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“Forward and Backward”: Actants and Agency in Marlowe’s *Doctor Faustus* and Shakespeare’s *The Tempest*

Abstract: This essay presents a posthumanist reading of Shakespeare’s *The Tempest* and Marlowe’s *Doctor Faustus*, two plays which feature a scientist/magus who attempts to control his environment through personal agency. After detailing the analogy between the agency of posthuman figures and the workings of computerized writing machines, as Katherine Hayles has proposed, my essay shows how Kott’s writing, especially his notion of the “Grand Mechanism” of history, anticipates the posthumanist theories that are currently dominating literary assessments. His critique of *The Tempest* makes this idea perfectly clear when he disputes the standard notion that Prospero represents a medieval magus; he instead argues that Prospero was more akin to Leonardo DaVinci, “a master of mechanics and hydraulics,” one who would have embraced revolutionary advances in “astronomy” as well as “anatomy” (1974: 321).

Keywords: Posthumanism, Actant, Agency, Prospero, Doctor Faustus, Mephistopheles, Ariel, Caliban, Transmedial, entanglement, daemons, Robert Boyle, Thomas Hobbes, Aristotle.

There is little doubt that human control and agency are challenged by both animate and inanimate forces in *Doctor Faustus* and *The Tempest*. Although part of my focus is on Faustus’s chant in Act 1, Scene 3 of Marlowe’s play, where he has written God’s name “Forward and backward” in anagrams, a phrase that mimics computer developments in print capabilities, I go on to show that the phrase also encapsulates my argument that *The Tempest* looks forward to a posthumanist world, while also embracing and drawing on the past, again “forward and backward.” Indeed, Jan Kott felt the same tension between that past and the future when he pronounced that the era in which these two playwrights lived was “the last generation of humanists” (1974: 298). After

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a brief overview of posthumanist theory, I turn my attention to two of the key points of this theory, the “actants” in both plays, before considering the networked systems in *Doctor Faustus*, and then focusing on the human/animal hybrids in *The Tempest*.

Posthumanist Theory

Posthumanist theory borrows significantly from scientific analysis. Some critics trace its origins to the “new materialisms” of the 1980s such as those articulated by Catherine Belsey, in her 1985 book, *The Subject of Tragedy: Identity and Difference in Renaissance Drama*. According to Christy Desmet’s distinction between traditional Renaissance humanism and posthumanism, “liberal humanism proposes that the subject is the free, unconstrained author of meaning and action,” such as Harold Bloom might argue, and so, in short, “the origin of history” can be found in a political system “which guarantees freedom of choice,” such as Western democracy proposes to do. But posthumanism, as we shall see, attempts to “debunk the sovereignty of this liberal humanist subject,” not only by placing people on the same ontological level with other objects, also referred to as “actants” by many critics, but by also things that possess “many of the qualities previously seen as the sole property of people” (Desmet “Alien Shakespeares,” 2).¹

Less than five years after Belsey’s assertions, N. Katherine Hayles’s book, *How We Became Posthuman* (1999), connected these two philosophical conceptions: while she takes as her “reference point” the “human” in the phrase “liberal humanism,” she asserts that the “posthuman subject is an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction” (1999: 3). But she also adds that any version of posthumanism and its “rejection of the body [which] underwrites fantasies of uncurbed power, immortality and triumph over the very vulnerabilities that connect us to the non-human world” is a proclamation much too simple and too often overstated (7).

Before we respond that such creations bring to mind only late 20th-century hybrid models such as “Robocop” or the “The Bionic Woman,” Joseph Campana and Scott Maisano argue instead that posthumanism has existed long before our century and actually has “its roots in and remains an offshoot of ‘Renaissance humanism’” (2). They go on to suggest that such humanism was “never a coherent or singular worldview, much less a rallying cry

¹ For more detailed discussion of “actants” in narratology, see Algirdus Grejmas, and for “actants” in theatrical modes, see Anne Uberfeld’s *Reading Theatre* (both listed in the Works Cited).

for ‘man as the measure’—or the center—of all things” (2). It is also important to emphasize that while humanism for the early moderns, as we all know, was “an engagement with classical literatures of the past,” we should not forget that some of these classical texts included “Lucretian atomism” which “viewed all things human and otherwise as matter” worth exploring, such as the Pythagorean notion of metempsychosis, “which downgraded the supremacy of the human by claiming the soul could be reborn in the body of an animal” (Raber 170, n. 11). This theory is somewhat echoed not only in Act 5 of *Doctor Faustus* (as we will see) but also in the hybrid characters of Ariel and Caliban in *The Tempest*.

