"Dressing Old Words New":
Shakespeare, Science, and Appropriation

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Abstract
This paper confronts the central question for studies of "appropriation": Is the appropriated work still the same work amended, or an entirely new and different cultural construction? Is appropriation about exploiting the immanent potentialities of the classic work, or rather about foregrounding the struggle between the work and its appropriator? If Shakespearean meaning were immutable, it would always resist and survive appropriation. If, however, Shakespeare does not "mean," in Terence Hawkes's phrase, "but it is we who mean by [him]," then there is nothing other than appropriation. In its search for models to illuminate the process of appropriation, this paper draws on the scientific metaphors found in critical language and on some simple paradigms from philosophy, biosciences, chemistry, and physics: Descartes on stability and change; mutability in the substance of protein; the molecular structure of metals and creation via the Big Bang.

I

Why is my verse so barren of new pride?
So far from variation or quicke change?
Why with the time do I not glance aside
To new-found methods and to compounds strange?
Why write I still all one, ever the same,
And keepe invention in a noted weed,
That every word doth almost tell my name,
Shewing their birth, and where they did proceed?
O know sweet love, I alwaies write of you,
And you and love are still my argument:
So all my best is dressing old words new,
Spending againe what is already spent:
For as the Sun is daily new and old,
So is my love still telling what is told. (Sonnet 76, in Shakespeare 1974)\(^1\)

If every word in poetry really did, as Sonnet 76 suggests, "tell"\(^2\) the author's name, unmistakably revealing its nativity and provenance, how much simpler (if less interesting) life would be. Modern literary scholarship, however, eschews such limpid textual transparency. In the last decades of the twentieth century, textual theory has experienced what D. C. Greetham calls an "inversion" comparable to Marx’s inversion of Hegel (Greetham 1999, 370). Just as Marx insisted that matter, not spirit, is the real substance of the world, so modern bibliographers have looked to the "material text" rather than to the original authorial utterance or "idea" as the "real foundation" of textuality, "making the very post-lapsarian contingencies of the text, its negotiations with its own history, as the base of textual operations, and therefore making authoriality, and especially authorial intention, into merely a 'function' (or the superstructure) of this history rather than its raison-d'être" (370-71).\(^3\) Instead of seeking to emulate a text-that-never-was, the authorial text imagined as original, complete and perfect in itself, bibliography now accepts textuality as a history of change:

The textual condition's only immutable law is the law of change. It is a law, however, like all laws, that operates within certain limits. Every text enters the world under determinate sociohistorical conditions, and while these conditions may and should be variously defined and imagined, they establish the horizon within which the life histories of different texts can play themselves out. The law of change declares that these histories will exhibit a ceaseless process of textual development and mutation — a process which can only be arrested if all the textual transformations of a particular work fall into nonexistence. To study texts and textualities, then, we have to study these complex (and open-ended) histories of textual change and variance. (McGann 1991, 9)

The first casualty of this process is, of course, the author, whose metaphorical "death" is also entailed in the birth of writing. The death of the author is the birth of "appropriation," as Foucault put it in his foundational essay, "What is an Author?: "discourses are objects of appropriation" (Foucault 1984, 108). As such, writing can no longer ever claim to be homogeneous and permanent, "all one, ever the same." It survives only by its capacity for mutability, for "variation or quick change."

II
Just how ceaseless and open-ended are these processes of "textual development and mutation?" If a "work" can undergo an almost infinite process of textual transformation, how can we be sure it's the same "work"? At what point does textual variance produce not a mutation, but a new text? When dealing with "appropriations" of Shakespeare, since they are also the work of other writers, are we still dealing with Shakespeare? Can we keep on "dressing old words new" and simultaneously regarding them as the same old words?

In a landmark text, Jean I. Marsden argued that to focus on "appropriations" is to produce "a view of Shakespeare embedded not only in his own culture but in ours, forcing us to consider both the impact we have on the plays and the impact they have on us" (Marsden 1991, 8). Appropriation studies are more likely by definition to be concerned with the impact we have on the plays, than with the impact they have on us. Appropriation, for Marsden, is a unilateral seizure, as in the OED definition, "to appropriate: to take possession of for one's own; to take to one's self." To take is also to take away: appropriation is simultaneously expropriation, forfeiture by the taken of intrinsic meaning and value:

Associated with abduction, adoption and theft, appropriation's central tenet is the desire for possession. It comprehends both the commandeering of the desired object and the process of making this object one's own, controlling it by possessing it. Appropriation is neither dispassionate nor disinterested; it has connotations of usurpation, of seizure for one's own uses. (Marsden 1991, 1)

