special weapons for fighting with each other. They charm the female by vocal or instrumental music of the most varied kinds. They are ornamented by all sorts of combs, wattles, protuberances, horns, air-distended sacks, topknots, naked shafts, plumes and lengthened feathers gracefully springing from all parts of the body. The beak and naked skin about the head, and the feathers, are often gorgeously colored. The males sometimes pay their court by dancing, or by fantastic antics performed either on the ground or in the air. In one instance, at least, the male emits a musky odour, which we may suppose serves to charm or excite the female . . . So powerful is this odour during the pairing-season, that it can be detected long before the bird can be seen. (D697)

The elaborate methods of courtship among many non-human species were fairly common knowledge by the time Darwin composed *The Descent of Man and Selection in Relation to Sex*, so the existence of such complex courtship behaviors, though interesting, was not revolutionary in and of itself. It was, rather, the collapse of any essential distinction between human sexual behavior and that of many other species which constituted Darwin's most subversive step. And his

most radical turn toward that collapse began with the question of aesthetic apprehension:

On the whole, birds appear to be the most aesthetic of all animals, excepting of course man, and they have nearly the same taste for the beautiful as we have. This is shown by our enjoyment of the singing of birds, and by our women, both civilised and savage, decking their heads with borrowed plumes, and using gems which are hardly more brilliantly coloured than the naked skin and wattles of certain birds. In man, however, when cultivated, the sense of beauty is manifestly a far more complex feeling, and is associated with various intellectual ideas. (D697)

Darwin moves easily from nature to fashion (birds to feathered hats), and does so without pausing to work out discrepancies that might exist between avian behavior and human. (Why, for example, would women use the feathers of male birds?) Instead, he resorts to his tried-and-true argument of differences in degree, not of kind:

With respect for female birds feeling a preference for particular males, we must bear in mind that we can judge of choice being exerted only by analogy. If an inhabitant of another planet were to behold a number of young rustics at a fair courting a

pretty girl, and quarreling about her like birds at one of their places of assemblage, he would, by the eagerness of the wooers to please her and to display their finery, infer that she had the power of choice . . . We can judge, as already remarked, of choice being exerted, only from analogy; and the mental powers of birds to not differ fundamentally from ours. (D750)

The basic mechanism of aesthetic apprehension is relatively similar from one species to the next and sexuality is primarily manifested as vocal and physical display, forming a continuum that makes Darwin's fundamental assertions applicable to a broad range of species, from fish to humans.³ Thus, the courting of a pretty girl at the fair and the eagerness of her wooers are equated to the elaborate love antics of other species, although the analogy works both ways--the courtship of other species is *courtship*, after all, so that the task of choosing mates throughout the animal kingdom often has the ring of farmboys courting pretty girls at the fair.

It is the similarity Darwin discerns between birds and humans, however, sharing as they do in singing and the display of "fineries," and a refined taste for the beautiful, that provides for his most interesting and influential archetype of sexual selection.

In the "Sirens" episode of *Ulysses* Joyce also draws upon the sounds and behaviors of birds, figuring human courtship along Darwinian lines--that is, as a form of sexual display. And the episode, as it turns out, is full of "birdnotes":

And a call, pure, long and throbbing.
Longindying call. Decoy. Soft word. But look:
the bright stars fading. Notes chirruping
answer. (U11.12-13)

Warbling. Ah, lure! Alluring. (U11.26)

A duodene of birdnotes chirruped bright
treble answer under sensitive hands. Brightly
the keys all twinkling, linked, all
harpsichording, called to a voice to sing the
strain of dewy morn, of youth, of love's
leavetaking, life's love's morn. (U11.324-6)

He touched to fair miss Kennedy a rim of his
slanted straw. She smiled on him. But sister
bronze outsmiled her, preening for him her
richer hair, a bosom, and a rose. (U11.246-8)

The *technic* of the "Sirens" episode is *fuga per canone*, "a fugue according to rule" (Gifford 290), a musical theme interwoven with echoes of the Homeric mermaid/bird-girls.

The barmaids, Miss Kennedy and Miss Douce, represent the mythical sirens, but they also compete for the attention of Blazes Boylan in Darwinian fashion: "He touched to fair miss Kennedy a rim of his slanted straw. She smiled on him. But sister bronze outsmiled her, preening for him her richer hair, a bosom, and a rose" (U11.346-48). A moment earlier, however, both Kennedy and Douce just as readily avoid the advances of Lenehan, who utters a child-like, and bird-like, "Peep!" (U11.240) And when Simon Dedalus begins a "duodene of birdnotes" on the piano, Lenehan "lisp[s] a low whistle of decoy" in yet another attempt to gain their attention just prior to Boylan's entrance. Others in the bar also engage in bird-like performances. Richie Goulding, for example, "cocked his lips apout" to produce a "low incipient note sweet" like a "thrush," his breath "birdsweet" (U11.630-3).

True to the polyphonic nature of the fugue, as well as *Ulysses* itself, there is more than one discourse informing the performances that take place in the Concert Room of the Ormond Hotel. For Leopold Bloom, whose understanding of phenomena is informed by a scientific predilection, music is, in a very objective sense, the "language of love" (U11.709). Thus, with Simon Dedalus singing to the barmaids in the background, Bloom becomes lost in a blend of scientific rationalization and masturbatory fantasy:

Love that is singing: love's old sweet song.
Bloom unwound slowly the elastic band of his
packet. Love's old sweet *sonnez la* gold.
Bloom wound a skein round his four
forkfingers, stretched it, relaxed, and wound
it round his troubled double, fourfold, in
octave, gyved them fast.
--Full of hope and all delighted . . .

Tenors get women by the score. Increase
their flow. Throw flowers at his feet. When
will we meet? My head simply swirls. Jingle
all delighted. He can't sing for tall hats.
Your head it simply swirls. Perfumed for him.
What perfume does your wife? I want to know.
Jing. Stop. Knock. Last look at mirror always
before she answers the door. (U11.681-690)

This passage is made up of numerous textual fragments from earlier episodes--the letter from Martha Clifford, snippets of Boylan's song, "Seaside Girls" ("my head simply swirls"), Molly's concern for her appearance, the afternoon meeting between Molly and Blazes Boylan to go over a musical programme, the jingle associated not only with the Viceregal procession, as well as Boylan's own jaunting car, but also with the loose brass quoits on the headboard of the Blooms' bed, and therefore with Boylan and Molly's adulterous relationship.

For Bloom, in addition to the net of personal associations, music simultaneously expresses and instigates sexual desire, and, like other phenomena, is subject to scientific explanation: Women (like Molly Bloom) are attracted to tenors (like Blazes Boylan) because tenoric singing helps to "increase their flow," i.e., intensify sexual appetites for both parties involved. He also postulates, in highly mechanical terms, that even the most sensual music is reducible to nothing more than mathematics and the physical movement of the vocal chords ("Numbers it is. All music when you come to think. Two multiplied by two divided by half is twice one. Vibrations: chords those are. . . Musemathematics. And you think you're listening to the etherial" [U11.830-835]).

One of Joyce's principal models for Bloom, Havelock Ellis, investigates at some length the effects of musical rhythm on physiology, how it "directly and powerfully effects the chief vital processes" as well as "various viscera and functions," including, sexual functions (*Sexual Selection in Man* 121). Bloom's idea that Boylan's singing serves to "increase" Molly's "flow" also echoes an illustration Ellis provides of a woman who, upon hearing beautiful music, experiences an "intense orgasm" (132).

Ellis's research into the sexual properties of music is built upon the foundation of Darwinian sexual selection, so Bloom's inferences on the sexual nature of music (in conjunction with the overall plethora of bird images in the

episode) are also textually related to Darwin's opinions on the power and evolutionary history of music.

"Human song," Darwin writes in *The Descent of Man*, "is generally admitted to be the basis or origin of instrumental music. As neither the enjoyment nor the capacity of producing musical notes are faculties of the least use to man in reference to his daily habits of life, they must be ranked amongst the most mysterious with which he is endowed" (*D* 878). Yet, in typical Darwinian fashion, he proceeds to explain just how explicable the mystery of music is when viewed within the larger scope of evolutionary history.

But there is nothing anomalous in the musical faculties lying dormant in man: some species of birds which never naturally sing, can without much difficulty be taught to do so.

. . . .

Music arouses in us various emotions, but not the more terrible ones of horror, fear, rage, &c. It awakens the gentler feelings of tenderness and love, which readily passes into devotion . . . It is probable that nearly the same emotions, but much weaker and far less complex, are felt by birds when the male pours forth his full volume of song, in rivalry with other males,

to captivate the female. Love is still the
commonest theme of our songs. (D 879)

The cautious approach to the sexual significance of human song is typical of Darwin's rhetorical stance throughout his writing. He is always willing to allow numerous exceptions, and objections to enter into his own theory. He is not sure, despite the perpetual presence of the theme of love in our songs, that music can still be linked to sexual stimulation. Nevertheless, it is at least potentially there, that latent impulse, that urge out of our primitive past. And although Darwin hedges as to whether music still functions as a sexual attractant among "civilized" humans, he cannot abandon his overall argument for continuity:

As the males of several quadrumanous animals have their vocal organs much more developed than in females, and as a gibbon, one of the anthropomorphous apes, pours forth a whole octave of musical notes and may be said to sing, it appears probable that the progenitors of man, either the males or females or both sexes, before acquiring the power of expressing their mutual love in articulate language, endeavored to charm each other with musical notes and rhythm. So little is known about the use of the voice by the Quadrumana during the season of love, that we have

no means of judging whether the habit of singing was first acquired by our male or female ancestors. Women are generally thought to possess sweeter voices than men, and as far as this serves as any guide, we may infer that they first acquired musical powers in order to attract the other sex. . . . The impassioned orator, bard, or musician, when with his varied tones and cadences he excites the strongest emotions in his hearers, little suspects that he uses the same means by which his half-human ancestors long ago aroused each other's ardent passions, during their courtship and rivalry. (D 881)

Because singing, Darwin implies, plays a significant role in the evolutionary history of sex, it cannot but remain, even if only tacitly so, a part of our present sexual and artistic behaviors. It is also significant, Darwin is careful to point out, that some of our closest living relatives, the primates, still engage in vocal display, and that somewhere along the evolutionary trail, we should therefore expect to find even "half-human" ancestors singing for their mates as well.

Havelock Ellis would only add to Darwin's theory on the sexual power of music, strengthening the tie between singing and courtship, concluding, despite a certain paucity of evidence, that we "may attach a considerable degree of

importance to the voice and to music in general as a method of sexual appeal" (125).

"Sirens" is constructed, in part, around Bloom's scientific interests, interests informed by both Darwin and Ellis. Darwin's connection between the sexual rituals of birds (which includes vocalization) and human courtship provides a dramatic model within which Bloom applies his principles of sexology to the performances in the bar.

Bloom is also trying to rationalize, through the objectifying language of science, Molly's sexual attraction to another man, and other instances of courtship that take place all around him in the saloon are associated with the larger problem of figuring out exactly why Molly is attracted to Blazes Boylan. The objectified drama of human courtship, scientifically-examined, serves as a defense for Bloom against his own sexual failures, and a way to rationalize his sexless marriage in a manner that is both self-stimulating and emotionally-distancing. It is also within the paradigm of sexual science that Bloom is able to act as both detached scientific observer and voyeur.

There is another significant point to make about Darwinian sexual selection, the science of sexology, and what takes place in the saloon of the Ormond Hotel. Leopold Bloom (who, like Darwin, concludes that our songs tend to be about love, and love lost--"All songs on that theme" [U11.802] is aroused not by the siren song of the barmaids (who disrupt much of the male posturing by means of their

derisive laughter⁴), but by the male voice, just as Molly is partly seduced, at least in Bloom's formulation, by Blazes Boylan's singing. In "Sirens," therefore, Joyce reverses the Homeric myth of the singing bird-girls who lure unwary sailors to their deaths, and constructs, instead, a sexual scenario where the males do most of the singing in hopes of gaining the attention of the females.

If we read the episode in light of a Darwinian rather than Homeric pattern, however, the manner in which performances divide along gender lines involves more than a simple reversal. In Darwin's sexual scheme, males generally perform, females listen and choose, at least when human courtship is equated, by analogy, to avian courtship.

When Havelock Ellis takes up the issue of singing and courtship, he, like Darwin, must find a way to demonstrate some degree of continuity in sexual evolution, even between such remote species as birds and humans. Ellis's solution is to delineate human sex roles according to the patterns observed among other species:

It may, indeed, be said at the outset that the reasons which make it antecedently improbable that men should be sexually attracted through hearing render it probable that women should be so attracted. The change in the voice at puberty makes the deeper masculine voice a characteristic secondary sexual attribute of man, while the fact

that among mammals generally, it is the male that is most vocal--and that chiefly, or even sometimes exclusively, at the rutting season--renders it antecedently likely that among mammals generally, including the human species, there is in the female an actual or latent susceptibility which, under the conditions of human civilization, may be transferred to music generally. (129-130)

Women are more likely to be aroused by the male voice, Ellis argues, because evolutionary history suggests a long-standing susceptibility to the male voice. Furthermore, given the deepening of the male voice at puberty, physiological evidence would seem to indicate that such a change is partially the result of sexual selection, which means ancestral females must have paid considerable attention to the male voice, and therefore at present remain susceptible not only to male singing, but to music in general. On the other hand, since women's voices experience no substantial changes during puberty, Ellis reasons, there is little evidence to suggest that the female voice can be taken as a sexual characteristic, and therefore men would neither be sexually influenced by women singing, nor sexually excited by music in general.

Of course, Bloom *is* aroused by music, by the human voice, although the voice in this case belongs to Simon Dedalus, and the song leads him into a sexual fantasy:

Tenderness it welled: slow, swelling, full it
throbbed. That's the chat. Ha, give! Take! Throb.
a throb, a pulsing proud erect.

Words? Music? No: it's what's behind.

Bloom looped, unlooped, noded, disnoded.

Bloom. Flood of warm jamjam lickitup
secreteness flowed to flow in music out, in
desire, dark to lick flow invading. Tipping her
tepping her tapping her topping her. Tup Pores to
dilate dilating. Tup. The joy the feel the warm
the. Tup. To pour o'er sluices pouring gushes.
Flood, gush, flow, joygush, tupthrob. Now!
Language of love. (U11.701-709)

Despite references to "tupping her" (recalling Iago's
warning to Desdemona's father that Othello, the black ram,
is "tupping" his white ewe), the imagery in this passage
points to masturbation rather than intercourse, so that
Simon's singing only indicates a further exclusion of any
active female role in the overall mapping out of sexuality
and sexual display that occurs in this episode.

Both the silencing of the barmaids and the emphasis on
male sexual display and sexual fantasy certainly fit the
general pattern of Darwinian sexual evolution. So well, in
fact, do the images of passive females and active males fit
within Darwin's scheme that a certain tension develops
within "Sirens" not only between the Homeric and Darwinian

discourses, but within the Darwinian/Bloomian science of sexuality itself.

A crucial and oft-cited inconsistency in Darwin's theory of sexual selection, and one that has bearing on how we read "Sirens," occurs with the shift from non-human to human sexual selection. Among other species Darwin describes, the power of choice lies almost exclusively with the female. It is through the selective pressures of a powerful female aesthetic that male birds, for example, evolve their colorful plumage, their elaborate songs, their complex courtship dances. But when Darwin turns his attention to humans, the power of selection is transferred almost exclusively to men:

Man is more powerful in body and mind than woman, and in the savage state he keeps her in a far more abject state of bondage than does the male of any other animal; therefore it is not surprising that he should have gained the power of selection. Women are everywhere conscious of the value of their beauty; and when they have means, they take more delight in decorating themselves with all sorts of ornaments than do men. They borrow the plumes of males birds, with which nature has decked this sex, in order to charm the females. As women have long been selected for beauty, it is not surprising that some of their

successive variations should have been transmitted exclusively to the same sex; consequently that they should have transmitted beauty in a somewhat higher degree to their female than to their male offspring, and thus have become more beautiful, according to general opinion, than men. Women, however, certainly transmit most of their characters, including some beauty, to their offspring of both sexes; so that the continued preference by the men of each race for the more attractive women, according to their standard of taste, will have tended to modify in the same manner all the individuals of both sexes belonging to the race.

With respect to the other form of sexual selection (which with the lower animals is much the more common), namely, when the females are the selectors, and accept only those males which excite or charm them most, we have reason to believe that it formerly acted on our progenitors. Man in all probability owes his beard, and perhaps some other characters, to inheritance from an ancient progenitor who thus gained his ornaments. But this form of selection may have occasionally acted during later times; for in utterly barbarous tribes, the women have more power in choosing, rejecting, and tempting their lovers, or of

afterwards changing their husbands, than might have been expected. (D 901)

Exactly what causes this reversal, where women become the objects of choice rather than the choosers, has been debated elsewhere.⁵ Darwin himself offers one explanation by pointing out that the change in sexual dynamics occurred among our "savage" progenitors. Our uncivilized ancestors, because they were savages, but savages with evolving brains, were able to shift effectively the prevailing sexual power structure by subjugating women. But the wresting of sexual power away from women is mostly, according to Darwin, a change informed by something much more basic than increasing intellect:

There can be little doubt that the greater size and strength of man, in comparison with woman, together with his broader shoulders, more developed muscles, rugged outline of body, his greater courage and pugnacity, are all due in chief part to inheritance from his half-human ancestors. These characters would, however, have been preserved or even augmented during the long ages of man's savagery, by the success of the strongest and boldest men, both in the general struggle for life and in their contests for wives; a success which would have ensured their leaving a

more numerous progeny than their less favoured brethren. (D872)

The infamous Darwinian displacement of sexual choice turns out to be an evolutionary extension of what Darwin views as the general physical and mental superiority of men. He often argues, for example, that "Man is more pugnacious and energetic than woman, and has a more inventive genius"--capacities forged not through the passive processes of female sexual choice, nor by way of the delicate refinement of male beauty effected through a female aesthetic, but through the rigors of the principal process that drives evolution in its entirety--*natural* selection. It is the superior physical and mental abilities of men that would finally bring about the usurpation of female sexual choice:

These various faculties will thus have been continually put to the test and selected during manhood; they will, moreover, have been strengthened by use during this same period of life. Consequently in accordance with the principle often alluded to, we might expect that they would at least tend to be transmitted chiefly to the male offspring at the corresponding period of manhood. . . .

