

Article

# 'Making New' and 'Attention' in Poe's 'Poetic Principle' and Olson's 'Projective Verse'

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**Abstract:** This article argues for a neural basis behind Edgar Allen Poe's 'Poetic Principle' and Charles Olson's 'Projective Verse' to create a more robust cross-disciplinary aesthetic model. Brian Boyd and Ellen Dissanayake show that 'attention' and 'making new' in poetry is a stable but evolving technique. This shows up in constant variation in 'classic' and 'modern' poetry and it forms a pattern for interpretation. This article will look at Poe's and Olson's essays in relation to this technique, steering their conclusions toward a partially naturalized conception of poetics in conjunction with more standard literary models in order to broaden aesthetic understanding.

**Keywords:** evolutionary aesthetics; Brian Boyd; Dissanayake; poetry; Poe; Charles Olson



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## 1. What an Evolutionary Aesthetic Model Does

This article intends to combine evolution and aesthetics in relation to poetry, specifically Poe's essay, 'The Poetic Principle' [1], then cross-examine this with Charles Olson's sense of 'breath' from his essay, 'Projective Verse'. While no true 'scientific' reading can be made in poetry or fiction, putting pressure on the debate may yet yield certain overlaps between the humanities and the natural sciences. Not enough interdisciplinary work is being done to look at the arts and sciences as a continuum, as part of the story of our species' history. This is slowly changing as more and more of our evolutionary past is uncovered and as more of our cognitive functions are delved into by the sciences and these findings are discussed by more academics in other fields. This will help push together the natural and cultural sides of human selves. As Joseph Carroll notes, "Clearly, one central line of development for evolutionary study will be to link specific cognitive structures and figurative modes, locating both in relation to evolved human dispositions" [2] (p. 9). When speaking of dispositions, we must understand that working in a consilient<sup>1</sup> mode we examine tendencies—and tendencies only—of our species. Just as the sonnet is a set form, it still allows (and revels in) variation upon that set form. So, too, when using an evolutionary aesthetic model, the edges of any thesis, upon empirical examination, will necessarily be fuzzy. I hope to soften the edges of a kind of evolutionary aesthetics such that inroads may be made toward other types of literary criticism for a future synthesis.

To foreground the literary discussion, we should look at David Wilson's three notions of evolutionary aesthetics from his book, *Evolution for Everyone*. He says:

1] all creatures have evolved to assess their environments to make adaptive choices 2] the mechanisms of assessment often take place beneath conscious awareness, and 3] the mechanisms are subjectively experienced as a feeling of attraction toward features of the environment that enhance fitness (beauty) and repulsion from features that reduce fitness (ugliness). If this theory is correct, then our sense of beauty . . . can be studied as something continuous with the rest of life. [3] (p. 116)

To be clear, he does not mean subjective notions of what is beautiful or ugly, as in, such-and-such fashion is in vogue this year, so-and-so's paintings are the *cause célèbre*, etc. What he means is that the predisposition for aesthetic assessment lies in a species'

pre-history—much prior to later categories of ‘beauty’ or ‘ugliness’ in relation to artistic representation—as a factor of fitness which would directly or tangentially influence that species’ evolutionary development<sup>2</sup>. Human aesthetic choices, for Wilson, have their origins in their intrinsic value to the survival of the species, which is to say at both the individual and group levels (though Wilson favors group selection)<sup>3</sup>. As language and culture developed, these survival features would then become codified as artistic and cultural practice. An evolutionary aesthetic model does not claim that everything we do in art or day-to-day life is a lock-step byproduct of evolutionary forces<sup>4</sup>. Some of these traits and behaviors gave our early ancestors certain statistical chances of survival in comparison to other individuals who did not share these advantages. Small advantages add up over eons. That culture and art are ubiquitous in human societies today is evolutionary proof that these behaviors granted survival advantages to the individuals within them. These groups would have slowly edged out their less-communally-cohesive neighbors, generation after generation. An evolutionary aesthetic interpretation requires a comprehensive understanding in many disciplines. As Carroll notes:

