

Mediating *The Fly*: Posthuman Metamorphosis in the 1950s

Bruce Clarke, Texas Tech University

One measure of *The Fly*'s modest cultural purchase is its generation of continuations and variants. Like *Frankenstein*, this breeding of further episodes has transformed a simple horror story into a collective fabulation—so this is a piece of modern mythology in the raw. *The Fly*'s first author was George Langelaan, a British writer raised in France.¹ Its first appearance was in the form of a short story published in *Playboy* in June 1957.² Within a year it was rescripted by James Clavell and made into a Twentieth-Century Fox movie directed by Kurt Neumann. This was followed by *Return of the Fly* in 1959, and *Curse of the Fly* in 1965. The northern hemisphere was safe from *Fly* remakes for two decades, until Charles Edward Pogue and David Cronenberg cowrote and Cronenberg directed his major revision of 1986, followed in 1989 by *The Fly II*.

Criticism has been focused on cinematic matters, particularly Cronenberg's transformation of Neumann, with little reference to Langelaan.³ In contrast, I will use a combination of literature-and-

1. Langelaan's primary literary output is a memoir of his undercover work for the British Secret Service during World War II. Interestingly, in order to operate incognito in Nazi-occupied France, he submitted to plastic surgery to change his face, especially his ears and chin. See George Langelaan, *The Masks of War* (Garden City, N.Y.: Doubleday, 1959), pp. 81–89.

2. George Langelaan, "The Fly," *Playboy*, June 1957, pp. 17–18, 22, 36, 38, 46, 64–68.

3. See Jennifer Wicke, "Fin de Siècle and the Technological Sublime," in *Centuries' Ends, Narrative Means*, ed. Robert Newman (Stanford: Stanford University Press, 1996), pp. 302–315; Adam Knee, "The Metamorphosis of *The Fly*," *Wide Angle* 14:1 (1992): 20–34;

science studies and media theory to discuss the initial flight of *The Fly* from a textual to a cinematic medium, its first transformation from ephemeral prose fiction to B-movie institution. Although Neumann's movie hews fairly closely to Langelaan's original, some important divergences bear examination. To frame them, I will briefly discuss literary metamorphosis and the concept of the posthuman, and then treat *The Fly* in its 1950s incarnations both in its historical situation as a product of Cold War and early-cybernetic culture, and as a continuation of the long literary line of metamorphic allegory. *The Fly* is precisely an allegory of modern media. In displaying the transformative power or daemonic agency of communications technology, this taut fable also unfolds the paradoxical unity of the distinction between matter and information, and this productive modern equivocation fuses the premodern to the posthuman.

Metamorphosis

Stories of bodily metamorphoses depict in various figures the restless transformations of the human.⁴ They allude to the fact that the essence of the human is to have no essence. Amplified by the social complexities produced by verbal languages and other technologies of communication, cultural developments accelerate past biological evolution, and metamorphic stories imagine an uncanny acceleration of human change. In premodern cultures, the perils of human status depicted in myth and legend, folklore and fantasy, dress the sheer contingencies of the natural order in divine or daemonic guises. That supernatural surplus also marks the supplemental status of social communication.⁵ The soul is troped into being by the mechanisms of speech, thought, and writing, and then found to be in correspondence with, or more precisely, attributed to, human impressions of nonhuman agencies at large in the extrahuman environment. Archaic and classical metamorphs—fictive entities once merely human that become some hybrid of human and nonhuman traces—were typically reinscribed back into the natural order: Daphne into a laurel tree, Narcissus into a flower. Metamorphoses induced by modern media systems depict more immediately the ar-

Mary Ferguson Pharr, "From Pathos to Tragedy: The Two Versions of *The Fly*," *Journal of the Fantastic in the Arts* 2 (1989): 37–46.

4. See Bruce Clarke, *Allegories of Writing: The Subject of Metamorphosis* (Albany: SUNY Press, 1995).

5. On bodily metamorphosis as symbolic of social organization, see José Gil, *Metamorphoses of the Body*, trans. Stephen Muecke (Minneapolis: University of Minnesota Press, 1998).

tifactual construction of the human through an ongoing reorganization of natural and technical elements.⁶

Biological evolution, or natural metamorphosis, exploits random genetic mutations within the processes of both asexual and sexual reproduction. Put another way, the variations necessary to evolutionary processes are driven by the increment of noise within the channel of genetic transmission from one generation to the next. This is the literal biological ground of the cultural figure of bodily metamorphosis. Parents send their children composite genetic messages that always rearrange themselves in transit to their recipients, and children are inserted into a social system that refigures the mutability of natural reproduction in the medium of changing cultural transmissions. I read fantastic stories of human metamorphosis, then, as specific allegorical composites and inscriptions of the sexual and informatic messages human beings send in order to self-organize in all the unpredictable ways humans stumble into. Premodern tales of metamorphosis anticipate and overlap modern and contemporary stories of posthuman transformation.

The Posthuman

In the last decade the theoretical trope of the posthuman has upped the ante on the notion of the postmodern. The common effect of its several definitions is to relativize the human by coupling it to some other order of being.⁷ At the present moment this intimate other is most typically the realm of machines, especially the "silicon creation" of intelligent circuitry that has arisen alongside the "carbon creation" of evolutionary biology.⁸ In *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, Katherine Hayles locates the philosophical footing of the topic by framing the "human" as the liberal humanist subject constructed by the En-

6. See, for instance, Vivian Sobchack, ed., *Meta-Morphing: Visual Transformation and the Culture of Quick-Change* (Minneapolis: University of Minnesota Press, 2000).