The forcefulness of this language shows the critic perceiving appropriation as violence and reacting with liberal outrage against an act of cultural colonization. But increasingly, we have become convinced that there is no other way of engaging with the canonical literature of the past. In Terence Hawkes's famous phrase, "Human actions, activities, the 'things of this world,' don't themselves 'mean.' It is we who mean by them" (Hawkes 1996, 8). Or as Gary Taylor puts it, "We find in Shakespeare only what we bring to him or what others have left behind; he gives us back our own values" (1989, 411). So there is nothing other than appropriation. Marsden's view is predicated on the postructuralist truism, verum factum, the world is what we make of it. Or as the occasionally Cartesian Hamlet puts it, "[T]here is nothing either good or bad but thinking makes it so" (Hamlet 2.2.239). "[E]very act of interpretation can be seen as an act of appropriation — making sense of a literary artefact by fitting it into our own parameters. The literary work thus becomes ours; we possess it by reinventing it as surely as if we had secured its physical presence by force" (Marsden 1991, 1).
But is reinvention, as this rhetoric hotly asserts, tantamount to kidnapping, if there is no kid to
nap? Martial is said to have invented the term "plagiarism" from *plagiarius*, a kidnapper; but this
was to describe writers who stole his work and misrepresented it as their own (White 1935, 16). If
we can only make sense of a literary artifact by fitting it into our own parameters, then it's a case
of *mutatis mutandis*. Why characterize this natural process as hostage-taking violence? How do
we define the entity we are taking over? If it remains undefined, how do we know whether we're
hacking off its limbs or breathing new life into a lifeless body? Is the work being laid on a Bed
of Procrustes, or on an operating table for resuscitation? Marsden raises this question herself, but
then retorts only with another question: "One impulse when faced with this plethora of conflicting
images may be to ask where the real Shakespeare lies. But is this question answerable or even
relevant?" (Marsden 1991, 8-9).

Appropriation studies of Shakespeare thus begin with a contradiction. We can only know
the work by reinventing it, by appropriation. But such reinvention is conceived as a violent assault
on the work's original identity, expropriation. Yet the work has no original identity. Or rather this
"identity" is alternately denied and assumed, erased and recuperated. Writing has no meaning other
than what we make of it. Yet we believe that the meanings ascribed by our appropriations are
different from other meanings of the work. "Different from" predicates a comparator; there can
be no difference without another. But we find ourselves no longer able, with any confidence, to
relocate that elusive and inscrutable stranger.

III

Revisiting the same territory a decade later, Christy Desmet develops Jean Marsden's
approach by acknowledging both positive and negative connotations of "appropriation": "The word
'appropriation' implies an exchange, either the theft of something valuable (such as property or
ideas) or a gift, the allocation of resources for a worthy cause (such as the legislative appropriation
of funds for a new school)" (Desmet 1999, 4). This redefinition (which works better in American
than British English) is then applied to Shakespeare by dividing "appropriations" into "big
time" and "small time" initiatives. On the one hand, there are the large-scale colonizations of
Shakespeare by some dominant ideology; on the other, more local, individual, particular acts of
rewriting that share a common revisionist agenda, "individual acts of 're-vision' that arise from love
or rage, or simply a desire to play with Shakespeare" (2). In some ways, this distinction recuperates,
in a less reductive way, the distinctions attempted in cultural materialist work of the 1980s between
conservative and radical appropriations. But Desmet's approach offers a much more positive view
of the interaction between the "work" and its meanings by acknowledging a constitutive reciprocity,
accepting that the work does have its impact on us, as well as vice versa. Or as John Joughin puts it, "[I]nsofar as we continue to appropriate Shakespeare, it's worth remembering that Shakespeare also continues to appropriate us" (Joughin 2000, 16).

But this approach encounters the same difficulty in defining exactly what the driver of that counter-appropriation is; what of the work exists beyond its multiple appropriations. Both Marsden and Hawkes raise this question, only to deflect it towards another inquiry:

One impulse when faced with this plethora of conflicting images may be to ask where the real Shakespeare lies. But is this question answerable or even relevant? (Marsden 1991, 8-9)

Serious conundrums remain. If we abandon the notion either of an absolute "truth" about Shakespeare the dramatist, or of a "truth" that his plays embody or entail, what can we make of the concept of an "alternative" to that truth? (Hawkes 1996, 15)

Desmet closes her Introduction to *Shakespeare and Appropriation* by seeking a way through this impasse. Revisiting Terence Hawkes's "mean by" slogan, she suggests that the work is not reducible to its appropriations, but is rather a fertile source for the proliferation of new meanings:

Terence Hawkes, in a misunderstood phrase, says that Shakespeare does not mean; rather "we mean by Shakespeare" (3). The point is not that Shakespeare has no meaning, but that because meaning changes with context, he has, if anything, more meanings than we can yet imagine. (Desmet 1999, 12)

Despite the caveat, the formulation "more meanings than we can yet imagine" is in one sense entirely consistent with the poststructuralist principle that Shakespeare has no intrinsic meaning, or at least none that is accessible. There is no immanent or permanent meaning; all meaning is generated anew by acts of the imagination. All acts of the imagination are local, context-specific, always different and always changing. Human beings, their society and culture, will go on changing in ways as yet unimaginable; and they will go on attaching new and different meanings to Shakespeare. Therefore, the future meanings of Shakespeare are as yet unimaginable.