A comprehensively adequate interpretive account of a given work of art would take in, synoptically, its phenomenal effects (tone, style, theme, formal organization), locate in a cultural context, explain that cultural context as a particular organization of the elements of human nature within a specific set of environmental conditions (including cultural traditions), register the responses of readers, describe the sociocultural, political and psychological functions the work fulfills, locate those functions in relation to the evolved needs of human nature, and link the work comparatively with other artistic works, using a taxonomy of themes, formal elements, affective elements and functions derived from a comprehensive model of human nature. [2] (p. 70)

Clearly, the evolutionary aesthetic path is not an easy one. My article will seek only part of Carroll’s comprehensive list. It will focus on connecting Brian Boyd’s notion of ‘attention’ with Ellen Dissanayake’s notion of ‘making special’. Boyd says in his book, *Why Lyrics Last*:

By its very nature, poetry makes a unique appeal to attention. In fitting the cognitive constraint of working memory, it allows us to release information in verbal bursts that reliably, repeatedly direct the attention of an audience to fix exactly on a specified segment of sense. No wonder this offers such an advantage that it has become a cultural universal, and no wonder poetry seems to many the essence of all art. [4] (p. 18)

Poetry elicits a different response than other forms of writing or recitation. These operate by the human brain’s capacity for pattern recognition and the desire for variation on patterns. What we should expect to see by observing the development of poetic traditions is a constant reconfiguration, modified era by era, of ways that poets make these appeals to attention. With new technologies come new means with which to innovate. At first glance, this might seem prosaic, but we do speak of traditions in the arts which radically redefined previously held ‘rules’. An artistic tradition resistant to new methods is already doomed.

Dissanayake’s notion of ‘making special’ helps to clarify why this appeal to attention is important. In her essay, “‘Making Special’: An Undescribed Human Universal”, she outlines the important status given to artistic products in the course of human cultural expression. She says, “Even though not all instances of making special may be art, all art is an instance of making special. This cannot be said about the other characteristics that evolutionists associate with art—i.e., not all art is a kind or instance of play, display or scenario-building; neither is all art communicative, pleasurable, creative, transformational, ordered and unified, or tension-resolving” [5] (p. 31). Making special draws attention to the curious human behavior of having art at all. Certain other species do ‘create’ beautiful patterns in their environments, but we have no evidence that any species save ours spends so much time, outside of the daily needs for living, creating and consuming artistic works.

The attribute of ‘making special’ by appealing to heightened levels attention (or playing against them ironically) are hallmarks of artistic practice. In Poe and Olson, we have two vastly different writers with vastly different aesthetic models. Yet, each demonstrates these two core concepts in their writing of and on poetry.

Here, we must pause briefly and examine the fundamental notions by which we should proceed so as to not fall into what Charles Peirce would call ‘sham reasoning’. He says this “is no longer the reasoning which determines what the conclusion shall be, but it is the conclusion which determines what the reasoning shall be. This is sham reasoning” [6] (p. 57)<sup>5</sup>. My point here is to underline the difficulty of approximating concepts between disciplines that the disciplines do not overtly share, let alone the methods by which such values may be apprehended, drawn or devised. Here, the notion of continuity becomes central to my argument to avoid merely confirming my own consequent<sup>6</sup>. One could easily argue that by placing emphasis on evolutionary factors as guiding aesthetic value judgments and then hunting around in literature for such evidence that I am merely committing an act of sham reasoning, merely hunting for exactly and only those examples which prove my hypothesis.