7. See Judith Halberstam and Ira Livingston, eds., *Posthuman Bodies* (Bloomington: Indiana University Press, 1995), and the review by N. Katherine Hayles, "Interrogating the Posthuman Body," *Contemporary Literature* 38 (1997): 755-762; Christian Moraru, "Corpo-Realities: Philip Roth, Joseph McElroy, and the Posthuman Imaginary," *Euresis: Cahiers Roumains d'Études Littéraires* 1-2 (1996): 238-242; Thomas Foster, "'The Sex Appeal of the Inorganic': Posthuman Narratives and the Construction of Desire," in Newman, *Centuries' Ends* (above, n. 3), pp. 276-301. On the British website "Mark -Space" (<http://www.euro.net/mark-space>) put up in 1995 and maintained at least until 1997, the "posthuman" is called "that stage of human development which goes beyond our biological evolution." By this definition, however, we have always been posthuman.

8. See O. B. Hardison, *Disappearing Through the Skylight: Culture and Technology in the Twentieth Century* (New York: Viking, 1989).

lightenment. Thus for Hayles the subject of the posthuman is precisely the posthuman subject, which unlike the supposedly universal, natural, and unalloyed liberal humanist subject “is an amalgam, a collection of heterogeneous components, a material-informatic entity whose boundaries undergo continuous construction and reconstruction.”⁹ From Hayles’s perspective, the virtual bodies imagined or enacted as the material figures of posthuman beings represent the posthumanist subjectivities constructed by the coupling of human biology to digital machinery.

In *Gramophone, Film, Typewriter*, media theorist Friedrich Kittler rehearses a prehistory of the posthuman.¹⁰ Kittler shows how in the century before 1950 the “humanist subject” is already changing in response to analog media technologies: “Pushed to their margins even obsolete media”—phonographs, silent films, manual typewriters—“become sensitive enough to register the signs and clues of a situation. Then, as in the case of the sectional plane of two optical media, patterns and moirés emerge: myths, fictions of science, oracles” (p. xl).¹¹ In light of Kittler’s remarks, I want to consider *The Fly* as a modern media “myth, fiction of science, and oracle” of posthuman metamorphosis.

Kittler continues in the passage cited above, “Understanding media—despite McLuhan’s title—remains an impossibility precisely because the dominant information technologies of the day control all understanding and its illusions” (p. xl). For Kittler, media determine the human situation, and this implies that the presumption of the spiritually autonomous self-determination of the liberal humanist subject always was a mystification of the actual material relations between persons and communications systems. Until the nineteenth century, these relations centered on the various technologies of writing and printing. “Prior to the electrification of media, and well before their electronic end, there were modest, merely mechanical ap-

9. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), p. 3.

10. Friedrich Kittler, *Gramophone, Film, Typewriter*, trans. and intro. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999); subsequent parenthetical references are to this edition. See my review: Bruce Clarke, “Friedrich Kittler’s Technosublime,” *electronic book review* 10 (Winter 1999–2000): <http://www.altx.com/ebv/reviews/rev10/r10cla.htm>; reprinted in *American Book Review* 22:1 (November/December 2000): 7, 9.

11. Moiré: “an independent usually shimmering pattern seen when two geometrically regular patterns (as two sets of parallel lines or two halftone screens) are superimposed especially at an acute angle” (*WWWebster*). Kittler’s discursive trope derives from the moiré produced by an interference pattern of light waves.

paratuses," hand-cranked instruments relying on the analog inscription of acoustic and optical vibrations; "Unable to amplify or transmit, they nevertheless were the first to store sensory data: silent movies stored sights, and Edison's phonograph . . . stored sounds" (p. 3). However, even in their rudimentary forms, what these new media brought into the open was writing's own status as a storage technology, a medium that operates along material channels specified by the "nature" of verbal symbols. Literally considered, writing does not store sounds or images—writing stores only writing. But because the storage and retrieval of temporal sequences of sounds and images were impossible until the inventions of the gramophone and the cinema, "As a surrogate of unstorable data flows, books came to power and glory" (p. 9). This overestimation, even fetishizing, of the literary and its artifacts, was materially induced by its "monopoly" as a storage technology. Learning to read literature in particular meant learning successfully how to hallucinate the aural and visual implications triggered by bare words on a page. Things change when other media can hallucinate them for us.¹²

With the mechanization and then electrification of sound and image media, the premise of unique spiritual profundity accorded to literary artifacts melted away. This belated technological enlightenment is registered by shifts in the cultural imaginary. In particular, ghosts and spirits are displaced from literary objects to the new media: "Once memories and dreams, the dead and ghosts, became technically reproducible, readers and writers no longer need the powers of [literary] hallucination. Our realm of the dead has withdrawn from the books in which it resided for so long" (p. 10). The soul is evacuated from the phenomenological structure of literary experience and revealed as a special effect rather than a literal reality—an event that, although Kittler does not use this term, amounts to a displacement of humanist dogma by the discourse networks of the posthuman.

My claim is that stories of metamorphosis are inherently self-referential: they are always also allegories of the media through which they are communicated. The metamorphosis of human characters is already posthuman, and the posthuman is thus, in part, the return of the premodern. However, a difference between traditional tales of metamorphosis and their postmodern progeny such as *The Fly* is that the former *intuited* the parallels between the biological and

12. See Joseph Tabbi and Michael Wutz, eds., *Reading Matters: Narratives in the New Media Ecology* (Ithaca, N.Y.: Cornell University Press, 1997), esp. William Paulson, "The Literary Canon in the Age of Its Technological Obsolescence," pp. 227–249.

the informatic, whereas the latter have emerged in an era when this coupling has graduated from surmise and enjoys the status of scientific verification and technological application. The metamorphic spectacles unleashed by the variants of *The Fly* are posthuman transformations brought about precisely by a fantastic adaptation of modern communications technology.

The plaintive cry—"Help me! Help me!"—added to the 1958 movie, emitted by the human-headed fly that survives the mercy killing of the fly-headed scientist only to be snagged on a spider web, has etched itself into popular mythology. Does this not suggest that we are all caught like flies in a huge media web? Perhaps this trifling tale of grotesque transformation is enjoying a successful cultural run because it gestures so far beyond the simple cautionary moral of human technological hubris punished by a spectacular disaster. In any event, we are now in a position to specify the media technologies in question in *The Fly*. The first words of the original story are directed toward the telephone.