These two texts, then, represent the same sort of “positive models of boundary-confusion and hierarchies that turn out to be profitably tangled” today (Raber 21). While seemingly oxymoronic on the surface, humanism, specifically “[e]nlightenment humanism, has always carried within itself the seeds of posthumanism. Simply by putting “‘man’ at the centre of the inquiry, philosophy ensured that ‘man’ would be the focus of intense and eventually destabilizing scrutiny” (Raber 10-11). One other way to express this connection can even be made, *contra* our expectations, that more conservative readings of Shakespeare, such as Bloom’s *Shakespeare and the Invention of the Human* (1999), may announce a similar trajectory, since he emphasized the noun, “Human,” in his title.

A split or “Constitution” developed in the seventeenth century, according to Latour in his book, *We Have Never Been Modern*. This distinction, he argues, began at a time when “the natural philosopher Robert Boyle and the political philosopher Thomas Hobbes were arguing over the distribution of scientific and political power” (15). Yet this alleged “turn” or “swerve” in Stephen Geenblatt’s term, is more complicated than we supposed, because the humanism of Marlowe and Shakespeare’s age was not the humanism of the Enlightenment, as Raber notes, so it is certainly possible that “post-Cartesian or Enlightenment ‘humanism’” may not be “unproblematically continuous with Renaissance humanism” (4-5).

As a substitute for seeking answers in logic, mathematics, or rhetoric—some of the same fields which failed to satisfy Doctor Faustus—Boyle relied on “credible, trustworthy, well-to-do witnesses gathered” to observe an experiment, who could then “attest to the existence of a fact,” even if they did not “know its true nature,” and so in essence, Boyle “invented the empirical style that we still use today” (Latour, *Modern*, 18). Hobbes, on the other hand, “arriv[ed] at all his scientific results not by opinion, observation or revelation but by mathematical *demonstration*, the only method of argument capable of compelling everyone’s assent” (Italics mine, 19). Lest we forget, Dr. Faustus is also performing experiments, and, as he points out to his colleagues Cornelius and Valdes, he hopes to produce for them “demonstrations” of his power learned from his conjuring book (A-text, 1:1:142).

The Tempest and Doctor Faustus

Both Shakespeare and Marlowe clearly created at least one respective central character who would fit the genre of the “mad scientist,” a type often found in classic science fiction and a figure featured in some posthumanist critiques of literature.² In Shakespeare’s *The Tempest*, the protagonist Prospero is exiled to an island with his daughter, where he continues his “secret studies” which began even before his forced exile from Milan; Marlowe’s *Doctor Faustus* focuses on a Wittenberg graduate who has tired of all the traditional training he learned in multiple disciplines, including rhetoric, jurisprudence, and even the field of medicine, which allowed him to save whole cities from dangerous outbreaks of disease. But these accomplishments are not enough to satisfy him, so like Prospero, he begins to study “magic,” which he claims has ravished him; however, unlike Prospero, Faustus engages in more dangerous pursuits, such as his deal with the Satan, and in exchange for this god-like power, he offers his soul to him. By employing an important element of posthumanism, that of “actants,” those human and non-human objects mentioned earlier, I hope to show how an examination of characters in each author’s play—Mephistopheles in *Doctor Faustus* and Caliban and Ariel in *The Tempest*—may help us discern the two dramatists’ engagement with the newly emergent scientific knowledge.

In Act 1, Scene 3 of Christopher Marlowe’s *Doctor Faustus*, the protagonist rehearses his conjuring mantra by speaking aloud the following words: “Lines, circles, signs, letters, and characters / Ay, these are those that Faustus most desires” (A-text, 53-54). Recent literary critics such as David Bevington and Eric Rasmussen suggest that *letters* allude to those in Jehovah’s name, which will be written “*Forward and backward*” and “the *characters* seem to be cabbalistic signs or emblems such as astrological symbols for the planets” (n. 53. 114). While they agree with most interpretations that the *lines* in Faustus’s speech are probably the ones Faustus traces around his body, they further remind us that lines were “also used in geomancy,” which is “the art of divination through signs derived from the earth”; according to this interpretation, the standard “method was to jot down lines and dots at random and then interpret them” (114).