However, if we accept that human beings are an evolved species and that all evolved species exhibit particular traits and behaviors, then what we are hunting is not a result of sham reasoning but rather evidence of continuities, and in this case, between our evolutionary past and artistic traditions<sup>7</sup>. To say that the arts must exhibit evidence of evolution (natural and sexual selection) is simply to accept that we evolved dispositions which found themselves evinced in what we call artistic practices, and that certain universals and patterns should be shared by all humans. If this is true, then certain particulars in our behaviors should still show evidence of this heritage through generally shared patterns among our species. The argument is the same if we look at the ubiquity of culture, let alone artistic practice. ‘Culture’ and its universality perfectly demonstrates the heritable (and thus variable) nature of culture itself<sup>8</sup>. Evolutionary aesthetics simply states that we have certain evolved (and stable) dispositions, while Theory would tell us *how* these dispositions are manifested more specifically from culture to culture. What is missing on the one side is sensitivity to particularity while the other side fails to note the commonality and universality of ‘human nature’ (or, more accurately, denies human nature outright). “We need to accept both the commonality of human nature and the differences between individuals and peoples. If we reject all claims to commonality, we risk denying a sufficient basis for concern for other humans” [9] (p. 207). I fail to see how these qualities cannot be brought together. Continuity begets unity. Cultural, individual and natural forces together help shed light on artistic practice in our species<sup>9</sup>. The lines between each are blurry. What is left for us is to attempt to explore where the demarcations begin and end and push further into the blurry areas.

## 2. Poe’s Poetic Principle Prodigiously Prodded

The choice to compare Poe’s ideas about poetics with those of Olson may seem *prima facie* bizarre. However, if overlaps can be located between aesthetically unlike poets writing in different times and manners, it may then suggest a stable cognitive core underlying all.

Poe is rather famous for his incantatory power and the pressing rhythm of his poems. He saw the nature of verse as something heightening perception and awareness through a type of rarification of sound and overall effect. He makes two interesting claims in his essays ‘The Poetic Principle’ [1] and in ‘The Rationale of Verse’ [11]. He claims in each that there cannot exist anything we call a ‘long poem’. He repeats this again in a third essay: “Here I say no, at once. What we term a long poem is, in fact, merely a succession of brief ones—that is to say, of brief poetical effects. It is needless to demonstrate that a poem is such, only inasmuch as it intensely excites, by elevating, the soul; and all intense excitements are, through a psychal necessity, brief” [12]<sup>10</sup>. The area of attention required of a reader or listener of a poem is such that only selective attention (to use William James’

term) is possible. What Poe noticed is what modern cognitive studies have confirmed. Ellen Dissanayake, speaking of mother–infant pair bonding and communication, says:

Mother-infant engagement and music are temporal structures, making similar use of framed episodes, or ‘bouts’, each with a clear beginning or introduction and final felt closure, sometimes with a refrain or coda. The utterances also appear to be organized primarily into what can be transcribed as lines (or phrases), judged either by number of words, or by timed length, generally three to four seconds . . . [which] characterize phrases of prelinguistic vocalization, adult speech, oral poetry, and music. [13] (p. 381)

If our sensitivity to rhythm and musicality indeed has its origins in pre-cognitive infant interaction (and here I must stress that the infants are not being ‘taught’ these rhythms; they react to certain ones as the evolved neural circuitry predisposes pleasure in some kinds of interaction and displeasure in others from the mother–infant interaction), then we can at least base some of our aesthetic qualifiers in the natural sciences and cognitive studies. It is a stable metric by which to establish and expand how, for example, certain durations, rhythms and ensuing tensions arise in poetry and how poets manipulate these to create layers of meaning at the sonic level. This does nothing to tell us what a particular poem might mean, but it gives a solid basis from which to say why rhythm, line-length and pattern show up in all formal poetic systems and why that kind of incantatory language can be found in other genres like public speaking or lyric fiction. We learn as infants to be sensitive to, attentive to, voices and things around us, particularly our mothers. Eventually, these proto-making-special moments cohere into a receptivity to uses of language, duration, pattern and variation. The stirrings of the ‘poetic soul’ start quite literally at birth <sup>11</sup>.