The Telephone

The first telling of *The Fly* begins with Langelaan's frame narrator, François Delambre (Vincent Price in the 1958 film) condemning the telephone as a source of random interruption—a noisy annoyance, assault, and violation. The overloading of the teleporter that crosses a man and a fly is anticipated by the narrator's aversion to the telephone's pushy penetration into the private sphere. So in *The Fly*'s initial narration, the invasive noise of the telephone prepares for the trespass of the fly: "Telephones and telephone bells have always made me uneasy . . . the sudden ringing of the telephone annoys me. . . . The worst is when the telephone rings in the dead of night. . . . In such a case . . . I am struggling against panic, fighting down a feeling that a stranger has broken into the house and is in my bedroom."¹³ In both '50s versions this fantasy of violation sets up François's reception of a late-night telephone call from his sister-in-law, Hélène Delambre (Patricia Owens), declaring that she has just killed her scientist-husband André (Al Hedison). In the Langelaan version, when François later prepared to resolve the mystery of her action by reading Hélène's written statement before passing it to the police inspector, he "disconnected the telephone" (p. 17). Helene's embedded nar-

13. George Langelaan, "The Fly," in *The Playboy Book of Science Fiction and Fantasy* (Chicago: Playboy Press, 1966), p. 2; all citations are from this volume. The story is also available in *Reel Future*, ed. Forrest J. Ackerman and Jean Stine (New York: Barnes and Noble, 1994), pp. 343–371.

rative returns to the moment when André first showed her his teleporter prototype, “a telephone call-box he had bought and which had been transformed into what he called a transmitter” (p. 21).

Hélène recalls: “André, the practical scientist who never allowed theories or daydreams to get the better of him,” succumbed to a vision of world transformation to be wrought by his matter-telephone:

[He] already foresaw a time when there would no longer be any airplanes, ships, trains or cars and, therefore, no longer any roads or railway lines, ports, airports or stations. All that would be replaced by matter-transmitting and receiving stations throughout the world. Travelers and goods would be placed in special cabins and, at a given signal, would simply disappear and reappear almost immediately at the chosen receiving station. (pp. 17–18)

Of course, there were still a few bugs in the machine. In both '50s versions, an ashtray with “MADE IN JAPAN” stamped on the bottom comes out of the receiving box with the inscription reversed. Then, “A few days later, André had a new reverse which put him out of sorts” (p. 20): pressed into service as experimental subject, the family cat fails to emerge in the receiving box. André confesses to Hélène, “there is no more Dandelo; only the dispersed atoms of a cat wandering, God knows where, in the universe” (p. 20). The narrative proceeds from a visible mistake, the mirror reversal of the ashtray, to an invisible mistake, the disintegration of Dandelo, to the spectacular metamorphic mistake that André inflicts on himself when a fly stumbles into the teleporter and interrupts the self-transmission of his bodily message.¹⁴

The Teleporter

Imaginary vehicles that transport characters in more or less miraculous fashion across spatial distances or temporal gaps frequently drive technological fables and science fictions forward. These fantastic machines—Wells's Time Machine, or the spherical pod that takes Jodie Foster through a cosmic wormhole to an alien rendezvous in *Contact*—are allegorical operators veiled by technological spectacles. Like any real artifact, they are cultural black boxes in need of reopening. At center stage in every version of *The Fly* since the 1950s is an imaginary vehicle in the form of a teleporter, a device for transporting

14. The “interposition” of a fly between the sender and the receiver of a “ghostly” message was imagined a century earlier by Emily Dickinson: “and then it was / There interposed a Fly // With Blue—uncertain stumbling Buzz— / Between the light—and me,” (poem 465), collected in *The Norton Anthology of Poetry*, ed. Margaret Ferguson, Mary Jo Salter, and John Stallworthy, shorter 4th ed. (New York: Norton, 1997), p. 634.

material bodies as, or on the model of, informatic signals.¹⁵ As a tale of metamorphic catastrophe, in each version of *The Fly* the plot turns on a noisy transmission due to an oversight by the operator of the teleporter. The fantasy of interrupted teleportation that drives *The Fly* is inscribed in larger reflections on the psychosocial uncertainties of communications media.

Let's look at the details of this fictive apparatus in Langelaan's narrative. Here Hélène recalls that, "whereas only sound and pictures had been, so far, transmitted through space by radio and television, André claimed to have discovered a way of transmitting matter. Matter, any solid object, placed in his 'transmitter' was instantly disintegrated and reintegrated in a special receiving set" (p. 17). André recounts for Hélène the teleporting of the ashtray across his laboratory: "For a fraction of a second, a bare ten-millionth of a second, that ash tray has been completely disintegrated. . . . Only atoms traveling through space at the speed of light! And the moment after, the atoms were once more gathered together in the shape of an ash tray!" (p. 18).

This scenario consistently blurs the distinction between transportation and transmission, material substance and informatic pattern. It seems that Langelaan's teleporter does not scan objects for data maps from which to produce serviceable replicas at a distance, but pulverizes objects in order to ship their atoms to a point of re-assembly. For Langelaan, the ostensible form of the teleporter is literally adapted from elements of earlier telephone systems, complete with "call-boxes" and a "switchboard" (p. 21), while Neumann's Americanized version supplements the telephone with a backdrop of IBM-style computers. But both versions present a rather crude teleporter that wavers between communications device and atomic weapon. The teleporter's explosive operation and its observers' protective gear serve to restage an atomic bomb test, and the teleporter's "disintegration-reintegration" function reads very much like a wishful recuperation of nuclear incineration.¹⁶ Teleporting an ashtray—

15. Physicist Anton Zeilinger notes that "the procedure for teleportation in science fiction . . . generally goes as follows: A device scans the original object to extract all the information needed to describe it. A transmitter sends the information to the receiver station, where it is used to obtain an exact replica of the original. In some cases, the material that made up the original is also transported to the receiving station, perhaps as 'energy' of some kind; in other cases, the replica is made of atoms and molecules that were already present at the receiving station" ("Quantum Teleportation," *Scientific American*, April 2000, p. 50).

