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The Scientific Method's Missing Step: Using Marianne Moore and A.R. Ammons's Poetry to See the Invisible

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The Scientific Method's Missing Step:
Using Marianne Moore and A.R. Ammons's
Poetry to See the Invisible

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Introduction:

The Invisible, Inexpressible, and Unknown

Communicating the invisible requires a common lexicon between the communicator and the receiver, a shared understanding with which to conceive the same thought about the invisible and its conclusion. Like describing a color, describing the invisible requires certain common visions and knowledge, a shared imagination and reality. For centuries, poets have turned to science to describe what can only be felt. Science itself deals in invisibles, using the objectively physical to form a hypothesis about the unobvious. Using observations, science delves beyond the surface, probing until a hypothesis emerges to explain the reasoning behind the order or system behind external phenomenon. Experiments test the hypothesis, and by the end of the process, something is corroborated, and if one is lucky, unveiled.

To acknowledge something as invisible has always been to acknowledge its existence, even if the mechanisms or purposes of its existence cannot be understood. The mechanisms are there; they are simply unseen. Their existence can be proven using tools other than sight. Sight is the only thing which keeps the existence of the invisible from being completely unquestioned. For something to be unknown is for its existence to be in question, if even acknowledged. If acknowledged, the unknown is accepted as an enigma, a mystery left willingly or resignedly unsolved. Science treats each unknown as invisible, refusing to leave something unknowable. Its process deepens knowledge, progresses technology, and leaves questions in the wake of answers, treating them as invisible, refusing to define them as the infinitely, unequivocally unknown.

In choosing to pursue everything as the invisible rather than unknowable, scientific process sets aside the mystery of the unknown for the marvel of the real. What is visible and

beautiful but not understood requires study beyond its known appearance. To marvel at something is to gaze upon it with wonder, to innately know something exists beyond its appearances, something unseen but clearly at work. These inner workings and mechanisms of function provide wonder and an opportunity to perceive something beyond the veil of sight. This is the invisible; this is the marvelous.

Poetry deals in a different kind of invisibility by communicating thought, invisible by nature. Poetry grasps at the inexpressible and indescribable, arranging words to describe as close as possible an inspired thought or a fleeting feeling. Its subjects of thought are not meant to be seen, but understood universally, the only common reference point the poem's words. As more questions have been answered through scientific process, more observations have been made objectively, creating a more widely shared understanding of the world. With each new discovery, a wider vocabulary and a new palette of language become available to poets hoping to describe the inexpressible.

The invisible and the inexpressible are two names for two of the intellect's forms. Both refer to truths either felt or intuited. An individual is aware of this truth, but cannot recognize it, cannot mentally seize it, cannot give it either form or name. Science addresses this by looking beyond the surface, using what can be observed, and traps the form, proving it through experiments. Poetry uses the nuance of language to invoke the shapeless truth, coaxing it to rise from the words and within the individual. The poem becomes the vessel for the shapeless truth; the poem becomes its form.

When used together, science and poetry refine this inexpressible thing. Through scientific language, the new observations create new vocabulary, providing new means of expression. What was once inexpressible may become thwarted by a new fact, a new scientific concept that

reflects exactly what is going on internally, and allows the individual to finally say, “This is it. This is the feeling I’ve been hoping to express.” New discoveries refine the invisible, but something more always remains, something even more out of reach, more complex and difficult to prove. So too will something always remain ineffable, explainable and describable, but unable to be fully seized within the compactness of a simple word. The invisible and the inexpressible become more refined with each new discovery and its new vocabularies, full understanding and expression always remaining just out of reach, compelling individuals to see and feel complexities previously unknown about their perceptions of the world.

The effect of changing new discoveries and their new vocabularies can be seen in the changing ways in which poets use science. What is considered invisible, inexpressible, and in need of an objective, scientific description evolves, each new age a further attenuation of human emotion and marvel.

Differing Scientific Expressions of the Invisible through the Ages

During the seventeenth-century, John Donne invoked the precision of scientific thought for units of emotional measure, treating emotions as the invisible but known truth whose magnitude needed to be communicated. Emphasizing internal feelings, he described the external in scientific terms for the sake of aggrandizing the speaker’s emotions from the personal to the physical. Units of measure offer an objective validation of the depth of his emotions. They fill the world, so large they must be measured according to the earth’s scale. The speaker’s grief becomes “The Computation,” a definitive series of years meant to communicate the magnitude of this grief.

“The Computation”

FOR my first twenty years, since yesterday,
I scarce believed thou couldst be gone away ;
For forty more I fed on favours past,
And forty on hopes that thou wouldst they might last ;
Tears drown'd one hundred, and sighs blew out two ;
A thousand, I did neither think nor do,
Or not divide, all being one thought of you ;
Or in a thousand more, forgot that too.
Yet call not this long life ; but think that I
Am, by being dead, immortal ; can ghosts die ?
(1635)

So deep is the speaker's grief he has no way of expressing it except through computation, through objective measures which every individual can understand. Usually reserved for keeping track of the finite, numbers are used to show just how unbearable supposedly finite, healable grief is, how extreme and undiluted when put into numerical terms. Numbers instead magnify the grief, communicating the shock he has felt “since yesterday” the forty-year period when he “fed on favours past,” and the dulling pain over the next eon (1-3). These are not exaggerations; they are clarifications, measured and recorded, the final sum conveying more than any mix of metaphor and imagery could.

The use of measurement's precision continues in “A Valediction: Forbidding Mourning,” in which the function of a compass is used to describe the bond of lovers, forcefully felt, but never seen. With its cords, love puppets paired individuals, drawing them together over and over again. Donne uses the act of using a compass to precisely draw a circle to explain why he will return to his wife after leaving for a long trip.

If they be two, they are two so
As stiff twin compasses are two ;
Thy soul, the fix'd foot, makes no show
To move, but doth, if th' other do.

And though it in the centre sit,
Yet, when the other far doth roam,
It leans, and hearkens after it,
And grows erect, as that comes home.

Such wilt thou be to me, who must,
Like th' other foot, obliquely run ;
Thy firmness makes my circle just,
And makes me end where I begun.

(“A Valediction: Forbidden Mourning” 25-36)

In describing their love in the terms of a geometric instrument, Donne precisely portrays the mechanics of their relationship. His return becomes a only a matter of time, for no matter what, he says, his wife “makes my circle just,/And makes me end where I begun” (35-36). Love’s causes and effects are the invisibility he wishes to validate. He wishes to capture “the vertical reconciliation of body and soul” of human love and its paradoxical tendency to “pulsate between the eternal perfection of circularity and the linear extension of space and time,” to make one feel at once infinite and mortal (Freccero 337). Using an instrument of precision captures perfectly the dependability of this complexity of human feeling. An instrument such as the compass will perform one function only, but this function is one which results in perfection, and always returns to its beginning. It is true and perfect, and there is a reason for such perfection. Though unseen, such love is not the result of some divine force, but a precise and dependable principle.

The measurements Donne relies on in “A Nocturnal upon St. Lucy’s Day, Being the Shortest Day” use the regularity of planetary orbits to convey the feeling of interminable imbalance he felt over the death of his daughter, using the science of natural systems to communicate personal emotion. “Among English poets, none showed a more immediate response to the new discoveries than John Donne...for a time he fastened upon the new astronomy as another source for figures of speech, another vehicle for his restless imagination,” and he demonstrates this tendency to use physical facts as vehicles for communicating the

personal when such facts serve as a measure of normalcy in this poem (Nicolson 47). Though he talks of chaos and creation in religious terms, observed physical principles are the points of comparison used to communicate the extent of grief. As if orbiting the bereaved's happiness, painful remembrance of someone lost shows itself occasionally but consistently. Through this poem, Donne conveys the inability to forget and the constant depressing presence of memory. In presenting St. Lucy's Day, which was the winter solstice in the old calendar, Donne begins with the objective fact of the day's length, calling it "the year's midnight, and it is the day's, /Lucy's, who scarce seven hours herself unmasks" (1-2). Donne's reality shifts because of grief, this objective fact subsumed within his personal grief. The necessary becomes a vehicle for him; his grief changes scientific fact for him, as he is "none; nor will my Sun renew" (37). He uses the facts as a point of comparison, declaring "If I an ordinary nothing were,/As shadow, a light and body must be here" (35-36). The sun will not return for him after this dark day, and he has become nothing, with neither "light nor body" (36). He is not "ordinary"; his grief defies scientific fact, reducing him to "the first nothing the elixir grown," the blankness out of which the world was divinely created (29). The invisible but very physically-felt aspects of grief become something which alters the physical, so deep no reality can exist except one in which no rules or scientific, physical facts exist. Human emotion effects a change on the physical, its solidity invisible but the effects of it apparent to the individual. In the form of poetry, the scientific helps Donne's emotional reality becomes the reader's.

Emotions' invisibility gave way to nature's wonders during the Romantic period. Nature's wonders create awe within the beholder, transmitting something substantial but unexplainable between viewer and landscape. The viewer beholds nature, and feels without

conscious provocation. To John Keats, rationalizing the cause of deep feeling within the beholder scattered the marvel inspired by nature. He avoids using science's rationalization to communicate wonder and its causes' invisibility. Instead, unveiling natural truths and mysteries becomes something almost sacrilegious, as if the wonders of the unknown are fragilely grand and can be broken by a deduced answer. Keats believed rationalization tended to dissipate mystery and wonder, disassembling the brilliance of the unknown. No longer considered subservient to personal emotion, the scientific rationalization becomes a force in itself, its process the key to answers. Keats eschewed this process, prioritizing the unknown over the deduced invisible, and "believed that Newton had reduced all the poetry of the rainbow by reducing it to the prismatic colors" (Dawkins x). The unknown was all, for part of beauty was to see it in its wholeness without wondering about its causes. The unknown, not the invisible, was the beautiful and the sublime, whole without reason. As written in Keats' "Lamia," "Philosophy will clip an Angel's wings," turning the divinity of an Angel into bits and parts. To turn the unknown into the invisible by asking questions about cause and reason tears at wonder. Reason is an astringent, puckering wonder's ability to overwhelm simply because the viewer does not know what he is beholding. To be overwhelmed by the something's being is to feel wonder, to be overwhelmed by its unfathomable existence. To attempt to fathom sullies wonder. To attempt to turn the unknown into the invisible, known but unseen, is to possibly reveal such wonder as an illusion. To answer the question of "how" is to unsaturate colors and "unweave a rainbow" ("Lamia" 238). In whole,

Philosophy will clip an Angel's wings,
Conquer all mysteries by rule and line,
Empty the haunted air, and gnomèd mine—
Unweave a rainbow, as it erewhile made
The tender-person'd Lamia melt into a shade.
(“Lamia” 229-238)

Scientific process attempts to “conquer all mysteries by rule and line,” believing there is more behind the “haunted air” and “gnomèd mind” (230). Keats casts fact and deduction as destructive, for just as “tender-person’d Lamia melt[ed] into a shade” when her serpent form was revealed, scientific process can reduce the wonderful by decomposing it into its pedestrian pieces. Unlike with Donne’s work, the invisible in Keats’ “Lamia” is something separate from the personal, the answers to the earth itself. Rather than used as a mechanism of language, the invisible is the principles behind the earth’s wonders, which should remain untouched by the reaches of reason. The unknown should remain the unknown, the mystery and uncertainty more sublime than the invisible principle and fact.

In “The Tables Turned,” William Wordsworth echoes Keats’ sentiments by defending nature in the face of science in response to a friend’s inquiries about why he sits “for the length of half a day/.../and dream your time away” (“Expostulation and Reply” 2-4):

Let Nature be your teacher.

...

Sweet is the lore which Nature brings;
Our meddling intellect
Mis-shapes the beauteous forms of things:—
We murder to dissect.

Enough of Science and of Art;
Close up those barren leaves;
Come forth, and bring with you a heart
That watches and receives.

(“The Tables Turned” 16-32)

Man uses science to “murder to dissect,” his “meddling intellect” rationalizing wonder and its causes by dissembling the “beauteous forms of things” until he succeeds in “strip[ping] the world of spiritual meaning” (Jeffrey 17). “Enough of Science and Art,” declares Wordsworth, of attempting to rationalize and dissect Nature with science in the hopes of reproducing her effects

through industrial or fine arts. Nature inspires awe through the “heart/that watches and receives;” its messages received and transmitted in full and in whole, not meant to be “dissected” through process. But unlike Keats, Wordsworth pragmatically acquiesces to the improvements science can offer. Produced through scientific process, the machines in his “Steamboats, Viaducts, and Railways” are Nature’s “lawful offspring” (11):

“Steamboats, Viaducts, and Railways”

MOTIONS and Means, on land and sea at war
With old poetic feeling, not for this,
Shall ye, by Poets even, be judged amiss!
Nor shall your presence, howsoe'er it mar
The loveliness of Nature, prove a bar
To the Mind's gaining that prophetic sense
Of future change, that point of vision, whence
May be discovered what in soul ye are.
In spite of all that beauty may disown
In your harsh features, Nature doth embrace
Her lawful offspring in Man's art; and Time,
Pleased with your triumphs o'er his brother Space,
Accepts from your bold hands the proffered crown
Of hope, and smiles on you with cheer sublime.
(1833)

Though industry betters Man’s position at the cost of wonder, it is Nature’s subordinate, offering a “crown/of hope” for her approval and “smile” of “cheer sublime” (13-14). “Beauty may disown” industry’s “harsh features,” but Nature will never flee from the earth in spite of all man’s “triumphs o’er” it. Nature is the great unknown to which all bow, here spirit forever untouchable. ‘Spirit’ eludes definition according “to a bundle of ‘mechanic laws,’ for the spiritual world is beyond [the scientist’s] jurisdiction,” existing in a plane above Earth (Jeffrey 22). Wordsworth warily embraces science, believing it “can be a great power for good,” but only to serve Nature and the wholeness of existence she offers the world (Jeffrey 22). The processes and deconstructions leave the unknown intact, the principles governing Nature unable to truly

“unweave the rainbow,” for the rainbow will always exist beyond Man’s full grasp.