Thus man has ultimately become superior to woman. It is indeed fortunate that the law of

equal transmission of characters to both sexes prevails with mammals; otherwise it is probable that man would have become as superior in mental endowment to woman, as the peacock is in ornamental plumage to the peahen. (D874)

And lest modern males be thought exempt from the sculpting benefits of competition, Darwin adds:

With civilised people the arbitrament of battle for the possession of the women has long ceased; on the other hand, the men, as a general rule, have to work harder than the women for their joint subsistence, and thus their greater strength will have been kept up. (D872-873)

One might argue, in Darwin's defense, that he simply follows his observations, that sexual dimorphism among humans cannot be explained according to the sex roles discernible among other species. Certainly, Darwin's principal strategy of establishing an unbroken continuity between nature and culture is one even he feels uncomfortable trying to make at times. Human sexual behavior, as Darwin argues on numerous occasions, is far more complex than that of pheasants or bower birds, and given our unique affinity for highly abstract attributes such as intellect, wittiness, social standing, and economic status, the disparity between the

"lower" species and Englishmen and Englishwomen may prove too great to bear analogy. When it comes to "mankind," and

especially with savages, many causes interfere with the action of sexual selection as far as the bodily frame is concerned. Civilised men are largely attracted by the mental charms of women, by their wealth, and especially by their social position; for men rarely marry into a much lower rank. Then men who succeed in obtaining the more beautiful women will not have a better chance of leaving a long line of descendants than other men with plainer wives, save the few who bequeath their fortunes according to primogeniture. With respect to the opposite form of selection, namely, of the more attractive men by the women, although in civilised nations women have free or almost free choice, which is not the case with barbarous races, yet their choice is largely influenced by the social position and wealth of men; and the success of the latter in life depends much upon their intellectual powers and energy, or on the fruits of these same powers in their forefathers.

(D891)

And yet, Darwin cannot, in the final analysis, abandon his argument for the relevance of sexual selection all together.

There is, however, reason to believe that in certain civilised and semi-civilised nations sexual selection has effected something in modifying the bodily frame of some of the members. Many persons are convinced, as it appears to me with justice, that our aristocracy, including under this term all wealthy families in which primogeniture has long prevailed, from having chosen during many generations from all classes the more beautiful women as their wives, have become handsomer, according to the European standard, than the middle classes; yet the middle classes are placed under equally favourable conditions of life for the perfect development of the body. (D892)

Women, at least civilized women, are essentially removed from the selective process except in terms of their appearance. They are no longer under the general pressures of natural selection (as is the still the case with "savage" women), and therefore while men continue to evolve, women come to represent the eye of the evolutionary storm, points of stasis and conservation, nurturers rather than doers. They become, according to Nancy Armstrong (222-224), the

tamers of men, trading in the rigors of competition for a supporting role through an exchange of sexual power for domestic power. The ideal evolutionary end of domestic selection is a woman very much like Virginia Woolf's Mrs. Dalloway--the perfect hostess, who is "cloistered, exempt" (121).

Although the shift from female to male sexual choice is problematic for Darwin, we must keep in mind that no matter what role females are assigned in his evolutionary history, the real power, though perhaps disguised by anthropomorphic issues of beauty and taste, always lies with men. Female birds, for example, choose males that are not only physically attractive "according to their standards of taste," but also represent (and this, I think, is lost on many of Darwin's commentators) what men ostensibly desire of themselves--courage, perseverance, pugnacity, strength, even a rugged physical outline. Darwin's theory of sexual selection is nothing if not an evolutionary tale of *male desire*. The seemingly inexplicable break from a female-driven sexual evolution to male-centered human sexuality, then, is really no shift at all, but a variation on a theme that allows the construction of human female sexuality within a domestic rather than competitive economy, to align the "natural" history of the feminine aesthetic with prevailing economic and social patterns. And the benefit, according to Darwin's scheme, is that women are finally allowed to develop, indeed, *evolve* as objects of greatest

value within an arena for which they are best suited--the household.

To return to the issue of singing and its relation to sexuality--although women "are generally thought to possess sweeter voice than men," and such a capacity was probably first acquired as a sexual trait, it is a characteristic, according to Darwin, that "must have occurred long ago, before our ancestors had become sufficiently human to treat and value their women merely as useful slaves" (D881). That is, song as a true expression of female desire was usurped at the very moment women became domestic. And yet, the "impassioned orator, bard, or musician, with *his* varied tones and cadences . . . uses the same means by which his half-human ancestors long ago aroused each other's ardent passions, during their courtship and rivalry" (my italics, D881). Men, it seems, are still able to arouse what Darwin reservedly calls "sensations and ideas" that "appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age" (D880).

Joyce's reversal of the Odyssean pattern, then, is not so simple as it first appears, since the inversion is informed by Bloom's Darwinian/scientific (as opposed to Homeric/artistic) sensibilities, an objectifying and very specific rhetorical perspective that not only readily transforms the act of singing into the symbolics of sexual display, but reveals Bloom's, and subsequently Darwin's,

sexological discourse to be one generated out of the male imagination and, despite the pretense of performance for the sake of female spectators, one produced solely for male consumption.

In "Sirens," Leopold Bloom, as Darwinian and amateur sexologist, reveals, albeit unwittingly, that the science of sexuality, the science of determining what women want, thrives on the necessary absence of feminine subjectivity. Bloom's explanation of Molly's attraction to Blazes Boylan, an explanation informed by Darwin's treatise on sexual selection, turns out to be more reaction than explanation, a failed attempt, and very much after-the-fact, at a rationalization of Molly's sexual behavior. Instead, we have a representation of male desire (or perhaps even jealousy) mediated by the iconography of Darwinian courtship.

By adopting Darwinian discourse, Bloom opens himself up to the tensions inherent in that discourse, and reveals, for example, at the point of application, that female desire escapes the confines of the male imagination. The only sexual performances Bloom captures within the folds of Darwinian sexual selection in the "Sirens" episode are his own and those of the other men present in the concert room, against which Miss Kennedy, in a truly telling reversal of the Homeric myth, "plugged both two ears with little fingers" (Ull.129-130).

NOTES

¹ Gifford notes that Virag's references to odor as an attractant echo Darwin's treatment of the role odor plays in mate selection. See Gifford, 495.

² In his autobiography, Darwin offers his appreciation of such novelists:

[Novels] which are works of the imagination, though not of a very high order, have been for years a wonderful relief and pleasure to me, and I often bless all novelists. . . . A novel, according to my taste, does not come into the first class unless it contains some person whom one can thoroughly love, and if it be a pretty woman all the better. (138-39)

³ Rosemary Jann ("Darwin and the Anthropologists: Sexual Selection and Its Discontents" *Victorian Studies* 37 [1994]: 287-306) argues that Darwin's "narrative" of sexual selection was "implicitly fragmented into rival discourses of continuity and rupture, progress and regression" (289) precisely at the point where animal sexual selection, governed almost exclusively by females, becomes human sexual behavior, where males own the power of selection. See also Gillian Beer's *Darwin Plots*.

⁴ The principal moment of ridicule comes early in the episode with Bloom's arrival in the bar. Miss Kennedy makes reference to Boyd, a druggist, and his "goggle eye" one

night in the "Ancient Concert Rooms" (U213.145,139), which is suggestive of both a grotesque leering as well the phallic "other" eye. Also, due to his close proximity in the scene, we are to take it as a reference to Bloom's eyeing Molly during a concert.

Shrill shriek of laughter sprang from miss Kennedy's throat. Miss Douce huffed and snorted down her nostrils that quivered imperthnthn like a snout in quest.

--O! shrieking, miss Kennedy cried. Will you ever forget his goggle eye?

Miss Douce chimed in in deep bronze laughter, shouting:

--And your other eye! (U11.143-148)

At this point Bloom passes by ("By went his eyes" U11.155) and the derisive laughter increases.

⁵ Cf. Jann, Armstrong.

CHAPTER III

EXHIBITIONISTISTICITY:

SEXUAL SCIENCE AND "NAUSICAA"

A woman, unlike a man, is prepared by Nature, to play a skilful part in the art of love. The man's part in courtship, which is that of the male throughout the zoological series, may be difficult and hazardous, but it is in a straight line, fairly simple and direct. The woman's part, having to follow at the same moment two quite different impulses, is necessarily always in a zigzag or a curve. That is to say that at every erotic moment her action is the resultant of the combined force of her desire (conscious or unconscious) and her modesty. She must sail through a tortuous channel with Scylla on the one side and Charybdis on the other, and to avoid either danger too anxiously may mean risking shipwreck on the other side. She must be impenetrable to all the world, but it must be an impenetrability not too obscure for the divination of the right man.

Havelock Ellis
"The Art of Love"

Beauty in the human species is, above all, a feminine attribute, making its appeal to men.

Havelock Ellis
"Sexual Selection in Man"

It is not improbable that the females were modified in other respects for the same purpose and by the same means; so that women have acquired sweeter voices and become more beautiful than men.

Charles Darwin
The Descent of Man

Miss Kennedy and Miss Douce, the laughing barmaids of "Sirens," are slowly transformed into silent objects of male voyeurism, a transformation that begins with the arrival of Simon Dedalus:

Into their bar strolled Mr Dedalus. Chips, picking chips off one of his rocky thumbnails. Chips. He strolled.

--O, welcome back, miss Douce.

He held out her hand. Enjoyed her holidays?

--Tiptop.

He hoped she had nice weather in Rostrevor.

--Gorgeous, she said. Look at the holy show I am. Lying out on the strand all day.

Bronze whiteness.

--That was exceedingly naughty of you, Mr Dedalus told her and pressed her hand indulgently. Tempting poor simple males. (U11.192-202)

Certainly, "tempting poor simple males" is part of both the Homeric and Darwinian patterns, and the sexual energy in the Ormond bar still belongs primarily to the sirens at this

point. Almost immediately, however, Simon begins singing at the piano and the barmaids become little more than showpieces as male voices effectively take over the remainder of the episode. The two women appear, like Stephen's wading bird-girl in *Portrait*, only in fragments--lips parting to whisper in someone's ear, a hand moving over the "smooth jutting beerpull" (U11.1112, 1116). It is not that they no longer play a part in the episode, but that their roles, colored by Bloom's sexual fantasies, become primarily visual rather than auditory. In fact, Lydia Douce's exposure of her tan line ("Bronze whiteness") acquired on the strand, and Simon Dedalus's flirtatious response, are part of a series of allusions that serve as preamble to the highly visual performance of Gerty MacDowell in "Nausicaa."

In "Nausicaa," an episode much like "Sirens" in that it focuses on sexual exhibition, Joyce weaves a tale of tumescence and detumescence, offering Gerty MacDowell as the perfect embodiment, or inscription, of the desiring female whose performance on Sandymount strand is read by the scientifically-minded Leopold Bloom.¹

Gerty MacDowell is also an embodiment of the culture of twentieth-century Dublin, as Garry Leonard and Jennifer Wicke, among others, have recently pointed out.² She is one of the "lovely seaside girls" (U13.906), a "womanly woman" by her own account, whose self-image is a montage woven out of publications like *Lady's Pictorial* (U13.35).³ As Christy

Burns observes, "Gerty's mind has been overfed" by "women's magazines and sentimental fiction," texts which "had an investment in training women in the art of posing for the male (premarital) gaze" (319). Indeed, as Jennifer Wicke argues, "*Ulysses* presents all sexuality as having been formed in the crucible of the mass culture it delineates, whether that is soft-core pornographic literature or high-art pornographic literature, ads for bathing beauties, or Greek statuary" (606). And certainly no figure is presented as a more perfect product of that crucible of sexuality than Gerty, who stands as a "fair specimen of winsome Irish girlhood as one could wish to see" (U13.80-81).

And it is precisely because Gerty MacDowell is such a remarkable "specimen" of cultural values (or texts) that Leopold Bloom, whose notions of sexuality are forged in the same crucible of mass culture, reads her display within the context of sexual science.

Interestingly, the first bit of information we are privy to when the episode shifts to Bloom's perspective is that Gerty walks with a limp:

Tight boots? No. She's lame! O!

Mr Bloom watched her as she limped away. Poor girl! That's why she's left on the shelf and the others did a sprint. Thought something was wrong by the cut of her jib. Jilted beauty. A defect is ten times worse in a woman. But makes them polite. Glad I didn't know it when she was on show. Hot

little devil all the same. I wouldn't mind.
Curiosity like a nun or a negress or a girl with
glasses. (U13.771)

No sooner is Gerty's "show" disrupted by her limp than Bloom manages to recover a sexual reading of Gerty's performance by turning her affliction into a sexual novelty. Of course, Bloom is as much an embodiment of sexual fetishisms as sexual science, although the two are certainly not mutually exclusive. Bloom's fetishes run parallel to his role as amateur sexologist insofar as such fetishes are effortlessly transformed into scientific data. While Gerty herself makes numerous references to her "higharched instep" (U13.98,168), her "wellturned ankle" with its "perfect proportions" (U13.168-69), indications of her reliance upon the muted sexuality found in sentimental novels, we also should keep in mind that Havelock Ellis, one of Joyce's principal discursive models for Bloom, devotes an entire chapter in "Erotic Symbolism" to the sexual suggestiveness of the female foot, providing examples of "masturbation with images of feet," which is precisely what Bloom has been doing while watching Gerty.

In *Ulysses*, as well as in the scientific texts it rewrites, the construction of sexuality *in its entirety* within the authoritative symbolics of sexual science brings about the possibility of interpreting a wide range of information as not only sexually suggestive, but also

scientifically valuable. Theorists like Ellis, for instance, are able to offer up as scientific evidence data ranging from carefully calibrated pelvic measurements of non-European females, to confessions of fetishisms, to passages from the *Kama Sutra* and *Arabian Nights*. It is no wonder, then, that Bloom so easily shifts his attention from Gerty's lameness to pondering the phenomenon of synchronic menstruation, to masturbation, and finally to general observations on the animalistic aspects of courtship, including the courtship behavior of men: "Always know a fellow courting: collars and cuffs. Well, cocks and lions do the same and stags" (13.829). While Gerty exhibits her "wealth of wonderful hair" (13.116), Bloom recalls Molly's hair as "[hair] strong in rut" (13.840). In addition, he often ponders the constructivist and performative aspects of female sexuality: "Fashion part of their charm," (13.804); "Must have the stage, the rouge, costume, position, music," (13.855; "Neat way she carries parcels, too. Attract men, small thing like that. Holding up her hand, shaking it, to let the blood flow back when it was red. Who did you learn that from? Nobody. Something the nurse taught me. O. don't they know!," (13.923). And although the episode is offered up in primarily visual terms, Bloom is just as easily led to speculations on the mechanics of odor and its role in sexual arousal:

Wait. Hm. Hm. Yes. That's her perfume. Why she waved her hand. I leave you this to think of me when I'm far away on the pillow. What is it? Heliotrope? No. Hyacinth? Roses, I think. She'd like the scent of that kind. Sweet and cheap: soon sour. Why Molly likes opoponax. Suits her, with a little jessamine mixed. Her high notes and low notes. At the dance night she met him, dance of the hours. Heat brought it out. She was wearing her black and it had the perfume of the time before. Good conductor, is it? Or bad? Light too. Suppose there's some connection. For instance if you go into a cellar where it's dark. Mysterious thing too. Why did I smell it only now? Took its time in coming like herself, slow but sure. Suppose it's ever so many millions of tiny grains blown across. Yes, it is. Because those spice islands, Cinghalese this morning, smell them leagues off. Tell you what it is. It's like a fine fine veil or web they have all over the skin, fine like what do you call it gossamer, and they're always spinning it out of them, fine as anything, like rainbow colours without knowing it. Clings to everything she takes off. Vamp of her stockings. Warm shoe. Stays. Drawers: little kick, taking them off. Byby till next time. Also the cat likes

to sniff in her shift on the bed. Know her smell
in a thousand. Bathwater too. Reminds me of
strawberries and cream. Wonder where it is really.
There or the armpits or under the neck. Because
you get it out of all holes and corners. Hyacinth
perfume made of oil of ether or something.
Muskrat. Bag under their tails. One grain pour off
odour for years. Dogs at each other behind Good
evening. Evening. How do you sniff? Hm. Hm. Very
well, thank you. Animals go by that. Yes, now,
look at it that way. We're the same. . . .

Perhaps they get a man smell off us. What
though? Cigary gloves long John had on his desk
the other day. Breath? What you eat and drink
gives that. No. Mansmell, I mean. . . . That
diffuses itself all through the body, permeates.
Source of life. (U13.1007-1040)

As was the case in "Sirens," women engaged in any activity
that can be interpreted as sexual become starting points for
Bloom's investigation of Molly's sexuality. He is reminded,
for instance, of the night Molly met Blazes Boylan ("At the
dance night she met him, dance of the hours") and Boylan's
probable attraction to Molly's perfume, the odor of which
still clung to her black dress from the night before and is
activated by the heat of her body. The passage also echoes
fragments of the "Calypso" episode, especially in terms of

the scents Bloom recalls from his morning spent near Molly-- the "warmth of her couched body rose on the air, mingling with the fragrance of the tea she poured" becomes, in "Nausicaa", a memory of "Cinghalese" tea and the scent of cast-off shoes and undergarments. The "Nausicca" passage is also mapped out in conjunction with the Homeric Calypso, who brews tea in her cave, sings, like Molly, and weaves on a loom.⁴

Gerty's perfume triggers Bloom's memories of Molly's favorite perfume, her bodily odors, and the odors that cling to her clothes. Bloom's reaction to Gerty's perfumed wave also sparks textual memories of both Joycean and Homeric origins. But Bloom likewise translates his own olfactory experiences into naturalistic terms--the mechanics of diffusion (also figured as a Penelopean-spider web being spun to sexually entrap men/prey), the connection between the sexual significance of human odors, both natural and manufactured, and the courtship behaviors of animals.