16. See Cyndy Hendershot, "The Cold-War Horror Film: Taboo and Transgression in *The Bad Seed*, *The Fly*, and *Psycho*," *Journal of Popular Film and Television* 29:1 (2001): 20–31.

as opposed to, say, the hosiery that Seth Brundle beams at the beginning of Cronenberg's *Fly*—is thus most appropriate to the implicit workings of the 1950s apparatus. For in fact, according to André's explanations, it does not function as a telecommunication device transmitting coded signals, but rather, as a high-speed distillery reducing material substances in a bright flash to a kind of atomic plasma, pumping the plasma to a destination, and then reorganizing there the transported smoke and ash. Langelaan's Hélène struggles to understand the process: "Do you mean to say that you have disintegrated that ash tray, and then put it together again after pushing it through something?" "Precisely, Hélène" (p. 19).

Clavell's screenplay for Neumann's *Fly* greatly improves on Langelaan's text in this key scene. Here, through cinematic flashback Hélène is released from the mode of sketchy written narration and dramatically fleshed out. When André first demonstrates the teleporter for this Hélène, she is granted some skeptical intelligence and permitted to debate him on the operation of his machine. Thus when he makes the ashtray disappear from the sending box and reappear in the receiving box, her incredulity is plausibly motivated:

André: Hurry, put them on. Now watch the box. . . . [the apparatus counts down to a blinding flash of light] . . . You can take your goggles off now, darling.

[She examines the sending box, now empty.]

Hélène: It's gone!

A: Come on.

[He takes her past a sliding partition into the next room. She sees the ashtray inside the receiving box.]

H: It's the same one! Have you turned magician?

A: In a way. For a split second, an infinitesimal part of a second, this was disintegrated. For one little moment it no longer existed, only atoms traveling through space at the speed of light. Then here a moment later, integrated again into the shape of an ashtray.

H: Oh, you're joking.

A: It doesn't sound possible, does it? But it's true.

H: It is impossible. You're playing some joke on me!¹⁷

17. *The Fly*, dir. Kurt Neumann, Twentieth-Century Fox, 1958.

In the continuation of this dialogue, André's response challenges Hélène's good nature and common sense. Neumann's teleporter reinstates the equivocal operation of Langelaan's device, but updates it by displacing its analogical justification from the telephone to the television set. Until André beats her down with fuzzy arguments for the functional identity of television and teleportation, Neumann's Hélène holds firm to her observation of difference between material disintegration and informatic patterning. Thus Neumann's scene articulates in a way absent from Langelaan's text the epistemological indeterminations—the shifting perceptions of identity and difference—put into play by media transformations:

A: Take television: what happens? A stream of electrons, sound and picture impulses, are transmitted through wires in the air. The TV camera is the disintegrator. Your TV set unscrambles or integrates the electrons back into pictures and sound.

H: Yes, but this is different.

A: Why?

H: Well, because it's impossible!

A: Fifty years ago if my father were told he could sit in Montreal and watch a World Series in New York at the exact time it was happening he'd say it was impossible. This is the same principle, exactly.

H: But it's not the same. This is solid.

[She taps the ashtray.]

A: Oh no, no, it's not. To your touch maybe it is, but in reality it's billions of atoms, which we believe are only a series of electrical impulses.

H: Uh—you actually did this—it's, it's no trick?

A: No, I can transport matter—anything—at the speed of light—perfectly!¹⁸

The classical or preinformatic tenor of André's account is especially captured in his declarations that a "stream of electrons" carry "sound and picture impulses," that "atoms" may be decomposed into "electrical impulses." Gregory Bateson, addressing the other

18. Ibid.

side of the cybernetic metaphor between electronic and neural systems, argues that

From a systems-theoretic point of view, it is a misleading metaphor to say that what travels in an axon is an "impulse." It would be more correct to say that what travels is a difference, or a transform of a difference. . . . Ideas are immanent in a network of causal pathways along which transforms of difference are conducted. The "ideas" of the system are in all cases at least binary in structure. They are not "impulses" but "information."¹⁹

André's locutions convey a Newtonian or dynamical intuition of particle trajectories possessing *vis viva* or kinetic momentum, and conceptually evade the quantum reformulation of microphysics in terms of particle/wave complementarities. André also seems oblivious to the place of coding in electronic communications engineering. He has modeled his teleporter not on the differential electromagnetic oscillations propagated from the transmitter to the receiver of a telephone or a television link, but on the flow of substance through a pipeline—thus in Neumann's *Fly* the flashing neon tubing, through which his device pumps the very same atoms derived from the disintegrated object across space and then reassembles them into the self-same thing or creature. The need at some point for some informatic control of such a process, the virtual or supplementary status of any actual telematic duplication, is simply not cognized in this scenario. Despite their debut during the heyday of first-order cybernetics, the teleporter technology of the *Flys* of the '50s remains tethered to a classical-materialist mishmash of physics unaffected by electromagnetic-field theory, relativity, or the cybernetic coupling of material-energetic and informatic ensembles. A slogan on the '50s movie poster describing the promised monster captures its ambience of nuclear fission, deployed at the expense of the details of electronic transmission: "The monster created by atoms gone wild."

And yet the paradoxes of the transportation/transmission distinction replicate in a crude way the equally strenuous paradoxes of relativity and quantum theory. Postclassical physics breaches previous certainties about the boundaries between matter and energy, space and time, discontinuous particles and continuous waves. The new

19. Gregory Bateson, *Steps to an Ecology of Mind* (New York: Ballantine, 1972), pp. 318–319. For an accessible and authoritative recent exposition of quantum-theoretical paradoxes, see the chapter "Microscopic Weirdness" in Brian Greene, *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory* (New York: Norton, 1999), pp. 85–116.

axioms of indeterminacy foreground the propensity of both matter and energy—say, the paper of books and the electromagnetic fields of telephones—to serve as media for the conveyance of informatic forms. To the extent that modern physics accepts some unpredictable play of indifference within these previously canonical ontological distinctions, the equivocations of the teleporter have some conceptual cover.