Understanding the invisible will not reveal the unknown; it must always be felt.

Donne’s invisibility of emotion and the Romantics’ unfathomable nature come together in Lord Alfred Tennyson’s *In Memoriam*, in which new Victorian theories of evolution and geology magnify Tennyson’s grief over Arthur Henry Hallam’s death into an unprecedentedly frightening question of human significance. He places the inconsolable grief within the context of the human species’ newly-revised history, and the invisible connection humans have with their past forms and current beasts:

...Arise and fly
The reeling Faun, the sensual feast;
Move upward, working out the beast,
And let the ape and tiger die.
(118.25-28)

Scientific fact prevents man from believing himself a completely different being from the beasts around him, for they are born of the same stuff. Wordsworth’s Nature was always above true human grasp, but the Nature about which Tennyson writes is not the same lofty and divine existence. This Nature is within the bones and forms of man. No longer can man choose to remove himself from nature, “watching and receiving” Nature into his heart only when he decides it desirable. Theories of evolution have made it impossible for man to ever shake nature from himself, “the reeling Faun,” “the ape,” and the “tiger” are part of man, regardless of life or death. “The beast” must be “work[ed] out” slowly as man “move[s] up” through their different forms, a gradually refining process. Requiring process, perfection no longer emerges whole from nothingness, diminishing humankind, diminishing Hallam, and diminishing Tennyson’s grief. Perfection may not even exist, as even the earth is a work in progress, with no definitive

end in sight, the product not of a divine nature, but of an infernal, undirected process. New theories in geology describe earth not as materializing out of divine genesis:

But iron dug from central gloom,
And heated hot with burning fears
And dipt in baths of hissing tears,
And battered with the shocks of doom.
(118.21-24)

The earth's continual changes, the ongoing process of evolution—their continuities are the invisible heritages of mankind, invisible and within them. Made invisible by time, man's biological and geological heritage complicate the grief Donne expressed two centuries before Tennyson. Once unbearable but simple, human grief becomes a matter of more than loss. Evolution and biology tap into a fear previously hidden below the basic concept of loss: insignificance. Donne's use of science aggrandized his feelings of grief, changing the world's reality into his. The ability of sorrow to alter reality elevated the departed individual's importance, disproving his or her worldly insignificance. During Tennyson's time, this fear of insignificance or being forgotten reemerges more powerfully in the face of new evolutionary theories, turning mortality into more than a fear of oblivion, but a matter of universal oblivion, of universal nothingness as the earth turns and turns. Evolution and geology validate these feelings, lending nuance to the fear of death, clarifying that it is not death of which man is afraid, but utter insignificance.

Yet the new science also helped Tennyson to invigorate a belief in self-made human significance, and renew a belief in the order of the heavens and the divine, now nuanced by these new sciences:

“The closer the acquaintance that Tennyson had with science, the more worried he seems to have become about its implications...the less acceptable (to him) aspects of science seemed to be being strengthened. One example was the increasing doubt that evolution could be progressive.” (Meadows 117)

With these doubts, Tennyson finesses the defiance of humanity to follow any fate imposed upon it by outside forces, be they scientific or divine. Man always chooses his own fate:

Not only cunning casts in clay:
Let Science prove we are, and then
What matters Science unto men,
At least to me? I would not stay.

Let him, the wise man who springs
Hereafter, up from childhood shape
His actions like the greater ape,
But I was *born* to other things.

(120.5-12)

“I was *born* to other things,” he declares, no matter what science or fact says, demonstrating human defiance of anything imposing an inability to choose one’s own fate. This refusal to accept scientific theory reveals another nuance of human defiance. Man is a stubborn creature who will decide for himself what he is “born to,” no matter what the majority or learned say. For Tennyson, doubt brought on by new knowledge of the connection between man and his predecessors, hidden within Man’s current body and mind, proven only by Man’s current existence, will not become the conduit of human life. Nor will the earth’s chaotic past, hidden within stones, force Man to accept his insignificance within a terribly awesome Nature. The invisibility of this baser heritage does not deter Man from choosing a personal fate; it only reassures him of his continuity, be it unplanned or divinely intervened.

Donne, Keats, Wordsworth, and Tennyson poetically treated different invisible presences within human life, each using scientific language to verbally bring these unseen truths into existence. Scientific language provided a means to communicate, prove, and validate different invisible things, felt and known, but never seen. With each added scientific idea, new forms of expression become available, and new inexpressibles become known, emerging from the finer

spaces of unknown between the facts. From Donne's use of scientific precision to Tennyson's use of evolution and geology, the invisible and inexpressible emotion of deep grief developed from a simple but potent emotion to a complex sorrow over loss, insignificance, and continuity. By the Victorian period, the Romantic differentiation between lofty unknown Nature and provable physical facts was lost, inextricable from the biology of Man and Earth's geology. Everything once considered untouchable, unknown, and only visible to Man became dislodged with new scientific theories. The unknown became the invisible, unseen but verified, within the very body of Man. His biological heritage proves the continuity between past, present, and future, a known fact, but a large temporal truth impossible to see. He becomes continuity with the past, present, and future united within him.

As American poets of the twentieth-century, Marianne Moore and A.R. Ammons wrote when science began to deal directly with the atomic, a level of invisibility undetectable by feeling. Though this level of invisibility suffuses through the very wholeness and essence of any inanimate or animate object, it must be rationalized. Apparent wholeness belies the particles, space, and energy within any object. No longer just a matter of past, present, and future, wholeness becomes a matter of body and its motion, a matter of not just continuity, but also unity. Marianne Moore uses the scientific to discuss the unity and physical integrity of a moving animal, using the process of science to poetically create the principle behind a living plant or moving animal. A.R. Ammons uses the scientific to exemplify within his long poems *Tape for the Turn of the Year* and *Garbage* the continuity of an idea as it becomes independent of its creator's space and mind. Continuing their predecessors' discussion of the invisible through the scientific, Moore and Ammons reflect the atomic scientific focus of the twentieth-century,

expressing through their use of scientific language movement's unity and ideas' continuity,
allowing their readers to see for a moment the invisible, insensible, essence of matter and motion.

Chapter 1: From Inquiry to Hypothesis

Marianne Moore's Internal Unity

Recognition emerges from coalesced thoughts, from the jumble of pieces and images. The intermediary phase between disparate thoughts and recognition, the very act of creating a conclusion, has no name, but falls under the same category as motion. An unseen existence, motion relies on the integration of many smaller pieces and images, flitting from one to the next. What allows for motion to remain motion, the fluidity between instances of stillness, serves as the focus of Moore's work, for principle blossoms in these moments of fluidity, emerging and clarifying as she describes her creatures. As the nautilus works away at her shell, the motivator of love becomes apparent; as the rubber plant and strawberry grow, fortitude; as the jerboa leaps, freedom and true abundance of movement; as the ostrich preens and runs, heroism; as the pangolin creeps, grace. The emergence of the principle and the importance of naturalness to this emergence require Moore to depend strongly on metaphor for the communication of principle. She rarely directly states and praises the principle or the animal's exemplification of it, as this could veer into excess of imagination, causing the reader to misinterpret the animal through imposition of the self. Principle is most recognized as the animal is in action, not as the animal is described or praised according to humanly imposed standards. Principle, when declared, such as in "To a Snail," loses the quality of being invisible. Principle's invisibility is its most important quality, as principle is an idea which emerges from the physically visible, its influence permeating through everything without truly being tangible or identifiable by sight. Though genuine, principle has no tell, and instead can only be identified in motion or by the feelings

which well within the reader upon his or her recognition of it. At its purest, principle is feeling itself, intellectualized and consciously understood.

Truly identifiable only in motion, principle eludes denotation and connotation. In order to convey principle faithfully, Moore avoids addressing the principle first, and instead speaks of the living thing which exemplifies the principle. She pieces these living things together, deconstructing them into parts of emotion. As she views feeling and emotion as the purest of intangibilities, she deconstructs these living things for the sake of breaking them down into their most basic components: their actions and their anatomy. The nautilus, jerboa, strawberry, pangolin, and ostrich are verbally vivisected, each piece representative of a different aspect of the principle they exemplify, and therefore representative of a different aspect of that principle's feeling. Reassembled within poetry so each aspect can be clearly felt, the principle becomes more potent and clearly conveyed as the reader is taken into the nuances of the principle's emotional impact.

In order to truly convey the principle, Moore uses metaphor, as metaphor communicates through implication rather than declaration. Metaphor allows for the delicacy of motion's invisibility, creating a matrix for recognition. Concerned greatly with precision, exactitude, and accuracy, Moore turns to metaphor's unique quality of communication through omission. Metaphor communicates through comparison; metaphor's purpose is to clarify without statement by prodding recognition within the reader of shared traits. By comparing her living things to machine and creature alike, Moore stresses the humanly inimitable organic grace of these creatures' motions. Metaphor preserves principle's reliance upon motion for existence by

recreating the functioning anatomy of the animal. From amidst the metaphors' allusion to other creatures with the shared traits, principle emerges, implied through comparison, but never stated.

The concept of grace underlines Moore's nautilus, ostrich, jerboa, strawberry, and pangolin. Each of the principles that Moore extols is a quality of grace, the unifying principle. Metaphor's communication through omission exemplifies grace's intangibility, and in this, Moore's method of approach is most scientific. Just as reason and answer emerge from disparate observations, from a realized unity, grace emerges from the disparate metaphors and similes.

The nuanced difference between symbolism and implication also requires the use of metaphor, as metaphor prevents misinterpretations by alluding to other creatures and machinery. Symbolism relies on shared internal meanings and attributes worth based on merits recognized in one creature or object alone. Moore's living things are implications, communicating through merits recognized in a wide variety of objects and animals. The repetition of traits across a wide spectrum of living and non-living things disallows too much personal interpretation. Conversely, strict declaration, such as that found in "To a Snail," prevents the emergence of grace. In order to convey grace and its organic roots most accurately, Moore relies on the use of metaphor, which replicates the emergence of principle from seemingly disparate anatomies and functions in "The Paper Nautilus," "Nevertheless," "The Jerboa," "He Digesteth Harde Yron," and "The Pangolin," just as reasoned hypothesis emerges from a collage of seemingly unrelated observations.

The truth of morality that Moore believes to be in nature is evident in the lack of introspection or reflection in her poems. Her poems contain no central human figures who ponder and mull over the merits of the animal. Even as the speaker she attempts to shrink her cerebral presence within her poems, disappearing into all but a set of eyes and knowledge,

“speaking only occasionally, and from the wings, not the center of the stage” (Stapleton 158). The shrinking of human presence minimizes the human tendency for ambiguity, clarifying the consistency of the animal. There are no ambiguities in the qualities she sees in animals; they are or are not, without the ambiguities of human purpose “whose hopes are /shaped by mercenaries,” as described in “The Paper Nautilus” (1-2). To Moore, humans muddle with their lack of resolve an idea which should be simple in theory: purpose. The very range of occupations which they have does not indicate a wide set of purposes, but rather a profound lack of it:

For authorities whose hopes
are shaped by mercenaries?

Writers entrapped by
teatime fame and by
commuters’ comforts? (1-5).

“Authorities” differ from “writers,” which differs from “commuter.” Each of these positions should fulfill a different need, and yet all writers manage to do is become “entrapped by/teatime fame,” beholden to the chatter of the idle or the languid boredom of commuting. Authorities defer to mercenaries, and writers are subordinates to their identities as commuters. There is no unity in the purposes of these human roles, no consistency in their reasons for being or doing. “Not for these” farcical responsibilities does “the paper nautilus/construct(s) her thin glass shell” (5-7). The nautilus’ clarity of purpose is clear as she works constructs her shell and “guards it/day and night” (13-14). Motivated by the need to protect her young, the paper nautilus works with consistency, “as if they knew love/is the only fortress/strong enough to trust to” (33-35).

Though a requisite for Moore’s morality is the absence of ambiguity, she never confuses fact for the truth of principle. Simultaneously, she does not substitute universal human sentiment

for truth. Though she sees love as the defining principle of the nautilus's work, it is not an imposition of human emotion, nor is it an interference with the natural truth as defined by the nautilus's careful work. For there is a natural truth in the care with which the nautilus builds "Ionic chiton-folds" (29) into

her souvenir of hope a dull
white outside and smooth-
edged inner surface
glossy as the sea." (9-12)

She presents love as the principle which unifies the nautilus' work, but not as its motivation. The nautilus embodies the principle of love, but is not aware of it. Moore takes care to stress there is a difference between being an active embodiment of principle and self-aware follower of principle. As she says "To a Snail,"

If "compression is the first grace of style,"
You have it. Contractility is a virtue
as modesty is a virtue.
It is not the acquisition of any one thing
That is able to adorn
Or the incidental acquisition occurs
As a concomitant of something well said,
That we value in style (1-8).