Charles Olson’s famous essay, ‘Projective Verse’, is well known for pointing toward the ‘language poetry’ of subsequent generations. However, there is a concordance in Olson with Poe’s assertion. Olson discusses the kinetics, principle and process of poetics under what he calls ‘Composition by field’ [14] (p. 864). He outlines this by saying that (#1) *Kinetics* relate to the origins of the poem.; (#2) *Principle* has to do with Robert Creeley’s comment that ‘Form is never more than an extension of content’ [14] (p. 884); and (#3) *Process* means that perceptions in poetry must lead immediately to another perception (more or less the sustained effects of Kinetics) and variations on the line as a unit of attention. Olson considered the breath (physically) to be a prime generator of poetic sense. He says:

It comes to this: The use of a man, by himself and thus by others, lies in how he conceives his relation to nature, that force to which he owes his somewhat small existence. If he sprawl, he shall find little to sing but himself, and shall sing, nature has such paradoxical ways, by way of artificial forms outside himself . . . Nature works from reverence, even in her destructions (species go down in a crash). But breath is man’s special qualification as animal. Sound is a dimension he has extended. Language is one of his proudest acts. And when a poet rests in these as they are in himself (in his physiology, if you like, but the life in him, for all that) then he, if he chooses to speak from these roots, works in that area where nature has given him size, projective verse. [14] (p. 871)

Olson takes nature as the root of poetics in relation to poetic practice, its germination leading to codification. If breath (and nature) form part of the origins of poetic impulse and practice as their antecedents, and if similar patterns can be seen in mother–infant interactions, then the subsequent outcome of #2/*principle* is the translation/codification of these functions into cultural units (e.g., breath units further written into lines, say, 14 in number with a variable rhyme pattern, producing a sonnet). Olson, of course, is arguing against a ‘closed verse’ (purely formal verse), but lacking forms there would be no patterns against which to rebel and create new variations. Here, again, a type of ‘evolutionary’ <sup>12</sup> process seems to be at work. Poe denies that there can be no long poem and Olson focuses on the physicality of the breath versus line in poetic creation. Each of these ties back to neural configurations of patterns and attention in the human brain <sup>13</sup>. For Poe, the

'moments' of poetry in the long poem call attention to themselves by their disruption of the underlying narrative. For Olson, the 'making new' of the poem on the page, of the disruptions of style or sense, calls attention to the physicality of the poem on the page, in the ear, in the lungs.

Here is exactly where Theory must be brought in to deliberate on the social history and function of such nuances, tensions and forms. We have our dual purposes now integrated. The *process* that Olson speaks of—heightened perception leading to further heightened perception—seems very much like Poe's mandate of short emotionally charged instances of poetic effect. A glance at Olson's own long poem, *The Maximus Poems* [16], demonstrates that the book's *process* is achieved by a system of variation from section to section (making new and drawing attention). Principle, it would seem, is the least connected to an evolutionary aesthetic heuristic precisely because it is the most culturally sensitive. However, with a small maneuver through breath and rhythm, Olson's idea can be modified to fit both a natural and cultural aesthetic model without the need for one to trump the other <sup>14</sup>.

Human societies were oral long before we were literate. The stories, songs and teachings, passed through generational communication, would simply be more memorable if they contained rhythmic, aural or repeatable patterns that aided their memorization. As David Wilson says of parable and social function, "Knowledge in oral societies is stored and communicated largely in the form of proverbs. We still make use of proverbs as memorable nuggets of information that are especially apt for a given situation" [3] (pp. 222–223). Wilson continues by quoting Walter Ong, who says, "Fixed, often rhythmically balanced, expressions of this sort and other sorts can be found occasionally in print, indeed can be 'looked up' in books of sayings' but in oral culture they are not occasional. They are incessant. They form the substance of thought itself. Thought in any extended form is impossible without them" [3] (p. 223). As technological advances made literacy more common, how could we not expect the human urge for innovation/making new to create new forms, new patterns, new ways of creating attention?