Moreover, the more one pushes on the details of the original *Fly* scenario, the more the literary aptitude of the metamorphic effects stemming from the teleporter rises above technoscientific anachronisms. In narrative and dramatic terms, teleporters—no matter how implausible their design specifications—are potent stage machines. Aimed at the manufacture of dramatic shifts among distinct narrative levels or reference frames, teleporters and similar devices reenter the “transporting” effect of narrative per se back into the story. Teleporters are allegories of narrative metalepsis, markers of literary self-referentiality.²⁰ Moreover, embedding a teleporter within a narrative or cinematic mise-en-scène reinscribes the outside of the story—the semiotic and discursive machinery operating in its cultural environment—on the inside of the narrative form. In this instance, the black boxes of Langelaan’s and Neumann’s teleporter technology open to reveal the latent and overlapping scientific and social agendas of the ’50s. Given the blurry distinctions between energy and information at the onset of cybernetic ideas, the threat of world destruction by thermonuclear energies is easily shifted to the threat of personal disintegration by “atoms gone wild” in a communications device.

The Typewriter

After André teleports himself to disastrous effect, the advent of the noisy metamorphic reception of his signal is observed at first in a media transformation—specifically, an alteration of handwriting: “The morning André tried this terrible experiment, he did not show up for lunch. . . . I paid no particular attention to the unusually large handwriting of his note” (Langelaan, p. 24). Metamorphosis announces itself as a lapse or breakdown in communication: even if, as with André, their transformation is only partial, human meta-

20. See William Nelles, “Stories Within Stories: Narrative Levels and Embedded Narrative,” *Studies in the Literary Imagination* 25 (1992): 79–96. On the “reentry” of form, see Dirk Baecker, ed., *Problems of Form* (Stanford: Stanford University Press, 1999), esp. David Roberts, “Self-Reference in Literature,” pp. 27–45.

morphs are often aphasic, deprived of articulate voice.²¹ In fact, André's changes specifically affect the communicative portions of human anatomy: his fly mouth cannot speak and his handleless fly arm cannot write. He has posted himself beyond the human. As Martin Heidegger has written: "Man himself acts [*handelt*] through the hand [*Hand*]; for the hand is, together with the word, the essential distinction of man" (cited in Kittler, p. 198).

But a communication channel for André still exists: the typewriter. Kittler and other media theorists have commented on the relations between disability and modern media: the first telephone was a prosthesis for the deaf, the first typewriter was an aid for the blind (see Kittler, p. 188). André has clearly departed the ideal state of free and autonomous observation and self-expression. He is disabled, but he has not "degenerated": he is now not less but more than human. Posthuman, he substitutes mechanical writing for human being, at first, in order to veil from Hélène his true monstrosity:

I HAVE HAD A SERIOUS ACCIDENT. I AM NOT IN ANY PARTICULAR DANGER FOR THE TIME BEING THOUGH IT IS A MATTER OF LIFE AND DEATH. IT IS USELESS CALLING TO ME OR SAYING ANYTHING. I CANNOT ANSWER, I CANNOT SPEAK. (p. 25)

The narrative drives relentlessly to a series of climaxes that unveil the abject metamorph before the gaze of his spouse. In the story, the first major shock is when she hears his inhuman voice, and in the movie as well, when she gets a glimpse of his transformed hand:

André emitted a strange metallic sigh. . . . He had let his right arm drop, and instead of his long-fingered muscular hand, a gray stick with little buds on it like the branch of a tree, hung out of his sleeve almost down to the knee. . . . I shuddered at the thought that he must be terribly disfigured and then cried softly as I imagined his face inside-out, or perhaps his nose in place of his ears, or his mouth at the back of his neck, or worse! (pp. 28–29)

When the white-headed fly cannot be found, André deliberates over the proper remedy for his condition. He types out a transcript of his recognition that he has become posthuman:

21. See Io in Ovid's *Metamorphoses*, Lucius in Apuleius's *Golden Ass*, and Gregor in Kafka's *The Metamorphosis*; two exceptions are the talkative metamorphs Bottom in *A Midsummer Night's Dream* and Lamia in Keats's *Lamia*. See Clarke, *Allegories of Writing* (above, n. 4), p. 64 and passim. The aphasia of the metamorph is of central concern in Irving Massey, *The Gaping Pig: Literature and Metamorphosis* (Berkeley: University of California Press, 1976).

I MUST DESTROY MYSELF IN SUCH A WAY THAT NONE CAN POSSIBLY KNOW WHAT HAS HAPPENED TO ME. . . . I AM ALIVE ALL RIGHT, BUT I AM ALREADY NO LONGER A MAN. AS TO MY BRAIN OR INTELLIGENCE, IT MAY DISAPPEAR AT ANY MOMENT. AS IT IS, IT IS NO LONGER INTACT, AND THERE CAN BE NO SOUL WITHOUT INTELLIGENCE . . . AND YOU KNOW THAT! (p. 32)

Daemonic Flight

The teleporter functions as an allegorical operator in a self-referential narrative of metamorphic changes triggered by—a common housefly. Insects in general are potent stock vehicles of the daemonic imagination.²² But why not, in this instance, an ant or a cockroach? The flies in *The Fly* are particularly apt because they are effective emblems of communication. There are several reasons for this. Flies enact rapidity, make noise, and cause annoyance, appearing suddenly and disruptively in places where they are not wanted. They operate indifferently as mythical couriers or as technological messengers. In their capacity for unobserved observation from moving or stationary perspectives, they mime the angelic functions of classical demigods as well as the panoptic surveillance of modern media networks. In short, because they fly, they buzz, and they seem to see what's going on, flies are daemonic angels of winged mediation and mobile observation.