What interests me about this phrase is, however, the way in which it chimes with, perhaps even recuperates, a language of infinity, the unknowable, the unimaginable, that we would naturally associate with traditional Bardolatry, or with its contemporary reaffirmations. As we undertake each re-imagining of Shakespeare, we own and understand the product of the activity. Yet when we contemplate Shakespeare's future potentiality for re-imaginings, we are faced with something alien, inconceivable, unknowable. Isn't this the same language that we find in Matthew Arnold?
Others abide our question. Thou art free.
We ask and ask — Thou smilest and art still
Out-topping knowledge. ("Shakespeare," in Arnold 1950, lines 1-3)

Or Ralph Waldo Emerson:

[Shakespeare] wrote the text of modern life . . . He is inconceivably wise; the others, conceivably. A good reader can, in a sort, nestle into Plato's brain, and think from thence; but not into Shakespeare's. We are still out of doors. For executive faculty, for creation, Shakespeare is unique. No man can imagine it better. (Emerson 1883, 201-202)

Makes you feel sad for the rest. Or Henry James:

The secret that baffles us being the secret of the Man, we know, as I have granted, that we shall never touch the Man directly in the Artist. We stake our hopes thus on indirectness, which may contain possibilities; we take that very truth for our counsel of despair, try to look at it as helpful for the Criticism of the future. (James 1981, 310)

Clearly, all these nineteenth-century thinkers assume Shakespeare as an originator of meaning. But they also recognize that our only access to that plenitudinous source is through something similar to what we now call appropriation: "indirectness" (James), "question" (Arnold), or in Emerson's wonderful phrase, by peering into Shakespeare's brain from an unheimlich position irrevocably external to it, "out of doors."

It is interesting that so many contemporary critics have begun to pay new attention to these old voices. Although we would not wish to share their Bardolatry, and we are now finally convinced that Shakespeare's work is changeable, multiple, unfixed, and unstable, we nonetheless find ourselves seeking an origin for that work in the indefinable, the invisible, the limitless. And after all, even Terry Eagleton once suggested that Shakespeare remains somehow ahead of us, and "we have yet to catch up with him" (Eagleton 1986, x).

IV

Shakespeare now exists in an environment of textual multiplicity. The text is multiple, iterable, subject to an inevitable law of change. It is never original, always copied. The grounds on which a priori assumptions could be made about the automatic superiority of one text over another have disappeared: so texts remain to us as plural, relative to one another, not severed into separation by
some absolute judgment, but embedded in a network of differences. The text gives us no direct access to any pure space of authorial intention, for someone has always already got there before us.

This is immediately apparent when looking at post-Shakespearean appropriations. But to take an obvious example, even the Jacobean Hamlet, with its three incommensurable published texts, its mysterious relation to a lost ur-Hamlet, its multiple and discordant sources, presents a model of textual instability and mutation. In the early modern period we see Hamlet being continually re-written, passing through a plurality of texts; we know that more than one Hamlet play appeared on the stage; and we can with reasonable confidence surmise that as both "play" and "text," Hamlet existed in a contested multiplicity of modes and manifestations. Hamlet, then, is nothing more than "a ceaseless process of development and mutation" to which we continue for some reason (as in this sentence) to give the singular and unitary name Hamlet.

When Descartes addressed this same problem, he deployed the figure of beeswax, an example lying easily to hand in the form of the stick of sealing wax in his desk. At first glimpse, wax is a piece of solid matter with definable properties — density, temperature, acousticity. It bears sensory traces of its own history, being redolent of honey and pollen:

Let us take, for example, this piece of wax which has just been taken from the hive; it has not yet lost the sweetness of the honey it contained; it still retains something of the smell of the flowers from which it was gathered; its colour, shape and size, are apparent; it is hard, cold, it is tangible; and if you tap it, it will emit a sound. So, all the things by which a body can be known distinctly are to be found together in this one. (Descartes 1968, 108)

But when heated, the wax changes shape, color, taste, smell, and transmutes from one state of matter, solid, to another, liquid. All the empirical evidence suggests that in terms of physical properties perceivable by the senses, this object has undergone several radical changes of state and condition:

But, as I am speaking, it is placed near a flame: what remained of its taste is dispelled, the smell disappears, its colour changes, it loses its shape, it grows bigger, becomes liquid, warms up, one can hardly touch it, and although one taps it, it will no longer make any sound. Does the same wax remain after this change? One must admit that it does remain, and no one can deny it. What, then, was it that I knew in this piece of wax with such distinctness? (108)

Since to the senses, "wax" is a discontinuous and incommensurable sequence of changes, and yet the observer continues to know it as wax, the identity of the object is not in itself, but in "an
intuition of the mind": "Certainly it could be nothing of all the things which I perceived by means of the senses, for everything which fell under taste, smell, sight, touch or hearing, is changed, and yet the same wax remains" (109). Descartes goes on, of course, from these observations to prove that he himself exists, since although he can doubt anything about wax, he cannot doubt his knowledge of it: for "it cannot be that, when I see or . . . think I see, I, who think, am nothing" (111).