Poe's question of the 'long poem' as a series of connected 'units of attention' [4] (p. 16) <sup>15</sup> in relation to Olson's sense of kinetics/principle/process is important because it helps us overlap natural tendencies with cultural practices. For example, in John Berryman's *Dream Songs* [18] the poems are broken up, fractured, and yet are patterned in regular stanzas (with variation) and relatively regular rhyme. Berryman's work, like Olson's, is a series of short poems, presented as a longer, cohesive work in ways different from a 'normal' book of poems. Berryman makes new in the dervish of his language while remaining remarkably fixed in the poems' form. This creates new levels of attention, new expectations, new ways of creation. Berryman presents a stable form through which speed the thoughts and neuroses of his character Henry. The final two stanzas of Berryman's 'Dream Song 77' demonstrates this:

"-Henry is tired of the winter,  
& haircuts, & a squeamish comfy      ruin-prone proud national mind,      &  
Spring

(in the city so called).

Henry likes Fall.

He would be prepared to live in a world of Fall

for ever, impenitent Henry.

5

But the snows and summers grieve & dream;

these fierce and airy occupations, and love,

raved away so many of Henry's years

it is a wonder that, with in each hand

one of his own mad books and all,

10

ancient fires for eyes, his head full

& his heart full, he's making ready to move on." [18] (p. 84)

Though the rhyme scheme is less employed here, the general form remains consistent. The repetitions of Henry throughout call attention to the prominence of the speaker while calling Henry's own role into question. The long, unbroken sentence that spans the two stanzas with its pauses and pulls on grammar and rhythm, emphasizes in its meandering the same meandering mind speaking to us. There is a physicality always on display for Berryman played against the poems' own psychicality: The form that should constrain the field of expression is beaten back by the speaker's verbal fusillade. However, the Berryman's work was highly praised in its time for its innovations (and it still is), giving poetry a new kind way to appeal to attention and to make new.

Though Olson's *Maximus Poems* preceded Berryman's<sup>16</sup>, we see many of the same tendencies in each<sup>17</sup>. The fracturing of the lines (not remotely new by the time Olson writes these poems) endlessly calls attention and makes new, takes the sentence's rhythm and bashes it against the line. It exacerbates Poe's idea of 'no long poem' by creating a monumental poetic sequence composed of atomic parts. From Olson's *Maximus Poems*, the patterns emerge:

“He came  
 accompanied by  
 the night. His son  
 hung  
 in the bushes. When Heaven was again  
 on top,  
 he swung  
 And altered  
 him

Down came  
 his parts  
 upon the sea. Out of the foam the form  
 of love  
 arose. Was ferried over  
 by the waves  
 to the shore . . . ” [16] (p. 447)

Olson plays the rhythmic length of the sentence directly against the line length, the enjambments calling more attention to themselves by the irregularity of the line length. Written out as sentences we can see the effects of the enjambment played against the more concrete sentence-level units of thought:

He came accompanied by the night.  
 His son hung in the bushes.  
 When Heaven was again on top, he swung and altered him  
 Down came the parts upon the sea.  
 Out of the foam the form of love arose.  
 Was ferried over by the waves to the shore.

Except for the third 'line', nearly all of these sentences are of the same length and of the same spoken duration. Had this particular poem been written in longer lines, it would still be a lyric tour de force, but it would lose a dynamic aspect of its meaning-making<sup>18</sup>. So too we see a strong relation between the physical and psychical as linked phenomena for Olson. The thing Olson shares with the tradition is the exact thing he rejects: the formal look or feel of a poem. He finds a new way to make new and draw attention by rejecting the very things associated with poetry. All poets alternate focus on differing aspects (narrative, line, image, pure sound, etc.) in order to sustain attention (as Poe was correct about the long poem) because of how human attention works. Novelty is beget by breaking pattern which draws attention and makes new. Olson's biggest strength was his antipoetic stance, playing the idea of form against the forms of ideas.

### 3. Conclusions

Poetic experimentation demonstrates the range of human ingenuity, much the same as, through observation and experimentation, certain flora and fauna could be identified as beneficial (boil willow bark for a headache) while others could be deemed harmful (Don't lick that bright orange frog, children). Again, a rather large impediment suddenly appears here: propensities and traits toward some behavior when thrust into an environment codify the tendency itself. Ours is a species that evolution has driven toward the communal and the personal, the social and individual. It is no wonder that these two forces tugging back and forth at all levels of the human experience remain the foundation of every type of political and artistic and philosophical 'issue' that has been brought up and will ever be brought up. Has it eroded our sense of humanity one jot that we know we are just another primate in a long line of other primates? Our natural tendency (and delight) in pattern seeking and recognition is the hallmark of technological advances.