The snail embodies the principle of style, although there is a clear discrepancy between "you," the snail, and "we," those who are aware of style and try to remain faithful to it. Additionally, the imposition of a human presence in this case is to remain faithful to truth by underlining the

difference between being an embodiment of principle and a follower of it. However, though the human in “To a Snail” still remains strictly an observer, her purely verbal explanation of the snail’s virtues become lost in the syllables, losing the “grace of style” (1) for which she praises the snail by aborting through over-explanation the “principle that is hid” (9). Truth becomes lost, and is only regained in the later “Paper Nautilus,” a poem that “moves with particularity from image to image drawn from a wide range of contexts, but all collected around a central figure,” (Costello 260). The wide range of contexts presents the facts of the nautilus, the central figure of principle. The nautilus demonstrates the human quality of love, but her demonstration of it, like the snail’s demonstration of style, becomes something very much removed from the needless complexities of human ambiguity and emotion, of the “‘too abstract,’ too intellectual” aspects of humanity as presented by the overly-expository human speaker in “To a Snail” (Stapleton 158). At the poem’s end, her arms have “wound themselves as if they knew love/is the only fortress/strong enough to trust to” (33-35). “As if,” not “because,” for the animal is not motivated by love, but embodies the principle of it through careful and devoted work. The facts of her actions as observed by the speaker are presented: her “chiton-folds” (29), the layers of “white on white” (28), and the iridescence of the “smooth-edged inner surface” (10-11). The assembly of each of these qualities translates into finesse and delicately constructed complexity, exhibited by the nautilus’ every action. Human comprehension thus brings about the move from observation to implication, and concludes that within the structural integrity of the nautilus’ construction is the principle of love. Human sense may intuit its existence, but within the structural complexities of the nautilus and the process of its construction can be found the principle of it, a truth consciously perceived and assembled rather than felt and intuited. In assembling this truth, Moore takes care to avoid symbolism, for though “beyond or below” the observations of Moore

“lies a basis of moral and intellectual absolutes—the truth,” she “has no intention of reducing her grasp of this truth to impotence by abstracting it from the details and confusion with which experience happened to surround it” (Zabel 129). To core the truth and discard the details would be to remove it from that which makes it true, reducing it to a symbol without context.

Feeling

Though the truth is consciously perceived within Moore’s poems, there is not an absence of feeling. The structural integrity which she equates with principle is a structure of emotion, conveyed through the movements of the animal rather than the scientific names of them. The scientific approach of Moore’s work is not in the name, but in the description of nature’s functions. Principle is not a name, but an action which must be observed. “The curious phenomenon of [the snail’s] occipital horn” (12) may embody style’s “method of conclusions” (10), but the reader does not know what style is when he or she only reads ‘occipital horn.’ The complete reduction of style into a single encyclopedic word such as ‘occipital horn’ hardens the subtlety of style. Though “To a Snail” declares “contractibility is a virtue” (2), the contraction of everything: “modesty” (3), the “principle that is head:/ in the absence of feet” (9-10), but “not the incidental quality that occurs/as a concomitant of something well said” (6-7) into the encyclopedic ‘occipital horn’ fails to demonstrate why. The folding of these qualities into ‘occipital horn’ deprives ‘occipital horn’ of any meaning. Its dependency upon explanation for effect demonstrates that not only is “explicitness the enemy of brevity,” but brevity is also the enemy of explicitness (*Predilections* 5). All of principle is compacted into the occipital horn, but the brevity of a single word destroys contractibility’s demonstration of style. There is no explicitness in the naming of the snail’s occipital horn, and therefore no principle. All meaning is

lost when the occipital horn is stated. By itself, ‘occipital horn’ does not induce the reader’s recognition of its “curious phenomenon.” Instead, he or she requires the preceding lines in which the snail’s different parts and traits are described through the lens of style. The ripples of the snail’s stomach-foot become “a virtue” (2), its mode of movement ““the first grace of style”” (1), its hidden foot ““a method of conclusions”” (10). “Precision is both impact and exactitude,” and ‘occipital horn’ loses both in its attempts to be both brief and precise (*Predilections* 4). The “brevity” which “contractibility” implies, the ability to condense complex “explicitness” into a “principle that is hid,” is undermined by the dependency of ‘occipital horn’ on the explanation of its preceding lines.

The integration of feelings creates the “impact” and “exactitude” required to communicate principle with “precision”. Moore communicates principle through feeling, and she succeeds in this communication by deconstructing intuited truths into consciously perceived ideas. Principle in its truest form is “feeling,” as “feeling has departed from anything that has on it the touch of affectation” (*Predilections* 6). Principles are felt, as indicated by the tenderness of language Moore uses in describing the nautilus’s embracing arms, but the communication of it requires a conscious recognition. Faithful communication of something requires conscious recognition and understanding of it. Through verbal capturing of a principle, poets risk imposing affectation upon it, thereby forcing “feeling [to] depart” (*Predilections* 6). Because feeling is of utmost importance, feelings are central to Moore’s communication of principle. The clinical precision of Moore does not remove the presence of feeling in her work. She uses a naturalist’s approach to observe the causes of feeling. Recognizing the principle which stirs the feelings allows for Moore to then “write the ‘proofs’ ... for things she had known for years” (Stapleton 158). These proofs piece together a collection of feelings in order to communicate the principle,

assembling the anatomy of the principle through the many different feelings it elicits. She does not name the feelings, but instead takes a metonymic approach, substituting the disassembled real anatomy of the animal for the disassembled anatomy of the principle. Though the snail's occipital horn was not able to convey the wholeness of style's principle, the disassembled components of its foot could, the style of two "halves of the body...compensating for each other" evidenced in the deconstructed foot (Willis 682). She deconstructs the natural wholeness of the organic so that as a poet, she may reassemble it and expose the inner workings of the principles found within the organic. The components of "fortitude" ("Nevertheless" 31) split into many "fragments" (3), "met"(3) in the soft "fragments" of a "strawberry/that's had a struggle" (1-2).

There is no pure element besides feeling within Moore's poems, and each feeling is associated with organic, physical traits. Moore reverse engineers principle in order to write her poems, which "are not simply made, but assembled," casting her work as characteristic of "an industrial age" in which function and movement can be engineered to realistically mimic life (Raine 180). She reverse engineers the strawberry, so that the complexity of "struggle" and "fortitude" become the "multitude/of seeds" (5-6), "the little rubber-plant-leaves of *kok-saghyz*-stalks" (23), "a root," and "a grape tendril" (23). Each of these becomes a different component of struggle and fortitude, each objectively describing a different form in which these two appear in nature. It is not symbolism, but observation. Symbolism would imply an intentional imposition of meaning on each of these aspects of the strawberry, and be an "affectation" which causes the departure of feeling (*Predilections* 6). There is no 'meaning' associated with each component of the strawberry; there is feeling. The specific marvel which Moore felt upon thinking about the strawberry is only a subset of marvel. She feels many different iterations of it upon viewing different plants: marvel at the strawberry's multitude of seeds, admiration for the *kok-saghyz*-

stalks' ingenuity, delight at the picayune grape tendrils. They are a collection of different types of marvel which are difficult to name without being reductive, as "feeling at its deepest—as we all have reason to know—tends to be inarticulate" (*Predilections* 3). Moore does not attempt to articulate, for to articulate would be to "heighten the significance of common emotions or common events, and dispel the dimness of the remote or the seemingly unimportant" (Wescott 50). She does not want to "dispel the dimness," she wants to "present that of which, but for [her] work, we should remain in utter ignorance" (Wescott 50). Articulation of principle would "dispel the dimness" of "feeling at its deepest." It would "heighten the significance of common emotions" and obfuscate the uniqueness of function. There is no common emotion in

... one who
can rest and then do
the opposite—launching
as if on wings, from its match-thin hind legs, in
daytime or at night; with the tail as a weight,
undulated out by speed, straight. ("The Jerboa" 115-120)

Moore does not compromise precision for clarity or familiarity, and instead creates for the reader the different aspects of marvel in order to communicate the jerboa's embodiment of abundance. Common emotion is not heightened. She instead recreates for the reader her enjoyment of reading about the jerboa, breaking down the jerboa's anatomy into different sources of enjoyment. This breakdown creates exactitude and as one reads, assembles to create enjoyment and understanding of how the jerboa exhibits true "abundance" within the segments of his "match-thin hind legs." The objective of this breakdown is to guide thought, to "ensure that readers can act as discoverers, not salvagers" as they pick through the details (Paul 172). As she

escalates the enjoyment of reading and imagining the jerboa, she verbally layers the different aspects of “abundance” upon each other until they turn into one and “abundance” is clarified. By deconstructing the functions of a plant’s structure or the mechanism of an animal’s anatomy, Moore gives herself the tools to evoke deep feeling from her reader, to piece together the poetic collage of emotion communicating her observations of principle. These collages “have the absurd mathematical extravagance of snowflakes...disregard them and everything goes to pieces” (Jarrell 134). Each purpose of the individual plants’ separate parts and each moment of the jerboa’s jump create a deepening of feeling using the “the intricate and artificial elaboration” of her chimerical poems, and intricacy which “does not conflict with the emotion but is its vehicle” (Jarrell 134). Through this complexity of collage, the emotion deepens and twists, mutating so that the reader feels different iterations of that emotion. When these nuances, twists, and fragments of feeling converge, principle finally wholly emerges. She “coalesces moralities hardly ever found together,” each purity of feeling pieced with another until finally, there results the “happy ending” of principle from this “extremely *moral* writer” (Jarrell 135).

The flora and fauna which are present in Moore’s poems embody principle, but principle itself cannot be proven. It can be felt, and the feelings which comprise its recognition deconstructed and reassembled, but principle itself remains beyond the senses. Moore names principle, but what principle actually is eludes the intellect. “What is there/like fortitude!” the end of “Nevertheless” exclaims, but what actually comprises fortitude remains ineffable (31). The idea of fortitude, all the words used to convey the idea of ‘fortitude’ mean nothing without the descriptions of

...a grape tendril

ties a knot in knots till

knotted thirty times—so
the bound twig that's under-
gone and over-gone, can't stir. (23-27)

The physical manifestations of fortitude must be described in order for the idea of fortitude to be communicated. The thirty-times-knotted tendril, the “bound twig,” the “frozen ground,” the “frost that kills”: all of these are codependent in the communication of fortitude. “The weak overcomes its/menace, the strong over-/comes itself” means very little without the specificity of the strawberry (28-30). Principle always requires a physical vessel. It manifests in nature, dependent upon human observation in order to make itself known. Like the fluidity of motion, comprised from an infinitude of pauses, the many small strengths of a single object comprise the wholeness of principle. Invisible unless in action, principle appears when “Moore stops a stately movement of social perceptions to startle the mind with somber strangeness, like an apparition...suddenly exhibited for a purpose” (Wescott 43). This “somber strangeness” is the sudden clarity of principle, the sudden human awareness of each object’s internalized order. Principle reveals itself after an inventory of the objects’ traits has been taken, after the course of emotions have been run to finally coalesce into purity of feeling. Principle flashes into clarity in this brief moment when cerebral inventory and emotional awareness become one.

Machinery and the Engineered

The use of deconstruction and reassembly to communicate principle is only possible because Moore finds physical morality in the natural world, equating flora and fauna’s structural integrity with principle. The process which she uses to communicate principle would be

impossible unless she found an ordered morality in everything natural, a rectitude impossible to mimic or manufacture. She has a “fondness for deducing the most serious morals from her material,” for relaying to her readers the morality within the structure and function (Greenberg 132). She “deduces,” approaching her material with the care of a naturalist, taking it upon herself to use “the prerogative of poetry to show what might not have been perceived” (Willis 338). The deduction of principle relies on repetition, on the structural integrity of the creatures to withstand repeated actions. The pangolin “endures” (15), the rubber plant “overcomes” and “still grow[s]/ in frozen ground” (28, 13-14), the nautilus demonstrates “love/is the only fortress” (34-35), the jerboa is “the untouched” (106). Each of these creatures exhibits principle, as proven through Moore’s deductions. The pangolin’s “scale/lapping scale with spruce-cone regularity” (2) and the jerboa’s “pillar body” (153) evidence principle’s natural strength, each of these components serving as one piece of the collage from which will emerge the purity of feeling which can only be associated with principle. The ability to withstand repeated assaults upon their bodies provides evidence for these creatures’ physical strength, their bodily “convictions [which] are the result of experience” (Willis 677). The physical nature of Moore’s descriptions equates physical strength with principle, as principle is the ability to withstand constant assault; principle is constancy. If an animal is able to endure, to repeatedly overcome, or to be untouched by the inconstancy of environment, then its body is wholly functional and complete. The different components of which it is comprised each hold up, and each remain adhered to each other, functioning together to ensure the survival of the animal. This is constancy in action; this is principle in action.