Although we might scoff at such power in dots and lines to form mystic signs, we should recall that early computer displays also employed “lines” and “dots,” especially when using a dot matrix printer to display a computer’s data

² See for example, John Cohen, *Human Robots in Myth and Science*. (New York: A.S. Barnes, 1967); Jessica Riskin, ed. *Genesis Redux: Essays in the History and Philosophy of Artificial Life*. (U. of Chicago P, 2007); and Jonathan Sawday, *Engines of the Imagination: Renaissance Culture and the Rise of the Machine*. (London: Routledge 2007).

collection. By employing closely-spaced dots, this computer printing also miraculously freed the machine from being limited to a single set of letters and numbers, such as on a typewriter. Often paired with a daisy wheel in the shape of a circle, these printers could not only print line by line, but also left to right and then right to left—“forward and backward”—in other words, just like the order and reverse order of Faustus’s speech. By accelerating the transfer of informational signs, usually using input from a technical expert, these printers occasioned a hybrid meeting of man and machine which produced on the printed page what N. Katherine Hayles refers to as a “material-semiotic object” (*Writing Machines*, 2002: 15).

This type of “material,” meaning objects and “semiotic” meaning concepts, also allows for connections between literary and scientific investigations urging us to read anew relations between objects, animals, and humans by granting all three some agency. For digital scholars today, “lines” have morphed into strings of XML code, “circles” are produced by Computer Aided Design (CAD) programs, “signs” have become Unicode symbols, and “characters” seem omnipresent in digitized texts. Even though we designate such esoteric “objects” as having no connection between Faustus’s recitation and today’s algorithmic processes, the correlation between them is quite close. While neither Faustus, nor Marlowe or Shakespeare for that matter, would have used a computer of any kind, in both moments of conception, a “command” is made—by a pen in Marlowe’s or Shakespeare’s hand, by a voice in Faustus’s and Prospero’s case, or by a keyboard or a touch screen today—to initiate the process. Moreover, posthumanism, as we will see, suggests that the humans in this network of “characters,” “signs,” “circles,” and “letters” may possess only as much agency as the objects, or “actants,” they are allegedly commanding.³

The literary and semi-scientific seem oddly to coexist in Faustus’s chant and Prospero’s spells, bringing together a “precisely written code” with “the richness of natural language” (Hayles, 16). Moving from the complicated conjuring quote in Faustus’s magical book, to the “creatures” in both plays,⁴ my essay focuses instead on these “actant” spirits that populate the dramas, primarily Mephistopheles in Marlowe’s work and Ariel and Caliban in

³ The term “actant” also, as Latour adds, allows literary critics to look more seriously at the “agency of a magic wand, a dwarf [or] the thoughts of a fairy’s mind,” or in Shakespeare’s play, Prospero’s magic staff and in Marlowe’s the agency of demons and semi-human characters. As Latour concludes, “novels, plays, and films from classical tragedy to comics produce a vast playground to rehearse accounts of what makes us act” (2005: 54-55).

⁴ As Julia Reinhard Lupton has shown, the word “creature” is related to the Latin verb “creare,” meaning “to create,” and those termed “creatures,” such as Caliban, are always a thing “with the sense of continued or potential process, action, or emergence” (Lupton, 2).

Shakespeare's play, not only to highlight the animal/human/monster amalgamations in both works, two primary aspects of posthumanism in general, but also in order to better understand the dispersal of agency in the plays themselves.