As Boyd notes, "I, like other who think that humans need to be understood as more than cultural or textual entities, do not wish to entrench the status quo ... (S)cience and technology have altered the status quo far more radically than anything literature professors have managed" [9] (p. 199). Technology, like any human creation, can be used for bad ends, but that is an argument against the users, not against science or technology itself. Our cultural and 'language'd' side does give way to variation and innovation, and it is within that capacity that artistic expression thrives. To call it only 'culture' with no reference to or understanding of aesthetics' natural causes is to deny that humans evolved as a species, a strange thought indeed.

Whale songs, fertility displays, variation in songbirds' singing, jumping spider mating dances, pufferfish creations of elaborate geometrical patterns on the sea floor, etc. Do these species seek patterns in the same ways that we do? Do they intentionally express variation in their elaborate plumage? Do whale's immaculate undersea songs have a cultural history that informs them? Do the geometries of the spider's web have appeal to attention in the same way that a poem does? Where does the distinction begin and end between a natural behavior that results from instinct and something akin to self-expression? Here, across the spectrum of possible life variations, we see the range of possible, a slow and steady accruing of types of behavior which in human beings—once language took hold—had one end of its tether attached firmly to the 'pattern seeker' and the other to the 'variation seeker'.

Even in examining prehistoric objects, made by our linear ancestors, we must be careful in how we ascribe meaning. Jean Clottes, speaking of an Acheulian 'proto-figurine' object from 280 kya which may depict a woman, says, "In fact, it should never be forgotten that, if we automatically project our own mental images onto the material reality that surrounds us and interpret it accordingly, what we see and the process of interpretation are the result of prior development and education of which we are no longer aware. We cannot conclude from this that archaic humans saw things in the same way" [19] (p. 31). Of course, as William James famously said "the trail of the human serpent is thus over everything" [20] (p. 515), and we cannot help but see the world through human eyes. However, those eyes and the brain behind them are evolved organs. The thoughts and feelings we have are shared to such a degree by people of other cultures and languages that we can read works in translation and find common currency between people long dead as our progeny will find common currency with us millennia hence. We are caught in a web of relations that extends from the dark corners of nature to the complexities of modern technological culture, and to lose sight of the continuum between these is to cynically deny our own humanity. When aesthetics denies nature in its holistic views it denies part of what it means to be human. I firmly hold that synthetic models are preferable to culture—or nature-only models. How could it be anything else with a species as uniquely natural, cultural and synthetic as our own?