A modern scientist would simply say that Descartes's methods of observation were too limited and superficial to understand the changes undergone by this substance. But if Descartes had known enough biochemistry to understand how wax is manufactured by the worker bee's digestive system and secreted onto its abdominal plates; or its chemical composition of fatty acids, hydrocarbons, and the propolin resin and pigments that give it color and scent; or even its atomic structure of carboxylic acids and monohydroxic alcohols, which can be quantified and graphically depicted — his conclusion would surely have been the same. "Wax" is not a singular lexical unit that corresponds to a singular object. It is a summary or shorthand term that covers and subsumes all this information. The word can just as easily denote "wax" to be a sequence of chemical changes and altered physical states, as it can point to "wax" as a stable and solid object.

Descartes's meditation provides one possible model for understanding a play like Hamlet. Like his stick of sealing wax, Hamlet lies to hand as a solid object, the text on my desk. Observation deduces a list of obvious properties: singularity, completeness, coherence, identity, stability, continuity. Closer observation (reading the Introduction!) discloses traces of origin and development: the shapes of narrative sources, the lineaments of an ur-Hamlet, the distinguishing marks of a vexed theatrical history. Once I begin to read the text, to interpret it, to write about it, to prepare it for a theatrical performance, to re-write it — in a word, to appropriate it — then I am applying Descartes's flame and discovering that Hamlet is indeed a "ceaseless process of textual development and mutation." But just as Descartes was content to call all that "wax," so I am reconciled to calling all this by the composite, yet univocal, name, Hamlet.

V

Descartes has taken us via philosophy into the biosciences. But modern critics, with their focus on the material text, seem to prefer models and metaphors from the apparently more solid science of chemistry. In this discourse we can find Hamlet, and Shakespeare himself, represented as solid objects such as metals. Martin Scofield, in his book on appropriations of Hamlet, speaks of the plays as a "ductile" medium (the ductility of a metal is its capacity to be drawn out into thin rods or wires) (Scofield 1980, 3). Similarly, Stephen Greenblatt speaks of Shakespeare's work as enduring because they are flexible: "The fantastic diffusion and long life of Shakespeare's works depends on
their extraordinary malleability” (Greenblatt 1997, 1). The secret of Shakespeare's longevity and plurality lies in the "malleability" of the works. The word is common in contemporary Shakespeare studies and is used to indicate the fact that the text is responsive to actions upon it, cooperates with adaptation, offers itself up for conversion and transformation. Though used generally to denote plasticity in any material substance, the word belongs properly to metallurgy (as its derivation from malleus, hammer, indicates). The malleability of metals derives from their peculiar atomic structure, which consists of tightly packed groups of positive ions, held in place by a strongly attractive, but relatively mobile, sea of free electrons surrounding them. Force applied to the surface of a metal allows atoms to "slip" over one another without loss of density. So you can hammer iron into different shapes without changing the structure or properties of its crystals. "Ductility" also represents a change of shape that entails no change in the internal structure of atoms and molecules.

The metaphor provides an explanation of textual mutability diametrically opposed to the poststructuralist inflections of "appropriation." If Hamlet is like a metal, then the changes it undergoes entail no fundamental chemical change and are produced by an interaction of internal properties and external forces. Iron hammered into rods, or copper into wire, remain unmistakably, elementally, iron and copper. Hamlet, hammered, squeezed, bent, wire-drawn — re-edited, interpreted, performed, adapted, travestied, re-written — remains elementally Hamlet.12

There is no particular reason, other than an instinctive preference for solidity as a guarantor of "materiality," why Hamlet should be compared to a solid rather than to one of the other states of matter, liquids and gases. Language in a play or poem does not behave with the random arbitrary motion of atoms in a gas. Liquids, on the other hand, with their peculiar couplings of atoms, their combinations of density and fluidity, their capacity to hold together through extensive motion, could possibly serve as a better model. But these parallels may well in any case be too generic to be sustained, since the states of matter correspond more accurately to primary categories such as language and narrative, and a play is more like an artifact constructed from metal than like metal itself; more like an ornamental fountain than like water.

VI

But given the dependence of poetry and drama on human activity, is a play not more like a living than an elemental thing, somewhere in the midst of Aristotle's distinction between natural and artificial beings? In the same sentence as his "malleability" reference, Greenblatt uses another figure which sends us back towards biology again: "The fantastic diffusion and long life of Shakespeare's works depends on their extraordinary malleability, their protean capacity to elude definition and escape secure possession" (Greenblatt 1997, 1). Greenblatt's other metaphor,
"protean," seems quite different, but is remarkably similar in its implications. In place of a solid body which can be reshaped by the application of external force, Proteus is a divinity who can change at will into a variety of quite different forms. A sea-god of Greek mythology, he is capable of "all kinds of transformations," can "change himself not only into every sort of beast on earth, but into water too and blazing fire" (Homer 1946, 75). Proteus is Poseidon's shepherd, responsible for the care of his "flocks" of seals. He is also a sage who knows everything of the past, the present, and the future. But, like Hamlet himself, he is "[n]iggard of question" (Hamlet, 3.1.13) and hates giving information. He must be captured and firmly bound, held through all his shape-shifting mutations, and only then will he consent to disclose the truth. In The Odyssey, Menelaus recounts to Telemachus the story of how he managed to hold Proteus long enough to learn of his past mistakes and his future destiny:

"At midday the old man himself emerged, found his fat seals already there, and went the rounds to make his count. . . . When he had done, he too lay down to sleep. Then, with a shout, we leapt upon him and flung our arms round his back. But the old man's skill and cunning had not deserted him. He began by turning into a bearded lion and then into a snake, and after that a panther and a giant boar. He changed into running water too and a great tree in leaf. But we set our teeth and held him like a vice." (Homer 1946, 76)

Frances Bacon saw Proteus as a model for matter itself. In De Sapientia Veterum (The Wisdom of the Ancients), he proposes that the "fable" of Proteus unlocks the secrets of Nature, and explains the states of matter:

For under the person of Proteus, the first Matter (which next to God is the auncientest thing) may bee represented: for Matter dwells in the concavity of heaven as in a Cave. He is Neptunes bond-man, because the operations and dispensations of Matter are chiefly exercised in liquid bodies.

His flocke or hearde seemes to be nothing but the ordinarie Species of sensible creatures, plants, and mettals in which Matter seemes to diffuse and as it were spend it selfe. (Bacon 1609, 67)

Reflecting the ancient idea that the universe consisted of one common material substance shaped by divine power into all the varied phenomena of life, Bacon uses the Proteus myth to explain the paradox of unity in diversity. Though the universe is varied and plural, it was initially formed
from one fundamental substance, "matter," which is associated with water and the "liquid" state of aquatic life. This is, of course, exactly how Creation is described in the Book of Genesis:

And the earth was without form, and void; and darkness was upon the face of the deep. . . . And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. (Genesis 1.2, 6 Authorized [King James] Version)

According to Bacon, "by the power of that divine word (Producat) Matter at the Creators command did congregate it selfe (not by ambages or turnings, but instantly) to the production of its worke into an act and constitution of Species" (Bacon 1609, 68). The creatures include, of course, Man: "And the Lord God formed Man of the dust of the ground" (Genesis 2.7 AV), or, as we would now say, from the billons-of-years old cosmic dust from which the universe is constituted. Matter is both one and many.

For Bacon, the hero who captures Proteus and extracts his secrets is, of course, the scientist. But there is no docile and obedient yielding up of Nature’s secrets to the analytical method. On the contrary, matter, like Proteus, will transform itself into many elusive shapes rather than accept subjugation:

If any expert Minister of Nature shall encounter Matter by main force, vexing and urging her with intent and purpose to reduce her to nothing; she contrariwise (seeing annihilation and absolute destruction cannot bee effected but by the omnipotence of God) being thus caught in the straites of necessitie, doth change and turne her selfe into divers strange formes and shapes of thinges. (Bacon 1609, 69)

Linked by a common derivation from protos (primary or fundamental), in Bacon's interpretation the myth of Proteus parallels the substance "protein." Biochemists call proteins "the building blocks of life," since they are fundamental to all biological change and development. Long chain molecules of amino acids, proteins are the basis of biological activity. As enzymes, they drive all biochemical reactions. As antibodies, they recognize invasive elements and prompt the immune system to confront them. As structural elements, they are the main constituents of bones, muscle, skin, and blood vessels.14 This insight takes us back to Descartes. The various substances that make up the body seem to perception very different, not manifestly made of the same stuff. Yet they are all constituted from proteins, a common primary matter undergoing continual self-transformation.

Protein may take many forms, but it's still protein. However broad the range of his permutations, Proteus remains Proteus. Like an elemental metal, the changes he undergoes are changes only of shape, not of identity or internal structure. If Shakespeare is like Proteus, then
all his manifold and plural forms remain permutations of the same singular entity. All these permutations should, of course, carry, if this conceit holds, a DNA code that can be traced back to the biological parent. Just as the Human Genome Project has specified the sequence of amino acid beads along a protein chain, so it should be possible to identify even remote and dissimilar products of Shakespeare as nonetheless Shakespearean.