The angel as ubiquitous modest witness of beleaguered humanity is memorably staged in the first frames after the opening credits of Wim Wenders's *Wings of Desire*.²³ We see the sky, then an eye, a shot looking down over Berlin, then an angel standing on a parapet, whose wings come and go. A "fly on the wall," the angel played by Bruno Ganz, is a silent outer witness hovering over the interior lives of the self-divided Berliners. *Wings of Desire* then displays the powers of flight already possessed by angels and flies, and technologically realized by human beings, through a coupling of aviation and broadcast communications. Wenders evokes the angelic or daemonic ambience of wireless signal transmissions as the all-observing camera eye flies past a radio and television transmission tower buzzing with overlapping stations. The fly is a proper totem for a fantasy of angelic teleportation that transgresses into a daemonic spectacle of cross-species metamorphosis.

22. See Clarke, *Allegories of Writing* (above, n. 4), pp. 84–87.

23. *Wings of Desire*, dir. Wim Wenders, Road Movies (Berlin) and Argos Films (Paris), 1988.

Desperate to reverse the transmission error that has disfigured and doomed her husband, H  l  ne urges Andr   to fly just one more time through the teleporter. It is at this point that the Neumann movie departs most significantly from the Langelaan text. In the Hollywood version, H  l  ne collapses physically but not mentally, and the movie ends with an especially perverse parting shot as the surviving mother and son go off into a bright and happy future, with Andr  's brother Fran  ois taking over as head of the family. Langelaan's original is grittier, and rather nastier. *Playboy* published the story under a banner that focuses the reader's expectation precisely on this climax in which a wife is at least psychologically assaulted by her husband: "If she looked upon the horror any longer she would scream for the rest of her life" (p. 17). With Langelaan, the final unveiling of the metamorph drives H  l  ne out of her mind and into the insane asylum where she is residing as Fran  ois reads her uncorroborated and surely delusional confession. When Andr   steps out of the teleporter the last time, this is what this H  l  ne sees:

Until I am totally extinct, nothing can, nothing will ever make me forget that dreadful white hairy head with its low flat skull and its two pointed ears. Pink and moist, the nose was also that of a cat, a huge cat. But the eyes! Or rather, where the eyes should have been were two brown bumps the size of saucers. Instead of a mouth, animal or human, was a long hairy vertical slit from which hung a black quivering trunk that widened at the end, trumpet-like, and from which saliva kept dripping. (p. 35)

Langelaan recovers from within his own text an item that Neumann simply discards, the atoms of Dandelo from the limbo into which André had sent them weeks earlier.²⁴ By doing so, Langelaan raises the grotesquerie of his construction to a mythic level at which the head of the Medusa swims into the narrative mirror. The textual *Fly* makes explicit an element that the first cinematic *Fly* edits out, but that the history of earlier metamorphic stories brings forward: the status of the fantasmatic metamorph as an emblem of primal psychosexual fantasy—specifically, the fetish as a symbol of castration and its imaginary recuperation by the phallic mother, by the imaginary reattachment of the phallus to the castrated vagina of the

24. Italo Calvino has written, concerning Ovid's *Metamorphoses*: "A law of the greatest internal economy dominates this poem, which on the surface is devoted to unbridled extravagance. It is the economy proper to metamorphosis, which demands that the new forms should recover the materials of the old ones as far as possible" (*The Uses of Literature: Essays*, trans. Patrick Creagh [New York: Harvest/HBJ, 1986], p. 157). See Clarke, *Allegories of Writing* (above, n. 4), p. 32.

tonomy are overturned and eliminated. But to focus on *The Fly* solely as a castration scenario would be to ignore the informatic framework, the media buzz of this metamorphic episode. In the chapter "Virtual Bodies and Flickering Signifiers" from *How We Became Posthuman*, Hayles notes:

Changes in bodies as they are represented within literary texts have deep connections with changes in textual bodies as they are encoded within information media. . . . The contemporary pressure toward dematerialization, understood as an epistemic shift toward pattern/randomness and away from presence/absence, affects human and textual bodies on two levels at once, as a change in the body (the material substrate) and a change in the message (the codes of representation).²⁸

Effected by the teleporter, a phantasmagoric media device full of noise, the changes in André's human body also convey a change in the message conveyed by metamorphic changes. Hayles defines this change as a shift from *castration* to *mutation*. The psychoanalytic notion of castration remains inscribed in a traditional dialectic of presence and absence—the possession or lack of a literal penis or symbolic phallus—as this marks a corruption of ideal (masculine) forms. The notion of mutation evokes the inevitable metamorphosis of all forms. Castration, especially as applied to sex and gender issues by classical psychoanalytic discourses, is an imaginary state. In contrast, mutation—as the informatic metamorphosis of the genotypic patterns by which bodies are constructed—is the real engine of evolutionary developments. "Mutation is crucial," Hayles continues, "because it names the bifurcation point at which the interplay between pattern and randomness causes the system to evolve in a new direction."²⁹ Of course, nothing guarantees that any given mutation will be viable; most are not, and André himself quickly selects his posthuman self out of the evolutionary gene pool.

Whereas in Cronenberg's *Fly* of 1986 a fully computerized teleportation creates the fusion of human and fly into one entity—the "Brundlefly"—the transformative catastrophe of the '50s versions yields two metamorphs, a fly-headed human and a human-headed fly. Despite André's identitarian design for a machine that "perfectly" recuperates episodes of "atomic" disintegration, the mutation of the metamorphs through a bifurcation and recoupling of fragments of man and fly reinstates the function of transmission—the doubling effect of informatic iteration. But what about the generic

28. Hayles, *How We Became Posthuman* (above, n. 9), p. 29.

29. *Ibid.*, p. 33.

mutation from Langelaan's text to Neumann's film? From this perspective we can read the movie's lack of such an explicit castration fetish as an emblem of its own informatic transformation.

In addition to Hélène's view of a multiply disfigured monster, the movie includes something not present in the short story: a moment of reversed observation, when the point of view shifts from Hélène's gaze at the monster to André's fly-eyed view of the screaming Hélène. Hélène's multiplication in the fly's eye accomplishes a symbolic dematerialization, an atomization of the Imaginary wholeness of the body image, a lapse of corporeal unity into informatic dissemination. It marks André's mediated mutation rather than castration, which would traditionally be conveyed, as with Oedipus, by a blinding of sight altogether rather than a compounding of visual images. With this scene—the return upon Hélène of the gaze of the partially mutated André—the first cinematic remake of *The Fly* bootlegs a glimpse of the posthuman perspective into the spectacle of technological humanity in the grip of media metamorphosis.