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## Notes

- 1 Consilience is a term from E.O. Wilson's eponymous book. It means to combine all forms of human knowledge from the scientific to the humanities.
- 2 Of course culture 'steers' aesthetic valuation to a large degree. Yet, the ability to formulate aesthetic models is a cognitive process, no matter the exceeding plasticity of the results.
- 3 I shall leave quite alone the debate whether evolution works at either the individual or group level. The debate centers on whether evolution can act at group levels instead of the individual reproductive level. On one side you have people like David Wilson and E.O. Wilson while on the other side you have people like Jerry Coyne and Steven Pinker. There are many interesting ideas coming from the group selection camp, e.g., about how altruism evolved, but the modern synthesis of evolution argues that evolution works at the level of the individual. Some recent findings in epigenetics are also quite interesting.
- 4 Evolution is not deterministic in this sense.
- 5 Peirce's prescience in understanding historical factors and their delineation cannot be overstated here. His essay 'Lessons from the History of Science' (an 1896 manuscript that was not finished) [6] (p. 43–125), outlines much, if not all, of the current debates still circulated in the philosophy of science today. He notes that the natural sciences do move, incrementally or rapidly, toward forms of consensus—a kind of perpetually modified truth—in based on data and observational reasoning.
- 6 Viz., cherry picking desired data that prove the initial concept. I discuss this in my article, 'The Indelible Stamp of Our Lowly Origins: An Epistemic Architecture Between the Science and Humanities' [7], where I argue that science is methodologically predictive while the humanities are methodologically retroductive. The present article cannot hope to be comprehensive in so few pages. Rather, it intends to suggest overlaps that might not be readily apparent.
- 7 Additionally, this is invariably limited to metaphoric approaches. There is no way to 'sequence the genome' of a poem. There are certain approaches in fields like corpus linguistics that bring computational data to the discussion, but these are not aimed at being aesthetic models.
- 8 Boyd says, "Far from denying cultural difference, an investigation of human nature that takes into account our evolutionary past makes it possible to explain cultural difference in a way that insisting that humans are completely 'culturally constructed' cannot" [8] (p. 23). This cultural construction is broadly held to be linguistic and gives rise to the linguistic constructivist models.
- 9 I do however understand the knee-jerk reaction to something like Boyd's maneuver in 'Art and Evolution' [10] that artists seek to "maximize audience attention and response" rather than express themselves as individuals. This does not square with the 'accepted' history of the arts, but given Boyd's definition of art as an extension of neotenus types of 'play'—common to all mammals, it would follow that artistic practice—and let us at least hedge this bet as 'artistic practice in its origins'—would fit as a type of pattern/display/variation/attention model.
- 10 It has always been hard for me to take Poe as being totally serious in this essay. His talk of 'elevation of soul' by way of mathematical manipulation—while totally possible and true to his mind—has always struck me as strangely discordant for him. Poe was also capable of incredible wit, sarcasm and jest as his essays attest.
- 11 If not before with the cadence of the mother's heartbeat and the muted noises heard in utero.
- 12 By which I mean a cultural inheritance, not a genetic one.
- 13 Frederick Turner and Ernst Poeppel argue that line duration in formal poetry the world over take around 3–4 s to say out loud. This is due to a "three-second acoustic information-processing pulse in the human brain. Our acoustic present is three seconds long; we remember echoically and completely three seconds' worth of acoustic information before it is passed on to longer-term memory system" [15] (p. 210). Though not accepted by most at present, the idea is tantalizing.
- 14 Yet, even with the backing of the natural sciences, evolutionary aesthetic models may misinterpret the evidence and come to incorrect or unsound conclusions. In 'Arts of Seduction' [17], Geoffrey Miller contends that poetry's use of rhyme, meter and rhythm are types of handicaps on language the overcoming of which demonstrates to others (viz. potential mates) the individual's mental and verbal status. By looking at the sexual selection function of poetry, Miller makes an interesting inference, but his overall message that these restrictions are mere courtship displays dilutes their content. Miller is not specifically wrong here except that the brain's specific pattern seeking function should highlight the communal aspects of poetry rather than just the individual aspects in trying to reproduce (viz. sexual selection).
- 15 The origin of the term 'unit of attention' comes from Cleanth Brooks and Robert Penn Warren.
- 16 Olson's project lasted from 1950 till his death in 1970. Berryman's *77 Dream Songs* was published in 1964 while *His Toy, His Dream, His Rest* was published in 1968. As early as 1947 Olson and Berryman were in correspondence (at Ezra Pound's behest), so each was aware of the other's presence and writing.
- 17 It should be noted that this duration has more to do with time than with particular stresses in the languages themselves. Isochrony and stress-duration in poetic forms seems to be relatively stable in traditional poetic formats. That a language like English with hard/soft stresses necessarily differs from a language without them (like Japanese or Classic Greek) is taken for granted, but the rhythmic duration of 3–5 s per line (in general) still holds as a relatively unit of attention based on a stable neural configuration of the human brain.



- 18 Additionally, of course poets recite their poems in different ways. Sometimes the enjambment is emphasized, and other times it is read through with no pause. The fundamental patterns are making special and appeal to attention.

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