Networked Systems in *Doctor Faustus*

Faustus seems to believe he is in total control of the "spirits" he has commanded, particularly Mephistopheles, because the Doctor believes there is some grand division between the human subject and the object "actants" in the play; however, posthumanist theory suggests that humans have never been entirely autonomous beings, and, just like actants, they are always partly controlled by their own environment and the networks they co-inhabit. Countering this simplistic division, I follow Latour and propose to "redistribute the cards between humans and nonhumans, and to disengage this pair from the perpetual battle carried on noisily by objects and subjects, the former seeking to come together under the banner of nature and the latter wanting to regroup in society" (*Politics*, 76). While it is fair to say that Faustus initiates the process with the actants, his own "selfhood" becomes entangled with the "spirits" so much so that agency becomes distributed throughout the network of beings in the play. Just as in Mary Shelley's novel, *Frankenstein*, in Marlowe's play, creator and created become united, part human, part beast, part autonomous being.⁵ For Faustus, just as for Doctor Frankenstein, the two actants/agents break free of their so-called "masters" in the literary works and begin to reverse the flow of the agency so that Faustus is always implicated in, and interwoven throughout, the networked systems of the drama; in Marlowe's play, in other words, the controlling "system" becomes the true agent which creates the action.

Although this "assemblage" exists without any specific action in the play, Marlowe dramatizes this rearrangement by signing a "contract" with Lucifer via Mephistopheles. Once this pact is signed, in other words, a metaphorical switch is pulled activating a "vibrant materiality," which bestows agency on both "non-human" and "not-quite human things," in Jane Bennett's terms (vi), and one that includes animate and inanimate objects, some of which spin out of Faustus's control.

While interactions with such human/monster creatures seem like the stuff of science fiction, posthumanist theory offers many examples of how this works in our lives today. Bennett's term "assemblage" seems particularly apt

⁵ Regarding the connection between Shakespeare's Caliban and Mary Shelley's Frankenstein creature, see my article "Mary Shelley and Shakespeare: Monstrous Creations." *South Atlantic Review* 72.2 (Spring 2007): 6-22.

here, most clearly articulated when she uses an electrical power station as one example (23). Such “ad hoc groupings of diverse elements, of vibrant materials of all sorts,” Bennett argues, contain “living, throbbing confederations that are able to function despite the persistent presence of energies that confound them from within” (23-24). While such a constellation of agents represents an assemblage, the effects generated are more akin to vital forces causing an electrical blackout, which “is distinct from the sum of the vital force of each materiality considered alone” (24). And precisely because each member-actant maintains an energetic pulse slightly “‘off’ from that of the assemblage, an assemblage is never a stolid block but an open-ended collective, a ‘non-totalizable sum,’” capable of moving forward and backward (24). In other words, it does not offer a limb-by-limb anatomy we can study, nor does such a vibrant mass allow us to parcel out agency or assign blame.⁶

Keven LaGrandeur makes a compelling connection regarding the type of “actants” to which I have been alluding by using Mephistopheles as an example in Marlowe’s play. Even if we grant that Mephistopheles is “a highly intelligent entity,” who functions as an “intermediary between Faustus and the system of demons he tries to harness,” we should also see him as “a being who is reflexively entangled in a system of beings and environmental components” in the exact same way as Faustus (24). By immediately changing into a Franciscan Friar per Faustus’s “command,” the spirit quickly assumes a recognizable, nearly stereotypical character of Protestant scorn, but one that conceals “a dauntingly complex system” (24). Returning to the computer analogy with which I began, the “experience” we encounter when composing is supposed to replicate that of the more familiar typewriter, hiding the complex system through which the computer actually functions. Most significantly—for both the modification of Mephistopheles’ appearance and the disguised machinations and codes of the computational device we are using—the aim is to make us “forget the intimidatingly complicated actions going on just below the surface appearance,” by “lull[ing] the user” into absolute complicity, often followed by eager action on our part (25). Due to his advanced skills in education, law, debate and even medicine, it makes perfect sense that Faustus believes he possesses enough agency to conjure demonic entities and to perform magnificent deeds; yet he is actually ensnared in a network of his own making, and he is no more autonomous than the actant Mephistopheles, who even admits in the play, that he is always in hell no matter where he travels (2:1:124-126).

⁶ A recent example of an “assemblage,” would be a large power grid failing, such as the so-called “Northeast Blackout” in 2003, which affected both the Midwest and Northeast United States as well as the Canadian province of Ontario for over forty-eight hours.