In an essay exploring similar ideas, Linda Charnes gives the example of a striking biological discovery (Charnes 2000, 65). Observing that DNA samples of tree molds taken from different parts of a forest in Michigan were all essentially the same, "clones of the same genetic being" (65), scientists postulated that beneath the forest there must be living and growing a gigantic subterranean fungus, weighing more than 100 tons. On the surface, a widespread and varied collection of fungi growing on rotting wood; underneath, "the world's oldest and biggest living organism" (65). Charnes deploys this phenomenon as a figure for Shakespeare. Contemporary culture is a decomposing forest. The various "Shakespearean fragments and texts which are popping up all over its surface" (66) may appear to be new forms, *sui generis*. In fact, they are outcrops of that massive subterranean growth, Shakespeare, on which their very existence is predicated:

> Their presence reassuringly enables us to "infer" that underneath all the historical "debris," behind the fragmenting claims and postures of "postmodernity," there is still "a there there," something . . . that we cannot actually see but whose presence must nevertheless be posited. (66)

**VII**

All these models, philosophical and scientific, reinforce our intuitive sense that *Hamlet*, and Shakespeare, are both one and many, formed but still forming, "still and moving" ("Burnt Norton," Eliot 1936, line 75). Physics, chemistry, and biology, even at this elementary level, present us with ideal types of a primary "matter," divisible into (currently) 118 elements, but with common atomic and molecular structures that can both maintain stability and produce unique combinations. Matter can undergo transformation without destruction. All these models allow for continual and radical change without any loss of identity.

But there is one thing missing from this discussion; and this is the hardest point of all to reach. Chemical elements exhibit changes of state in response to physical conditions. Carbon appears as one of its allotropes — graphite, coal, or diamond — depending on the circumambient context in which it forms. Carbon itself possesses the potentiality for change as an intrinsic capability.
But how did carbon acquire this protean talent? By an act, or process, of creation. Proteins also have an innate organic capacity for self-transformation. They transform themselves in obedience to instructions in the genetic DNA code. But whence do they acquire those instructions? From an act of creation.

In another interesting comparison, Gary Taylor compares Shakespearean "genius" in its uniqueness, its singularity, to ideas from astrophysics about the black hole:

A singularity (represented by the symbol *) is the center of a black hole; it is a mathematical point in space having no length, breadth or depth, a point at the centre of a once vast, now collapsing star where matter is crushed by its own irresistible gravity into literally zero volume. Even light cannot escape from a black hole; time itself stops.

If Shakespeare has a singularity, it is because he has become a black hole. Light, insight, intelligence, matter — all pour ceaselessly into him, as critics are drawn into the densening vortex of his reputation; they add their own weight to his increasing mass. The light from other stars — other poets, other dramatists — is wrenched and bent as it passes by him on its way to us. He warps cultural space-time; he distorts our view of the universe around him. . . . But Shakespeare himself no longer transmits visible light; his stellar energies have been trapped within the gravity well of his own reputation. (Taylor 1989, 410-11)

Like the "cease of majesty" in Hamlet, the black hole "Dies not alone, but like a gulf doth draw / What's near with it" (Hamlet, 3.3.15-17). Barely escaped from the black hole himself, Gary Taylor pleads for "available cultural space for other writers, [such as] . . . Thomas Middleton" (Taylor 1999, 205). Of course, not everything disappears into black holes: if a stellar body has sufficient mass, it can resist even that enormous gravitational pull. Taylor should take comfort from the example of Cygnus X-1, a massive hot star which is apparently towed around by an aptly named "dark companion," a black hole against whose attractive force it has managed to stabilize itself. Room for Middleton, yet.

But the mathematical concept of "singularity" has a much larger import even than this, since it also represents the originating moment of creation itself, the single point of infinite density in "Big Bang" theory. Stephen Hawking took a phrase from Hamlet as the title of his third book, The Universe in a Nutshell (2001): "I could be bounded in a nutshell, and count myself a king of infinite space" (Hamlet 2.2.243-44):

[T]he behaviour of the vast universe can be understood in terms of its history in imagined time, which is a tiny, slightly flattened sphere. It is like Hamlet's nutshell, yet this nut
encodes everything that happens in real time. So Hamlet was quite right. We could be bounded in a nutshell and still count ourselves kings of infinite space. (Hawking 2001, 99)

Similarly, the "vast universe" had its origin in an immeasurably small, but inconceivably powerful, point. This singularity has been described in language, defined in mathematical calculations, and explained in cosmological theories. But it is a point where language and mathematics and theory all break down. It cannot be explained. Astrophysicists cannot, for example, understand why the singularity that produced the universe didn't just produce a black hole. Or what stops the universe from disappearing into another one . . .

VIII

And this is where we are:

Time is off its hinges, time is off course, beside itself, disadjusted. Says Hamlet. Who thereby opened one of those breaches, often they are poetic and thinking peepholes [meurtrières], through which Shakespeare will have kept watch over the English language; at the same time he signed its body, with the same unprecedented stroke of some arrow. (Derrida 1994, 18)

For Derrida, speech is the illusion of presence, writing potentially a means of demonstrating absence. The sign is always a "deferred presence." Language attempts to overcome this deferral of meaning, but in doing so, only reinscribes it. As Graham Ward puts it:

Derrida suggests the openness of textuality to an indefinite future, a deferred eschaton — an openness that cannot be closed. We are always in medias res — moving between an origin which can never be recovered or single and a conclusion which can never be determined. We occupy a place, as such, in the shifting sands of semiotic systems, haunted by the possibility of presence and stable identity, but forever unable to produce it. (Ward 2000, 15)