Structural integrity indicates principle, and both function very much like machinery in Moore’s poems. Structural integrity implies a wholeness of body, susceptible to no physical

attack. Her animals are not machinery; they are only described using the assembled nature of machinery. In describing their functions, there is also a machine-like fluidity, an engineered seamlessness which substitutes for the natural wholeness of the creature. Directly acknowledged when Moore calls the pangolin a “near artichoke with head and legs” a “miniature artist engineer,” the machinery of her description is a reminder of the necessity of parts and gears in the communication of principle (“The Pangolin” 4-6). She describes the animal itself as an engineer, and the merits of its body are exemplified through comparison with made structures. Its eyes are the “apertures” of cameras (“The Pangolin” 13), its scales “armored” (“The Pangolin” 1) as if with plates of man-wrought metal. This animal, a creation of nature, has “the fragile grace of the Thomas-of-Leighton Buzzard Westminster Abbey wrought-iron/vine” (“The Pangolin” 25-27). This “fragile grace,” ethereal and attainable only through nature and movement, can be seen within the engineered, “not unchain-like machine-like/form and frictionless creep of a thing/made graceful by adversities, con-/versities” (“The Pangolin” 56-58). This “frictionless” creep can only be found in nature; no amount of human ingenuity can manage to create the same fluidity, the same paradoxical movement in which many parts move as constantly as a smooth, graceful whole. Rather than corrode the machinery of the pangolin, “adversities” and “conversities” contribute to the pangolin’s grace. This exemplifies principle: the constant fluidity of movement without the impediment of engineered parts. Movement displays principle, a natural machinery made of many parts, but functioning as a seamless whole.

Moore compares the animals to feats of human engineering, not the other way around, bulwarking against potentially fulsome human imagination. Human engineering is the measure of comparison, rather than the animal. By comparing the animal to the man-made, she “analyzes the life of miraculous co-ordination” (Zabel 127). Her poetry facilitates the transition between

life and “miraculous co-ordination,” creating the fluidity of seamlessness. By comparing the living to the engineered, the living becomes precise and exact. There is no hierarchy in this comparison; the animal neither mimics machines nor do machines mimic the animal. When the ostrich “revolves with compass-needle nervousness” (“He ‘Digesteth Harde Yron” 27) “preening down his leaden-skinned back,” the mix of machine and flesh aggrandizes the ostrich into a creature greater than either—into a creature of grace. When she compares the biological to the mechanical, she admits the merits of intentional actions, of engineering. She believes “precision and effectiveness...[give] value to the world,” as “they become forms of imaginative possession, and also activities” (Steinman 117). Without discipline, “imaginative possession and activities” run into danger of unrestrained fancy. “With regard to unwariness that defeat precision, excess is the common substitute for energy,” creating a false idol of human creation based upon a sybarite need for the “awful,” “terrible,” “frightful,” “infinite,” and “tremendous” (*Predilections* 9). “Unwariness” leads to the excess which “defeat[s] precision,” while “energy” is feeling by another name. Excess often leads to affectation, to the adulteration of words’ pure meanings. Finding it “curious to see how we have ruined the word ‘fearful’ as meaning full of fear” with pretensions of emotions, Moore’s own poems substitute words of engineered machinery for precision (*Predilections* 9). Engineering is the physical, tangible manifestation of human imagination, trimmed of excess and turned into functionality. Having once “argued America’s scientific and industrial feats all rest on the American imagination,” Moore’s use of industry and machinery in describing animals turns the animals into these actualized feats of precision born from the imagination (Steinman 119). They become a mix of reality and imagination, a mix between the natural and the engineered, a combination of organic grace and mechanized precision, trimmed of excess.

Movement and Motion

Moore strives to explain the biological mechanics of a creature by describing them as man-made machinery, exposing the guts of the creature's value. She poetically vivisects the creatures, exposing their internal value as they remain alive within her poems, alerting the reader to "that precision which creates movement," words of e.e. cumming with which Moore felt an affinity (*Predilections* 141). Because the fluidity of the creatures—the "frictionless creep" ("The Pangolin" 56), the "launching/as if on wings" ("The Jerboa" 117-118), the "great neck revolv[ing] with compass-needle nervousness" ("He Digesteth Harde Yron")—imbues them with the grace which humans cannot hope to accomplish through artificial means, Moore can only poetically convey the wonder. In order to communicate the fluidity of organic movement, she needs the process of moving machinery as a measure of comparison. Their inimitable lightness and seamlessness of movement cannot be recreated, even with the conjuring ability of words. This grace can only be witnessed and realized when the animals are in motion. To try to recreate grace or apply it to a man-made situation results in misappropriation:

....To explain grace requires
a curious hand. If that which is at all were not forever,
why would those who graced the spires
with animals and gathered there to rest, on cold luxurious
low stone seats—a monk and monk and monk—between the
thus
ingenious roof supports, have slaved to confuse
grace with a kindly manner, time in which to pay a
debt,

the cure for sins, a graceful use
of what are yet
approved stone mullions branching out across
the perpendiculars? A sailboat

was the first machine. (“The Pangolin” 61-74)

The tendency of “those who graced the spires with animals,” who felt and intuited the miracle of movement in the animals recognized “grace.” But in their overeagerness to pay testimony to that grace, they misattributed it, failing to recognize their own “ingenious roof supports,” and instead calling grace “the cure for sins,” one of many confusions between compassion and grace. Just as the word ‘fearful’ had been adulterated, so too has ‘grace’. Moore’s pangolin reminds the reader what grace truly means: the “pangolins, made/for moving quietly...models of exactness/on four legs” (74-76). When she casts the pangolin as “made,” rather than natural, understanding grace becomes more plausible. Accessibility to principle becomes more likely as the animal becomes the machine “made/for moving quietly” yet a “model of exactness.” The excess of feeling which gave rise to the superfluous definitions led to the litany of incorrect definitions. By casting the pangolin as a creature both natural and engineered, Moore circumvents this mistake. In her hopes to define the pangolin as an epitome of grace, she bypasses the monks’ mistakes of excessive feeling, who similarly reached at defining that liquidity of life. She exposes the pangolin’s movements by describing its limbs and body—the vehicles of movement and grace. Up to this point, different parts of the pangolin’s body have been described using different descriptions of machinery: “aperture,” “unchain-like,”

“machine,” “tool” (49). Now, she puts together these pieces into “a sailboat/...the first machine,” building the creature of grace without directly defining grace to us, within this creature who is a “model of exactness” (75). Through this process, grace becomes humanly comprehensible, exposed to human understanding and described in human terms.

Because feelings are so integral to principle, Moore emphasizes the organic nature of these principles by contributing the qualities of other animals to the descriptions of her focal animals. While understanding the grace of these animals requires the intellect, it must first be intuited, as feeling is the root of imagination. Feeling, a reaction to the fluctuations of one’s environment, leads to a desire to create, a desire so strong “one could almost say that each striking literary work is some phase of the desire to resist or affirm ‘religion’” (Willis 678). Religion organizes feeling, but potentially adulterates it by channeling it into “imposed piety,” which “results in the opposite [of belief in God]” (Willis 678). “Imposed piety” stamps out feeling and roused imagination, creating too much restraint. “Religion that does not result first of all in self-discipline...could be the prey of any form of tyranny,” but excessive self-discipline eradicates the truths found in nature by viewing everything as potentially gratuitous and cause for misinterpretation (Willis 677). Moore defends against excessive feeling by mechanizing her animals, insuring against the possibility of misinterpretation, but she coaxes the imagination by prodding at dormant recognition of stubbornly organic grace. Describing the pangolin, “serpentine” (“The Pangolin” 21) with a tail like “elephant’s trunk” turns the pangolin into something more than an armored creature with a sinewy body; the pangolin becomes a representative of the virtues of the muscled ‘S’ in nature, a fluidity unattainable in man’s proclivity for “perpendiculars” (“The Pangolin” 51, 71). The ostrich “foot hard/as a hoof” and suspicious as a “leopard” becomes a creature of speed and efficiency known by a name

comprised of two others: the “sparrow camel” (“He Digesteth Harde Yron” 14-15, 63). Moore is not borrowing the traits of one animal for another; these traits are collectively innate to all of the animal kingdom. She instead uses them out of an “instinctive effort to ensure naturalness,” to prod the reader into realizing the organic source of grace (*Predilections* 7). Observers intuit this natural collective fluidity, and subconsciously recognize shared qualities amongst animals. Actual recognition of the quality comes next, and recognition of the animal’s spirit, born from “naturalness,” humanly inimitable. “To a Snail” deprived the snail of all ‘naturalness.’ The declaration of the snail’s exhibition of ‘style,’ a subcategory of grace, imposed meaning on the snail; its natural merits do not materialize. The snail’s attributes, unlike those of the ostrich, jerboa, nautilus, or pangolin, disappear in the lengths of words and syllables. With naturalness denied, feeling is denied; such restraint desiccates the snail, for “only when the physical reality of the creature has become so passionately accepted and comprehended that its external appearance, noted with the laconic felicity of science, is indistinguishable from its spirit, and all the banalities of allegory can be discarded” (Zabel 127).

Integrating science and art, Moore’s poetic process and description rely upon intent, eliminating the spontaneous. There are no affectations of spontaneity or effusive emotion. The “impulse” to create may be unintentional, but the “working out” of the impulse is “intentional, not spontaneous” (Willis 674). Intent, much like machinery, shaves the excess off the necessary. To Moore, sharp intention differentiates the artist from the dabbler, as “The better the artist, moreover, the more determined he will be to set down words in such a way as to admit of no interpretation of the accent but the one intended” (Willis 96). To preserve the potency of intention within the poem, she “admit[s] no interpretation.” The grace of fluid motion and seamlessness is delicate enough already, visible only when the creature is in action. To admit

interpretation “but the one intended” would be to dissipate the seamless whole, as each of her lines depend on each other, one pulling at the next, creating a taut intricacy from which even one component must not be adjusted, lest “everything goes to pieces” (Jarrell 134). Intent becomes the moral compass, commanding everything, her prosaic rectitude both framework and finishing. To admit interpretation besides that which she desires would be to unravel the intent, to unravel the “effect of naturalness,” preventing “the motion of the composition” from “reinfor[ing] the meaning” (Costello 320). The ‘naturalness’ of her works accounts for the spontaneity of inspiration, but the ‘intent’ purifies that spontaneity and forms it into the recognizable machinery others can understand. This mutation of the environment through mechanization follows “Moore’s purpose...to emphasize how all human encounters with the world—be they scientific, industrial, or literary—are similar in that they involve reclassifying, revaluing, and so in some sense changing, the world” (Steinman 119). The reclassification and revaluation do not transmute the world permanently. Instead, they “change the world” for the purpose of conveying it. The world is changed momentarily in communication, but the resultant idea planted in the reader’s mind remains pure, evoking the same feelings which she herself felt upon learning about these animals.

Science and Poetry Together

Assembled through a poetic process dependent on scientific observation, Moore’s animals are a combination of mechanical and natural metaphor, allowing Moore to communicate through omission. Her reclassification and revaluation of the world take the form of metaphor, changing the principles she observes for the sake of their preservation. While denotative meanings could serve the same function without changing the meaning at all, it would be

restraint to a fault. She considers the “‘things that are stated without being said’ [as] the most valuable” because the use of omission in communication conveys most powerfully an idea or a principle (Costello 400). Denotative meaning focuses too much on the visible and the obvious, but “the power of the visible is the invisible” (“He Digesteth Harde Yron” 48-49). This belief in the precedence of the invisible over the visible drives the meticulous nature of her work as she approaches each subject as a naturalist in deducing what the visible is hiding. In conveying her discoveries, the use of metaphor maintains the sanctity of the invisible, allowing the invisible to remain hidden and the reader to similarly experience the joy of discovery. The invisible answers the question of why, while the visible associates with the how. Principle, a thing unseen but verified over and over again, moves the living. The actions and survival of the living depend on principle. The nature of these principles, grace, in a word, is invisible. Moore combines the living with the mechanical for the sake of verbally actualizing the invisible. Function and mobility—these are the invisible principles which allow the living things to remain in existence, independent of human imposition of meaning.

Just as science delves into the invisible and imperceptible to discover the why by first questioning how, Moore strives to explain the why by explicating the how. When Moore compares the animals and plants’ anatomies to machinery, she explains how by describing their anatomies as understandable machines. She maintains their ‘naturalness’ by comparing them to other animals. These descriptions of what is visible never truly describe what is invisible, what familial trait it is that ties together the “silvered to steel” jerboa to the “fawn-breast...[and] chipmunk” (“The Jerboa” 99-100, 109). Beyond the color, beyond the movement behind that sleekness of body which the jerboa shares with these other creatures, beyond the physical shape is something potently similar and indescribable. To name it would be to dissipate it. Just as the

nautilus shares qualities with Ionic structures, “devilfish,” and the “glass-ram’s horn,” the shared quality is not stated, but alluded to through these metaphors (“The Paper Nautilus”). While love is named in the last line, to state it is “a weak expression of the most powerful incentive,” as Moore said about an early version of this poem (Costello 400). “Incentive” is the key here, motivation completely intangible but capable of generating action. Though she stated this about an early version of the poem, it evidences her desire to invoke, not state, to prod recognition of “the most powerful incentive” without minimizing its power through direct statement or “weak expression.” And while she names “grace” in “The Pangolin,” she states what it is not, and gives evidence for what it is, without trying to expound. She provides evidence of grace: the “frictionless creep,” the “serpentine” body, the “flattened sword-edged leafpoints,” the “sense of humor” and “everlasting vigor,” only going so far as to call the tail a “graceful tool” (“The Pangolin”). Grace itself is not described; grace itself is not brought to center, but by the end, the reader knows this creature is at once graceful and mighty because of these comparisons to other fluidly powerful objects and animals. The omission of explanation and description allows the quality itself to emerge through the metaphors, clearer than any attempt at precise verbal rendering. Just as the facts and observations of science part under rigorous analysis to reveal its secrets, calling for a recognition of these secrets through the synthesis of many facts, Moore calls for her readers to recognize through the synthesis of these metaphors. Her dependence on the metaphor is intentional, used to get the reader to synthesize and recognize on his or her own, to allow for the value of “things that are stated without being said” to remain extant. The vehicle for Moore’s intent is metaphor, which omits the word and uses comparison to preserve the idea.