But what does this whole scenario reveal to us when filtered through a posthumanist lens? In short, it undermines the characters own sense of agency and stable identity. As Raber explains, early modern characters “discover that they are enmeshed in an environmental web within which identity,” not unlike Doctor Faustus in this tale, “is constantly dissolved and dispersed” (125-126). Although Faustus represents one of many “fictional characters who can easily be labeled mad but whose madness . . . lends the stories their perverse psychological textures” (Chow, 6-7), the numerous variants of the tale create “loops” of meaning. As contemporary critics have noted about the posthumanist condition and the reproduction of virtual texts, and the subsequent numerous overlapping recurrences, these networks “suggest a topological looping together that is at the same time an enmeshment of topics,” a type of “entanglement” of “things held together or laid over one another in nearness and likeness,” not so different, perhaps, than the composition of plays by early modern collaborators (Chow, 1). Moreover, the dispersal of “agency” we witnessed in *Doctor Faustus*, certainly “is compounded, in the age of digitization, by the rapid disappearance of time-honored intervals, be those intervals temporal, geographical or personal,” and so the “transmediality of the web or net,” the latter names for the internet (“web” and “net”) being perfect word-images for “capturing” copies from the past in the present, such as texts of early modern plays re-presented on computer platforms and through digital programs (10).

Animal/Human Hybrids in *The Tempest*

While Marlowe’s play suggests a number of posthumanist characteristics, Shakespeare’s *The Tempest* multiplies these connections in repetitive ways by not only providing a posthuman “networked system,” but also emphasizing the man/machine, master/slave and animal/human hybrids so important to posthumanist theory. Hayles’s insight into human co-evolution suggests that this new regime continues to involve a mutual and serial metamorphosis, with technology possibly shaping humanity and vice versa in a perpetual process: “As inhabitants of globally interconnected networks, we are joined in a dynamic co-evolutionary spiral with intelligent machines as well as the other biological species with whom we share the planet” (*Unfinished Work*, 164). This particular posthumanist theme of man and machine or master-slave may be most pronounced in Shakespeare’s play *The Tempest*.⁷

⁷ Of course, the numerous postcolonial readings of the play, some of which focus on critical race theory, highlight and challenge the simple master-slave binary. See, for example, Paul Brown’s, “‘This Thing of Darkness I Acknowledge Mine’: *The Tempest* and the Discourse of Colonialism.” In *Political Shakespeare: New Essays in Cultural*

Humans “have never really been autonomous entities,” Kevin LaGrandeur posits, “but rather they have always been intimately interdependent upon their environment and tools” (16). Tracing this notion back to Aristotle’s *Politics* (about 350 BCE), LaGrandeur suggests that Aristotle’s “best solution for the thorny problems of owning slaves” might be by “inventing machines that were smart enough to do the work themselves” (17). In other words, Aristotle envisioned that “the shuttle would weave and the plectrums touch the lyre” so that eventually “chief workmen would not want servants, nor masters slaves” (Aristotle, 2: 229-230). Such a tension between who is the master and who the slave is certainly one of the prominent issues on the island where Prospero now reigns over not only Caliban, who was once his “own king” of the land (*The Tempest*, 1:2:343), but he exerts control over Ariel as well.⁸

For Aristotle, such mechanical inventions would then take over the slave’s primary function which was to “allow the master to overcome natural human limits” (LaGrandeur, 17). In other words, machinery/slaves provided “additive capacities of various sorts to the master’s bodily and mental abilities,” adds LaGrandeur, and “so they become tools to assist the master and so increase his or her natural strength,” such as the way Prospero uses Caliban to expand his own numerous physical feats. But Aristotle also suggests that the “additive capacity” is not limited to physical deeds,” claiming that “the slave that teaches the master’s children . . . adds mental capacity to the master’s cognitive repertoire that he would not otherwise have” (qtd. in LaGrandeur, 17). Since it seems both Miranda and Prospero helped to educate Caliban, we are once again confronted with the distinction and connection between master/slave and human/creature.

One last point Aristotle makes is that a humanoid system need not bear a physical similarity to humans, such as androids do, but they must be able to replicate human capabilities. On the island where Prospero now rules, we find an intelligent network consisting of organic and inorganic material, and this system is facilitated by Caliban who keeps Prospero and his daughter alive by “show[ing] him all the best qualities o’ th’ Isle” (1:2:338), including the “fresh springs” and “fertile” areas. He even picks berries, searches for fishes, and procures “wood enough” for Prospero’s and his daughter’s survival (2:2:157-158) until his grand project comes to fruition—one might say “experiment”—of

Materialism. Ed. Jonathan Dollimore and Alan Sinfield. (Manchester University Press, Manchester, U.K. 1985) 48-71. For a more recent essay on a similar topic, see John Kunat’s, “Play me False”: Rape, Race and Conquest in *The Tempest*.” *Shakespeare Quarterly*, Vol. 65.3: (2014): 307-327.