Writing is, in Derrida's terms, an elegy for lost presence, an act of mourning for that which lies already in the past. But the very signs employed to represent that lost presence announce the absence of the presence they signify. Presence is again postponed, pushed into the future, a "deferred eschaton" (16). Hence there is always, in Ward's terms, "a gap between event and consciousness" (16) — but also between reality and experience, between signifier and signified, between now and then. If a text is "no longer a finished corpus of writing, some content enclosed in a book or its margins, but a differential network, a fabric of traces referring endlessly to something
other than itself" (Derrida 1991, 257), then the text itself is also a "gap." A hole, an empty space, an aporia through which we can glimpse a place beyond borders, "the limits" (Derrida 1991, 257), "an unlimited place" (Cixous 1991, 1), the indefinable.

There was a point of origin for Shakespeare's plays, for Hamlet, just as there was for the universe, and we will always be fascinated by it, mourn for its passing, long for its rediscovery, even its repetition. In Henry James's words, "[W]here shall you find a presence equally diffused, uncontested and undisturbed?" ("The Birthplace" 1903, quoted in Gross 2002, 21). "Diffused" like the molecules in a gas: present, but not confined to one space or state. But this singularity is not to be reached or recovered in the past by archaeological excavation, but rather extrapolated towards that final deferred "eschaton" that lies at the other end of time. What we are doing when we appropriate Shakespeare's texts is more a matter of building towards an unrealized future than recapturing an irrevocably vanished past: "We have yet to catch up with him" (Eagleton 1986, x). In that process, our mourning for the lost past is projected forwards into mourning for the endlessly deferred future. As such it embraces bereavement, and with all the powers of the imagination invests in what Derrida calls "the work of mourning."

Any text is inseparable from an act of making. Writing, publication, and theatrical performance are practical crafts that take place in a restlessly changing environment of productive technologies. But none of them would be necessary were there not some point of origin, some act of creation which brings into being a piece of organized language considered worth preserving and circulating. And the genesis of such works is inseparable from creativity and imagination. The text is changeable, multiple, unfixed, and unstable. Yet it has an origin in the indefinable, the invisible, the limitless. The singularity of creation is also that vanishing point identified by Derrida as "the very origin of the destabilising moment" (Derrida 1993, 65); or in Foucault's words, the "space into which the writing subject constantly disappears" (Foucault 1984, 102); or Slavoj Žižek's "vanishing mediator," defined as "the structure of an element which, although nowhere actually present and as such inaccessible to our experience, nonetheless has to be retroactively constructed, presupposed, if all other elements are to retain their consistency" (Greenlatt 1996, 338).

IX

When I consider every thing that growes
Holds in perfection but a little moment.
That this huge stage presenteth nought but showes
Borrowers and Lenders

Whereon the stars in secret influence comment.
When I perceive that men as plants increase,
Cheared and checkt even by the selfe-same skie:
Vaunt in their youthfull sap, at height decrease,
And weare their brave state out of memory.
Then the conceit of this inconstant stay
Sets you most rich in youth before my sight,
Where wastfull Time debateth with decay,
To change your day of youth to sullied night,
And all in war with Time for love of you,
As he takes from you, I engraft you new. (Sonnet 15, in Shakespeare 1974)

How, then, to retain identity and meaning in an environment of continual and inexorable change, where the only choices seem to be: surrender to "variation" or just keep on "telling what is told"? The world we love is growing and dying, our place in it no more than an "inconstant stay." As in many of the Sonnets, reflections on mutability focus with unusual force an image of changeless beauty, always about to change. In love with the lover, but in war with Time, the poet will preserve beauty not by trying to hold on to it, but by "engrafting" it into a new synergy. In doing so, he has both accepted the destruction of the loved object and affirmed its potentiality for creative development. The DNA blueprint of beauty will survive into a new efflorescence. Change and permanence are one; and many.

Flesh fade, and mortal trash
ash . . . Fall to the residuary worm; world's wildfire, leave but
immortal diamond,
This Jack, joke, poor potsherd, patch, matchwood,
Is immortal diamond. ("That Nature is a
Heraclitean Fire and of the
Comfort of the Resurrection,"
Hopkins 1953, lines 21-24)

Notes
1. References to Shakespeare's Sonnets are from The Sonnets of William Shakespeare (London: Shepheard-Walwyn Ltd., 1974). This edition is based on Thomas Thorpe's 1609 Quarto edition, with one emendation (see note 2).

2. Ironically, the printed text fails to deliver the required clarity of exposition. The very word that denotes confessional transparency reads, presumably by printer's error, as "fel." By substituting "tell" we are accepting an uncontroversial Capell emendation, but also already allowing someone else to speak on behalf of the allegedly self-revelatory name of Shakespeare.
3. See also Greetham 1999, p. 406: "McGann, like Marx, determines that 'conceiving' and 'thinking . . . appear as the direct efflux of [the] material.' That is we can read back into spirit and thought the primary evidence to be obtained from materiality, which is, for McGann, text's 'only condition.'"