Moore’s scientific approach manifests in her dependency on the visual to create a matrix of metaphors to communicate the invisible, yet whole, idea. Beginning with observation, the

process of science depends on implication for conclusion. Facts are assembled, their relation to one another clear, though the unifying feature is not. Similarly, Moore's metaphors are unified by some invisible idea to create the whole of the animal, and she leaves it up to the reader to realize the unifying factor of grace. Metaphor exemplifies the invisibility of grace, the unnamed source of and inspiration for poetic function in her works. Directly alluded to in "The Pangolin," grace is "forever," "work half-done," "unignorant,/modest and unemotional, and all emotion" ("The Pangolin"). "All emotion," all feeling, no affectation, creates the purity of human response. "Work half-done" implies the finished product. It is implication, which is what the whole of successful metaphor rests upon. Implication is the invisible, the idea of the whole, completed by the reader's belief in the existence of a greater idea. Moore avoids misinterpretation through the unspoken ideas related to each of her connected metaphors; each metaphor raises "concepts and images...toothed together" into one united implication (*Predilections* 49). Guided by metaphor, the reader understands the implication, demonstrating a belief in the merit of the invisible. "Horror, which is unbelief, is the opposite of ecstasy; and wholeness, which is the condition of ecstasy, is to be 'accepted and accepting,'" to accept the existence of the invisible, to achieve that wholeness with imagination (*Predilections* 49). Misinterpretation arises from excessive or insufficient rigidity, from a failure to allow "art [to] 'acknowledge the spiritual forces which have made it' (Willis 48) by means of...mental agility...such as rapidity, accuracy, and possessiveness" (Steinman 121). These three traits create the ability to recognize implication, to recognize the grace of creation. Writing is motion of poetry and words, for "as music is best described by performing it, poetry is best defined by writing it" (Costello 388). The moment between thought and production is the action of writing—the actual moment of genesis. The

graceful omission of metaphor prepares for this genesis, and the reader, with “mental agility,” faithfully completes it.

The use of metaphor as a tool differentiates between implication and symbolism. While Moore’s living things demonstrate principles, they resist becoming lifeless symbols. They are exemplifications, functioning according to these invisible incentives. Symbols “dramatize a meaning/always missed by the externalist” (“He Digesteth Harde Yron” 46-47). “The externalist” sees the image of the animal or plant rather than the motivations behind the image, imposing human value on the image, attributing qualities like the ostrich’s “justice” or the snail’s “style” to a creature without considering the anatomy of their movements, thereby disallowing the principle’s grace of invisibility and implication. When asked about style, Moore stated

An animal—also an athlete—in command of a skill should glory in it; but the manner, probably is advertent. To attain nicety, deliberateness at some point in performance is obligatory. The halves of the body should have some practice in compensating for each other. Then when experience has lent confidence, opportunity seems like destiny.
(Willis 682)

In declaring the snail an example of style, she does not allow for the “deliberateness...in performance,” as the snail’s principled occipital horn is reduced to a “phenomenon” (“To a Snail” 12). A phenomenon remains an enigma. It is an invisibility different from the ostrich’s heroism’s. Invisibility here does not indicate an unnamed, but implied, driving force. It indicates an incomplete understanding, without the promise of implied meaning and wholeness shared with machinery and other animals. Though ““compression is the first grace of style”” directly alludes to grace, grace does not describe the elegance of an idea completed through implication. Instead, grace here describes the first of a checklist of things “that we value in style” (8). The invisible is forced into visibility with the encyclopedic, denotative “occipital horn,” destroying any “opportunity of destiny” for the reader to realize the invisible value of the occipital horn, denying

the reader the chance to “experience” “confidence” and belief to infer the principle behind the anatomy’s function. Having lost agency and mobility, its body parts reduced to an “absence of feet” rather than revalued as a familial principle shared with other creatures, the snail is reduced to a symbol, subject to human qualities. Without the help of metaphor, the snail becomes an incomprehensible phenomenon to which humans can only ascribe the virtues of style. “A poem is not a poem, surely, unless there is a margin of undidactic implication, —an area which the reader can make his own,” and “To a Snail” is full of the didactic, disallowing the poem’s subject and reader to function independently, to work with metaphor and realize the value of the implied (Costello 443). Symbolism results from the misunderstood, from the resultant self-imposition of imagined meaning on surroundings rather than the tacit clarification of inference.

The scientific method calls for observation before hypothesis. Somewhere in between human interaction with the outside world and formation of a hypothesis, reason emerges, first intuited from the dissociated observations. Moore replicates this process through metaphor in order to convey organic grace, the unifying principle. Intellectualized feeling, principle is most accurately conveyed through implication, and Moore’s metaphors, at once mechanical and natural, create a matrix for this implication, preserving the conveyed principle without compromising the invisibility of its fluidity through declaration or allowing for the potential misinterpretation. Through her use of metaphor, Moore proves the unseen to her readers, uniting the scientific with the artistic in the elegance of the invisible.

Chapter 2: From Space to Body

A.R. Ammons's Continuity of an Idea

Ammons as a Poet

Born in 1926, Archie Randolph Ammons would become known as a successor to the American transcendentalists. The following quote from an essay by Harold Bloom entitled "A.R. Ammons: 'When You Consider the Radiance'" serves as the best form of introduction to Ammons as a poet, offering insight into his poetic style and place in poetry's history:

In the lengthening perspective of American poetry, the year 1955 will be remembered as the end of Wallace Stevens's career, and the beginning of Ammons's, himself not Stevens's heir but like Stevens a descendant of the American Romantic tradition, Emerson and Whitman. (Bloom 45)

As a "descendant of the American Romantic tradition," Ammons celebrated the sublime, recognizing an unseen reality lying below visible surfaces, a reality invisible but brilliant. He described this unseen reality within the poem "The City Limits," calling it "radiance":

When you consider the radiance, that it does not withhold
itself but pours its abundance without selection into every
nook and cranny not overhung or hidden; when you consider

that birds' bones make no awful noise against the light but
lie low in the light as in a high testimony; when you consider
the radiance, that it will look into the guiltiest

swervings of the weaving heart and bear itself upon them,
not flinching into disguise or darkening.

(“The City Limits” 1-8)

He describes the brilliance of this invisible reality hidden within “every nook and cranny,” within the silence of “birds’ bones,” “bear[ing] itself upon” “swervings of the weaving heart.” The radiance cannot be seen or felt, but it undeniably exists. Physical reality is suffused with radiance, a truth understood as it “pours its abundance” into spaces “not overhung or hidden.”

Very little is “overhung or hidden,” as “air or vacuum, snow or shale, squid or wolf, rose or lichen,/each is accepted into as much light as it will take,” craving the radiance, or the “abundance of such resource” (9). Radiance exists within the physical, an unseen reality hidden within the “dumped/guts of natural slaughter or the coil of shit,” invisible but true (10-11). Ammons “alone has made a heterocosm, a second nature in his poetry,” derived from the second reality he perceives beneath the visible one (Bloom 50).

Tape for the Turn of the Year and Garbage

Ammons unveils the existence of this unseen reality through the tale of a poem. Best described as poetic truth, this unseen reality creates a fabric of continuity between all things, like or unlike. This is the unseen continuity and relation which allows Ammons to scale easily between the cosmic and the microscopic, the infernal and the heavenly, the spiritual and the corporeal. In trying to prove the existence and ineffability of this invisible continuity, Ammons turns to the narrative of a poem as it moves from meaningless to meaningful.

From *Tape for the Turn of the Year* (1965) to *Garbage* (1993), Ammons takes the reader through the poem’s birth and death. The first half of this poem’s journey is *Tape*, in which the poem comes into existence. Written on an arbitrarily-selected roll of adding-machine tape, this poem is defined by the boundaries of the tape’s space. The content of this tape proves rather arbitrary with a lack of consistency between subject matter, tone, and structure. Only the boundaries of the tape hold the poem together. Dependent on the space of the tape for a semblance of wholeness, the poem’s meaning is inextricably connected to the tape’s controlled, unraveling space.

Science helps the poem's language to become independently meaningful and integral to the greater world's context. Scientific statements are systems within themselves, imported from a system beyond any page or any arbitrary definition and meaning. Within *Tape*, it brings in the greater world, and identifies the attempted expressions within the arbitrary clauses of *Tape*, giving these arbitrary clauses significance extending beyond the confines of the page. These scientific statements are the means by which the poem inherits from the greater world, thereby allowing it to become part of the universe's fabric. By *Tape*'s end, the poem has freed itself from the boundaries of the page, ready for its attempt at greater and more constant meaning.

The story of inheritance continues within *Garbage*, in which science becomes inadequate, its systems of constant truths unable to explain the intangible. It may recognize and identify the existence of the invisible, but as a tool of expression, it fails. Explanation deconstructs and becomes destructive, destroying the body of meaning within the poem. The entirety of *Garbage* is about decomposition, about the inadequacy of body, from which explanation extends. Explanation deconstructs the provable, and thus falters in helping the poem gain independent meaning, instead turning into the poem's demise as poetry itself is explained according to the incongruous measuring standards of expository and declarative language. But by *Garbage*'s end, what poetry and the poem itself are do not matter, for the poem has transcended beyond the flesh of words, becoming pure meaningful action. Its meaning becomes independent of space and definition, and passes onto the reader, the poem's inheritor.

Ammons uses scientific language to facilitate the birth and death of a poem, using the constancy of fact to integrate the poem within a greater universal context before fact becomes burden rather than benefit. Fact conveys an invisible reality, but fails to explain it. Within

Ammons's *Tape* and *Garbage*, science proves to be an intermediary mechanism of inheritance, necessary to the continuity of meaning between the world, poet, poem, and reader.

The controlled space of *Tape* results in an apparently erratic and disordered structure, establishing a relationship between creativity and space. "Ammons cultivates, in the structure and style of *Tape*, spontaneity," artificially creating "the fertile edge between order and chaos" where "one has the best chance of creatively managing surprise and change, the prerequisite for adaptivity and creativity alike" (Buell 220). Passively tossed about by the tension "between order and chaos," the poet pushes him or herself to create for the sake of exerting some type of control over these forces. Within *Tape*, the limit of paper creates a constant factor of unpredictability. His thoughts are constrained free-thought, "masterpieces" defined by the confines of the paper (*Tape* 3). What he records and does not record, the known and the unknown, depend on the space of the paper.

I'm attracted to paper,
visualize
kitchen napkins
scribbled
with little masterpieces
so
it was natural for
me (in the House &
Garden store one
night a couple weeks
ago) to contemplate
this roll of
adding-machine tape, so
narrow, long,
unbroken, and to penetrate
into some
fool use for it: I
thought of the poem
then,
but not seriously: now,

two weeks
have gone by, and
 the Muse hasn't
rejected it,
seems caught up in the
 serious novelty:

(Tape 3)

“Kitchen napkins/scribbled/with little masterpieces” are pure spontaneity, revelations which need to be quickly caught on a surface, recorded before they begin to fade from the mind. The continuity of ideas is rare, as they flash in and out of the mind before creativity can be finished. Paper provides a surface on which these flashes of inspiration can be caught, and later filled in by the creator himself as he sifts through the records of his thoughts. By providing himself first with the surface in the form of “this roll of/adding-machine tape, so/narrow, long/unbroken,” Ammons reverses the process of spontaneity, forcing the continuity of ideas. These ideas are connected through the paper, a fibrous matrix in which ideas flow from one to the other without the interruptions of consciously-made distinctions. Space precedes the idea; it exists before the idea. The idea flows through the space provided, until the “necessary quality to it [the poem] that seems inevitable” emerges, so what was “taking place in the mind...happen[s] on the page...becom[ing] itself” (Burr 43).

The page mediates between mind and poem, creating a means of continuity for the idea. Though creativity is depicted as a separate entity in the form of the Muse, it is the emptiness of the page which creates the necessary order and chaos. The emptiness of the page provides more than continuity or a surface on which to create. It also contextualizes the work, making physical circumstances as much a part of a work's value as the content itself. The “little” ideas “scribbled” upon napkins becomes “masterpieces,” their “littleness” emblemizing the improvisational quality of their creation. The moment of creation is a spontaneous one, and the only evidence of it is in

the smallness of the ideas on these dispensable napkins. Just as easily dispensable is the long roll of adding machine tape, an intentional substitute for traditional paper. The disposability of the napkin and the tape lends a certain ‘authenticity’ to the spontaneity of the ideas recorded on them.

It validates the authenticity, even if

the record
can't reproduce event:
even if I could know &
describe every event, my
account would
consume the tape & run
on for miles into air.

