PETER GALISON

Though perhaps not the most hilarious philosopher of all times, Immanuel Kant nailed it when he wrote that comic laughter was essentially about the sudden dissolution (*Auflösung*) of a grand expectation reduced to nothing (*Nichts*). This colossus/runt contrast was striking to a long line of comedy analysts. Jean Paul Richter, for example, found the laughable in the juxtaposition of the insignificantly minor with an exalted person (*einem Erhabenen*). For his part, the nineteenth-century biologist and theorist Herbert Spencer fastened on the "descending incongruity" that toppled "great things to small" or, more explicitly, "the degradation of some person or interest possessing dignity in circumstances, that excite no other strong emotion."¹

All this impressed Theodor Lipps, the brilliant Munich fin-de-siècle psychoanalyst, who, drawing on and extending these philosopher-analysts, put "relative nothing" in hard opposition to the sublime. In that contrast, said Lipps, stood the comic. Lipps stressed that the small is not comic; comedy only emerged when smallness presents itself against the large. Picture, for instance, this series: a powerful church, an imposing theater, an entire neighborhood of mighty structures. Then suddenly insert a tiny, humble house. In that deflation lies the comic. Freud takes this developing theory of the comic—by Kant, Jean Paul Richter, Spencer, and Lipps—and sets it in an economic-psychoanalytic context, with the logic of the unconscious accounting for jokes and the preconscious for the comic.

Caricature, parody, and travesty aim at something sublime, exalted, and powerful and (in different ways) cut it down to size. The sudden deflation of this authority is what produces the laughter: for Freud, there is real effort, psychical and physical, that enters into the thought of the large/important/abstract, an effort that suddenly evaporates in the comic moment, discharging energy as laughter. This "degradation" (Alexander Bain's term) is noted by Freud, while Freud's own choice of nomenclature, "Herabsetzung," is registered in our whole physical being, literally and accurately, a "put-down." Freud likens this set-aside of the greater for the lesser, physiologically, to the abrupt change the soldier feels as he is told first to stand at attention, then to back down, "at ease." Our whole musculoskeletal being responds to the comedown.

Central to Freud is a joining of the abstract with the corporal, a bond he refers to as "ideational mimetics"—the bodily incarnation of abstraction of thoughts of behe-

^{1.} Immanuel Kant, Kritik der Urteilskraft (part I, section 1, p. 54); Theodor Lipps, Komik und Humor (Hamburg and Leipzig, 1898), section on the large and the small (Freud cites p. 50ffp in his 1905 Jokes and the Unconscious, in Freud, Standard Edition of the Complete Psychological Works of Sigmund Freud, vol. 8, trans. James Strachey and Anna Freud (London: Hogarth Press and the Institute of Psycho-Analysis, 1960), p. 199; Jean Paul Richter, Vorschule der Aesthetik, 2 vols. (Hamburg, 1804), pp. 11, 13, Part II, par 51; and Herbert Spencer, "The Physiology of Laughter," Macmillan's Magazine (March 1860), in Essays 2 (London, 1901), pp. 146–47.

^{2.} Alexander Bain, *The Emotions and the Will* (London: Longmans Green and Company, 1865), cited by Freud, SE 8, 200.

42 OCTOBER

moth and shrimp. "A high mountain" says the "common man" and raises his hands upward as if to capture the peak; he says "a little dwarf" and holds his hand near the ground. He follows this with his voice if he's managed to slip the bonds of hand gestures, not to reflect his emotions, but to express the *content* of what he is describing.³ Freud writes: "I regard the matter as a really important one, and I believe that if ideational mimetics are followed up, they may be as useful in other branches of aesthetics as they are here for an understanding of the comic."⁴

Suppose that Freud was right—that it is very often the case that our experience of the abstract is accomplished through a simultaneous presentation of the material, an embodiment in content that often results in a physical gesture. That is, suppose that when we gesture wide and high to express the abstract, we register such an abstract quality the way we register the large mountain, the high tree, or the exalted person. Freud suspected that this bodily gesturing expresses idea content, not just affect. For a moment, let us put aside the economic and even the psychoanalytic sides of Freud's analysis. No need here for the view that the discharge of unused preparatory energy flows into and activates the laughter or to invoke the logic of the unconscious. Instead, I want to rewire this longer Kant-Lipps-Freud tradition to a more epistemological end, to take seriously Freud's suggestive addendum that perhaps this dynamic of the comic had something more to it, something that speaks not just to the comic but to "other branches of the aesthetic."