The Darwinian penchant Bloom has for establishing a continuum between natural and cultural phenomena is very evident in this passage in his speculations on odors. That perfume, despite its artificiality, can function as a sexual lure much as the natural emanations of animals is testament to the influence not only of Darwin, but also Havelock Ellis, who devotes a number of chapters to the sexual implications of odor, including the sexual effects of perfume, the odor of armpits, feet, clothes, tobacco, and

semen. In fact, the plethora of sexual, or sexualized information Bloom is able to generate from Gerty's performance is largely due, I would argue, to Havelock Ellis's popular elaborations of Darwinian sexual selection.

Their Natural Cravings: Ellis, Darwin, and the Construction of Female Desire.

In the preface to the fourth volume of his *Studies in the Psychology of Sex* (1905), Ellis gives credit to Charles Darwin for introducing the "doctrine of sexual selection," only to criticize him for having

injured an essentially sound principle by introducing into it a psychological confusion whereby the physiological sensory stimuli through which sexual selection operates were regarded as equivalent to aesthetic preferences. This confusion misled many, and it is only within recent years (as has been set forth in the "Analysis of the Sexual Impulse" in the previous volume of these *Studies*) that the investigations and criticisms of numerous workers have placed the doctrine of sexual selection on a firm basis by eliminating its hazardous aesthetic element. Love springs up as a response to a number of stimuli to tumescence, the object that most adequately

arouses tumescence being that which evokes love; the question of aesthetic beauty, although it develops on this basis, is not itself fundamental and need not even be consciously present at all. When we look at these phenomena in their broadest biological aspects, love is only to a limited extent a response to beauty; to a greater extent beauty is simply a name for the complexus of stimuli which most adequately arouses love. If we analyze these stimuli to tumescence as they proceed from a person of the opposite sex we find that they are all appeals which must come through the channels of four senses: touch, smell, hearing, and, above all, vision. (v-vi)

Ellis's overt intention throughout his *Studies* is to rewrite and revitalize the science of sexuality within a physiological framework, to ground the study of sexual arousal in a "complexus of stimuli" while leaving issues of beauty to the aestheticians.⁵

First, he transforms Darwin's largely relativistic sexual aesthetic--that is, *differences* in the apprehension and evaluation of beauty from individual to individual, as well as across cultures--into an objective, physiological phenomenon that is not always culturally determined:

The fact that the modern European, whose culture may be supposed to have made him

especially sensitive to aesthetic beauty, is yet able to find beauty among even the women of savage races serves to illustrate the statement already made that, whatever modifying influences may have to be admitted, beauty is to a large extent an objective matter. The existence of this objective element in beauty is confirmed by the fact that it is sometimes found that men of the lower races admire European women more than women of their own race. There is reason to believe that it is among the more intelligent men of lower race--that is to say those whose aesthetic feelings are more developed--that the admiration for white women is most likely to be found. (153)

That common descriptions of female beauty are found across cultures indicates common psychical organization, and standards of beauty are projections of a universal human faculty that can be classified and ranked in relation to the European ideal, which stands as the epitome of its expression.

The scientific study of beauty became, then, in the early years of the twentieth century, a study in methods of sensory stimulation. In *Sexual Selection in Man*, for example, Ellis divides his investigation of human sexual arousal according to the four primary senses that play a part in courtship: touch, smell, hearing, and vision. The

first three, though certainly having a share in sexuality, are nevertheless of less importance for humans (with the exception of children, savages, and women, who, within Ellis's studies, always demonstrate a greater affectability to primitive stimuli than do civilized men) than vision. Vision, according to Ellis, "is the main channel by which man receives his impressions" and it is "not surprising that from the point of view of sexual selection vision should be the supreme sense, and that the love-thoughts of men have always been a perpetual meditation of beauty" (136).

But the love-thoughts of women also tend to be determined by the love-thoughts of men, and the apprehension of female beauty, inextricably woven to sexual impulses in Ellis's argument, is no less determined by the desiring male gaze, even when the desiring subject happens to be a woman:

Beauty as incarnated in the feminine body has to some extent become the symbol of love even for women. Colin Scott finds that it is common among women who are not inverted for female beauty whether on the stage or in art to arouse sexual emotion to a greater extent than male beauty Scott considers that female beauty has come to produce an emotional effect on both sexes alike. It is certainly rare to find any aesthetic admiration of men among women, except in the case of women who have had some training in art. In

this matter it would seem that woman passively accepts the ideals of man. "Objects which excite a man's desire," Colin Scott remarks, "are often, if not generally, the same as those affecting woman. The female body has a sexually stimulating effect upon both sexes. Statutes [sic] of female forms are more liable than those of male form to have a stimulating effect upon women as well as men. The evidence of numerous literary expressions seems to show that under the influence of sexual excitement a woman regards her body as made for man's gratification, and that is this complex emotion which forms the initial stage, at least, of her own pleasure. Her body is the symbol for her partner, and indirectly for her, through his admiration of it, of their mutual joy and satisfaction" (138-39)

Not only is sexual attraction rooted in physiological responses as opposed to any separate aesthetic faculty, but the biological norm is generated solely out of male desire (desire "incarnated" in the female body) to the point where female desire is fully rendered only in terms of its adherence to male expectations and gratification. Yet, despite the turn toward the trope of physiology, the fact that "numerous literary expressions" are made to serve as scientific evidence in support of the thesis that "a woman

regards her body as made for man's gratification" is a proposition that points to an increasing rather than diminishing reliance on aesthetic expression as evidence. In fact, Ellis's evidence for an objective, universal quality of feminine beauty is surprisingly non-physiological. Ellis, like Darwin, though on a grander scale, depends upon a wide variety of artistic sources ranging from the Hebraic *Song of Songs*, to Australian folktales, to the *Arabian Nights*, to Plato, to the troubadours of the twelfth century, to Petrarch's sonnets.

Upon closer inspection, Ellis's stated goal, the elimination of the "hazardous aesthetic element" from the the study of sexuality, is somewhat misleading. In his efforts to correct Darwin's injurious mistake, Ellis does not abandon the aesthetic components of sexuality, but radically expands the experimental and textual territory of sexology in all directions. In other words, once the initial gesture is made to include the language and methods of physiology, Ellis, far from expunging issues of aesthetic taste, expands its potential evidentiary importance since even the apprehension of beauty, the highest level of discrimination, is still an elaboration on physiological reponses.⁶

The effect of Ellis's expansion of the boundaries of sexual evolution cannot be overemphasized, for it enables Ellis, indeed the entire discipline of sexology, to use virtually all modes of expression, not as mere anecdotal

evidence, but as legitimate and legitimizing scientific data. Cultural expressions of sexuality, from literature to advertising, are then subsumed into the discourse of an essentialist science, and beauty, especially female beauty, is no longer simply a matter of taste per se, but rather an expression of a biological norm. The net effect is not a diminishing of aesthetic concerns in favor of strictly physiological stimuli, but an exponential increase in available evidence at all levels of investigation, from the excitation of olfactory nerves, to the Song of Songs.⁷

Against any temptation to reduce Bloom's speculations on the function of odor and its connection to sexual arousal to the vagaries of "naturalism," or even dismiss his thoughts as mere "perversions," we can, instead, read his response to Gerty's visual (and sensory) performance as part of a continuum of scientifically-informed interpretations of sexual display found here and elsewhere in Joyce's fiction. Just as the barmaids are Homeric sirens transcribed within the explanatory discourse of Darwinian sexual selection, Gerty MacDowell, a perfect "specimen" of the wind-swept heroine of sentimental fiction, is translated into an ideal object of scientific observation. If Gerty represents the cultural textualization of the female body, Bloom's reading of Gerty points to the continuing process of recontextualization of that already textualized body within the discourse of science, so that Gerty's body language is always just that, a body of language to be deciphered, data

to be interpreted. Appropriately, Bloom thinks at one point, while gazing at Gerty, that there is "a kind of language between us" (*U* 13.944).

And that language is one that is supposed to reveal Gerty's desires, but true to the Darwinian-Havelockian paradigm that defines female sexuality in terms of male gratification, the desire she fulfills is the voyeuristic desire of Bloom, who, also true to his role as amateur sexologist, translates her bodily confession of desire into scientific data.

Joyce's fictionalization of the science of courtship in "Nausicaa," as well as "Sirens," offers interesting insights into the transformation of cultural texts (courtship plots, advertising, pornography) into scientific evidence, and science into icons of popular culture. Bloom also represents an inherent dualism that characterizes the act of observation of itself--the desire to be both scientific observer and to gain some sexual gratification from that observation. In both roles, that of scientist and that of voyeur, the female body is a site of excess, a composite of cultural and biological inscriptions--a composition first formulated within Darwin's theory of sexual selection where the apprehension of beauty, aesthetic preferences determined by cultural norms, effect the actual physical evolution of the body.

The net effect of Gerty's performance on Sandymount strand is the evocation of a conglomeration of texts that

cannot, in the end, be fully disentangled. Her visual display is one necessarily viewed through the textual language of courtship plots, Darwinian evolution, Homeric parallels, advertising, Havelockian sexology, and Joyce's own Ulyssean scenarios of sexual drama. Like Stephen in *Portrait*, we look into the science of sexuality and discern the image of Venus, or the courtship plots that inform Darwin's history of sexual evolution. And when we peer into the artifice of *Ulysses*, examine, along with Bloom, the textual body that is Gerty Macdowell, we discover, in the vast interweaving of texts that make up her character, and that of her admirer, the unmistakable threads of sexual science.

NOTES

¹ According to the Linati scheme, the technique of "Nausicaa" is "tumescence" and "detumescence." In my analysis of the episode, I want to suggest that Joyce equates the science of sexuality with voyeurism, and consider the possibility that the technique as named is meant to connote a specific connection to works like Ellis's *Erotic Symbolism*, where the mechanism of tumescence and detumescence receives considerable attention.

² See Garry Leonard's insightful essays, "Joyce and Advertising: Advertising and Commodity Culture in Joyce's Fiction" and "Power, Pornography, and the Problem of Pleasure: The Semerotics of Desire and Commodity Culture in

Joyce" (*James Joyce Quarterly* 30/31, 1993). See also, in the same issue, Jennifer Wicke's "Modernity Must Advertise: Aura, Desire, and Decolonization in Joyce," and Peggy Ochoa's "Joyce's 'Nausicaa': The Paradox of Advertising and Narcissism."

³ The phrases "womanly woman" and "manly man" (U288.210) function as ideal expressions of a sexuality perfectly balanced. Within the discourse of sexology, a woman admires what is manly about a man, while a man is attracted to what is womanly in a woman. It is the delineation of this essentialist argument that occupies much of Ellis's work on sexual differences, and serves as the foundation for arguments against the violation of naturally-ordained boundaries. "The sexes," Ellis argues, "do not play their part in life by their freedom to imitate each other, even though they are entitled to possess that freedom, but by liberating their own native impulses, and in that way building up a richer and more joyous civilization than can ever be founded on the instincts of one sex alone" ("Preface to the Sixth Edition," *Man and Woman* xi).

⁴ See Gifford, 77.

⁵ Ellis's strategy, as I see it, is to inject a degree of scientific formality into the debate over human sexual behaviors. He does so not by abandoning anecdotal evidence but by including within that anecdotal evidence phrases that recontextualize and linguistically reconfigure sexuality. For example, after describing the effects music has upon

sexual selection, a subject covered initially by Darwin, and in much the same manner, Ellis briefly reconfigures sexual selection as "the influence on the pairing impulse of stimuli acting through the ear" (134).

⁶ Although I maintain that Joyce is writing within a Darwinian discourse, Ellis is also a primary source for Joyce when it comes to the science of sexuality as it appears in *Ulysses*, as other readers of Joyce have pointed out. Nevertheless, those who argue for a close connection between Joyce and Ellis tend to emphasize, and I think greatly overemphasize, Ellis's (and Joyce's) interest in sexual perversions. I, on the other hand, am concerned with Ellis's treatment of sexuality and what he owes to Darwinian discourse.

⁷ The multiplication of the discourse of sexuality is treated at length in Michel Foucault's *The History of Sexuality, Volume I*.

CHAPTER IV

CHILD'S PLAY

Courtship resembles very closely, indeed, drama or game; and the aggressiveness of the male, the coyness of the female, are alike unconsciously assumed in order to bring about in the most effectual manner the ultimate union of the sexes.

Havelock Ellis
Studies in the Psychology of Sex

Following the strict scientific method we thus enter the sacred precincts of the nursery, and inquire of the suckling the answer to one of the most momentous questions man can ask, "Whence are we?"

Alfred C. Haddon
The Study of Man

Book Two, Chapter One of *Finnegans Wake* is devoted to the children's drama, *The Mime of the Mick, Nick and the Maggies*, a play described as a "Pageant of Past History worked up with animal variations" (FW 221.18). The players in this "funnaminal world" (fun, phenomenal, and animal) are sometimes described in terms of their bird-like behavior or appearances. Chuff, peacock-like with his "gamecox spurts"/gamecock spurs (FW 234.17) is surrounded by a "host

of spritties," who go "penhenning a ripididarapidarpad around him" (FW 234.18), while Chuff's rival, Glugg, is "bedizzled and debuzzled" (FW 234.2), a drunken unattractive fowl with "specks on his lapsan" (FW 251.16). A battle ensues for attention of the chorus of females, who urge us to "listen to the mocking birde to micking barde making bared." Chuff and Glugg, caught up in the drama of "Boyrut season" (FW 229.33) engage in a singing/instrumental contest, one we've "heard . . . since songdom was gemurmal" (FW 251.35). The contestants begin by "puffiing (their) blowbags" (FW 252.2), suggesting not only bagpipes (a traditional instrument of warfare), but also a Darwinian bird-like display, exposing distended airsacks like male grouse. Earlier, Chuff, urged by the twentynine schoolgirls (who, in order to "setisfire more than to teasim," send him "perfume most praypuffs" and "allaud" to him by all the "licknames in the litany" [FW 234.22-25]) "bellows upthe tombucky in his tumtum argan," creating a multiple image of a grouse-like airsack, a man filling his lungs with air prior to singing, the inflation of bagpipes, as well as an erection ("Their orison arises," [FW 235.6]). The connection between singing, displaying, and Darwinian sexual selection is made much more explicit, however, when the Rainbow girls choose Chuff over Glugg ("one's only owned by naturel rejection") and shout "Charley, you're my darwing!" and "sing they sequent the assent of man" (FW 252.28-29).

Margot Norris reads the "Mime" episode as a Joycean critique of the "symbolical fiction of home as the locus of infantile security, nurturance, and comfort," (*Joyce's Web* 209), effectively recontextualizing childhood "into its social and political matrix" (212). Furthermore, Norris argues,

the "Mime" is *bricolage*, assembling from the submerged Joycean pretexts that we have received only accidentally--the epiphanies, Stanislaus' diary, *Stephen Hero*--the larger social plot that rewrites the Irish artist's plight as a historical and class issue. These topoi--tea party, exile and home--imbricate each other in complex ways. The "Mime" conflates nursery and parlor, infantile games and adolescent courtship rituals, to show that older children enact social values already imbibed in nursery rhymes and fairy tales The "Mime" allows us to reconsider as primordially exiled the child whose class dislocations cause it to be marginalized and ostracized--the child relegated to a collective narrative otherness in Joyce's earlier fiction as member of a savage race (191)

We might also, however, read the "Mime" chapter, with its references to courtship and Darwinian sexual selection, as a world of children Joyce finds already symbolically

contextualized by turn-of-the-century sexual science. In this final chapter on sexual selection, I examine, first, the scientific troping of childhood that occurred in the late nineteenth century, considering, especially, the use of nursery rhymes as evidence for the evolutionary history of sexuality and courtship. Second, I consider the textual relationship Joyce's drama of childhood courtship has to anthropological studies of children's games, as well as to Joyce's own earlier Darwinian fictions of courtship found in *Ulysses*.

Unconscious Keepers of Archaic Archives

Havelock Ellis, in the sixth volume of his *Studies in the Psychology of Sex*, begins his chapter on "Sexual Education" defending himself against those who would view the study of children as irrelevant to the investigation of sexuality. "It may seem to some," Ellis remarks,

that in attaching weight to the ancestry, the parentage, the conception, the gestation, even the first infancy, of the child, we are wandering away from the sphere of the psychology of sex. That is far from being the case. We are, on the contrary, going to the root of sex. All our growing knowledge tends to show that, equally with his physical nature, the child's psychic nature is

based on breed and nurture, on the quality of the stocks he belongs to, and on the care taken at the early moments when care counts for most, to preserve the fine quality of those stocks.

(*Studies in the Psychology of Sex*, volume 6, 33)

The strong eugenicist assumptions of Ellis's position are made strikingly manifest here, although, despite the importance he places on "the quality of the stocks," he is less concerned with the issue of heredity as a determining factor for the sexual behavior of children than with the attention one must give to the channeling of even the earliest of sexual energies. "When we reach the period of infancy," he argues, almost as a warning to parents, "we have already passed beyond the foundations and potentialities of the sexual life; we are in some cases witnessing its actual beginnings" (34). Sexual training, therefore, must begin early, and it must be based upon the scientific knowledge of the realities of childhood sexuality.

Ellis is not plying new waters here. Freud had already made children the subject of sexual studies ("Zur sexuellen Aufklärung der Kinder," 1907) and as is the case with Ellis's other major treatments of sexuality, his expansive *Studies in the Psychology of Sex* is largely a compilation and interpretive rendering of what other scientists have observed and written about.¹ But his encyclopedic approach

is precisely what makes Ellis valuable because he points to the extensive effort being given over to an overall mapping out of childhood sexual behavior in the first decades of this century.