(Tape 18)

Ammons strives to minimize recording and expedite as quickly as possible the transition between the mind and the physical. “The record/can't reproduce event,” can't produce action, and attempts to perfectly capture “event” only interrupt and “consume the tape.” Additional details cause nothing but waste, as all the spontaneity and motion of ‘event’ disappear in the detailed attempts to record. Details are a poor facsimile of an event, too many degrees separated from the wholeness of an ‘event.’ They are too premeditated, requiring someone to “know” the event, which completely counteracts the kinetics of something ‘happening.’ When something happens, there is simultaneous movement of forces, so many it is impossible to “know” and repeat them all. If one “knows” the event, then he or she has missed partaking in it, in “the bringing of all the forces into this momentary symmetry of actions” (Burr 21). The “apparently easy, effortless harmony of things” is ‘event,’ and the closest one can come to capturing the moment of its spontaneity is by recording the evidence, the remains of action and occurrence (Burr 21). Through inquiry and study, those who view the evidence can reach a conclusion about the events which transpired. The remains of spontaneity are impressed upon napkins and adding machine tape when they are improvised to record an idea. Their disposability and improvised

functions are evidence of spontaneity, the scribbling on them the fossilized marks of an idea in motion, unable to stop and alight on more appropriate surfaces. An idea in motion sticks to anything available, to anything which functions with “inexhaustible/multiplicity & possibility/of the surface” (*Tape* 13). The surfaces of the napkin and the tape magnify this “multiplicity & possibility” because disposability is an indispensable part of their function. Their constantly assigned functions are to be disposable, which renders them the smallest of the small, intentionally transient. When an idea of value is impressed upon them, the idea endows the improvised surface with value, turning the disposable into its antithesis. The visual evidence of the idea recorded upon the napkin or tape turns this disposable object into something infinitely valuable by becoming part of the idea’s genesis, which “exist[s] in time from the first syllable to the last,” as “they are actions” (Burr 32).

The irony of *Tape*’s diary format is it helps space assume precedence over thought and idea by forcing ideas onto the page, bypassing the significance of the paper roll’s disposability. The page still behaves as a mediator between the mind and physical reality, but now it no longer behaves as the collector of spontaneity. It acts as mediator and enforcer, prodding the mind into working, forcing the mind to spill itself onto the page so the process of creativity is made visible to the reader. Through the force of the diary’s function as a daily record, the page catches the dust of the creative process, the words of Ammons swirling and creating the illusion of motion on the page, using the emptiness to reveal as much of a glimpse as possible of creativity’s spontaneity. Just as dust creates motion within still light, his words create the appearance of motion within the stillness of an empty page due to the intellectual motions of “the full play of his mind..[as he] brings the world of multiplicity into changing orders... by means [as] fluid and undogmatic as natural process” (Buell 200). Readers see the movement of creativity within the

emptiness of the silent page. Allowing the silent page to precede the idea forces each movement to be captured, the space of the page defining what and how he writes. The spontaneity necessary for creativity requires “faith to go/ahead & see if anything/will happen:/maybe the tape will run out” (*Tape 38*). “I feel weak so/much tape remains” he laments as the space of the tape overwhelms him, but among these laments is the evidence of movement (*Tape 38*). The empty roll forces the movement of his pen and sets a trap to track creativity. The entirety of the empty page is a reach for understanding or “intellection,” a fibrous “bowl we hope to fill” with “motions on the/prowl” (*Tape 43*). “We hope to fill” these attempts to know or understand with the “motions” of imagination, to fill order with chaos. These “motions on the prowl” are the undercurrents of creativity constantly ready for a reaction, energy at rest and simply waiting for the inviting explosion between order and chaos, conditions found “in nature, [where] there are no fixed centers, only provisional ones, ones constituted by the changing relationships...Such provisional centers...hold only by accepting and creatively managing surprise, change, and interaction” (Buell 219). The empty page creates an environment lacking fixed centers, but also serves as the “single governing image at the center [of a long poem]” around which “anything can fit...while allowing for a lot of fragmentation and discontinuity on the periphery” (Burr 101). The relationships between Ammons’s words create the “fragmentation and discontinuity,” simulating the “surprise, change, and interaction” of “changing relationships” between bodies within a system.

The “changing relationships” between the words are spatially defined, their physical circumstances within the structure of the poem and on the page creating a continuity of language and thought. In order to catch evidence of the creative process, Ammons imposes the limits of an arbitrary surface, “the adding machine tape, less than two inches wide” (Burr 101). Claiming this

surface seemed “just right for a kind of breaking and spilling” through the limitations of its narrow size, Ammons imposes other limits on his language, thereby influencing the relationships between his words:

A good deal of Ammons’s triumph in the *Tape* is a function of his choice of limits: how to start and stop; how much parochial matter to include, and how much ecumenical; how to use a local language in ways that can admit universal subjects without surrendering a personal voice; how to maintain epic pace and scope without sacrificing attention to minute detail. (Harmon 300)

These limitations engender changing relationships, but do not sacrifice the spontaneity which the simple “point...to get to the other end” engenders because these limitations affect the material of the poem (Burr 102). The need to simply “get to the other end” causes “the material itself [to] seem secondary; it fulfilled its function whether it was good or bad...just by occupying space” (Burr 102). The continuity of the language on the page is again spatially defined; its function is bound to the space. Language simply needs to fill the space, and does, regardless of the limitations of subject and pace. He may, in his desire to fill space, interrupt stanzas with arbitrary lines of “& so & so & so &” (*Tape* 39), dollar signs (*Tape* 81), or various other symbols, but the “the arbitrary [is] indistinguishable from the functional” (Burr 102) because the only function is to fill space. The apparent jaggedness or discontinuity of the words’ subjects and segues become nothing of consequence when contextualized within the narrative of the tape. The tape “itself became the hero, beginning somewhere...coming to an impasse, then finding some way to conclude” (Burr 102). The tape meanders through “a series of internal and external side-trips or forays,” but “like Odysseus,” the tape “has a destination, a home he seeks” (Buell 203).

Simply the concept of destination creates the idea of linearity. Though the “side-trips” disrupt topical flow, the onward drive “to get to the other end” creates a narrative in which there is a clear start and destination: a linear narrative. “The physical circumstances of [their]

composition” thus give the used words the freedom of spontaneity and “changing relationships” without relinquishing the recorded linear narrative of creativity (Burr 101). Outside of the poetic context, these words become disposable. Within the structure of the poem “monosyllables” can “reverberate” within the poem’s “vertical array” and “display an uncommonly high degree of coherence, stability, and acoustic symmetry” (Harmon 306):

“You
can
come
sit
down
now
if
you
want
to.”

(Tape 133)

Outside of the structure of the poem, these words may still retain the acoustic symmetry created by the “down” and “now,” but they lose the poem’s context (Harmon 306). By losing the poem’s context, structure, and system, the words lose their significance as the finale to “a comfortable amalgamation of the domestic and the sacred,” or cooking (Harmon 304). Within the context of the poem, cooking becomes this almost ceremonial “amalgamation,” and those words become the benediction marking the close of “the sounds in the kitchen” (*Tape 132*). Outside of the poem’s context, the single-word lines become nonsensical, the acoustic center nothing but a coincidental assonance. Having lost the context of the poem, the benediction loses its church, and becomes a disposable, secular sentence.

The only words which are not disenfranchised in the landscape of the tape by their purely functional, space-filling purpose are the words loaned from the scientific lexicon. Their meanings are ensured beyond the poem, reflecting the true continuity of language with the world

beyond the poem. These words fill the “intellections [which] have a use,/don’t think they don’t” (*Tape 44*). Intellections need to be filled with the motion of imagination to create the fertile blend between order and chaos, but the scientific language of “intellections” is functional outside of this system. Scientific language remains strictly scientific no matter the poetic system in which it is being utilized, a core of fact around which the creativity springs. “It was perfectly natural for me to speak that way and to write that way,” Ammons said in an interview, revealing the natural interchangeability of scientific words between everyday colloquial systems, “I really was not trying to be scientific” (Burr 49). “I don’t use science because I once looked for a source for metaphors,” he said; they are equivalent to any other words (Burr 48). Because they are functionally equivalent to other ‘non-scientific’ words, they are just as arbitrary as the other words used to fill space within the *Tape*’s context. But as words carried over from another system, they remain functionally independent and external to the poem. The importation occurs within the context of the poem too, when Ammons writes for the December 7th entry

last
night I
read
about the
geologic times
of the Northwest.
(*Tape 5*)

Through reading, he imports the language, carrying it over from the magazine’s functional, non-space-oriented system to the poem’s. Upon transport, the scientific language does not lose its independent function. While it fulfills the poetic role of filling space, the following words also have the independent meaning of giving an account of geologic history:

periodic eruptions into
lava plateaus,
forests grown, stabilized,
and drowned

between eruptions:
in the
last
10,000 years (a bit of
time) the
glaciers have been
melting, some now unfed,
disconnected, lying dead.

(Tape 5)

Outside of the poem, those words about geologic history do not change their meaning or legitimacy. The “periodic eruptions into/lava plateaus” remain a fact of the earth’s history, “forests grown...in the last 10,000 years,” during which the “glaciers have been/melting” remain integral to geology within and without the poem. These words fulfill more than an arbitrary space-filling role. Conversely, the preceding words’ meanings change when taken out of the poem. When removed from the context of December 7th, their meanings potentially alter:

today
I feel a bit different:
my prolog sounds phony &
posed:
maybe
I betrayed
depth
by oversimplification,
a smugness,
unjustified sense of
security:

(Tape 5)

Without the context of the poem, the reader cannot judge whether or not the “prolog sounds phony & posed” as he or she loses the poem’s standards of normalcy and authenticity. He or she cannot compare the difference between “today” and yesterday or tomorrow, cannot decide if “depth” was “betrayed...by oversimplification” when she or she does not know what ‘simplicity’ comparatively is. Context means everything for these words. Though order and chaos are created

through the randomness of content, the words facilitated in the creation of order and chaos become meaningful only through the context of their roles. Outside of this content they become meaningless and garbled, no longer part of the tape's continuity. Only the words of scientific language remain coherent, part of a continuity, narrative, and space beyond the tape.

Ammons uses the objectivity of science to place the poem within a larger system, so when "the poem takes on a value within itself," the poem survives when contextualized within the world at large (Burr 26). Scientific language's meaning remains the same in all cases. Without changing its factual meaning, Ammons's "poetics of geology" can fulfill a variety of functions: "inform his ecological vision of the natural world," be "a metaphor for conceptualizing poetic practice," shape "development of central images and ideas" (Schneider 138). Even as "Ammons's poetics of the earth, with its remarkable concern for motion and seismic upheaval...coincide with a period of great social change in the United States," placing the poem within a historical social context, the integrity of the scientific language and what it literally expresses are not altered (Schneider 138). They do not function as metaphor; they function as an objectively continuous truth, constantly moving according to the natural processes of nature. He does not demote scientific language to metaphor, allowing them to retain their literal meaning because all he needs is their literal meaning. What "modern science" says below is enough to express what Ammons strives to convey. No metaphor is necessary on the poet's part, and no inference on the reader's:

the sky is like
neon lightning, a
ceiling of light
without origin, no
fierce disc
radiant, recognizable
source: equal diffusion:
and when

the Florentines painted
radiant populations in
the heavens they were
not wrong:
each of
us,
says modern science, is
radiant,
tho
below the
visible spectrum
(*Tape 52*).

“Each of/us/.../is radiant,” and that is enough. Objectively proven and validated with or without the structure and context of the tape, this statement exaggerates and fabricates nothing; electromagnetic energy indeed radiates from every individual. As a science-based conclusion, this statement requires neither argument nor exposition. It earned its right to be a statement, emerging from the slew of hypotheses and experiments as fact, shedding its need for proof. In or out of the poem, this statement always remains technically true. Everything else can change, but “it is itself in its own integrity or shambles,” a self-contained and self-manifested meaning (Burr 32). Dissimilarly, the sky must be built, and does not have ownership over its being. The intangibility of the sky’s transcendent effect on human eyes needs to be slowly formed. The “clusters,” “organizations,” “designs,” and “blood red summer sun” layered above and below the “close suspension of/cloud: not a break or/beam” help ripen the fullness of meaning within “the sky is like/neon lightning, a/ceiling of light/without origin” (*Tape 51-52*). The idea of radiance remains out of human reach despite this layering, actualized within the imaginations of Florentine painters for “populations in/the heavens” (*Tape 52*). Radiance remains an ungraspable idea, dissipated above humans in some “ceiling,” inaccessible to anything but imagination. These different descriptions combine to depict radiance as expansive and diffusive, one description reliant upon the other as if the steps of a proof. “Meaning ideally becomes denser and more

complete as the mass of definition grows,” but the elusive combination of “clause, sentence, paragraph” which will make the idea of radiance independent from these layers of definitions remains out of Ammons’s reach until he states the fact “Each of us is radiant” (Burr 8). With this scientific fact, radiance sheds the sky, the clouds, and the words meant to describe a transcendent order: “designs,” “clusters,” “organization.” It sheds the “incongruence between our nonverbal experience of reality and our language reflection of it,” “sense[d] as disorder” between what the individual wishes to say and he or she can say (Burr 9). The inability to express what one “wishes to say” disappeared once radiance becomes a fact. The figurative and abstract meaning became literal, perfectly expressing what the mind knew but could never say. Radiance becomes “each of us” and “each of us” becomes radiance, independently and objectively proven. Radiance does not emerge from the crafted layers of description meant to prove what it is. They become irrelevant in the face of this technical fact, which is at once proof and conclusion. Unlike the contextually-dependent “You/can/come/sit/down/nw/if/you/want/to,” this fact will never lose its meaning. This statement is not a benediction; it is truth. Within or without the poem, radiance will always be human.