Appropriately, the very category of aesthetics is itself a strikingly good example of materiality interwoven with abstraction. We know that the term, so often taken to be a fully ephemeral notion of disembodied beauty, arises in the eighteenth century to designate things accessible through the senses. Even in the realm of the comic, the spread of the idea might be indicated by the Lipps-Freud interest in the whole range of techniques that realize the comic, not least unmasking, parody, and caricature. *Unmasking* shows that the highfalutin Prince suddenly reveals himself to be all-too-human through bodily function. *Parody* imitates—and shows how strikingly the putatively unique and powerful can be replicated, so

- 3. Freud, Standard Edition, vol. 8, pp. 192–93.
- 4. Ibid, p. 193.
- 5. Unmasking functions broadly in our way of knowing the world. Freud's own life's work is a form of unmasking—dreams, parapraxes, jokes all are after something much more basic about the body and bodily urges that we fancy ourselves to have bypassed. When the Marxist argues that Adam Smith's arguments about the grand principle of efficiency are just a cover, the coal-mining boss isn't after some economic optimization, he is instead after direct control of the workers' bodies and labor. Stephen A. Marglin, "What Do Bosses Do?: The Origins and Functions of Hierarchy in Capitalist Production," *Review of Radical Political Economics* 6 (July 1974), pp. 60–112. Of course there is seemingly infinite literature on the precise relation between the superstructural and the (economic-material) basis of social life, a literature launched in no small part by Marx's own assertion that, "just as one does not judge an *individual* by what he thinks about himself, so one cannot judge such a period of transformation by its consciousness, but, on the contrary, this consciousness must be explained from the contradictions of material life, from the conflict existing between the social forces of production and the relations of production." Karl Marx, "Preface," in *A Contribution to the Critique of Political Economy* (1859; New York: International Publishers, 1970).

reducing that singular person to a replicable voice, gesture, or appearance. And *caricature* disrupts the integrity of a thing or person, exaggerating one quality, for example.⁶ Each diminishes the sanctified, the beautiful, the abstract, and (in different ways) calls out materiality. We see this in the all-too-physical emphasis of the political cartoon, in the comic strip or book, where pale abstraction comes down to earth in intimacy, violence, and power. Frame by frame, the comic is ready at each moment to conjoin the ephemeral into an almost-tangible world featuring embodiment in all its violence, sex, etc.

There are many ways in which this comic condensation ties high (abstract) things to low (material) ones. There are words that divide into concrete bits; there are slight changes in word order that sink the sublime to the ridiculous; there are slight modifications of high-flying words into ground crawlers. Art Spiegelman's *Maus* and Keiji Nakazawa's *I Saw It* undo the abstract statistic of mass violence by instantiating it.

Structurally, the aspect of comic materialism that interests me most is the way that double meanings superimpose the literal and the metaphorical. Freud: Think of Hamlet's remark that the purpose of drama is to hold a mirror to nature, a medical friend said to the dramatist Arthur Schnitzler that it was not surprising Schnitzler had become a great writer. "After all your father [inventor of the mirror-based laryngoscope] held a mirror up to his contemporaries." From the mirror of nature to the mirror of a sore throat—back and forth it flies. Crucially the logic of the comedic in multiple meanings is a kind of superposition, not an unmasking: in the joke, Shakespeare/Hamlet/Arthur Schnitzler are not demoted to a laryngoscope; the exalted and the material cross.

In the logic of this comic moment, we have a mirror that is both a metaphor (a change of place) and an *insistence* on staying in the same place (dare we call it an autophor?). It is this *simultaneity* of the metaphorical and literal, of ideal and material, that interests me most in the study of historical and contemporary science. Henri Poincaré, the great mathematician, philosopher, and physicist, argued that the very idea of simultaneity could be understood through the action of two longitude-determining telegraphers who sent signals back and forth, using those signals (and the time it took to transmit them) to coordinate their respective clocks. Metaphorical? Absolutely, Poincaré never would insist that telegraphers had to be present to define the meaning of time. Literal? Certainly, Poincaré himself was in charge of an army of military geographers, stationed around the world, sending signals to fix time and so map the globe. Young Einstein too engaged in this literal-metaphorical reasoning—his paper, the most famous physics paper of the twentieth century, begins with a scene of clocks coordinated along rail lines. It is material (Einstein was in charge of evaluating patents like these) and fully abstract (he was introducing a new meaning to time, making it fully relative with

^{6.} See Lipps, Komik und Humor, also Freud, Standard Edition, vol. 8, p. 201.

^{7.} Freud, Standard Edition, vol. 8, pp. 36–37.

44 OCTOBER

respect to the frame of reference). Look at Feynman recreating his greatest lecture, "There Is Plenty of Room at the Bottom," as he impresses in words and concepts, gestures, and voice the place of his "tiny machines."

Perhaps we can see in the autophor/metaphor a way of thinking a certain kind of materialism—comic materialism—that identifies something useful by showing us how material stuff joins abstract ideas not by changing places, but by pressing the abstract directly into the concrete, through comic ontology, that is, without changing place.

PETER GALISON is the Joseph Pellegrino University Professor in History of Science and Physics at Harvard University.