In fact, for anthropologists of the late nineteenth and early twentieth centuries, children were rather routinely observed as if they offered clear windows into our species' sexual past; their games, as Alfred C. Haddon argued in 1898, "commemorate methods of courtship which presumably belonged to different races and which certainly were in vogue during diverse ages" (*The Study of Man* 313). Elsewhere Haddon notes:

Those unconscious keepers of archaic archives--our village children--have retained some of the romping games of the "grown ups" of "Merrie England"; but also in some singing games, played by the roadside, can we trace degenerate and fragmentary survivals of the social life, ceremonies, and religious practices of our savage ancestors. (264)

The process of inscribing children-at-play as objects of anthropological study provides a foundation upon which, for instance, the natural and social sciences, as well as psychology, built up evidence for the anthropological and evolutionary significance of domestic courtship and

marriages.² Children's games allowed a broad range of human sciences--sciences already heavily imbued with courtship plots and recapitulationist assumptions--to construct a natural history of the family from observations made within the domestic scene itself.³ In many cases, the nursery or playroom, rather than the parlor or bedroom, became the discursive center of a domestic sexuality, a window on adult activities that take place in those other rooms-- thus Havelock Ellis can refer to childhood sexual games as "Playing pa and ma," games that may even take the form of "rudimentary sexual intercourse" (37, 36).

Nuts in May

As one of the numerous examples of the significance of children's games to anthropological, as well as sexual histories of the family, and the manner in which those games are transcribed within the larger discourse of human evolution, Alfred Haddon argues that the children's rhyme "Nuts in May," which "seems at first sight a nonsensical title to a not very exciting game" is, upon careful observation, a children's version of the practice of "marriage by capture," where women were ritually stolen by men of neighboring tribes:

Marriage by capture is still practised in
Australia and a few other places. In many savage

and barbaric countries the bride makes a show of resistance, resorting in some cases to physical force, though all the time willing to be married, and there is frequently a sham fight between the relatives of the bride and bridegroom, and there are actual survivals in English, Scottish, Welsh, and Irish customs of marriage by capture. (317)

The game "Nuts in May," Haddon reports, is certainly one of those "survivals", since it

is always played in lines, and the principal incidents running through all the versions are the same, i.e., one player is selected by one line of players from her opponents' party. The "selected" one is refused by her party, unless someone from the opposite side can effect her capture by a contest of strength. (315)

Joyce seems to have envisioned something very similar to the kinds of courtship games Haddon records when he composed the *"The Mime of the Mick, Nick and the Maggies,"* as evidenced by a letter he sent to Harriet Shaw Weaver:

The scheme of the piece I sent you is the game we used to call Angels and Devils or colours. The Angels, girls, are grouped behind the Angel, Shawn, and the Devil has to come over three times and ask for a colour. If the colour he asks for

has been chosen by any girl she has to run and he tries to catch her. As far as I have written he has come twice and been twice baffled. The piece is full of rhythms taken from English singing games. (Gilbert, *Letters* 295)

Although Joyce gives no indication in the letter that he intends anything of an anthropological sort, it is certainly made clear within the "Mime" episode itself that his children's guessing game is marked not only as a game of courtship, (if not as a game of marriage-by-capture) but as a children's game enacted along the lines of a Darwinian model.

I am not suggesting that Joyce's primary goal, like Alfred Haddon's or Havelock Ellis's, is to reinforce the notion that childhood behaviors should serve as windows on human evolutionary development. Rather, Joyce repeats the mapping out of childhood sexuality and courtship within the misprision of *Finnegans Wake* if only to spoof the process of scientific encoding by means of comedic excess. The point of such overdetermination is that scientific explanations are always mediated, like the *Wake* itself, by other discursive systems. In other words, Joyce takes the language of sexual selection as already applied to the games of the nursery and playroom, and applies it excessively in order reveal, much as he does elsewhere in his fiction, that the scientization

of humanity does not proceed from direct observation of actions, but from the incorporation of already existing language, including the culturally-regulated language of children.

The Law of the Jungle

One system that mediates Darwinian accounts of courtship and marriage, and therefore Joycean renderings of Darwinian courtship scenarios, is the language of exchange. Haddon, as noted above, interprets the children's game of "Nuts in May" as echoing the practice of marriage by capture. But marriage by capture cannot be considered part of the larger phenomenon of courtship since it does not really involve the "element of love" (316). Marriage by capture, then, is only a preliminary to the more complex, and truly selective process of sexual barter. Darwin notes just such a transformation in the evolution of marriage, from an act of violent capture to an aesthetic exchange :

In our own marriages the "best man" seems originally to have been the chief abettor of the bridegroom in the act of capture. Now as long as men habitually procured their wives through violence and craft, they would have been glad to seize on any woman, and would not have selected the more attractive ones. But as soon as the

practice of procuring wives from a distinct tribe was effected through barter, as now occurs in many places, the more attractive women would generally have been purchased. (D 897).

The essential connection between primitive sexual selection, aesthetics, and economic exchange is a fact of which Joyce is very aware, for despite the foregrounding of primarily aesthetic reasons for the rainbow girls choosing Chuff over Glugg, (as well as Glugg's failure to guess the proper color of Issy's/the rainbow girls' underwear) it is clear that principles of economics, not beauty, drive sexual selection in the "Mime":

Xanthos! Xanthos! Xanthos! We thank to thine, mighty innocent, that diddest bring it off fuitefuite. Should in offer years it become about you will after desk jobduty becoming a bank midland mansioner we and I shall reside with our obeisant servants among Burke's mobility at La Roseraie, Ailesbury Road. Red bricks are all hellishly good values if you trust to the roster of ads but we'll save up ourselves and nab what's nicest and boskiest of timber trees in the nebohood. Oncaill's plot. Luccombe oaks, Turkish hazels, Greek firs, incense palm edcedras. (FW 235.9-21)

Chuff, who is one of Shaun the Postman's numerous manifestations in the *Wake*, is chosen because of his earning potential, while Glugg is rejected, not because he is unattractive, but because, as an artist, he lacks financial promise. The Darwinian selective process presumably based upon the power of aesthetics is also a discourse of sexual exchange. As Issy remarks in the "night lessons" episode that follows the play, "One must sell it to some one, the sacred name of love," for it is the "law of the jungler" (*FW* 268.31,32). The notion that "love" is quite literally worthless unless it is valuable as a commodity is the true law of the jungle (and "young girls").

We are told at the conclusion of the face to face encounter between Chuff and Glugg that "exceedingly nice girls can strike exceedingly bad times unless so rightly chosen's by" and "one's only owned by naturel rejection" (*FW* 252.22). Certainly, Glugg is not chosen because he is an unreliable, and unprofitable, artist ("no mere waterstichystuff in a self-made world that you can't believe a word he's written in" [*FW* 252.26]), and in one sense, the "exceedingly nice girls" do "strike" or cause "exceedingly bad times" for Glugg: "Creedless, croonless hangs his haughty," his "blowbag" deflated (*FW* 252.33). Sexual selection has its mirror image in sexual rejection, and in a Darwinian world for a displaying male not to be chosen by a female means a great deal, since traits of the rejected male will not be passed on to future generations. But Joyce

suggests something else in this passage as well. In all the confusion that surrounds the contest between Chuff and Glugg ("such transfusion just to know twigst timidy twomeys, for gracious sake, who is arthoudux from whose heterotropic, the sleepy or the glouch" [FW 252.19]) one can easily overlook the fact that by not being chosen themselves the rainbow girls are also in danger of striking "exceedingly bad times unless so richtly chosen's by." Indeed, as Issy remarks in an earlier episode, Darwinian sexual selection constitutes, in a nutshell, the "strangle for love and the sowiveall of the prettiest" (FW 145.26), whereby the economic survival of women is linked, metaphorically and in reality, to male competition and sexual aesthetics.

The "Mime" episode, then, might be read not only as a dramatic production, but as an overproduction, where the impulse to transcribe children scientifically as vessels of cultural values is revealed through the parodic children's play. The cultural and ideological grounding of scientific inquiry appears precisely at the point where childhood sexuality is made to conform, perhaps too closely, not only to issues of aesthetic apprehension as manifested in the simple act of guessing colors (even if that "aesthetic" apprehension, as Ellis would have it, is rooted in the mechanisms of physiology) but to a complex adult system of economic exchange that would render the body obsolete, or valueless, unless transformed into an object of desire through exchange. After all, as Joyce writes, "one's only

owned by naturel rejection," that is, one becomes valuable as property only by rejecting the ideologically bare body.

Darwinian evolution allows its practitioners like Alfred C. Haddon to inscribe freely as "natural" any cultural system of sexual exchange even as it operates within the "sacred precincts of the nursery." Games like "Nuts in May" are treated as telling manifestations of earlier evolutionary stages through which humankind has passed, and children, recapitulating that progression, reveal through play a knowledge of those more primitive stages to the observant scientist .

The compulsion to delve into the recesses of the home, to bring even childhood games within the circle of a unifying scientific knowledge, was instigated by Darwin, who first formulated sexuality in terms of excess, of overdetermination, where value is no longer linked to the general survival economy, to utilitarian needs, but thrives along the margins as largely unregulated, and unprofitable desire. Darwin himself had to come up with some means of discursively regulating evolutionary excesses by incorporating aesthetics into his theory of selection--an aesthetics that, at least when it comes to human sexuality, is directly linked to desires generated by the symbolics of economic status (clothes, jewelry, and other expressions of wealth). It is within this Darwinian context that Joyce constructs his own "Pageant of Past History with animal variations," reinventing and reinvesting children's games

with scientific significance if only to unravel, in dramatic fashion, the ties that bind science to the larger culture. And, as we will see, Joyce takes the occasion to rewrite one of his own consumer-driven Darwinian courtship plots within the context of the children's play.

"Nausicaa" Revisited

Grace Eckley, in her comprehensive study *Children's Lore in "Finnegans Wake,"* provides detailed explanations of the numerous games and rhymes Joyce employs throughout the "Mime" chapter. Drawing upon, among other texts, Alice Gomme's *Traditional Games of England, Scotland, and Ireland* (1894, 1898), Eckley discloses the extent to which children's lore supplies material for Joyce's most materialistic work. And although she acknowledges the courtship elements present in Joyce's rewriting of children's games and rhymes, she treats such instances as Joycean embellishments on core structures. "In staging the game of 'Angels and Devils or colours,'" for instance, Eckley argues, "Joyce added an element of sexual allure" (my emphasis 133). I would suggest, however, that to interpret the courtship components of the games as creative afterthoughts, or products of poetic license, is to miss the degree to which children's games, as Eckley herself notes, not only "provide an introduction to sex," but had also been

scientifically and popularly textualized as primitive rituals of sexuality by the time Joyce composed the episode. Interestingly, it is Alice Gomme's two volumes on children's games that provided much of the background evidence Alfred Haddon required in order to produce his study on the "primitive survivals in child-life" (xxii), and he not only frequently acknowledges his debt to her scholarship, but often abstracts information directly from Gomme's texts and reconfigures that information within an evolutionary context.

Despite the crosscurrent of textual sources for the children's drama, the most important material source of the "Mime" episode may lie within Joyce's own texts. Certainly, the configuring of Chuff and Glugg as displaying male birds and the rainbow girls as peahens recalls the similarly avian imagery of "Sirens," which also, as I point out in chapter two, is an episode composed within the iconographical frame of Darwinian courtship. Even more strikingly, the children's play re-plays key components found in the stylized "Nausicaa" episode. The twin boys, Tommy and Jacky Caffrey, for example, seem to prefigure the rival brothers Shem and Shaun, and therefore Glugg and Chuff.

Not only do Tommy and Jacky, as precursors of Glugg and Chuff, respectively, demonstrate the same level of bitter rivalry as their Wakean counterparts, but that rivalry is fueled in part by their desire to win the attention of their

sister, Cissy, much as Shem and Shaun compete for Issy's attention throughout *Finnegans Wake*.⁴

Also, in the "Mime," Glugg tries and fails to guess the color of the rainbow girls' underwear in order to win Issy for himself:

Speak, sweet bird! Mitzymitzy! Though I did
ate tough turf I'm not the bogdoxy.

--Have you monbreamstone?

--No.

--Or Hellfeursteyn?

--No.

--Or Van Diemen's coral pearl?

--No.

He has lost.

Off to clutch, Glugg! Forwhat! Shape
your reres, Glugg! Foreweal! (*FW* 225.20-30)
As the result of Glugg's inability to solve the riddle, he
is banished and Chuff wins the contest ("Ring we round,
Chuff! Fairwell! Chuffchuff's inners even. All's rice with
their whorl!" [*FW* 225.30-31]) In similar fashion, Tommy
Caffrey in "Nausicaa" is pressed to reveal the identity of
his "sweetheart":

--Tell us who is your sweetheart, spoke Edy
Boardman. Is Cissy your sweetheart?

--Nao, tearful Tommy said.

--Is Edy Boardman your sweetheart? Cissy queried.

--Nao, Tommy said.

--I know, Edy Boardman said none too amiably with an arch glance from her shortsighted eyes. I know who is Tommy's sweetheart. Gerty is Tommy's sweetheart.

--Nao, Tommy said on the verge of tears.(U 13.66-74)

Instead of winning his sister's attention, Tommy is led away to urinate with the help of Edy Boardman, an event echoed in the "Mime" chapter when the rainbow girls make fun of Glugg for peeing in his pants and playing with himself ("Otherwised, holding their noises, they insinuate quiet private, Ni, he make peace in his preaches and play with esteem," [FW 225.5-7]).

But the similarities between the children's drama and that which takes place between Bloom and Gerty do not end here. In addition to the fact that Bloom's Darwinian reading of Gerty's performance fits well with the courtship ritual of the children's play, we also have a lengthy description of Gerty's underwear, anticipating the guessing of colors in the children's play:

As for undies they were Gerty's chief care and who that knows the fluttering hopes and fears

of sweet seventeen (though Gerty would never see seventeen again) can find it in his heart to blame her? She had four dinky sets with awful pretty stichery, three garments and nighties extra, and each slotted with different coloured ribbons, rosepink, pale blue, mauve and peagreen, and she aired them herself and blued them when they came home from the wash and ironed them and she had a brickbat to keep the iron on because she wouldn't trust those washerwomen as far as she's see them scorching the things. She was wearing the blue for luck, hoping against hope, her own colour and lucky too for a bride to have a bit of blue somewhere on her because the green she wore that day week brought grief because his father brought him in to study for the intermediate exhibition and because he thought perhaps he might be out because when she was dressing that morning she nearly slipped up the old pair on her inside out and that was for luck and lovers' meeting if you put those things on inside out or if they got untied that he was thinking about you so long as it wasn't of a Friday. (U 13.171-87)

Gerty's superstitious link between the color of her underwear, exactly how she wears it (inside out) and her wish to be married is re-inscribed within the courtship

ritual/guessing game enacted in the children's nursery. Furthermore, Bloom, in a textual foreshadowing of Glugg's failure to guess the correct color, offers three guesses as to the scent of perfume he believes to have come from Gerty:

Wait. Hm. Hm. Yes. That's her perfume. Why she waved her hand. I leave you this to think of me when I'm far away on the pillow. What is it? Heliotrope? No. Hyacinths? Hm. Roses, I think. (U 13.1007-1009)

The answer to the children's guessing game is, of course, heliotrope, but the answer lies, unavailable to Shem, not simply in the past of childhood, but in a past Joycean text.

Joyce also rewrites the economic underpinnings of Darwinian sexual selection within the selective processes of the "Mime." As noted in chapter three, Gerty MacDowell's self-display, her notions of her sexual worth, are determined by the consumer culture she embodies. Her bodily confession of desire is not only couched within the language of Bloomian sexual discourse, but also within the symbolics of advertising. Her hands are like "finely veined alabaster," made so through her frequent use of lemonjuice and "the queen of ointments" (U13.90). She has also been taking "iron jelloids," along with "the Widow Welch's female pills" in order to stave off anemia and that "tired feeling" associated with menstruation. Her manner of dress is described as "simple", but with the "instinctive taste of a

votary of Dame Fashion." She wears, in accord with the dictates of *Lady's Pictorial*, a "neat blouse of electric blue selftinted by dolly dyes. . . with a smart vee opening down to the division" (U13.148-152). Gerty is, in essence, marketing herself according to the dictates of fashion magazines.

Her exhibition on the beach is viewed and interpreted by Bloom in terms of advertising as well, so that when he sees she is lame, he thinks: "Poor girl! That's why she's left on the shelf Jilted beauty. A defect is ten times worse in a woman" (U13.770-72, 774-75). The illusion of health and beauty created by fashionable accouterments like her electric blue blouse, her "navy threequarter skirt cut to the stride [that] showed off her slim graceful figure to perfection," her "coquettish little love of a hat" with its "underbrim of eggblue chenille," her shoes ("the newest thing in footwear"), her "shapely limbs encased in finespun hose with highspliced heels and wide garter tops," along with her ointments and pills, is disrupted by Gerty's lameness. Bloom, true to his sensibility as an ad canvasser, and much like a potential buyer of an item who discovers a flaw, understands why Gerty, as sexual merchandise, has been "left on the shelf".

We cannot fully separate Bloom's sexual reading of Gerty from his economic reading since the science of sexuality is, like Darwinian natural selection, founded upon the figuring of nature as a vast economy, and sexual

selection takes place within that economy. In fact, according to Darwin, the absence of an economic element when it comes to human sexual selection results in either indiscriminate selection, as is the case with violent marriage-by-capture, and therefore no true sexual selection occurs, or the inability to bargain for what women themselves find is of greatest value: their beauty. Why else, Darwin argues, would the aristocracy be consistently more beautiful than the majority of the lower classes unless wealth, or rather the exchange of female beauty for economic reward, plays a significant role in sexual selection among humans? (*Descent* 892).

The economics of display are not only consistent with the expression of sexual desire, but provide the very foundation of that desire. So, when Joyce rewrites the courtship drama of sexual selection within the home (the house, the *oikos*-- *oikonomikous*: economics), indeed, within the playroom where children enact their own economic version of sexual selection ("so rightly chosen's by," *FW* 252.22), Joyce also recalls earlier courtship performances that occur in *Ulysses*.