⁸ All citations to the *The Tempest* are to the Arden Shakespeare edition, edited by Virginia Mason Vaughan and Alden T. Vaughan. Full publication information can be found in the Works Cited.

marrying off Miranda, his daughter, to Ferdinand, in order to unite Naples with Milan.

The most important part of his survival depends on these spirits he assumes he commands, who, like Ariel, extend Prospero's own powers. Indeed, it is clear that Ariel is an extension of Prospero's power who not only helps to create the tempest that begins the play, but also entices Ferdinand towards Prospero and Miranda's dwelling, as well as directs the masque in Act 4. Prospero makes this perfectly clear when he admits at the conclusion of the wedding masque that Ceres, Juno, and Isis are "spirits," which he has "called to enact" his "present fancies" (4:1:120-122).

As Jan Kott has shown, this spirit of the air, is rooted in Shakespeare's backward look at the *Aeneid*.⁹ Two very specific examples should suffice to show how this actant is borrowed and appropriated from Virgil. When Ariel is transformed into a Harpy in 3:3:52 to menace Alonso, Sebastian and Antonio, the stage directions are quite explicit: *Thunder and lighting. Enter ARIEL like a harpy*, who then smothers the entire feast with his huge Harpy's wings, and so "the banquet vanishes" (3:3:52). Yet when the soldiers "draw their swords," they are suddenly stilled, as if by magic, just as in Virgil's version; when the Harpies snatch away the food, and Aeneas and his companions reach for their swords and raise them to strike at the birds, their swords freeze in their hands (Kott, "The *Aeneid*," 436). While not calling Ariel an actant, Kott's description of this scene demonstrates just how much agency Ariel has in the overall plot of the play.

Another transformation of Ariel occurs, as I noted above, in the wedding masque. Not only does Ariel prepare the masque "on Prospero's command," but he also took part in it by playing the role of Iris,¹⁰ who then introduces the goddesses and presents Ceres (4:1:59). But in Shakespeare's hands, this ceremony was no obligatory or traditional marriage feast which always ended "with the presentation of gifts to the young couple" (438). As Kott explains, however, this "dramatic rupture of Prospero's revels" is more akin to the scene in the *Aeneid*—the disruption of the hunt preparing us for the wedding pageantry of Dido and Aeneas" when Juno intervenes with a storm of "burning flame" and "lightning" skies. Everyone is scattered in confusion, and even "the Nymphs yelled from the mountains top" (Surrey, *Aeneid* IV, 216). As Kott notes, "in his disruption of the betrothal masque Shakespeare retained Virgil's dramatic

⁹ My extensive use of Kott in this section is in part due to the theme of this Special Issue, but also to show how he was thinking in posthumanist terms before most Shakespearean critics in the Anglo-American world turned their attention to this theoretical critique.

¹⁰ Isis and Ariel's "airy qualities" would associate the two for the audience (Vaughan and Vaughan, 71).

tension and the shock of interruption” and, as in the attack by the Harpies, “the narrative has been transformed into spectacle” (“The *Aeneid*,” 439). While such spectacles in *The Tempest* were first performed during Shakespeare’s time in London during new scientific discoveries and evolving stage practices, I would agree with Kott that Shakespeare is also looking forward: “Shakespeare, the producer and man of the theatre, probably . . . designed his last play for the possibility of a new stage where marvels could suddenly change” (“The *Aeneid*,” 442).¹¹

Yet lest we forget, Ariel is also enslaved by Prospero, and in his initial speech, he reminds Prospero that he has served willingly: “To swim, to dive into the fire,” or to “ride on the curled clouds” (1:2:190-191) to ensure his release. However, as the play progresses this promise of freedom has yet to be granted: “Since thou dost give me pains, / Let me remember thee what thou has promised / Which is not yet performed me” (1:2:242-244); in short, he seeks his own “liberty” (245). Again, the master/slave dichotomy is complicated, as is the “agency” on the island.