4. From Giambattista Vico: "What is true, and what is made by man, are one and the same." See Terence Hawkes, *Structuralism and Semiotics* (2003), 3.


10. See, for example, Stanley Cavell on James, in *Philosophical Shakespeares* (Cavell 2000), xv-xvi; and John Joughin on Emerson, (Joughin 2000), 3-4. See also Graham Holderness in *Textual Shakespeare: Writing and the Word* (2003), 247-48.

11. See also John Joughin in *Philosophical Shakespeares* (2000): "[T]he dramatist's open-ended resistance to conceptual control might finally turn out to be a far more crucial resource for critical thought" (11).

12. The analogy can be pursued by observing that while Shakespeare's *Hamlet* remains malleable, subsequent re-writings of the play do not share in the same flexibility. When mixed with other elements, as in an alloy, elemental metals lose their flexibility by the introduction of "grain boundaries," across which atoms find it much harder to move. The carbon atoms in steel present an external force with much more resistance than atoms of iron, so the crystals are more likely to dislocate than to "slip." We remain surrounded by appropriations of *Hamlet*, but not with appropriations of appropriations. Appropriations are more like alloys than like elemental metals. For discussion of a range of *Hamlet* appropriations, see my *Textual Shakespeare: Writing and the Word* (2003).

13. Quotations from *The Wisedome of the Ancients, done into English by Sir Arthur Gorges Knight* (Bacon 1619). Bacon's scientific interpretations of ancient myths are extraordinarily advanced as well as acute, though earlier commentators saw him as attributing rather than extrapolating meaning: "[T]he sages of former times are rendered more wise than it may be they were by so dexterous an interpreter of their fables" (Thomas Tenison, quoted in Benjamin Farrington, *Francis Bacon: Philosopher of Industrial Science* [1973]), 77. Yet Proteus was obviously
thought of in ancient Greece as a model for primary matter. The twenty-fifth Orphic Hymn invokes Proteus as first-born, transmuting matter and possessing all knowledge (The Book of the Orphic Hymns [1827], 16). A fascinating passage in Ovid's Fasti identifies Proteus along these lines: "Aristaeus wept, when he saw his bees killed / And honeycombs abandoned incomplete." But "Proteus will . . . tell you how to regain what is gone." The advice is to sacrifice a bullock and bury its carcass: "From the putrid ox / Swarms bubble. One life axed bred a thousand" (Ovid 2000, lines 364-65, 367-68, 379-80).

14. Proteins achieve this iterability by a process that scientists call "folding." In order to carry out a particular function as enzyme or antibody, proteins must take on a particular shape or "fold." When proteins fold incorrectly, they may be the cause of diseases such as Alzheimer's and BSE (Bovine Spongiform Encephalopathy, or "Mad Cow Disease"). Many biological terms similarly derive from the Greek protos, or "primary"; for example, the "protests," the generic term for single-cell beings, from viruses to larger organisms like the amoeba (full name Amoeba Proteus). "Proteus" has proven a useful brand name for a range of products in biosciences and information technology. Wadsworth's "Proteus Classics" provides a large database of writing with tools for customizing individual anthologies. A bioscience company "Protéus" "discovers and develops molecules of primary importance and turns them to any form that meets the needs of the near future" (Protéus). "Protean 292X," a portable video signal generator, is (ironically) manufactured by a company called Hamlet. All these examples entail an appropriation of Proteus' metamorphic capabilities. For modern science, the god is firmly bound and singing like a canary.

15. Many literary applications have been made of this phenomenon. D. H. Lawrence, in 1914, used it to explain his approach to character in "The Sisters": "There is another ego, according to whose action the individual is unrecognizable, and passes through, as it were, allotropic states which it needs a deeper sense than any we've been used to exercise, to discover are states of the same single radically-unchanged element. (Like as diamond and coal are the same pure single element of carbon.)" (Lawrence 1981, 2:183). G. M. Hopkins used it to reconcile the mutability of nature with the permanence of resurrection in "That Nature is a Heraclitean Fire and of the Comfort of the Resurrection": "This Jack, joke, poor potsherd, patch, matchwood, immortal diamond / Is immortal diamond" (Hopkins 1953, lines 23-24). Today, it is possible to have the cremated remains of a loved one reconstituted into a diamond ring.

16. Stephen Greenblatt has more recently revised his scientific metaphors, and in Hamlet and Purgatory (2001), sees the play as being "distributed in tiny, almost invisible particles throughout my account" (5).
17. The phrase is the sub-title of Derrida's *Specters of Marx*, but the sentiment is generally held. See, for example, Gary Taylor, "Culture is the gift of the survivor. It is always bereaved" (1996), 5; and Geoffrey Hartman, "Inscribing, naming and writing are types of a commemorative and inherently elegiac act" (1970), 223. Andrew Murphy applies this problematic to editing: "[E]very vision of textual presence . . . is doomed to failure" (1999), 136.

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