Such thematic repetitions, along with the distinguishing presence of Darwinian sexual selection as an operative paradigm in both texts, suggest that the "Mime" inscribes Joyce's own fictions of Darwinian sexual selection by rewriting the sexual dynamics of "Nausicaa" (which itself is a return to the sexual dynamics of "Sirens") within the

context of a children's game of courtship. Joyce's language of sexual science accumulates in Darwinian fashion from one text to the next, beginning with Stephen's debate with the eugenicists, circulating through the mind of Bloom, to the performances of the barmaids, to Gerty's display on Sandymount shore, only to come into play again within the courtship games of children. Joyce's construction of the children's play, then, is a drama that not only draws upon anthropological associations between the ancestral courtship rituals and present-day nursery games, but that also reenacts, in miniature, Joyce's own mimicry of Darwinian courtship.

Margot Norris argues, in *Beasts of the Modern Imagination*, that James Joyce's domesticity removes him from what she terms the "biocentric" tradition initiated by Charles Darwin. Truly Darwinian artists, like D.H. Lawrence and Franz Kafka, eschew parody, imitation, and domesticity in their art in favor of allowing their "animality" to speak (1). Their works are marked by "bestial acts and gestures," their artistic sensibilities driven by a primitive libido. Joyce, on the other hand, thrives on mimesis and parody, where libidinal forces are always manifested according to domestic patterns. But in the "Mime" chapter it is the very domesticity of Darwin that Joyce recreates, borrows from, imitates--the Darwin of the Victorian drawingroom, the Darwin who, despite the revolutionary nature of his work, explained powerful natural mechanisms, including sexual

impulses, by reference to barnyard animals and ladies' fashions. The evolving libido does indeed find its utmost expression in excess, in the enormous tail of the peacock, in the ballooning airsacks of grouse, in elaborate hairdos, but the emanations of Darwinian sexual evolution are also couched in the economics of the home, the flirtations of the parlor, posturing on the beach, songs sung in a local hotel bar, and in the playacting of children.

NOTES

¹ See Russett, pp. 45 ff.

² Michel Foucault obviously provides an important interpretive paradigm for my reading of the "Mime" chapter, although I am less concerned with the discourse employed to specifically *regulate* children's sexuality than I am with reading the construction of children's sexuality within the larger context of the evolutionary history of courtship. Nor do I read evolutionary accounts of courtship as an attempt, as Foucault claims is the case with much of the science of sexuality, to speak "about it [sexuality] from the rarefied and neutral viewpoint of a science" in order to avoid speaking "about sex itself." (*The History of Sexuality* 53). Foucault's own theoretical position denies the possibility that "sex itself" can be spoken of at all since it is always already a construct. I am more concerned, therefore, with the alignment of sexuality and aesthetics as initiated by Darwin, debated by figures like Ellis or Geddes, and

parodied by Joyce. Nevertheless, the general Foucauldian position that the "sex of children and adolescents has become, since the eighteenth century, an important area of contention round which numerable institutional devices and discursive strategies have been deployed" is one I share (30).

³ It is crucial to keep in mind that children's games were not thought of, as we might think of them today, as cultural inventions designed to inculcate social values, anymore than marriage was viewed as a contractual invention rather than a natural alliance subsequently embellished in various ways by civilization (cf. Ellis's chapter, "Marriage," in *Studies in the Psychology of Sex*, volume 6, pp.420-506). Children's games and rhymes (and marriage, for that matter) were considered true survivals of primitive practices, and were therefore studied as natural phenomena.

⁴ The similarity of "Cissy" and "Issy," though suggestive of an intentional echo on Joyce's part is, nevertheless, problematic given the protean nature of names in *Finnegans Wake*. The fact that the name "Issy" has come to denote the sister of the two brothers (who are not always portrayed as brothers), "Shem" and "Shaun," (who also carry a multiplicity of names and attributes) is a critical convention, not a textual certainty.

CHAPTER V

VARIABILITY IN EVERY TONGUE:

JOYCE AND THE DARWINIAN NARRATIVE

Once the narrator has begun modifying the initial style by supplementing it with new elements, he has opened a bag of narrating techniques that makes difficult any direct return to the stylistic rock of Ithaca.

John Paul Riquelme
Teller and Tale
in Joyce's Fiction

Considering the extensive influence of Darwinian evolutionary theory, when Joyce writes to Frank Budgen that the stylistic variations of the "Oxen of the Sun" in *Ulysses* bear some relationship to "faunal evolution" perhaps we should not dismiss the implications, as Paul Van Caspel does when he warns the "inexperienced reader . . . to concentrate on the story as mirrored in the various styles . . .," and that he "need not bother about matters of biological evolution" (204).¹

Stuart Gilbert, on the other hand, in his classic study *James Joyce's Ulysses*, reads the *technic* of the episode rather too strictly in accord with Joyce's embryonic metaphor. Gilbert writes:

The rationale of this sequence of imitation lies in the theme. The *technic* and the subject of this episode are both embryonic development and the styles of prose employed follow an exact historical order

To get the full effect of the literary artifice employed in the text . . . the reader probably needs a fairly intimate acquaintance with the literary landmarks which cast their shadow upon it, but even without precise knowledge he cannot but feel, as he reads on, that under the protean transformations a constant evolution is unfolding itself, that the changes in style are purposeful and progressive. The process of development begins in a murk of chaos, recalling the opening phrase of the Creation: "the earth was without form and void, and darkness was upon the face of the deep." (297)

Gilbert's teleological reading of the stylistic shifts that characterize "Oxen of the Sun," and his emphasis on an "exact historical" arrangement of styles lies in stark contrast to E.P. Walkiewicz's suggestion that Joyce is in fact offering a tantalizing semblance of a well-ordered linguistic taxonomy, only to destabilize that order with the fall, as Joyce himself describes it, into a "frightful

jumble of pidgin English, nigger English, Cockney, Irish, Bowery slang and broken doggerel" in the final section of the episode (*Letters* 140).² Such marginalized languages represent types, or stages, or species, that develop outside the canonized styles of Anglo-Saxon rhythmic alliterative prose, Swiftian satire, or the effusive renderings of Thomas Huxley. They do not, in other words, fit within a neat arrangement, nor do they offer any support for the historically and ideologically powerful notion that evolution, including linguistic evolution, is teleological. As Robert Spoo also observes, "Joyce's parody reaches beyond individual signatures to the ideas of history" (139):

"Progression," "constant evolution," "faunal evolution," "the natural stages of development," "purposeful and progressive." Joyce's symbolic pretensions aside, these organicist metaphors draw attention to another feature of the discourse of literary history at the turn of the century: its profound reliance on the developmental hypothesis, the master narrative of organic growth which, with the rise of the biological sciences and theories of evolution, increasingly shaped the larger discourse of history in this period. (142)

Furthermore, Spoo argues, "Oxen of the Sun"

participates in and responds subversively to such organicist assumptions. . . . On this reading, Joyce's references to embryos, natural stages of development, and faunal evolution in the letter to Budgen are not so much provocations to symbol hunting as a laughing acknowledgment of the controlling metaphors, the tropics of historical discourse, that operate within "Oxen"--structurally, linguistically, and (as the episode is set in a maternity hospital) thematically--metaphors that are made increasingly visible in the course of the episode's parodic clowning, particularly in its explosively counterteleological finale. (144)

The powerful organic tropes of recapitulation and teleological evolution that drive "Oxen of the Sun" are also subject, then, to dysteleological disruption. For example, the "missing links" between the stylistic blocks (like the "missing link of creations chain desiderated by the late ingenious Mr Darwin, 14.858-59) raise, on the one hand, the possibility of temporarily absent or delayed information, a rectifiable incompleteness of the organic record. But such gaps also suggest, on the other hand, that the systematic ordering of organic or linguistic development is a tenuous enterprise to begin with, one that tends to break down along its edges, in those zones of transition between types, and

especially when the language under consideration is of a recognizably unofficial nature (like pidgin). In "Oxen of the Sun," then, Joyce simultaneously offers a scientifically informed arrangement of language while the arrangement itself ironically highlights problems inherent in the act of classifying complex systems.

Another kind of tension develops in "Oxen of the Sun" between the surface rendering of the succession of styles and the setting of the episode itself. We are, after all, in a maternity hospital, awaiting the delivery of Mina Purefoy's baby, but the literary varieties that "evolve" are all of a distinctly paternal origin. Thus, against the backdrop of the cries of real labor, and in the company of Bloom and a chorus of male medical students, Stephen Dedalus proclaims the supremacy of the male artist: "In woman's womb word is made flesh but in the spirit of the maker all flesh that passes becomes the word that shall not pass away" (14.292-94). But it is the smothering presence of a male-generated biological discourse, here rendered with even greater intensity than in "Sirens," and appropriately in the style of Thomas Huxley, that points to a parodic overdetermination of the very Darwinian paradigm that informs the episode in its entirety.

Science, it cannot be too often repeated, deals with tangible phenomena. The man of science like the man in the street has to face hardheaded facts

that cannot be blinked and explain them as best he can. There may be, it is true, some questions which science cannot answer--at present--such as the first problem submitted by Mr L. Bloom (Pubb. Canv.) regarding the future determination of sex. Must we accept the view of Empedocles of Trinacria that the right ovary (the postmenstrual period, assert others) is responsible for the birth of males or are the two long neglected spermatozoa or nemasperms the differentiating factors, or is it, as most embryologists incline to opine, such as Culpepper, Spallanzani, Blumenbach, Lusk, Hertwig, Leopold and Valenti, a mixture of both? . . . The other problem raised by the same inquirer is scarcely less vital: infant mortality . . . Nature, we may rest assured, has her own good and cogent reasons for whatever she does and in all probability such deaths are due to some law of anticipation by which organisms in which moribund germs have taken up their residence (modern science has conclusively shown that only the plasmic substance can be said to be immortal) tend to disappear at an increasingly earlier stage of development, an arrangement which, though productive of pain to some of our feelings (notably the maternal), is nevertheless, some of us think, in the long run beneficial to the race

in general in securing thereby the survival of the fittest. (14.1226-1285)

The attempt on the part of the males to silence the maternal voices coming from the other rooms of the hospital, to avoid any "hentrusion" into their rational discussion of gestation (14.1448) results in a current of female concerns that runs throughout the episode, but only *within* male discourse, much as Darwin's history of sexuality, which includes the construction of female desire, is elaborated according masculine expectations. The succession of paternal styles, then, does not merely aspire to the organic, seeking to partake of the power of maternal creation--its goal is to define and confine the maternal, the feminine, within the tropological field of biological discourse.

As tempting as it is to align Darwin himself with this patriarchal, linguistic taxonomy, to make him the generative father-figure of the episode's oppressive evolutionary structure, we can also associate his evolutionary principles with the instability of the episode's final section, the chaotic tailpiece that ushers in the "intricate zoological design" of "Circe" (*Letters*, 164).³ As will be seen, the connection Darwin forges between linguistic and evolutionary processes, a connection Joyce explicitly makes in "Oxen," though parodically, does not always result in a stable taxonomy. Although Darwin, as Spoo argues, "might be said to preside over the developmental and evolutionary tropes" of

"Oxen," the Darwinian troping of language also produces a flood of linguistic play, its own "frightful jumble" of language, species, types, etc., depending on which Darwin one chooses to bring to the forefront (147).

In these final two chapters, I argue that Joyce does not leave his Darwinian sensibilities behind in "Oxen," but continues to explore the narrative possibilities Darwin's version of evolutionary history makes imaginable. What the narrative implications are will be tentatively explored in this chapter. In the next, I expand the discussion by offering a reading of the "letter" chapter in *Finnegans Wake*. By forging a link between nature, gender, and anonymity in his formulation of the principle of natural selection, Darwin opens up a complex narrative space within which Joyce attempts to construct what Suzette Henke has called the "mysterious and polymorphous iterations" of the female psyche (127), a movement of pure (linguistic) desire that resists designation, and appears to circulate outside the patriarchal taxonomies of expression. By associating the fluid language of his female characters such as Molly in *Ulysses*, and especially ALP in *Finnegans Wake* with nature and natural processes, Joyce again draws on the powerful evolutionary iconography initiated by Darwin.

Genus Inexhaustible

In Book I. vi of *Finnegans Wake* the effusive Professor Jones (a.k.a. Shaun), an "eminent spatialist," (FW 149.18-19) lectures his time-oriented brother, Shem, on the "dime-cash" (time-space) debate. As one committed to a strict Newtonian distinction of space and time, Jones must insist that objects, in this case a piece of cheese ("cheeps"), must have a definite position:

My heeders will recoil with a great leisure
how at the outbreak before trespassing on the
space question where even michelangelines have
fooled to dread I proved to mindself as to your
satisfaction how his abject all through (the
quickquid of Professor Ciondolone's too frequently
hypothecated *Bettlermensch*) is nothing so much
more than a mere cashdime however genteel he may
want ours, if we please (I am speaking to us in
the second person), for to this graded
intellecktuals dime *is* cash and the cash system
(we must not be allowed to forget that this is all
contained, I mean the system, in the dogmarks of
origen of spurios) means that I cannot now have or
nothave a piece of cheeps in your pocket at the
same time and with the same manners as you can now

nothalf or half the cheek apiece I've in mind
unless Burrus and Caseous have not or not have
seemaultaneously sysentangled themselves, selldear
to soldthere, once in the dairy days of buy and
buy. (160.35-161.14)

As one of many Shaunian masks, "Professor Jones" serves as a parodic representation of Wyndham Lewis, who, in *Time and Western Man*, attacks Joyce for being too time-oriented--a conceptual and artistic flaw Lewis cites as one cause for the utter materialism of *Ulysses*. Joyce answers the charge, and effects a sure revenge, by creating the pedantic Professor Jones, a "slav to methodiosness" (159.30-31) who attacks the "sophology of Bitchson" (the sophistry/philosophy of Bergson) [149.20] and the "done by chance ridiculisation of the whoo-who and where's hairs theorics of Winestain" (Einstein) [149.27-28].

Professor Jones's lesson on the "cashdime" problem is, on a broader scale, also rooted in familiar Wakean conflicts: Cain and Abel, Jacob and Esau, the Ant and the Grasshopper, Burrus and Caseous, angel and devil, saint and sinner, orthodox and heretic. Newton/Lewis versus Einstein/Joyce ("timekiller and spacemaker" [247.2]) is another embodiment of the principle of opposites that defines the roles of the bickering brothers throughout the book. The Shaunian-type is always trying to "sysentangle" himself from the Shemian-type, but finds himself caught up,

unwillingly and unwittingly, in the "mushe, mushe of mixness" (505.20). Of course, Professor Jones's predicament is doubly parodic since he, too, is part of the material swirl of Wakean (and Shemian) language, so that his argument for the preeminence of space over time--indeed, for clear-cut categorization at all levels of knowledge, a trademark of the Shaunian figure--is undercut at the outset. It is not really a question of whether Professor Jones is right or wrong when he insists that a piece of cheese cannot occupy different spaces/pockets at the same time, but that the flux of language, the "chance ridiculisations" of his own expressions, suggests, at the very least, that *linguistic* objects can occupy the same grammatical space while simultaneously existing on numerous meaningful, and perhaps contradictory levels. Such fluctuations in language allow the good professor a few puns at the expense of his artistic brother ("where michelangelines have fooled to dread") but they also force him to make the Platonic claim that the "speechform is mere surrogate" (149.29) to his purer intentions--the instability of language disrupting what would otherwise be time-less expressions.

But the "mixness" of *Finnegans Wake* is not just any old "mushe, mushe." It is a tide of language informed by familiar discourses, one of which is certainly Einsteinian relativity.⁴ Another, and one generally overlooked, is Darwinian evolution. Since Professor Jones takes all temporal philosophies to task, Darwinism, with its deep

commitment to the principle of variation over time, becomes a prime target. His criticism of "Professor Loewy-Brueller" (anthropologist Lucien Levy-Bruehl) as one "hopelessly vitiated by what I have now resolved to call the dime and cash diamond fallacy" is also marked by an allusion to Darwin's *The Descent of Man*: "'by Allswill' the inception and the descent and endswell of Man is temporarily wrapped in obscenity" (150. 30-31). Indeed, the biological descent of humanity, within a Darwinian framework, is "wrapped" in temporality and "obscenity" (obscene, presumably, because most of *Descent* is concerned with sexual selection), whose "accidents" (chance, random variations) Jones prefers to explain away by evoking the analogy of bad television reception: "looking through these accidents with the faroscope of television, (this nightlife instrument needs still some subtraction betterment in the readjustment of the more refrangible angles to the squeal of his hypothesis on the outer tin sides)" (150.32-35). Despite being caught up in the Darwinian/Einsteinian/Shemian flux, Jones still insists that he "can easily believe heartily in [his] own most spacious immensity as [his] ownhouse and microbemost cosm," that he is "reassured by ratio that the cube of my volumes is to the surfaces of their subjects as the sphericity of these globes . . . is to the feracity of Fairynelly's vaccum" (150.36-151.43). His language of measurement (which includes a Wakean version of the Pythagorean theorem, as well as a play on the castrato

singer Farinelli and the "sphericity" of his [missing] "globes") stems from a persistent belief in the preeminence of spatial organization (if not essences--cubes, spheres, triangles) over temporal processes, as well as his own centrality in the universe (albeit as microbe--"microbemoest cosm").

Shaun's goal is to remain, as he says, "stolidly immobile in space" (163.20), so he attacks, in the guise of Professor Jones, all systems suggestive of flux, of "mixness," and he does so, in part, by pointing out the hybrid natures of the very discourses that purport to explain such "mushe." Darwinian evolution, for example, is associated not only with the "theorics" of Einsteinian spacetime, but also with the dogmas of Marxian economics ("the *dogmarks* of origen on spurious"), or rather, the underlying argument of *The Origin of Species*, built upon an economic model of nature, shares in, along with Marx, the discourse of capitalism--literally a cash-dime system.