Caliban represents, of course, a much more belligerent actant/slave in the system, and his embodiment, as Aristotle noted earlier, does not need to necessarily replicate only human features. Indeed for Aristotle such “instruments are of various sorts” and perhaps even lifeless, like the rudders or sails of the ships in Alonso’s convoy. But Caliban is certainly not just an innate object as the ship parts. In fact, his embodiment, which is his form or bodily shape, remains “woefully imprecise” (Vaughan and Vaughan 13), surely to highlight him as a significant animal-human hybrid. For example, to Prospero, he is a “misshapen knave” (5:1:268) and to Trinculo, “half a fish and half a monster,” a sort of creature from the black lagoon, even as Antonio refers to him as a “plain fish” (5:1:266).

Other adjectives used to describe him run the gamut of animal-human hybridity: “shallow,” “weak,” “scurvy,” “puppy-headed” and “abominable.” However, and this is key, Prospero notes Caliban is human in some form as early as Act 1, when he states that “*except for Caliban, the Island was not honored with a human shape*” (Vaughan and Vaughan, 33; italics in the original). Even Miranda, who has perhaps the most reason to think of Caliban as beast like, must be referring back to him as a “man” when she describes Ferdinand as “the third man that e’er I saw” (1:2:446). As the Introduction to the Arden edition states, “despite his possibly demonic parentage and unspecified deformity,” Caliban is “essentially human,” (Vaughan and Vaughan, 34), and the word demonic here, as we will see in the conclusion, also adds to my posthumanist argument.

¹¹ For an excellent discussion of this movement, see Henry S. Turner’s *The English Renaissance Stage: Geometry, Poetics, and the Practical Spatial Arts 1580-1630*. Oxford UP, 2006.

These human-animal hybrids hover throughout the play “between ‘creatures’ and ‘mankind,’ between animate beings in general and their realization in the form of humanity” (Lupton, 2). Is Caliban, Lupton wonders (as do Stephano and Trinculo), “a man or fish? creature or person?” (2). He was once his “own king” (1:2:342), as we noted before. Since, however, Prospero’s colonization of the island, he is “[n]ow enslaved to a Master-Maker, [and] he finds himself locked within the swarming ranks of scamels, filberts, and the nimble marmoset” (Lupton, 2). Moreover, while he is seemingly learned language, usually an entrance point for civilization, it is all for naught, and so after his alleged rape of Miranda, he remains “pure vitality” (Lupton, 3). He loudly protests that he has learned to speak only in order to curse his tormentors, who call him a “villain,” a “poisonous slave,” and a “Hag-Seed,” referring to his mother, the witch, Sycorax (1:2:345; 1:2:367). By the end of the play, he is reduced to a “thing,” when Prospero alludes to him as a “thing of darkness” and Alonso calls him a “strange thing (1:3:313, 322, 368, 370; 5:1:278), an active if rebellious actant, yet one composed of Bennett-like “vital materiality.”

The posthuman “loops” or repetitions that Chow explained earlier continue throughout the time on the Island. Certain words, situations, and even theatrical moments recur on this isle “full of noises”; and many, as Kott has demonstrated, seem to echo events from the *Aeneid*. From the storm at the opening of the drama, all the way to the chess match between Ferdinand and Miranda (where the object, of course is to be “mated”), Shakespeare borrows from Virgil and he may have even seen a 10th-century manuscript which depicts Aeneas and Dido “as a medieval couple playing chess” (Kott, “The Aeneid” 429).

In one final connection between computers and the actant spirits in both plays is the term demon or daemon, one of the words used to describe Caliban in *The Tempest* and applied to many of the spirits in *Doctor Faustus*. According to the *OED*, a demon/daemon is “a supernatural being of nature intermediate between that of gods and men.” For example, as Wendy Hui Kyong Chun explains, “UNIX—that operating system seemingly behind our [computers]—runs daemons,” which include our e-mail and our web servers, and these “invisible processes” make our computer “executables magic” (318). While the most famous daemon is perhaps Socrates’ *daimonion*, a kind of mystical inner voice, not unlike a conscience, that assisted him “in time of crisis by forbidding him from doing something rash,” the more ubiquitous use of the word is the one created by James Clark Maxwell, a physicist in the late 19th century. His term referred to “an imaginary agent which helped sort molecules and worked tirelessly in the background” (“The Origin of the word Daemon,” online) most of the time, and like the slaves in both plays, “Maxwell’s Deemons also define and challenge the position of the master” (Chun, 320), not unlike Ariel’s complaints noted above.