The independence of the scientifically-based sentences helps the poem escape from the domination of space and its disposability. Its existence relies on surfaces, on the record of spontaneity the adding machine tape provides as it documents the motions of creativity. The tape’s empty page creates disorder, and in this disorder creativity begins to form the poem’s independent meaning. The poem rambles through the space and emptiness of the page, and as stated in Ammons’s essay “A Poem is a Walk,” “There is no ideal walk...except the useless, meaningless walk. Only uselessness is empty enough for the presence of so many uses. Only uselessness can allow the walk to be totally itself” (Burr 19). In *Tape*, the poem “become[s]

totally itself” through the arbitrary language used to fill the space, defined only by a need to get from one end to the other. Its entire *raison d’être* is to be finished, for its language to traverse its length, to be filled spatially from one end to the other. As arbitrary space-fillers, its language carries no meaning from beyond the poem, and isolates itself within the fabric of the poem. The words cling to the page for life, lost without designated space to fill or structure to mimic. To Ammons, words are system-dependent, “a mass of fragments, elements that in certain configuration can convey meaning,” but are “obviously...not identical with what [they] point to” (Burr 8). The intentions with which they were formed prioritized “time and space yet to be taken” over them, leaving them mired in the page (Harmon 308). They inherit nothing from beyond the system of the page, and have nothing to pass on. Sentences oriented around scientific content, however, become systems within themselves, and behave as independent systems within *Tape*. With or without the poem, these sentences have the conviction of reality, and their meanings remain as constantly functional as “the chloroplasts/...working round the/peripheries of cells,” their words defined by their own ecosystems (*Tape* 199).

The language of *Tape* draws from materials besides “a great deal of scientific material—from geology to biology and astronomy,” such as “classical tales” and history, but these other source materials adapt to the system of the poem (Buell 214). They become significant because of the poem, not because they are independently meaningful. They utilize the poem; the poem does not use them. Ammons retells the story of Sisyphus, and in this retelling, Sisyphus changes according to the mood of Ammons on December 17th. Sisyphus enters the poem as most know him, “struggling/with his/immortal rock” but changes at the “mountaintop” when he celebrates his work “soaked into the hard/potential of the stone” and “release[s]/weeks of energy” as he watches the rock “leap & lollop/like a deer/feather-light (*Tape* 76-77). Instead of the punished

Sisyphus mythology knows, Sisyphus retold perceives the “gravity-bound, difficult/rock” “each time as/miracle” (*Tape 76*). Sisyphus’s meaning has changed because of this poem, but because his story was never truth, it does not become a fiction. It is simply a retelling, a reinterpretation accepted as superior within the context of the poem. His actions remain the same, but instead of being damned to relentless back-breaking monotony, Sisyphus “take[s] on/again [the rock’s] difficult majesty,” hoping again to be awed by gravity and nature (*Tape 78*). The poem subjects Sisyphus to the boundaries of its space when it next rambles, “got/to leave Sissy Fuss,” discarding Sisyphus as a pun, which would very well lose its comical effect had a story about Sisyphus not just been told. The pun depends on the poem’s space, and so too does the retelling of Sisyphus. Outside of the space of the poem, the pun would lose its comedy and the retold story would be deprived of its thematic celebration of human work, imagination, and transcendence. Science, however, cannot be revised and retold. Science contains an independent integrity, constant and true. Should the integrity of this ecosystem be compromised, science itself disappears. When it is retold, its ecosystem is rearranged, and fact becomes unquestionably fiction. Just as “the only representation/of the sea’s floor/is the sea’s floor itself,” science is the only representative of itself (*Tape 184*).

The poem’s meaning depends on science’s integrity, “absorb[ing] and min[ing] for the wealth of correspondences [science] suggests between nature, society, mind, imagination, and spirit” (Buell 214). Where the poem is at liberty to use Sisyphus as it sees fit, *Tape* depends on science for greater universal meaning. Between the real world, Sisyphus’s traditional mythological world, and the new world the poem makes for him, science remains constant. Gravity always forces the rock to move, rolling onward to “the still point of contemplation and deep realization” nestled between layers of scientific reality (Burr 20). Though the personal “still

point” is subjective, the physical truth of gravity is not. Gravity’s effect on the rock allows each of these three stories to function, but never once does gravity itself change. The truth of gravity creates a net of fact from the three different versions, each spatially bound by their contexts’ pages and systems.

Each version is an “interstice” of the greater world, lending the reader some understanding of the truth beneath visible truths, of “the/space between electrons” (*Tape 204*). By the poem’s end, the tissue of the poem’s body has been formed “a fact at a time:/a little here/.../a little there” (*Tape 202*). Freed by the truth of science, the poem begins to build an independent body, its metaphors and unproven statements supported by the cords of scientific statements, eventually allowing its greater “emptiness” of “wide reaches/of water/with no islands” to connect with and be inherited by the greater world in *Garbage* (*Tape 204*). The “space between electrons,” between

old castles, carnivals,
ditchbanks,
bridges, ponds,
steel mills,
cities
(*Tape 205*)

are spaces between solid structures of fact, defined by their intrinsic, scientific truths, proven and concluded. Hardened by proof and conclusion, immalleable facts create the emptiness in which a poem can “be totally itself,” different presences of imagination swirling within these immobile statements, ensuring the longevity of the poem’s meaning in a greater world (Burr 19). “So long:” ends the poem, on a colon, described by Ammons as the punctuation mark most capable of “carry[ing] off” and “promot[ing] from piece to piece” the “consistency [of a whole poem]” (Burr 54). Now ready for its meaning to become corporeal and capable of continuity beyond the confines of the tape’s space, the poem becomes part of the world’s consistency, the final colon

indicating its continuation is beyond the pages of *Tape*. With this final colon, *Tape* becomes an inheritance, its meaning to be passed on and completed outside of its pages and poetic context, finally freed from its space.

Garbage's structure gives the poem an independent body, and becomes the story of inheritance after the body disappears. No journey from start to end is mentioned, though Ammons wrote it in much the same way he wrote *Tape*, "for [his] own distraction, improvisationally. [He] used a wide roll of adding machine tape and tore off the sections in lengths of a foot or more" (Burr 125). As *Tape*'s structural successor, *Garbage* has moved beyond obsession with space, and become bodily aware, defined by the structure of its sentences rather than moving from a spatial start to a spatial end. *Tape* began immediately with a sense of beginning, drawing attention to a definite start and a definite structure:

Today I
decided to write
a long
thin
poem
(*Tape* 1)

The poem is long and thin, with Ammons very aware of the limits in which the poem must thrive. He also began *Tape* with an invocation, expressing his initial feelings of creative impotence by "employing certain/classical considerations," stating "first the/Muse/must be acknowledged/saluted,/and implored" (*Tape* 1). The invocation of the Muse already denies *Tape* agency from the beginning, the creative source beyond the physical reach of the poet. In the form of the "long" and "thin" page and the externally-sourced Muse, space thwarts the poem and the poet's independence from the beginning. Conversely, *Garbage* begins as an evenly-structured poem, carrying over the consistency it earned by the end of *Tape*. Creative impotence begins within the poet:

Creepy little creepers are insinuatingly
curling up my spine (bringing the message)

saying, Boy!, are you writing that great poem
the world's waiting for: don't you know you

have an unaccomplished mission unaccomplished;
someone somewhere may be at this moment

dying for the lack of what W.C. Williams says
you could (or somebody could) be giving: yeah?
(*Garbage* 13)

The “creepy little creepers” bring a message to Ammons asking why he has not exercised his poetic and creative agency. They say the “world’s waiting for” this poem, continuing the story of the poem who became finally integrated within the fabric of the world. The world “waits” for this poem, which now has its own structure and its own body. This is a poem which is consistent, its blank verse couplets creating a tightness of form from which the reader cannot escape, the colons behaving as ligaments between different ideas which cannot be pulled apart. Conversely, the erratic structure of *Tape* often drew attention to the distance between ideas, with only the boundaries of the page and the context of the poem providing tenuous holds between them. “In *Garbage*, as in most of Ammons’s long poems, the usual terminal punctuation is the colon, the symbol of his commitment to provisionality of thought,” but the colons of *Garbage* are not the loose connectors of *Tape*, used to mimic consistency rather than emphasize it (Vendler 27). In *Garbage*, the interstices created by the colons set off each idea as an idea complete in itself, but inextricable from the idea preceding and following it. “It is almost impossible to quote briefly from it, since its mind-loops are long pensive arcs” which cannot be smoothly broken (Vendler 39). Its structure does not afford the same erratic breaks as *Tape*, whose obsession with filling space created non-sequiters delicately connected with colons and the implied idea of eventual wholeness. To take apart *Garbage* would be to dissect it because the poem now moves as one,

each statement part of a “long pensive arc” that is part of the greater arc of the poem, ending only when the poem ends, not when it runs out of space.

Garbage is a poem of explanation, speaking much less about the state of things and much more about the course of them. Scientific vocabulary emerges much less, and no longer serves as the independent system within chaos. Contextually-linked to the rest of the poem, the scientific statements and vocabulary are no longer the only way to express the ineffable. “Modern science” no longer needs to step in when humans grasp at explanation or struggle “to personalize and familiarize, to ingest and acquaint” the intellect with the experienced (Burr 11). Fact no longer has the exclusive ability to express things beyond the scope of the poem. It no longer serves a purpose of proof and conclusion, as a consistent truth across different contexts. This poem’s meaning can be derived completely from its language, without the confines of space. It becomes itself without science’s explicit help, demoting science to the expressive level shared by the rest of language:

...:the axis will be clear
enough daubed here and there with a little ink

or fined out into every shade and form of its
revelation: this is a scientific poem,

asserting that nature values models, that we
have invented little (copied), reflections of

possibilities already here, this is where we came
to and how we came.

(*Garbage* 20)

Ammons uses the word “scientific” to describe this poem, but unlike before, science speaks for neither others nor itself. Instead, science embeds itself within the context, nestled between “the axis will be clear” and “nature values models.” “Scientific” describes and adds nothing, the

broadness of this adjective undermining science as an independent, declarative system. *Tape* called for identification, and scientific language could provide it. But that same declaration falls short here, leaving readers to wonder what a “scientific poem” actually entails. As a means of identification, science clarified and declared the inexpressible. This no longer suffices, as the words of the poem no longer depend on context and space for significance. Explanation is needed, explanation of science’s place within a broader system, of poetry’s place, of language’s. The objectivity of science becomes undermined by the subjective and introspective desire to move beyond simple recognition of reality. The objective cannot describe

a going thing called life, life has a right to

derive life from you: ticks, parasites, lice,
fleas, mites, flukes, crabs, mosquitoes, black

flies, bacteria: in reality, reality is like
still water, invisible, spiritual: the real

abides, spiritual, while entities come and go.
(*Garbage* 98-99)

The objective can identify “life,” can identify a consistency between “ticks, parasite, lice/fleas, mites, flukes,” but it cannot explain why “life” is “a going thing.” Science may have helped expand the definition of life by identifying the microscopic “parasites” and “bacteria,” but why these entities all “come and go” within the “still water” of “reality” requires explanation. Their “invisible” unity demands explanation and words concerned with the “spiritual” rather than the physical. The objective may expand lists by identifying more “entities” to add, but recognizing the source of unity between “you,” the listed microscopic entities, and the macroscopic requires explanation. It requires an understanding of unity, of why it exists and persists as “entities come and go.” “What we find in *Garbage*...is...a new and necessary confrontation with ‘the gap’ between Ammons’s vision of dynamic unity—the whole motion intimated in its discrete forms—

and the integrity of those forms in themselves,” indicating a sort of self-awareness within the poem that longs to know more than the ‘what’ science previously provided, that now wants to know “where we came to/and how we came,” that wants to know the source of function (Tobin 125).

This desire to know about origins leads to a search for explanation, decomposing the scientific while inviting spirit into the poem. In trying to become more than an identifying tool, scientific language deconstructs the poem’s contents and meanings, facilitating the poem’s decay. “Decomposition is the true, unheralded source of composition Ammons will now celebrate” using science: the “symbolic system in which Ammons has his primary imaginative life” (Tobin 122-124). Where science once provided a means of continuity for the poem outside of the boundaries of its space, it now provides a vehicle for spirit, the antithesis which no objective method can disprove. Explanation grates at the “event becoming word” (*Tape 37*). “Scientists plunge into matter looking for the/matter but the matter lessens and, looked too/far into, expands away,” the search for explanation revealing matter to be “insubstantial all/along,” a collection of “motion and space” (*Garbage 30*). The same intangibility was in the passage about radiance, but Ammons was able to express it solidly by using “modern science’s” identification of “each of us” as “radiant” (*Tape 52*). Modern science cannot explain the “realityless” quality of matter (*Garbage 30*). It can identify it, but it cannot explain the power of its elusive “permanent movement and staying” (*Garbage 30*). Instead, Ammons turns to words invoking the unexplainable, describing how “reality wears out, wears thin” by talking about the “priestly plume ris[ing]” from burning garbage, burning matter (*Garbage 30*). The decomposition and degradation of matter is “priestly,” because only a word invoking something as incorporeally substantial and unexplainable as spirit can come close to expressing the rise of feeling which the

“terrifying transformations” of degradation and the “eternal flame, principle of the universe” cause. The visceral desire to understand primordial principle is best described as a

...dance

peopling the centers and distances, the faraway
galactic slurs even, luminescences, plasmas,

those burns, the same principle: but here on
the heights, terns and flies avoid the closest

precincts of flame...