Bernard Benstock, in a tantalizing confluence of reality and fiction, argues, Jonesian-like, that the "political climate of *Finnegans Wake* owes as much to fundamental Marxian dialectics as its psychological climate is dependent upon Freud and Jung and its evolutionary structure determined by Darwin." But, Benstock is careful to warn us, "there is no reason to assume that Joyce was a Marxist," only that he was "aware of the various political aspects of contemporary society spotlighted by Marx's

sociological perspective" (246), just as Freud and Jung provide a "psychological climate" for *Finnegans Wake* without making Joyce a Freudian or Jungian. He seems less concerned, however, with qualification when it comes to Darwin's influence on Joyce. The "evolutionary structure" of *Finnegans Wake* is "determined by Darwin," whereas Joyce only "owes" something to Marx, or is "dependent upon the psychological climate" initiated by Freud and Jung (my emphases). If Benstock is correct in proposing that the entire Wakean structure is also a Darwinian structure, then perhaps we should carefully consider that the oft-despised Professor Jones is doing more than giving his wayward brother a lesson in spatial (or monetary) etiquette--that he is, indeed, revealing something fundamental about the linguistic hubbub of *Finnegans Wake*--and that the larger "system" of Joyce's most complex work is indeed informed by Darwinian evolution.

The potential connection between the complexities of nature and the complexities of the linguistic system of *Finnegans Wake* has previously been suggested by Louis O. Mink:

. . . *Finnegans Wake* is unlike other books, so the experience of reading it comes to be unlike other experiences of reading--in fact, hardly like "reading" at all. It seems to me now much more

like the experience of a scientist confronting nature (the "book of nature") or, in Bacon's phrase for scientific experimentation, trying to put nature to the torture, that is, to wring from it a confession of its own hidden forces and functions. As Anthony Burgess has remarked (in *Re Joyce*), "*Finnegans Wake*" is as close to a work of nature as any artist ever got." I would go even further and say that Joyce has created a world, though it is a word-world, which like the natural world has indefinitely many levels of organization and patterns of relationship. And reading *Finnegans Wake* is like the scientific inquiry into nature, constantly driven forward by the dynamic of intellectual curiosity and the satisfaction of small discoveries. (38)

Perhaps, though, we might fruitfully entertain more than an analogous relationship between our post-Darwinian conceptualization of nature and the complexities of *Finnegans Wake*, as well as work beyond the issue of Joyce's political "climate." Instead, we can recover, or continue to recover, specific manifestations within Joyce's fiction of the Darwinian imagination as it relates to the production of language. I propose, following Professor Jones's lead, that we can read *Finnegans Wake* as literary expression of a Darwinian "word-world," one that lends itself not to a

Baconian uncovering of the facts of nature, but a specifically textual refiguring of both nature and language as fundamentally inexhaustible.

Words and Things

As noted at the end of Chapter Five, Margot Norris, in her marvelously insightful exploration of Darwin's cultural impact, *Beasts of the Modern Imagination*, deliberately and overtly excludes Joyce from her band of "biocentric thinkers" (a group whose members include Lawrence, Nietzsche, Kafka, and Ernst) arguing that Joyce, "the master parodist, the genius of imitative form, . . . in spite of his coziness with the libido, never ventures into the ontological wilderness of biocentric thinkers."⁵ She defines the biocentric artist or philosopher as one who "[creates] as the animal--not like the animal, in imitation of the animal--but with their animality speaking."⁶ Charles Darwin stands as founder of this biocentric movement so astutely traced in Norris's study.

I have argued that Joyce should be included as an heir to the Darwinian imagination, especially when it comes to his creation of scenarios of sexual performance and its relation to aesthetic apprehension. Furthermore, I have pointed out that Joyce's domesticity, for which Norris exempts Joyce from the influence of Darwin, fits well with the very domestic aspects of not only Darwin but many of his

intellectual children, like Havelock Ellis and Alfred Haddon. Now I wish to offer yet one more objection to Norris's exclusion of Joyce from Darwin's influence. When it comes to the kind of textual effects Darwin's "shattering conclusions" had on the works of Lawrence, Kafka, Nietzsche, and Ernst, those textual effects, it seems to me, are at least categorically related to those we find in the later episodes of *Ulysses* and *Finnegans Wake* in its entirety-- e.g., the collapse of a fully representational, taxonomic language (especially following "Oxen of the Sun"), the emphasis on chance over design, process over stasis, aberration over type. My interest, however, lies less with the philosophical reverberations of Darwinism than with the narrative possibilities his theories enable.

I consider Darwin, to borrow (and perhaps misapply) Foucault's term, to be a "founder of discursivity," one of those who, through his own work, initiates "the possibilities and the rules of formation of other texts."⁷ As Margot Norris writes, the "philosophical ramifications" of Darwin's evolutionary treatises

are so immense that they strike at the most fundamental oppositions at the heart of Western culture: the difference between human and animal, male and female, Nature and culture. He reverses a system of signification at least as old as the Greek *polis* with whose emergence the images of

hybrid and intermediary forms (centaurs, Amazons, Cyclops) were banished to the realms of monstrosity and otherness. With the disappearance of the Author from Darwin's universe, these oppositions, which had been elevated virtually to the status of logical categories or necessary ways of thinking about the world, collapsed into a kind of Derridean freeplay. (37)

To build upon Norris's assessment, when Darwin published *The Origin of Species*, the ideal body of natural theology vanished, replaced by an accumulation of traces, some in the process of erasure (the human coccyx, for instance), others rendered functionally useless (male nipples). And along with the disappearance of the ideal body, fully immersed in the anonymous workings of natural processes, went the capacity to represent the body in full. Ears have histories, as do teeth, tongues, genitalia--all temporal aberrations given temporal names. Bodies were transformed from categorical expressions of type into palimpsests, flesh-and-bone registries of an arbitrary organic process.

In essence, Darwin made the body (and mind, and culture) a site of play, and in the same gesture, which could not be avoided, language itself was subsumed into this process of bio-signification:

[No] philologist now supposes that any language has been deliberately invented; it has been slowly and unconsciously developed by many steps. . . I cannot doubt that language owes its origin to the imitation and modification of various natural sounds, the voices of other animals and man's own instinctive cries, aided by signs and gestures. . . The frequent presence of rudiments both in languages and in species, is still more remarkable. The letter *m* in the word *am*, means *I*; so that in the expression *I am*, a superfluous and useless rudiment has been retained. In the spelling also of words, letters often remain as the rudiments of ancient forms of pronunciation. Languages, like organic beings, can be classed in groups under groups; and they can be classed either naturally according to descent, or artificially by other characters. Dominant languages and dialects spread widely, and lead to the gradual extinction of other tongues. A language, like a species, when once extinct, never, as Sir C. Lyell remarks, reappears. The same language never has two birth-places. Distinct languages may be crossed or blended together. We see variability in every tongue, and new words are continually cropping up; but as there is a limit to the powers of memory, single words, like whole

languages, gradually become extinct. As Max Müller has well remarked:--"A struggle for life is constantly going on amongst the words and grammatical forms in each language. The better, the shorter, the easier forms are constantly gaining the upper hand, and they owe their success to their own inherent virtue." To these more important causes of survival of certain words, mere novelty and fashion may be added; for there is in the mind of man a strong love for slight changes in all things. The survival or preservation of certain favoured words in the struggle for existence is natural selection. (D 462-66)

It is easy to identify one of Darwin's primary rhetorical strategies here, a simple yet highly effective substitution of "words" in place of "species." Darwin generates a syntactical surface structure from a set of deeper assumptions based on what happens to all objects, be it noses or nouns, when subjected to selective pressures over time. The ease with which Darwin binds together the processes of organic history and philology--that language is modified over time, that it develops through struggle as well as a desire for novelty (which also links language to aesthetic concerns), that it is subject to extinction, that language also contains useless rudiments marking its passage

through time--serves to illustrate my point that the language, the structure, the enabling analogies and metaphors, the deceptively simple *grammar* of Darwinian evolution, allows other disciplines to emerge within a powerful bio-linguistic space. In this case, and in light of the principle of natural selection, philologists not only can, but are required, lest they seem recalcitrant, to look at language in terms of competition, survival, variation, selection, use and disuse--to consider language not only as a product of evolution, but as an object of investigation ultimately accessible only through the specific language of Darwinian evolution.⁸

Naming the Unnamable

As Michel Foucault points out in *The Order of Things*, this alignment of things and words long served as a central strategy of the natural historian. In fact, the discourse of natural history is made possible by the

common affinity of things and language with representation; but it exists as a task only in so far as things and language happen to be separate. It must therefore reduce this distance between them so as to bring language as close as possible to the observing gaze, and the things observed as

close as possible to words. Natural history is
nothing more than the nomination of the visible.
(*The Order of Things* 132)

The classificatory system developed by Linnaeus, at least in its idealized form, "permits the visibility of the animal or plant to pass over in its entirety into the discourse that receives it" (*The Order of Things* 135). Yet, as Foucault maintains, language and species, thing and word ultimately remain separate, since the classificatory system of natural history (in the eighteenth century) began by stripping away "words that had been interwoven in the very being of the beast" in order to transform it (the animal, the plant, the mineral) into a representation of its *position* in a divinely constructed grid (129). Gilbert White, for instance, in his widely read *The Natural History of Selbourne* (1788) overtly insists that "one [take] his observations from the subject itself, and not from the writings of others" (91) since the goal of the natural historian is to see a bird, a sedimentary layer, a flowering plant, apart from language prior to naming, and then to name it according to its coordinates within the vast surface structure of nature. Interestingly, however, White also insists that a good botanist should "by no means be content with a list of names," but should "study plants philosophically, should investigate the laws of vegetation, should examine the powers and virtues of efficacious herbs . . ." (175). Along

with the need to name, then, there is also a desire to disrupt the process of naming lest the object *should* actually disappear into language all together.⁹ One way to maintain the visibility (and physicality) of the object apart from its sayability is, ironically, to flood the interstices between word and thing with yet more words--law, philosophy, virtues--and thereby forestall the totalizing impulse of taxonomy.

Charles Darwin, however, allows the development of languages and bodies to operate according to common principles, to exist within a *single* system of bio-signification. Unlike White, Darwin faces the difficulty, not of bringing language and nature together, but rather of how to create a workable taxonomy when *both* language and species are subject to a complex play of differences:

Certainly no clear line of demarcation has yet been drawn between species and sub-species--that is, the forms which in the opinion of some naturalists come very near to, but do not quite arrive at the rank of species; or, again, between sub-species and well-marked varieties. or between lesser varieties and individual differences. These differences blend into each other in an insensible series; and a series impresses the mind with the idea of an actual passage From these

remarks it will be seen that I look at the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the term variety, which is given to less distinct and more fluctuating forms. The term variety, again, in comparison with mere individual differences, is also applied arbitrarily, and for mere convenience sake. (O 107-08)

Of course, Darwin is not prepared to give up on classification altogether. As arbitrary as a "convenient" taxonomy sounds when compared to the radicalizing notion of a constantly shifting and truly continuous affinity between all living organisms, Darwin still requires a degree of control over his subject and his language. The process of reading (or rewriting) the Book of Nature along Darwinian lines calls for a delicate suppression of the infinite series of finely wrought differences at points of classificatory and, I would argue, narrative interest. There must be license to construct a taxonomy, to order experience on a manageable scale without re-introducing older notions of a *a priori* design. As Dennis Allen observes:

Darwin's insistence on the value of taxonomy, on the importance of classification, is clearest .

. . at the point where he comes closest to presenting the antitaxonomic implications of evolutionary theory. Positing a simultaneous vision of every biological form that has ever lived, Darwin notes that it would be "impossible to give definitions by which each group could be distinguished from other groups" (413), since they would blend together. Nonetheless, he insists, a "natural classification" would still be possible. (24)

Allen suggests, then, that Darwin's final justification for a workable taxonomy may amount to nothing more than a resurfacing of a pervasive Victorian penchant for classifying. Darwin, it would seem, insists on classification at the most radical point in his theory because his culture tells him to do so.

There is also a sense, however, that Darwin must maintain a degree of narrative control, that he cannot allow his language to become fully caught up in the natural processes he describes, although, as Gillian Beer argues, this is precisely what happens:

The multivocality of Darwin's language reaches its furthest extent in the first edition of the *Origin of Species*. His language is expressive rather than rigorous. He accepts the

variability within words, their tendency to dilate and contract across related senses, or to oscillate between significations. He is less interested in singleness than in mobility. In his use of words, he is more preoccupied with relations and transformations than with limits. Thus his language practice and his scientific theory coincide. (38)

In essence, Darwin evokes the complexity of nature, first, by providing a plethora of examples, and second, by the sheer effusiveness of his narrative. The degree of difference among the continuum of living organisms, the very comprehension of nature itself, is directly dependent upon the degree of linguistic play Darwin, and those who follow in the wake of Darwin, are willing, or able, to effect.

To argue that the Joycean narrative is also a Darwinian narrative is different from arguing, as Burgess does, that *Finnegans Wake* can be read as the closest linguistic approximation we have to the complexities of nature, or as Mink insists, the closest word-world we have to that non-word world out there. I am not concerned with nature as such, nor with the creation of a natural narrative. Rather I am interested in how Darwin, in both his scientific theory and narrative practice, offers Joyce not only a model of nature-as-narrative, but also a system wherein natural and

linguistic development, biology and philology, word and flesh--though not quite word made flesh--are produced and shaped by identical processes. Darwinian evolution offers a paradigm where Joyce acquires a "new terminology" that will enable "artistic conception, artistic gestation, and artistic reproduction" (P 202), where the language of biology and narrative finally merge (or emerge) together, without reference even to a God that would remain "within, or behind or above his handiwork" (P 207), much as Darwin's nature, though governed by the laws of a clockwork universe, functions just fine without a watchmaker.

Of course, Joyce consumes Darwin's texts much as he consumes the texts of Homer, Shakespeare, Dante, Marx, Freud, and what seems countless others. And his consumption is obvious in the case of Darwinian sexual discourse, and even more so in the trope of fetal development and recapitulation that patterns the language of "Oxen of the Sun." But, as Professor Jones himself points out, Joyce also partakes of the Darwinian "system" in its most disruptive form, and celebrates, by means of a radical narrative technique, the principle of Darwinian variation, of language and life without bounds, a world without end.

NOTES

¹ In his letter to Frank Budgen, dated March 13, 1920 Joyce describes the procession of his "ninepart episode" as one "linked back at each part subtly with some foregoing episode

of the day and, besides this, with the natural stages of development in the embryo and the periods of faunal evolution in general"(139).

² Walkiewicz's analysis of "Oxen" is informed by a more complex reading of evolutionary theory and its various applications than that offered by Stuart Gilbert. He notes, for example, that Darwin's own doubts about creating an agreeable taxonomy of species, or even a definitive taxonomic nomenclature, presents an interesting dilemma for the reader who would attempt to retrieve a definitive Joycean taxonomy of styles from "Oxen of the Sun." By following too closely from Joyce's own "cue," readers of "Oxen"

may be led to assume that the stylistic "imitations" that make up "Oxen" correspond to distinct faunal "types" (classes? genera? species?), arranged in temporal sequence to form something like a taxonomy. cursory analysis of the chapter's structure seems to support this hypothesis: the various imitations, some partly parodic, others not, seem clearly bounded, appear to consist of units of one or more paragraphs distinctly demarcated by paragraph breaks. *Ulysses*, however, . . . habitually instructs us by misleading us . . . and as some students may be led to discover for themselves, some

of the passages are much more stylistically diverse than others, and in at least one case a major stylistic shift occurs not definitively at a paragraph break but, rather, gradually in mid-paragraph. (303)

³ As the reader will recall, "Circe" is also full of the sexological language of Bloom and the ghost of his father, Virag. It is also an episode that works to subvert the paternal pretense toward order and classification offered in "Oxen of the Sun." Bloom, for instance, is both male and female, signaling the breakdown of fundamental categories of distinction, like gender.

⁴ See Andrzej Duszenko's "The Relativity Theory in *Finnegans Wake*." *JJQ* 32 (Fall, 1994): 61-70.

⁵ *Beasts of the Modern Imagination*, 6.

⁶ *Beasts*, 1.

⁷ "What is an Author?" (*Foucault Reader* 114).

⁸ For a biological account of the development of language see Phillip Lieberman's *The Biology and Evolution of Language*, (Cambridge, Harvard UP: 1984). "The evolution of human linguistic and cognitive ability," Lieberman notes, "like other aspects of human evolution,"

is probably the result of Darwinian natural selection acting to retain structural variations that, though they may seem small and trivial, made profound changes in human behavior and culture possible. The anatomical development of the

opposable thumb, for example, facilitated the development of tool culture. The development of the ability to produce sounds like the vowel [i] (the vowel of the word *bee*) likewise facilitated the development of human speech, which in turn facilitated the rapid interchange of information in humanlike animals who already had their hands occupied using tools and carrying objects because of the previous sequences of small anatomical changes that yielded upright bipedal locomotion. The evolution of human linguistic and cognitive ability, to me, thus is part of the general process of evolution. (vii)

⁹ One can find numerous instances in scientific texts, especially those intended for the lay reader, where authors overtly make use of figurative language, only to point to it as "only" a metaphor, "only" a figure of speech, in an attempt to keep utterance and object apart, to adopt the position that language is only a fortuitous convenience, and not, as I would argue, antecedent to the investigation. The use of anecdote, for example, is often treated as a relinquishing of true scientificity for the sake of a pop-understanding. What changes, then, are the terms of expression, although such a rhetorical move is often conceptualized as a fall into language, and not just a move into a less precise, less authoritative language.

CHAPTER VI

DARWIN'S M, ALP'S TEA AND MR. WOOLNER'S EAR:

WHERE IN THE WASTE IS THE WISDOM?

. . . all over which fossil footprints, bootmarks, fingersigns, elbowdints, breechbowls, a.s.o. were all successively traced of a most envolving description. What subtler timeplace of the weald than such wolfsbelly castrament to will hide a leabhar from the Thursmen's or a loveletters, lostfully hers, that would be lust on Ma, than then when runctions ended, than here where the race began: and by four hands of forethought the first babe of reconcilment is laid in its last cradle of hume sweet hume. Give it over! And no more of it! So pass the pick for child sake! O men!