In both versions, Hélène's climactic encounter with the metamorphosed André is reprised at the end by the discovery of the metamorphosed fly, which proves the veracity of her private account—followed by its destruction, which preserves her secret. This doubling of abominable abjection elicits once more, on the underside of the melodrama, the angelic or daemonic prospect of winged, ecstatic flight exactly as something to be attained only at the price of monstrosity and death. In *The Fly*, the hapless housefly that stumbles into the teleporter and becomes interpenetrated with a human being is both a mediated message of winged or informatic desire for the transcendence of material constraints *and* the corporeal static that trips it up—both the signal and the noise.

Noise

In *Gramophone, Film, Typewriter*, Kittler writes: "no means of transportation are more economical than those which convey information rather than goods and people" (p. 28). Whereas coded translations of the sensory data emitted by human bodies—visual images, spoken or written utterances—can fly through space like light, or along optical fiber cables *as* light, the persons who present the images or do the uttering must be physically and laboriously hauled from one place to another. The alarming alacrity of electronically mediated information puts the sluggish inertia of all material bodies to shame. Kittler's remark, however, plays on what Niklas Luhmann would term the unity of the distinction between transportation and transmission. As we have discussed, the transportation of substantial

things differs decisively from the transmission of information. Transportation—locomotion and portage—concerns organic systems and their physical conditions or needs, whereas transmission in the modern technological sense is the operational basis of the electronic communications media that propagate signals between individuals and groups, psychic and social systems. The desire to conform matter in motion, by means of electromagnetic energy, to the status of information in transit, drives the teleportation fantasy of *The Fly*. But the hybrid notion of *informatic transportation* is a paradoxical figure, and the metamorphic turn in the tale derives precisely from the paradoxical crossing or momentary fusion of the distinction between matter and information, transportation and transmission.

As we have noted, André's matter-telephone is of ambiguous design. It reimagines a process of electronic transmission as a matter of material disintegration. In fact, electronic media transmit only the weightless data patterns lifted off of material bodies—noises, voices, images, texts—virtual or formal entities whose conversion into a signal involves no disintegration, but rather, an analog or digital rearticulation of a pattern, some figurative recoding and duplication. Communicating information creates a momentary or enduring spatial bifurcation, a virtualization, of the data source.³⁰ Thus the notion of material transportation through an electronic communications device is a noisy one, buzzing with hybrid significations. The various versions of *The Fly* exploit the semiotic interference of this analogical overload; its horrific spectacles emerge from the moirés created by the nodal overlapping of these multiple themes.

Kittler's hermeneutics of the hardware in *Gramophone, Film, Typewriter* stands behind Hans Ulrich Gumbrecht's and Timothy Lenoir's recent discussions of "the materialities of communication"—the importance of determining the historical particularities of the instruments and networks that enable communications media to function at all.³¹ *The Fly*'s overlapping of transportation and transmission displaces the registration of the materiality of communication by misattributing substance to the informatic signal being transmitted by the circuit rather than to the material/energetic substrate, the instrumental body of the communications system itself. At this point,

30. "Communication is the creation of redundancy or patterning" (Bateson, *Steps* [above, n. 19], p. 406).

31. See Hans Ulrich Gumbrecht and L. Ludwig Pfeiffer, eds., *Materialities of Communication*, trans. William Whobrey (Stanford: Stanford University Press, 1994); and Timothy Lenoir, ed., *Inscribing Science: Scientific Texts and the Materialities of Communication* (Stanford: Stanford University Press, 1998), esp. Lenoir's introductory essay "Inscription Practices and the Materialities of Communication," pp. 1–19.

sociological systems theorist Luhmann might have urged a further consideration, in the form of a further distinction—the difference between transmission and communication.

Luhmann offers “a clarification of the concept of communication. Customarily one uses the metaphor of ‘transmission’ here. One says that communication transmits messages or information from a sender to a receiver”; however, in discussing the *social* functions of human communications,

The metaphor of transmission is unusable because it implies too much ontology. It suggests that the sender gives up something that the receiver then acquires. This is already incorrect. . . . The metaphor of transmission locates what is essential about communication in the act of transmission, in the utterance. It directs attention and demands for skillfulness onto the one who makes the utterance. But the utterance is nothing more than a selection proposal, a suggestion. Communication emerges only to the extent that this suggestion is picked up, that its stimulation is processed.³²

From this vantage, *The Fly* is the story not only of a failure of transportation due to a faulty transmission, but also of a failure of transmission due to a faulty communication. The teleporter mimics the communicative transmission of a message (say, a telephone call to someone), but André operates it in secret—that is, in the absence of any social other who might complete or realize the communication by receiving it. Even though there is a receiving device, there is no intended addressee to “process” this reception, to confirm or reject its proposal. The body-message sent by the teleporter is like a broadcast sent out to no one in particular, which opens the transmission all the more to the chance or accidental nature of reception, compounded by the random event of stochastic noise being added to the signal. By the time Hélène becomes the inadvertent recipient of André’s message, the medium itself, through an increment of noise, has already determined his condition.