Conclusion: “Forward and Backward”

As I hope I have shown, what we are experiencing in this posthumanist era is not entirely new. Connecting the past, and the development of the printing press, to 21st -century information gathering machines, Campana and Maisano also look forward and backward when they demonstrate that “Renaissance humanists demonstrated how close reading and careful restoration of *ancient* texts could be an effective means of situating, if not solving or answering, the pressing philosophical problems” of their own age (2).

While many important critics see *The Tempest* as a “childish” fantasy tale (Kott, *Our Contemporary*, 297), played out on an island which is a sort of utopia or a fairy isle located in a never-never land, Jan Kott anticipates the posthumanist reading I have developed. Claiming that *The Tempest* was “a drama of the men of the Renaissance, and of the last generation of humanists” (298), he believes it to be a tale of “man’s efforts to conquer the physical world; with dangers threatening the moral order; with nature, which is and is not the measure of man” (299). He also suggests that the play reflects “an era which saw a revolution in astronomy, in the melting of metals, and in anatomy; an era of science, which for the first time became universal” (299). Kott goes one step further, and with more specificity, by comparing Prospero to Leonardo DaVinci, not a medieval magus, but instead a “master of mechanics and hydraulics”; DaVinci could also, according to Kott, “already perceive the emergence of a world in which man would wrench from nature her secrets and overcome her by his art and science” (321).¹² More recently, Gabriel Egan also dismisses Prospero as a magician, arguing that his “apparent magic represents human ingenuity at its peak, not supernatural at all,” a point Kott and I would both support (164).

But more importantly for my argument is Kott’s assertion that in *The Tempest*, one of the most important symbols of time in the play is the hourglass, mentioned three times in the drama; I would add that the grains within it also move forward and backward. As Kott more specifically puts it, the “hour-glass is an image of time repeating itself and retuning” (“*The Tempest*, or Repetition,” 25). Once the sand runs out of the top, it is turned over and “the same sand runs its course again,” backward and forward; equally significant, Kott provocatively adds; “[e]ach hour measured by the sand is a different and the same hour” (25).

For the most part, Ariel serves as “type of proxy for Prospero,” a “digital daemon,” not unlike a contemporary “type of software that operates in the background, and also provides an interface between the networks user and the operating system”(LaGrandeur, 20). In other words, as Chun notes, these

¹² In 2007, for example, Jonathan Sawday, called the play more Baconian than Shakespearean, more concerned with science than with magic (305).

“daemons run in the background without intervention by the user”; so “technically UNIX daemons are parentless—that is orphaned—processes that run in the root directory” (319). Just as Caliban, Ariel, and even Mephistopheles are without family, they, too, continue to operate almost without intervention, at least before Caliban’s alleged attempt to rape Miranda or Faustus’s attempt to renege on his contract.

But one last element of posthumanism remains to be considered and that is the elemental and environmental forces which shape the narrative of the two plays and our understanding of the texts. Even though Faustus promises to “burn his books,” as he is being dragged to the underworld in the A-Text of the play, and Prospero intends to “drown” his magical books and staff at the close of *The Tempest*, these objects were never completely consumed nor destroyed, thanks in part to the newly invented printing press. So that today, in our own “brave new world” of digitized texts we can still access them. While the human bodies of Marlowe and Shakespeare may have “crashed” over 400 years ago, their body of work has continued to flicker across computer screens around the globe, their powerful poetry overcoming any surge protector. Today we encounter Shakespearean and Marlovian output in innovative actants such as e-books that read us—our favorite fonts, our usual formatting options, even our preferred color of print—so that we, too, are entangled in a scene that also looks forward and backward, even as we are scanning their plays on multiple screens, so much so, that agency is distributed in our encounters with the text, just as it was in Doctor Faustus’s study and on Prospero’s island.

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