Finnegans Wake (80.10-19)

A breed, like a dialect of language, can hardly be said to have had a definite origin.

Charles Darwin
The Origin of Species

Remounting aliftle towards the ouragan of spaces.

Finnegans Wake (504.14)

. . . Father Time and Mother Spacies boil their kettle in their crutch.

Finnegans Wake (600.2-3)

Despite being theoretical works driven by unquestionably serious intent, Darwin's *The Origin of*

Species and *The Descent of Man* are also very anecdotal, even domestic. As George Levine argues, Victorians had a penchant for "small, familiar facts" that "explain large phenomena," and if we can define Darwin's work by such criteria, he was very much a Victorian (90). He tells mini-stories to illustrate points far more often than he offers up statistical charts. (One is reminded of a similarly domestic, if highly reductive readings of ALP's letter in *Finnegans Wake*: "Yet it is but an old story, the tale of a Treestone with one Ysold," [113.18]; and "'Tis as human a little story as paper could well carry," [115.36]).

In an attempt to account for the evolution of religion, for example, a touchy subject no matter how it is presented, Darwin describes the reaction of his dog to a parasol moved by a slight breeze. The dog, Darwin reports, must have "reasoned to himself in a rapid and unconscious manner, that movement without any apparent cause indicated the presence of some strange living agent, and that no stranger had a right to be on his territory," and thus he "growled fiercely and barked" (469). Somewhere in our own ancestral past, Darwin suggests, we too may have assumed an unseen "living agent" rolled a stone down hill, or moved a branch on a windless day, and attributed the cause to spirits. What happens afterward in the development of human religion is only a matter of elaboration. For Darwin, the difference between a dog barking at a parasol and a congregation singing in a cathedral is one of degree, not of kind. One

small, familiar fact, when couched in evolutionary terms, takes on broad, and often subversive, implications.

Also true to his Victorian disposition, Darwin loved the bizarre and exotic. Along with the more domestic images of skittish dogs and ladies' fashions, *The Descent of Man* contains anecdotal accounts and lithographs of strange creatures, or creatures engaged in equally strange behaviors: male lizards extending colorful gular (throat) pouches to dazzle potential mates, male Bower-birds gathering shells, bones, and leaves around a nest to attract a materially-minded female of the species. Darwin calls such behaviors "love antics," and warns us not to judge the "love gestures" of other species by our own human standards of taste (714). Thus, although his examples are exotic, his language suggests a kind of domesticity that often produces unintentionally comic effects.

But Darwin isn't going for laughs (though he certainly doesn't lack a sense of humor), and the anecdotes and lithographs are as subversive as Swiftian satire. The natural world *is* populated by Brobdingnags, Yahoos, and Houyhnhnms, creatures whose appearances and behaviors are strange, yet uncomfortably familiar. The history of life on earth is a history of accumulated aberrations, a comedy of errors, not adherence to abstract norms, and to explain zebra stripes and platypus bills, singing apes and turkey wattles in light of creationism is to turn the Divine Creator into a Divine Comic.

The power of Darwin's rhetoric, therefore, lies in his ability to locate the unusual in the familiar, or the familiar in the unusual. Darwin's "small facts," unlike those gathered by natural theologians as evidence of perfect design, point to disruption and dysteleology, where even the most mundane objects are testimony to the quirky imperfections of organic history.

In this final chapter, I want first to suggest that the organic and linguistic minutia of the Darwinian narrative are also characteristic of the Joycean narrative--language made up of anomalies, often about anomalies, that results in strange bodies and strange texts.

Second, not only is *Finnegans Wake* a virtual sea of linguistic miscellany reminiscent of a Darwinian word-world, but that word-world is also associated with the liquid language of ALP, much as Darwin's effusive narrative of natural history is associated with the workings of Mother Nature, a female-gendered natural selection.

The connection between detritus and the language of women constitutes a central theme in *Finnegans Wake*. One of our earliest images of ALP, for instance, is of a woman gathering up the ruins of history:

. . . all spoiled goods go into her nabsack:
curtrages and rattlin buttins, nappy spattees and
flasks of all nations, clavicures and scampulars,
maps, keys and woodpiles of haypennies and moonled

brooches with bloodstained breeks in em, boaston
nightgarters and masses of shoesets and nickelly
nacks and foder allmichael and a lugly parson of
cates and howitzer muchears and midgers and
maggets, illls and ells with loffs of tofs and
pleures of bells and the last sigh that come fro
the hart (bucklied!) and the fairest sin the
sunsaw (that's cearc!). With Kiss. Kiss Criss.
Cross Criss. Kiss Cross. Undo lives 'end. Slain.
(11.18-28)

Like the woman in the "Proteus" episode of *Ulysses* who carries, at least in Stephen's imagination, a "misbirth" in her collecting bag, ALP picks over the lifeless fragments of the past and present (shell casings, bones, the scapulars of priests, and the all-important fragments of the letter from Boston, Massachusetts--"boaston nightgarters and masses") and places them in her "mutteringpot." Her language, her mutterings/motherings make up the body of the text itself, a text she reproduces from the womb-like knapsack she carries. She represents the life force that drives *Finnegans Wake*; she is both product and producer of all that exists. And, I would argue, she is partially fabricated along the lines of a Darwinian Mother Nature, a Joycean version of Darwin's female selector, who scans with a scrupulous eye the vast materials of the world, materials she herself generates, and creates from its excesses myriad shapes.

Darwin's Pointy Ear and Nature's Leftovers

Of all the lithographs in *The Descent of Man*, one is particularly mundane in contrast to the distended air sacks of the grouse, the conical hair-dos of Rubucund monkeys, or the elongated horns of the chameleon, but it may be the most dangerously intriguing illustration of all: a drawing of a human ear. Darwin was fascinated by rudiments. Though related to his general argument concerning homologous structures (e.g., similarities found in the skeletal patterns of bats wings, whale flippers, and the human hand), rudimentary organs held a special fascination for him because they were hard to explain away in creationist terms. Whereas shared functional designs could be taken as evidence of a Great Architect creating from a basic set of blueprints, rudiments were apparently useless, evolutionary leftovers (e.g., wings on flightless birds, or vestigial hind limbs on boa constrictors). To explain rudiments in terms of design makes God a little too quirky, and His creation a "mere snare laid to entrap our judgment" (*Descent* 411), whereas from an evolutionary standpoint there *should* be rudiments, signs of a literal affinity with distant, and perhaps very different, ancestors.

And what of Mr. Woolner's ear? (It really isn't Mr. Woolner's ear at all, but the drawing of an ear made by Mr. Woolner that appears in *The Descent of Man*.) Oddly, it is

the only lithograph of a human body part in a book that professes to trace the evolution of the human species from lower forms. (The closest we get to human physiology is a drawing of the head of an orangutan foetus that looks like a human infant with pointy ears.) Accompanying the drawing, Darwin provides the following explanation:

The celebrated sculptor, Mr. Woolner, informs me of one little peculiarity in the external ear, which he has often observed both in men and women, and of which he perceived the full significance. His attention was first called to the subject whilst at work on his figure of Puck, to which he had given pointed ears. He was thus led to examine the ears of various monkeys, and subsequently more carefully those of man. The peculiarity consists in a little blunt point, projecting from the inwardly folded margin, or helix . . . Mr. Woolner made an exact model of one such case, and sent me the accompanying drawing. These points not only project inwards towards the center of the ear, but often a little outwards from its plane, so as to be visible when the head is viewed from directly in front or behind. They are variable in size, and somewhat in position, standing either a little higher or lower; and they sometimes occur on one ear and not on the other. They are not confined to

mankind, for I observed a case in one of the spider monkeys (*Ateles beelzebuth*) in our Zoological Gardens; and Mr. E. Ray Lancaster informs me of another case in a chimpanzee in the gardens at Hamburg. (403)

Explaining this "little peculiarity of the external ear," Darwin concludes that the "points are vestiges of the tips of formerly erect and pointed ears" (404), yet, in his typically reserved fashion, adds that such an explanation is at least "probable." No matter what the specific function or history of the anomaly, it is there to be explained, and Darwin is at least certain of his general explanation, descent with modification, although he is not certain that his story of how humans came to have remnants of pointy mammalian ears is *the* story. (There is also nothing in Darwin's argument that would preclude the possibility of our species developing pointy ears in the future, but since natural selection is a game of statistical probabilities, we can never know for sure unless it happens.)

Just as rudiments in living creatures point to the development of species over time, so too, as mentioned earlier, do the rudiments found in language. "No philologist," Darwin reports, "now supposes that any language has been deliberately invented; it has been slowly and unconsciously developed by many steps" (462). As illustration, Darwin offers the rudimentary "m" in the

phrase "I am" ("The letter *m* in the word am, means I; so that in the expression *I am*, a superfluous and useless rudiment has been retained. In the spelling also of words, letters often remain as the rudiments of ancient forms," [465-66]).

The redundant *m* and Mr. Woolner's pointy ear are but two examples drawn from the hundreds that contribute to Darwin's evolutionary argument. Rudiments, whether in language or human anatomy, serve as evidence of continuity without teleology, an accumulation of accidentals rather than a move toward perfection. No species, or language for that matter, ever moves beyond the level of sufficiency for a given moment in time, a temporary encoding of characteristics likely to become obsolete. Even species or languages that survive the long passage through time are only relatively and temporarily more perfect (or fortunate) than those that passed into extinction, and will very often contain traces of those extinct forms.

Darwin's "small facts," therefore, undermine any possibility of reading the book of nature in its entirety, or even fully understanding small passages, for the text itself is always in motion. And, as is clear from the early pages of *The Origin of Species*, when the object of investigation is always in motion, nomenclature itself becomes arbitrary:

. . . I look at the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the term variety, which is given to less distinct and more fluctuating forms. The term variety, again, in comparison with mere individual differences, is also applied arbitrarily, and for mere convenience. (108)

Darwin's biological revolution was also, as previously noted, a linguistic revolution, setting signifiers free along with species, and it is not surprising that by the time Darwin published *The Descent of Man*, there were numerous philological publications available for him to draw from. Much like Joyce, Darwin engaged in his own version of the conservation of literary matter: Darwin quoting Darwinians.

In his book *Grammatical Man: Information, Entropy, Language, and Life*, Jeremy Campbell explores the basic tenets of Shannon's information theory, and suggests useful applications of that theory within a wide-range of disciplines, from linguistics to physics, sociology to biology.

In a discussion of language, Campbell defines the process of writing as a dynamic interplay between a writer's

adherence to grammatical rules and the freedom to manipulate those rules in order to be creative. James Joyce, Campbell says,

extended his freedom by throwing overboard some of the rules of language in an exuberant search for novelty. In *Finnegans Wake*, he allowed himself a much wider variety of possible messages than, say, Jane Austen, who observed the rules more scrupulously. (71)

By "throwing overboard" grammatical strictures, Joyce creates "a great deal of uncertainty," and in *Finnegans Wake*, "it is hard to guess what comes next" (72). More important, Campbell argues, Joyce's "exuberant search for novelty" makes it "difficult to detect misprints and errors" (72), a statement that serves well as introduction to a passage found in *Finnegans Wake* itself:

A bone, a pebble, a ramskin; chip them, chap them, cut them up allways; leave them to terracook in the mutteringpot . . . For that (the rapt one warns) is what papyr is meed of, made of, hides and hints and misses in prints . . . So you need hardly spell me how every word will be bound over to carry three score and ten toptypsical readings throughout the book of Doublends Jined
(20.5)

The process of reading *Finnegans Wake* is indeed an exercise in error-reduction.¹ We attempt to stabilize the text in order to make it meaningful, to recover a coherent message out of Joyce's "radiooscillating epiepistle" (108.24), and instead of achieving stability, we multiply the message "three score and ten."

As John Paul Riquelme points out, Joyce's process of artistic creation is based on the "conservation of literary matter," a conflation of artist as both teller and reader, and thus Joyce's encyclopedic text contains within its "macromass" remnants of the same discourses we employ in order to render the radical flow of language meaningful, so that a reading of *Finnegans Wake* is always re-reading, and the elusive primary language (The message, The Word, ALP's "mamafesta") is continually being deferred and multiplied.

Book I, chapter v of *Finnegans Wake* is unique in this regard. As co-consumers of the *Wake*'s historical/literary matter, we not only participate in the process of recovering the letter from the middenheap of language, but we also recover Shemian and Shaunian readings of the letter--indeed, we recover "Shem" and "Shaun" as well, since they too exist within the "macromass" (111.29) of the text.² In addition, the antagonistic brothers read the "oldworld epistola" (117.27) through the distortions of the three main Western discourses: Darwinism, Marxism, and Freudianism. I will ignore Marx and Freud, focusing instead on recovering evolutionary/Darwinian readings of the letter present within

the text, although the recovery of one discourse often includes the recovery of another. For example, Suzette Henke's interpretation of the letter chapter is generally psychoanalytical, and she treats Shaun's lascivious examination of the envelope as an erotic attempt on the part of the male to understand the mystery of the feminine libido (187-88). Yet the passage Henke selects also has Shaun investigating the envelope as an article of "evolutionary clothing . . . full of local colour and personal perfume," which suggests that the Shaunian-figure is considering more than the "literal sense or even the psychological content" of the document (109.12), and his reading evokes primary aspects of Bloomian discourse/Darwinian sexual selection.

Bernard Benstock notes that Joyce "spoofs" simplistic Freudian and Marxist readings of the text ("yung and freudened," [115.22]; "Father Michael about this red time of the white terror equals the old regime and Margaret is the social revolution," [116.7]), interpretations that reduce ALP's letter, or the *Wake* itself, to a system of "simple-minded" codes. Granted, Joyce is parodying Darwin as well, but there is sufficient evidence to suggest that we can recover more complex uses of Darwinian discourse operating in I.5. Given the "behaviorising" of Biddy the hen, whose process of reading/ordering the letter is equated with "natural selection" and is therefore indistinguishable from the letter-producing flow of ALP's "floralingua" (117.14), (the same "ambidual" [528.24] relationship exists between

Issy and her mirrored Other), we may be wise to follow the hen's lead after all.

My intention is not to discount other critical readings of the letter chapter, nor to praise simple-minded codification, but rather to point out that Darwinian discourse, though often retrieved in bits and pieces from the middenheap of *Finnegans Wake*, is largely ignored, if not too readily dismissed. Yet if we read the "proteiform graph" (107.8) of I.5 as a product of "Annah the Allmaziful, the Everliving, the Bringer of Plurabilities" (104.1-2), a letter full of "errors, omissions, repetitions, and misalignments" (120.15), then a Darwinian reading of the letter would seem appropriate, for reasons to be explored here. For unlike Marxist or Freudian discourses, Darwinian discourse is not archetypal or teleological (though it is often made so, as I think the Shaunian figure does in this chapter) but disruptive and dysteleological, a rhetorical mirror that attempts to put into language the infinite complexity of nature, and a discourse that results in a profound destabilization of our view of nature and language. As George Levine suggests, "Darwin's arguments can be read in the context of ideology but cannot be reduced to it, and in fact they contain elements hostile to the ideology with which they are normally accused of being complicit" (12). As a result, to read ALP's missive in Darwinian terms is to create further disruptions that make the text, one "naturally selected" (124.23) by Biddy the hen, more

elusive, but it also serves helps open up even further the linguistic play, the maternal flux of language, that characterizes *Finnegans Wake* in its entirety. If the "farther back we wriggle the more we need the loan of a lens to see as much as the hen saw" (112.1), then Darwin provides us with that lens, although what we may discover is a "grotesquely distorted macromass" (111.29), a "puling sample jungle of woods" (112.4).

A Feminized Narrative

There are multiple evolutionary effects in *Finnegans Wake*, I.5. The textual effect that comes closest to the Darwinian characteristics I have described, that is, a text based on aberration, difference, error, is tied to Biddy Doran, who, to the "shock" of some, "looked at literature" (112.27); the "Dame Parlet" whose marks on the letter ("pierced butnot punctured," [124.1]) become part of the unpredictable flux of the text itself ("naturally selected," [124.23]), unlike imposed male punctuation/penetration that suggests sexual and linguistic control over the flow of language ("stop, please stop, do please stop, and O do please stop respectively," [124.4]). Biddy, who is simply another manifestation of ALP, a Joycean feminine principle, interacts with the text, but it is an unconscious interaction, and whatever peculiar features accumulate on the surface of the "polyhedron of scripture" (107.8) serve

only to mark the letter's passage through time, just as the rudimentary point of Mr. Woolner's ear indicates unguided descent with modification. Biddy's experience with the infamous, and generally unreadable letter is therefore part of the maternal/feminine processes that generate not only the letter itself, but presumably all of the language of *Finnegans Wake*. Biddy recovers the letter, interacts with it, adds to its mysterious content, but does not tell us what is in it. The possibilities are numerous: a love letter to ALP, from ALP, from her daughter Issy, to Margaret from Father Michael, or even to Biddy. It may also connect HCE, the dreamer of the *Wake*, with a sexual crime, the Fall of Man, or Parnell's adulterous relationship with Kitty O'Shea.

What is of greatest interest, though, is not simply what the letter is (and since it is associated with fluidity itself, the letter is different from one appearance to the next) but how it is read. Shemian and Shaunian readings, for example, tend to borrow on both heterodox and orthodox philosophies. Shaun's reading represents the establishment, the ideology of the church father, while Shem celebrates the "puling sample jungle of woods."