The attribution of monstrous alteration to the agency of noise

32. Niklas Luhmann, *Social Systems*, trans. John Bednarz, Jr., with Dirk Baecker (Stanford: Stanford University Press, 1995), p. 139. Luhmann touches on the concept of noise soon after: “The combination of information, utterance, and expectation of success in one act of attention presupposes ‘coding.’ The utterance must duplicate the information, that is, on the one hand, leave it outside yet, on the other, use it for utterance and reformulate it appropriately: for example, by providing it with a linguistic (eventually an acoustic, written, etc.) form. We will not go into the technical problems of such coding any further. What is sociologically important is, above all, that this too brings about a differentiation within the communication process. Events must be distinguished as coded and uncoded. Coded events operate as information in the communication process, uncoded ones as disturbance (noise)” (ibid., p. 142).

may be said to reflect, in addition to a perennial strain of Platonist deprecation of the body, a more recent moment when information theory was beginning to extricate itself from classical dynamics. For instance, at mid-twentieth century Bateson strove to clarify the crucial difference between physical and cybernetic explanations: "The conservative laws for energy and matter concern substance rather than form. But mental process, ideas, communication, organization, differentiation, pattern, and so on, are matters of form rather than substance."³³ An untenable indifference to the distinction between substance and form is also symptomatic of a related and concurrent misunderstanding in the early development of cybernetics and information theory, due to a conceptual hangover from the era of classical thermodynamics. In Claude Shannon's initial formulations of information theory, the inexorable quantum of noise within electronic channels was viewed merely as a corruption of the true signal, a circumstance that could only subtract value from the message received.

This marks a moment in the emergence of informatics when noise—in William Paulson's phrase, "anything that arrives as part of a message, but that was not part of the message when sent out"³⁴—was allegorized as a daemonic agent victimizing innocent signals. At the moment of its theoretical inception, at the same time that Shannon and Warren Weaver appropriated the term *entropy* into their informatic vernacular as a positive quantity, the concept of noise emerged in the old role of thermodynamic entropy as an ineradicable systematic friction, as the dissipation of communication.³⁵ The concept of entropy had begun as a measure of the loss of "usable energy"; the concept of informatic noise was immediately stipulated as a merely negative or destructive interference breeding a loss of data. The fly that mingles in prose and cinematic fiction with the scientist-engineer teleported to damnation is at bottom mere static, *le parasite*, the concept of noise in hyperbolic daemonic guise as an agent of lethal metamorphosis (see Fig. 1).

Noise is the ghost of the material in the realm of the informatic. "Technological media operate against a background of noise because

33. Bateson, *Steps* (above, n. 19), p. xxii.

34. William R. Paulson, *The Noise of Culture: Literary Texts in a World of Information* (Ithaca, N.Y.: Cornell University Press, 1988), p. 67.

35. See Warren Weaver, "Recent Contributions to the Mathematical Theory of Communication, 1. Introductory Note on the General Setting of the Analytical Communications Studies," in Claude Shannon and Warren Weaver, *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949), pp. 18–22.

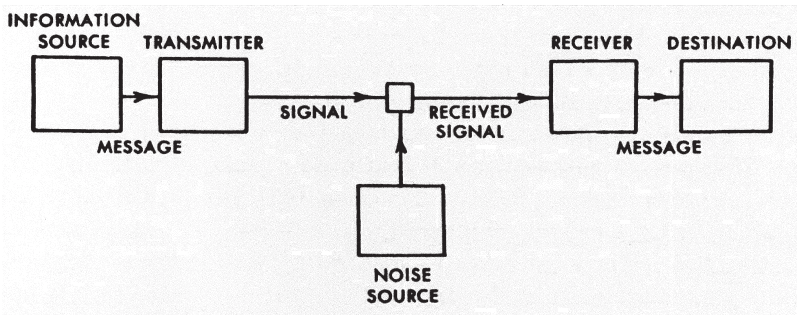


Figure 1. Information and noise. From Warren Weaver and Claude Shannon, *The Mathematical Theory of Information* (Urbana: University of Illinois Press, 1949), p. 7.

their data travel along physical channels," Kittler writes, "as in blurring in the case of film or the sound of the needle in the case of the gramophone" (p. 45). And as Michel Serres has discussed at length, the noise that interrupts communications may be figured as a daemon, an allegory or "prosopopoeia of noise."³⁶ Myth and informatics merge when daemonic media agents produce the metamorphosis of bodies. The horrific metamorphic complications spawned by every version of *The Fly* demoralize the materiality of communication itself, the fly in the ointment of perfect transmissions, as a monstrous degradation of pure and proper signals.

We now have a more generous conception of the productive ambiguity of informatic noise. "All of information theory and hence, correlatively, of the theory of noise," Serres writes, in accordance with the axioms of second-order cybernetics, "only makes sense in relation to an observer who happens to be linked to them":

If one writes the equation expressing the quantity of information exchanged between two stations through a given channel and the equation which provides this quantity for the whole unit (including the two stations and the channel), a change of sign occurs for a certain function entering into the computation. In other words, this function, called ambiguity and resulting from noise, changes when the observer changes his point of observation.³⁷

36. Michel Serres, *Hermes: Literature, Science, Philosophy*, ed. Josué V. Harari and David F. Bell (Baltimore: Johns Hopkins University Press, 1982), p. 67. On the role of noise in the crossover from energy to information, see in particular Serres's "Platonic Dialogue" and "The Origin of Language: Biology, Information Theory, and Thermodynamics," *ibid.*, pp. 65–83. See also the seminal impact of Heinz von Foerster's work on observation, self-organization, and noise, in *Observing Systems*, intro. Francisco Varela, 2d ed. (Seaside, Calif.: Intersystems Publications, 1984).

37. Serres, *Hermes* (above, n. 36), p. 77.

The play of ambiguity introduced by the fluctuations of noise and the shifting reference frames of the observer enables information and noise to “change signs” as the observer changes positions. This is how chaos becomes self-organized: “the next level functions as a rectifier, in particular, as a rectifier of noise. What was once an obstacle to all messages is reversed and added to the information.”³⁸ The noise of information in circulation enables entropy to define rather than dissipate form. This has emerged from the consideration that noise, too, *is* information. Noise is precisely *unexpected* information, an uncanny increment that rolls the dice of randomness within every communicative transmission. Over the past five decades, cybernetic discourse has exploited the informatic integration of the disciplines of knowledge made possible by complicating the sign of noise. The horrific metamorphoses of *The Fly*—a Gothic spectacle playing anachronistically, as allegory has always done, on the persistence of superannuated conceptions in the midst of altered circumstances—are a kind of inverted annunciation of this new virtual dispensation.

38. Ibid., p. 78.