(*Garbage* 31).

“The whole century as far as I can tell has been a century of explanation. We seem to have taken the view that the truth is to be discovered by the use of the discursive, rational intellect,” Ammons stated in an interview (Burr 49). In a “century of explanation,” body wears away, all—people, truth, argument, and poetry—become garbage (Buell 231). But this does not lead to emptiness, does not return poetry to its two-dimensional dependency on surfaces and space. Instead, it leaves behind its pure existence, the meaning within the interstices, the invisible reality that cannot be “explain[ed] away,” suffusing “the centers and distances” (Burr 49). Science is able to confirm the existence of that invisible reality, but to truly understand it requires more than explanation. Explanation deconstructs; what this reality needs is garbage, which is “spiritual,” and therefore “has to be the poem of our time” (*Garbage* 18).

Like *Tape*, *Garbage* contains references to the history of the earth, but instead of behaving as a system independent of the poem’s, science contributes to the explanation-ridden self-destruction of the poem. “The certainty of destruction lies behind” *Garbage*, and explanation begins this mortal process by degrading everything (Vendler 49). The universe becomes a burning pile of garbage when explained. The matter of stars “that rusts in the asteroid/or fusions in the sun” “is composed of the same matter” as “celestial garbage, [in its] orbits thick and thin,”

produced by humans (*Garbage* 117). Humanity explained is “apes: we’re meat wrapped around notchbone spine,” fleshy matrixes of rot that cannot “untangle [itself]/productively from stalwart lacing, bone, artery/nerve compact” (*Garbage* 105). Everything humanly associated in the context of this poem become part of the “celestial garbage” that “is so far the highest evidence of our/existence here” (*Garbage* 117). The earth, filled with the vehicles of explanation—humans—will “be fine, as soon as the people get off,” but as long as they exist, explanation’s destructive tendencies do. *Garbage* continues on, deconstructing everything through explanation, turning the poem into one big explanation, until finally poetry itself is explained, dissected like the “logic/ or knowledge or philosophy” “poetry is not” (*Garbage* 112). Explanation tears away pieces of the poem’s body when “the best/kind of poetry” is described, dissecting the intricacies of a poetic truth “that seeking resolution/and an easing out of tension still out-tenses the/intensifiers” (*Garbage* 120). Just as scientific truth and declaration falters in the face of the demands for explanation, demanding the explanation of poetic truth mistakes the body for the spirit. “Language is the medium that carries the inscription” of the spirit and its greater meaning, its action and potential to affect its surroundings (Burr 29). To explain the poem is to explain its language, and “what is inscribed in poetry is action, not language. The body of the ice-skater is only the means to an inscription on ice. Beautiful as the body may be, the inscription does not exist for the purpose of the body but of what the body does, what its doings symbolize” (Burr 29). The language used to describe the “best kind of poetry” may speak about its “easing out of tension” and the “swells/of easing away,” but these words impinge upon the poem acting for itself, strangling it with the ropes of definition (*Garbage* 120).

But the self-destructive behavior of explanation leaves behind the spirit of the poem, allowing for it to move beyond both space and body, turning it into nothing but pure meaning

which can be infinitely inherited. After explanations about “the best/kind of poetry” turn the reader’s attention to whether or not *Garbage* fulfills these definitions, the tightness of the poem’s colon-ligamented body directs his or her attention to the effects of a poem in action:

...the hackers, having none,
hack away at intensity, they want to move,

disturb, shock: they show the idleness of
pretended feeling: feeling moves by moving

into considerations of moving away: real
feeling assigns its weight gently to others,

helps them meet, deal with the harsh, brutal,
the ineluctable, eases the burdens of unclouded
facts...

(*Garbage* 120-121)

The “burdens of unclouded facts” disappear, explanations gone to leave “loud boys, the declaimers,” “the deaf,” and “the whisperers” as disciples of the poem’s spirit, constantly seeking “the fire line, where passion and control waver//for the field, that is a line so difficult to/keep in the right degree” (*Garbage* 121). Each of these actors has the freedom to behave off a best kind of poem, its spirit suffused within them as it becomes nothing but pure meaning upon being spoken and conveyed, rather than explained, by language. Explanation deconstructed the poem, but by ending with the actions of the poem’s disciples, Ammons preserves the poem’s meaning. The poem’s meaning happens through their actions. The poem ends, shedding its body with the final period, but remains active, now truly beyond the systems of space and body. It stirs feeling, and leaves the reader with a vision of the moving poem, frozen for a moment like “teasel and cattail and brush above snow in/winter, pure design lifeless in a painted hold,” its stillness delicate and illusory (*Garbage* 121). This moving stillness is the reader’s birthright, his or her

inheritance from the ended poem, an inheritance of meaning acting through the silence of the page.

Together, the long poems *Garbage* and *Tape* tell the narrative of a poem's birth and death within the context of the larger universe. Its existence comes into being within *Tape*, but it remains isolated from the greater world, its content defined by the boundaries of the page, the words arbitrarily selected to fill the page. The meanings of the words thus depended on the entirety of the poem's contents, defined by the arbitrarily made landscape. Only scientific language, imported from a system beyond the poem, provided constancy of meaning, allowing the poem to become integrated within the greater world. By *Tape*'s end, the poem is ready to become part of the fabric of the universe, to be continuous and no longer isolated. In *Garbage*, the poem frees itself from the definitions of science, as science proves inadequate, and cannot explain anything intangible, such as spirit. Science only identifies the intangible, and as it tries to explain it, the intangible idea decomposes. And yet its spirit remains in the poem, which becomes pure action amidst the explanations, discarding its body of definitions for movement. By *Garbage*'s end, the poem succeeds as an ancestor of meaning, conveying to the reader an active meaning and idea greater than any individual actor. Within the inheritance of this meaning and idea, continuity between space, the page, the reader, and the universe is achieved, an invisible thread of the unseen reality lying beneath identification, thought, and recognition.

Conclusion

In pursuit of scientific knowledge, mankind refines his perception of the physical world and orients himself within the space of his existence. The space of this existence expands and deepens as humans question the space in which they live, wondering if something more exists within the visible, tangible, and known. Between the spaces of these known facts lie truths unseen and inexpressible through the available lexicon. These truths are felt and known, but to express them requires words not yet available within the common vocabulary. To compensate for the lack of vocabulary, poets use the scientific. “Facets of earlier twentieth-century science which we now take for granted—the terminology of the atom, for instance—had been sacralized and given cultural currency by older poets,” entering the common lexicon and broadening the communicable (Crawford 2). Scientific thought process and vocabulary create a matrix for the poets, mimicking the structure of facts from which new conclusions and questions arise. The known but unseen, ungraspable truth becomes an implication contained within the facts of science, flashing into perceivable existence from between these words’ interstices.

Simulating the scientific process, Marianne Moore poetically disassembles and reassembles living things in order to prove the grace of unity hidden within their structural integrity. This grace is the core principle of any living creature or plant, significantly elemental to the brightness of their vitality. This principle functions within the very atoms of their living beings, and can be neither destroyed nor dissipated. As a studier of living creatures, Moore recognizes the principle at work within the living plant or animal, recognizing it through the feelings that consistently arise when she thinks of the creature or plant. Each organism embodies a different shade of grace, be it the nautilus’ love, the jerboa’s abundance, vegetation’s fortitude,

the ostrich's alertness, or the pangolin's organic machinery. They each characterize the principle of grace which cannot be found in machinery, the seamlessness of movement impossible to mechanically replicate.

Communicating this principle requires precision. Generically communicating it would be a failure, as it is comprised of many parts, multi-faceted and nuanced at many levels. Exactitude in communication is absolutely pertinent in preserving grace. Describing it becomes an impossible feat due to grace's many nuances. As occurs with the snail and a declaration of its style, simply assigning a word to the animal's brand of principle reduces it into a lifeless symbol, denying the variegated aspects of the animal's particular grace.

To avoid imprecision, Moore turns to metaphor in order to convey the full spectrum of her living things' shades of principle. Borrowing from scientific process and thought, she disassembles her animals, treating them as observations to be synthesized. This disassembly occurs through metaphor, which allows for conclusion through implication and avoids deadening declaration. By combining metaphors of machinery with metaphors of other animals and plants, Moore differentiates between the engineered and the organic, between moving and living. With the machinery metaphors, Moore concedes the animals' forms can be mimicked, but their vitality cannot. The metaphors comparing animals and plants to vastly different ones press the reader to search for the common principle unifying these many living things, a principle which cannot be replicated through engineering. Only adequately described as 'being alive,' the inexpressible difference between a perfect machine copy of an animal and the animal itself emerges from these metaphors. Somewhere between the comparisons to the engineered and the organic, the animal's grace of living clarifies, unifying the animal in a way which fails with machinery. The reader's mind reassembles the animal, its internal unity now understood.

A.R. Ammons used scientific concepts and language to trace the path of an idea as it becomes independent of its creator, gaining body as it moves from being a series of random connection to an incorruptible meaning. The idea of the poem begins defined by the space of the page in *Tape*, its sentences and form bound by the tape's margins and length. Its meaning is derived only from what can fit on the page. Even Ammons, as the creator, is subjected to the nothingness of the page's blankness, forced to ramble about anything in order to reach its end. He writes in stream-of-consciousness, his thoughts lacking wholeness as they flit from the philosophical to the daily, accidentally co-existing to reach an end rather than intentionally written because of shared meaning. Within the context of the tape they may assume shared meaning, but outside, the meaning disappears. Consistency of meaning for these ideas and words depends on the tape's space. These ideas have different meaning outside of the context of the tape, as their erratic form becomes strange and nonsensical without the tape. Continuity and consistency of meaning beyond the bounds of the tape is impossible.

The lack of consistent meaning does not apply to the scientific facts within *Tape*. These are statements imported from the universe itself, unchanging no matter the form and medium of their communication. They are words of fact, and their meanings remain fact regardless of context. These facts integrate the poem within the fabric of the world, shelters of consistency protecting the fragility of the space-dependent words' meanings. Meaning accumulates and by *Tape*'s end, enough scientific facts have been used to contain and provide a body for the different ideas expressed within the poem, giving them an identity.

The poem continues in *Garbage*, *Tape*'s sequel in form. Composed in the same way on a strip of adding-machine tape, *Garbage* contains consistent structure. The ideas presented within the poem are not dependent on the tape's space, instead forming independently of what the space

allows. The ideas possess their own body, the matter of their meanings preserved within the words, tightly bound through the syntactical wholeness. Science becomes inadequate, its powers of identification no longer necessary for the poem to retain meaning in a larger context. Beyond the limitations of scientific fact, the poem's subject of spirit is innate to the reader. Spirit is the poem's meaning, and like facts, preserves its meaning regardless of context. Yet even the identifying powers of science cannot recognize or preserve spirit. Instead it moves beyond words into matter, becoming an idea inextricable from everything. In achieving this continuity, the poem gains an independent body in the form of meaning. Through the preservation of its meaning, the incorporeal, invisible idea continues, unbrokenly threading through time and the universe's fabric.

The invisibility expressed within Moore's work is unity, and within Ammons's work is continuity. Unity and continuity exist within everything, the former ensuring the existence of an object's body, the latter essential to its permanence. Despite their essential ubiquity, unity and continuity cannot be described, broken down into a series of details and particles. Attempts to break unity or continuity into simpler parts are a Möbius-strip, each new descriptor only twisting understanding of unity and continuity in on itself and back to the starting point of unity and continuity. By using poetry, Moore and Ammons evade this loop. In doing so, they successfully communicate the invisible elements of existence; unity is its matter, and continuity is its movement. What ensures their perpetual state will be for the next generation of scientists to discover and for their contemporary poets to communicate, all pushing onwards into the invisible.

Epilogue

The push onwards has continued, and new layers of invisibility have emerged since Moore and Ammons's times. Written in 1993, the poem entitled "Dark Matter," by Brenda Hillman, uses the everyday as Ammons did. Her use of science leads beyond the continuity of an idea as invisibility itself gains particles and matter. With this poem, the invisible has shades of darkness and lightness. Visibilities and physicalities exist within the invisibility, a physical plane more elusive to our senses than the subatomic:

I want to see everything but they say now
most of the universe is hidden;
they call what we can't see dark matter,
those particles straining unprovenly through
what is, sucking gravity from the edge
of galaxies. They're trying to find just one
speck of it... Why am I thrilled by the idea
that this unhurried thing cannot be caught?
That this huge mountain's filled with it,
billions of it going through me every second.
(23-32)

"Thrilled by the idea/that this unhurried thing cannot be caught," the speaker wonders about particles of the invisible, unseen not because of infinitesimal size, but because they are invisibilities within the invisible, a hidden universe within "this huge mountain," within the air, within the emptiness. "This unhurried thing," invisible within emptiness and "what is" complicates feelings of unity and continuity, endearing the speaker to them as she begins "trying to love the missingness in the middle" (46-47), finding it "possible to welcome/wounded matter" (61-62) and "guard their incompleteness" (64). Essential to existence, unity and continuity become wounded by the idea of dark matter, and a previously inexpressible thing becomes newly expressed: incompleteness within unity, disunity within continuity.

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