When the dueling brothers offer what I take to be suggestive of evolutionary readings of the mamafesta, Shaun takes up a position of a pre-Darwinian natural theologian, while Shem's invocation of "Annah the Allmaziful" parallels the Darwinian reversal of a patriarchal creator in favor of a self-reflexive, self-sufficient, and self-guiding

matriarchal nature. Shem's exuberance for the "Bringer of Plurabilities" is matched by Darwin's exuberance for his own muse:

How fleeting are the wishes and efforts of man! how short his time! and consequently how poor will his products be, compared with those accumulated by nature during whole geological periods. Can we wonder, then, that nature's productions should be far 'truer' in character than man's productions; that they should be infinitely better adapted to the most complex conditions of life, and should plainly bear the stamp of far higher workmanship? (*Origin* 133)

Darwin's insistence on multiplicity, infinite complexity, and the enormous time scale with which nature has to work, stands in stark contrast to the old Adamic myth of naming fixed forms. Shem's description of the letter and its contents as a "sequentiality of improbable possibles" (110.15) suggests an equally potent and unpredictable creative power, and the paragraph concludes with "Ahahn!" (a hen!), who represents the power of natural selection, the unconscious shaper of letter/litter/leaves/life.

It is also Shem who speaks of the letter as an "oldworld epistola of their weatherings and their burings and their natural selections . . . made-at-all-hours like an ould cup on tay" (117.27). The fact that the letter is

"made-at-all-hours" like an old cup of tea suggests a Shemian view of time (past operating in the present/present operating in the past) as well as the reference to female urination: ALP's teastain signature, and an image that functions as a metaphor for continuous artistic creation (and perhaps artistic indestructibility: "locust may eat all but this sign shall they never," [111.18]).

Shaun's reading of the letter is more difficult to define, partly because the distinction between discourses is itself a problem in *Finnegans Wake*, but more so because Shaun is capable of taking up virtually any discourse and suiting it to his needs. Shaun's evolutionary reading, for example, borders on social Darwinism, so when he pronounces his own invocation to the "kindly fowl," it is not multiplicity he praises, but ALP/Biddy's "socioscientific sense" (112.11), which suggests her confinement not only to social norms, but also to those activities biologically appropriate for a woman. Although he recognizes her "automutativity," he qualifies his admiration by adding that she is "right on normalcy" (112.12), and "ladylike in everything she does" (112.16). Shaun's praise is for the maternal instinct, for women who fulfill, with little fuss, their motherly roles: "she just feels she was kind of born to lay and love eggs (trust her to propagate the species and hoosh her fluffballs safe through din and danger!)" (112.13). And all of this comes as a response to Shem's taunting in the previous paragraph:

You is feeling like you was lost in the bush, boy? You says: It is a puling sample jungle of woods. You most shouts out: Bethicket me for a stump of a beech if I have the poultryest notions what the farest he all means. (112.3-6)

Shem suggests Shaun is lost when faced with feminine language, and Shaun responds, not by trying to understand the letter on its own terms, but by moving behind the letter in order to define/confine the writer. Furthermore, rather than reading the letter as a "jungle of woods," or as a "peck of kindling . . . from the sack of auld hensyne," again suggestive of ALP/Biddy's natural selection (as well as her womb-like knapsack), Shaun invokes a kind of domestic teleology, or perhaps recapitulation: "What bird has done yesterday man may do next year, be it fly, be it moult, be it hatch, be it agreement in the nest" (112.9).

Shaun's pseudo-scientific reading of the letter, then, is primarily an attempt to stabilize ALP's language, to control what is figured as the flux of feminine discourse. He suggests that "under the closed eyes of the inspectors the traits featuring the *chiaroscuro* coalesce, their contrarieties eliminated" (107.28), and that whatever is happening on the page is nothing more than "a jolting series of prearranged disappointments" (107.32). His reading, again, is teleological (and Cartesian), noting the "ruled barriers along which the traced words, run, march, halt,

walk, stumble at doubtful points, stumble up again in comparative safety" (114.8). It is not that Shaun fails to notice the polymorphic nature of the letter, but rather that he converts multiplicity into a kind of pre-Darwinian progressionism: "Such crossing is antechristian of course, but the use of the homeborn shillelagh as an aid to calligraphy shows a distinct advance from savagery to barbarism" (114.11).

Provoked by Shem's reading of the "oldworld epistola" as a product of their "weatherings and their burying, and their natural selection," Shaun launches into an long argument that sounds very much like natural theology:

Now, kapnimancy and infusionism may both fit as tight as two trivets but while we in our wee free state, holding to the prestatute in our charter, may have our irremovable doubts as to the whole sense of the lot, the interpretation of any phrase in the whole, the meaning of every word of a phrase so far deciphered, we must vaunt no idle dubiosity as to its genuine authorship and holusbolus authoritativeness . . . [The] affair is a thing once for all done and there you are somewhere and finished in a certain time, be it a day or a year or even supposing, it should eventually turn out to be a serial number of goodness gracious alone knows how many days or

years. Anyhow, somehow and somewhere before the bookflood or after her ebb, . . . wrote it, wrote it all down, and there you are, full stop.

(117.33-118.14)

We can recover several "messages" from this passage, including the conflation of HCE with Parnell. But it also resounds with pre-Darwinian natural history. Before Darwin proposed that nature was full of anomalies and infinitely complex because it was continually making itself over, natural theologians argued that our inability to map the natural world fully was a sign of human limitation, and that nature was governed by divinely established laws, a clockwork universe where species were either fixed from the moment of creation or subject to development along predetermined paths. The text of the world, Shaun insists, was written down in the beginning and "finished at a certain time," which suggests he is following in the footsteps of natural theologians. He also makes the same modifications of the time scale natural theologians enacted as geological evidence made it impossible to confine creation within a biblical time frame, and finally arrives at one of the last strongholds of natural theology, catastrophism ("even supposing, it should eventually turn out to be a serial number of goodness gracious alone knows how many years").

In the next paragraph, Shaun assumes the mantle of incredulity:

Because, Soferim Bebel, if it goes to that,
. . . every person, place and thing in the
chaosmos of Alle anyway connected with the
gooblydumped turkery was moving and changing every
part of the time . . . variously inflected,
differently pronounced, otherwise spelled,
changeably meaning vocable scriptsigns. No, so
help me Petault, it is not a miseffectual
whyacinthinous riot of blots and blurs and bars
and balls and hoops and wriggles and juxtaposed
jottings linked by spurts of speed: it only looks
as like it damn it . . . [By] the light of
philosophy, . . . things will begin to clear up a
bit one way or another within the next quarrel of
an hour and be hanged to them as ten to one they
will too, please the pigs, as they ought to
categorically, as, stricly between ourselves,
there is a limit to all things so this will never
do. (118.18-119.9)

Shaun requires categories, a "limit to all things," a
taxonomy of language and nature like that parodically
offered in "Oxen of the Sun," and when confronted by the
overwhelming evidence of the letter as "blots and blurs and
balls and hoops and wriggles and juxtaposed jottings" his
response is to insist, like the natural theologian he is,
that the letter/nature only appears to be unreadable. The

passage echoes the speech Shaun delivers as Professor Jones, attacking a Darwinian figuring of nature as simply the result of bad "refrangible angles" (150.35), poor perception (or television reception), and "that things will clear up a bit one way or another."

Although Shaun appears to begin his investigation of the "proteiform graph" in an evolutionary mode, by the end of the chapter, he arrives at its opposite, and returns to creationist criticism of ALP's "untitled mamafesta," which continues to constitute a threat:

. . . that strange exotic serpentine, since
so properly banished from our scripture, . . .
seems to uncoil spirally and swell lacertinelazily
before our eyes under pressure of the writer's
hand (121.20)

The distinction made between ALP's letter and "our scripture" reestablishes the division between male and female writing, nature and God, and Shaun celebrates, once again, "the beauty of restraint" (121.30). The evolving handwriting of ALP's polymorphous letter is transformed back into an Edenic serpent, the image of sin, and then into a penis/pen in the writer's hand. The proteiform graph of Annah the Allmaziful is forced back into the patriarchal language of Genesis.

One of the ways Joyce "feminizes" the mysterious missive in the first place (if not the *Wake* itself) is by associating the process of linguistic production (and its anonymous authorship) with Darwinian natural selection. Of course, Joyce does not need Darwin in order to make claims about feminine language, but in his invention of a "countersign," from the Penelopean web of Molly's monologue that ends *Ulysses*, to the "proteiform graph" of ALP's letter, Joyce aligns this countersign, this imagined language of an imagined feminine principle, with Darwin's own creative, and distinctly female-gendered process of evolution. It is, to draw on Alice Jardine's concept of "gynesis," an encoding of this "other-than-themselves" as "*feminine, as woman*" (author's italics 25) that Darwin and Joyce share. Although I do not believe Darwin fully encodes his narrative of evolution in feminine terms (and certainly Joyce does not imitate, or even parody Darwin's narrative "style") Darwin does draw upon and transform the traditional image of Mother Nature into a powerful self-generating and self-consuming process that operates according to natural (maternal) rather than divine (patriarchal) law, which as Gillian Beer notes, results in the creation of, at the very least, an effusive narrative that partakes of the very processes it attempts to describe. Darwin empties one authorial position (that belonging to God) and creates another authorial space that is paradoxically "unoccupied" by an anonymous, feminine natural selector, much like

Joyce's ALP, a "principle" discerned only in terms of its (her) effects, products, temporal traces.

I believe that Joyce's formulation of female writing in *Finnegans Wake* also operates according to the Darwinian principle of anonymity, multiplicity, and an exuberant materialism. We have seen in "Oxen of the Sun" how he connects evolutionary processes to the succession of patriarchal styles. Female biology, as something *textually* represented, remains on the margins, confined to other rooms. But in *Finnegans Wake*, the "hentrusions" return in the form of an "anonmorous letter," an "untitled mamafesta," a *narrative technique* meant to textually represent, albeit by means of a male pen, the polymorphous iterations of woman.

Joyce is not simply "spoofing" Darwin, but incorporating various elements of Darwinian discourse into his texts: versions of Darwinism that, in the end, help define characters like Bloom, Gerty MacDowell, Molly, Shaun, Shem, ALP, and Issy. And in the vast mutteringpot of Joyce's texts, a certain lack of distinction between characters, between texts, between one language and another, between words, follows from the Darwinian blurring of the boundaries between species and well-marked varieties, between one species and another. We are left, in both nature and text, only with degrees of difference, subtle shadings, which is very Joycean, and very Darwinian, indeed.

NOTES

¹ I use the term "error" as Campbell does, denoting a degree of entropy, multiplicity, and uncertainty, not in the pejorative sense of "mistake."

² The digestive metaphor and its link to aesthetics is a common one throughout Joyce's work, going back to his earliest critical writings. From his "Paris Notebook," dated March 28, 1903:

Art is the human disposition of sensible or intelligible matter for an aesthetic end.

Question: Why are not excrements, children, and lice works of art?

Answer: Excrements, children, and lice are human products--human dispositions of sensible matter. The process by which they are produced is natural and non-artistic; their end is not an aesthetic end: therefore they are not works of art.

(*Critical Writings* 141-142)

The *technic* of the "Lestrygonians" episode of *Ulysses* is "peristaltic," and Bloom visits the Burton restaurant for lunch, but finds he is unable eat anything because of the repulsiveness of the customers. One of the more interesting passages has Bloom thinking in almost Dedalean terms, contemplating connections between art and natural processes like digestion, leading him to wonder if the statues he has

seen in the library are anatomically correct:

Shapely goddesses, Venus, Juno: curves the
world admires. Can see them library museum
standing in the round hall, naked goddesses. Aids
to digestion. They don't care what men looks. All
to see. Never speaking. . . . Nectar imagine it
drinking electricity: god's food. Lovely forms of
women sculpted Junonian. Immortal lovely. And we
stuffing food in one hole and out behind: food,
chyle, blood, dung, earth, food: have to feed it
like a stoking engine. They have no. Never looked.
I'll look today. Keeper won't see. Bend down let
something drop. See if she. (8.920-932)

But Joyce brings together the process of digestion and
artistic production most keenly, and most effectively, in
the image of Shem the Penman, who

boycotted him all muttensuet and romerules
stationary for any purpose, he winged away on a
wildgoup's chase across the kathartic ocean and
made synthetic ink and sensitive paper from his
own end out of his wit's waste.

Shem, at least according to Shaun, makes indelible ink from
his own waste products and then writes upon his own body
(185.4-36).

CONCLUSION

Literary intellectuals at one pole--at the other
scientists, and as the most representative, the
physical scientists. Between the two a gulf of
mutual incomprehension

C.P. Snow
"The Two Cultures"

Science and literature appear to constitute two
categorically distinct disciplines--a difference somewhere
along the order of mollusks and mammals when it comes to
poets and physicists, though perhaps only dogs and cats when
it comes to novelists and nineteenth-century biologists. In
this study of Darwinian influences on the works of James
Joyce it has not been easy, nor particularly fruitful, to
determine where Joyce is more scientific or less literary,
or where Darwin is more novelist than scientist. Where,
exactly, do we draw the line between artistic expression and
scientific evidence? Or clinical observation and voyeurism?
The temptation is to claim simply that science and
literature are the same, that they differ only in emphasis,
even though, at an almost instinctual level, we sense they
are not in fact the same. It is equally problematic to point
to the existence of a disciplinary chasm, as C.P. Snow does
in his now classic essay, without explaining the existence

and nature of that chasm beyond attitudinal differences, or basing the division between scientists and literati on who does or does not read Shakespeare, or who does or does not recognize what non-conservation of parity means. To say that science and literature are different without specifying exactly how they differ is no better than arguing that science and literature are fundamentally the same without describing similarities.

One of the difficulties that arose during this project was, and remains, how to formulate a relationship between art and science without privileging either one, without making one a step-child to the other. For example, does it make Darwin less scientific, less objective, less trustworthy as a scientist when we recognize that his view of nature is inextricably tied to an economic model? Are we obligated to dismiss his theory of sexual selection because it is partly based on the parlor antics found in sentimental fiction? Is Havelock Ellis to be taken less seriously because he uses passages from George Eliot's novels, not merely as illustration, but as evidence for the sexual influence of the male voice on women?

Part of the problem may lie with the notion that science is one thing, or, perhaps, shares one thing: a methodology. But as Thomas Kuhn argues in his seminal work *The Structure of Scientific Revolutions*, that supposedly unified and univocal field of knowledge we call science, even though it does maintain a level of internal

consistency, is made up of a number of competitive communities, and communities within communities--all engaged in what he calls "normal science," the working out of the details of already established, and generally unchallenged, paradigms. Science, then, is more verb than noun. It is also, as R.C. Lewontin argues, a "productive activity" that aims toward its own legitimization (8-9), which means science is an ideology *par excellence*, one that works very hard at simultaneously proclaiming its authority while hiding its ideological roots--much like religion, or history, or politics, or the realistic fiction of the last two centuries.

The question of where science ends and art begins is critical to my understanding of Darwinian influences on Joyce's fiction--so critical, in fact, I must leave it alone for now, make a gesture toward future work, the need for more study, more thought, more investigation. As for the preceding chapters, I wanted to create a blueprint for Darwinian readings of Joyce, a sketch of what is possible. Although there have been a few insightful articles on Joyce and physics, the biological sciences have been largely ignored. This is not to suggest that other readers of Joyce have somehow failed to notice Darwinian elements and I have fortuitously arrived to correct the oversight. One can read Joyce in blissful ignorance of scientific theories of sexual selection and still enjoy the "Mime" chapter of *Finnegans Wake*, or Gerty MacDowell's complex sexual choreography.

I am not so sure, however, that we can adequately understand Leopold Bloom without broaching the subject of science and art, since Bloom embodies the sensibilities of Joyce's age, and to some extent, Joyce's own knowledge of science. Nor am I convinced, as discussed in the first chapter, that Stephen should be exempted from the discursive force of science, and a much more thorough reading of *Portrait* in light of biological theories is warranted. But the relationship between the Joycean text and Darwinian discourse, indeed between art and science in general, remains woefully unexplored. I have, for the most part, treated science and literature as separate entities--Joyce parodies Darwin, uses Darwin, employs Darwin, creates Darwinian patterns, even constructs narratives according to the intricate processes of a post-Darwinian nature, but he is never really a Darwinian, nor is he ever truly scientific. I have less difficulty claiming that Darwin is both literary and scientific. At least one reader quickly pointed out this dichotomy, suggested that I allowed Joyce to use science as legitimate literary material, but would not permit Ellis to use literature as scientific evidence. Let me say, in my own defense, that I never intended to condemn Ellis for his use of literature as data. After all, what really matters is whether Ellis believed he was doing good science. My original intention, albeit one I subsequently retreated from but would like to return to at some future date, was to argue that Joyce attempted to

incorporate science into the realm of artifice, to treat science as a primarily imaginative enterprise, one rooted in artistic, or aesthetic, concerns. It was, I think, Joyce's way of dealing with the perception that two cultures did indeed exist--one artistic, the other scientific--but that in the early twentieth century, science had come to dominate. His solution was not to effect a compromise, to produce, like Zola, scientific novels, but rather to fashion authority for the artist by treating science as language, and therefore subject to mastery by one of literature's most talented linguists. The "Ithaca" episode of *Ulysses* would appear to offer a reconciliatory dialogue between Bloom and Stephen, thus between science and art, but by the time we arrive back at the rock of "Ithaca" the distinction between art and science, indeed, most categorical distinctions, have been disrupted. Science becomes, within the Joycean text, one style among many styles.

What intrigues me most about Joyce is his capacity to create a literary text that is not only self-reflexive, folding inward upon itself, turning itself into a literary object, but one that also transforms other presumably non-literary texts into literature. It is not merely that Joyce consumes Darwin, but that the Darwinian text itself is transformed in the process--it, too, is revealed as a composite, a multiplicity of elusive sources (Adam Smith, Erasmus Darwin, William Paley, the Book of Genesis, etc.), and subsequently those texts generated from Darwin's text,

including the works of Ellis and Freud, and, ironically, Joyce's own fiction, also become subject to this exponential multiplication of origins. The surface distinction between science and art fades precisely at the point one begins reading in depth, immersed in the tide of language, in the radical commingling of discourses. The result is a Darwinian blurring of boundaries, the production and emergence of a momentary textual structure that subsequently evolves under the selecting eye of the reader, only to fade again into the tangled bank of language.

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