TOWARD A UNIVERSAL LANGUAGE OF MOTION: 
REFLECTIONS ON A SEVENTEENTH-CENTURY MUSCLE MAN

In 1649 a little-known English savant, John Bulwer, published in London a book called Pathomyotomia, or A dissection of the significative muscles of the affections of the minde. The author was a physician, and the title might suggest a medical text, but Bulwer's "dissection" is figurative rather than literal. His concern is with somatic signification. How does the body convey meanings? How are commands conveyed from the spirit to the muscles? How do "affections" — passions, ideas, responses, projects — pass from the silent and inaccessible inward reaches of the mind to the world? The obvious passageways, of course, are speech and writing, but central to Bulwer's inquiry is his conviction that speech and writing are only part of the signifying resources of human beings, and not the most reliable part at that. For language is notoriously slippery, deceptive, and unstable — notoriously, from the point of view of both theology and science.

The Hebrew Bible relates the fall of language in the wake of the attempt to build a tower that would reach unto heaven. "The whole earth was of one language, and of one speech," the Bible says, when the tower was undertaken; its builders proposed to "make us a name, lest we be scattered abroad upon the face of the whole earth" (Genesis 11:4). The human fear then appears to be a fear of fragmentation, of being lost in the vastness and diversity of the world, of ceasing to speak to one another as a single people. Making the tower and making a name are a single project, a project that deeply alarms God: "And the Lord said, Behold, the people is one, and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do." In response to this threat — the threat of a unified humankind with a common project that promises to realise the dreams of the imagination — God confounds language, so that humans no longer understand each other's speech. He does then what the builders most feared and tried to prevent: he shatters humankind and scatters the fragments across the face of the earth. The tower gets a name, but the name signifies the splits, gaps, opacities, and multiplicities in language and in human culture: "Therefore is the name of it called Babel; because the Lord did there confound the language of all the earth: and from thence did the Lord scatter them abroad upon the face of all the earth."

To this melancholy account of the fracturing of human unity through the confounding of language was added in the late Sixteenth and early
Seventeenth Century the searching epistemological scepticism of Montaigne and Bacon. The problem was not, Montaigne recognised, simply the multiplicity of languages; a single, familiar, apparently shared language is in fact deeply unreliable: "Our speech has its weaknesses and its defects, like all the rest," he writes in "The Apology for Raymond Sebond"; "Most of the occasions for the troubles of the world are grammatical." For Montaigne, the acknowledgment of the defects of language leads to an acceptance of human limitation, an awareness of all that will remain unstable, unresolved, imperfect, incomplete. To grasp the inherent weaknesses of speech is to give up the grand ambitions of the human mind, the dreams of perfection and certainty. For Bacon, by contrast, a sceptical critique of language is the necessary precondition of a programmatic advancement of learning. Only by liberating oneself from the fraudulence and sloppiness and myth-making of ordinary language can one begin to acquire a genuine and well-founded knowledge of things, a knowledge that will initiate the long road back to the unity and the power possessed fully in Eden and lost definitively at Babel.

With Bacon we return to the obscure John Bulwer. For Bulwer was a Baconian, not one of those followers who refined the experimental methods or who pondered the epistemological problems of the emerging science, but one who responded to the utopian element implicit in Bacon's program, the dream of recovering the primal power whose key was the primordial language spoken before the confounding of tongues. The revolutionary ferment of the mid Seventeenth-Century sparked many searchers for this ur-language or at least enabled their ambitious projects to surface in print. Often their hopes led them to Hebrew or to some version of Hebrew cleansed of its post-Babel corruptions. Hence in 1655 Thomas (Thoreau) Tany informed the world that he had received a revelation of "the pure language" which English was capable of rendering in utterances like the following: "obedient alma honasa hul; generati alvah ableuvisse insi locat amorvissem humanet rokoas salah axoret etlah alvah hon ono olephad in se mori melet eri neri meleare; okoriko ol ophaus narratus asa sadoas loboim olet amni Phikepeaa ebellrer elme bosai in re meal olike." Others sought not only the primordial spoken language but also the root and origin of writing, the so-called "Real Characters" that would not merely represent things but express in direct and unmediated form the essence of reality itself.

Bulwer's project, in the Pathomyotomia and other works, is clearly related to this search, but there is a significant difference. Where Tany and others were searching for the universal language in writing and speech, Bulwer had the idea of looking elsewhere, in what, following Aristotle, he takes to be the highest perfection of a living creature: motion. For a living creature, he writes, "is a living Creature by moving" (1). This is why, he reasons, God brought his creation of the world to a climax in the creation of sentient creatures capable of
movement: in making "most Noble and necessarie and no way to be despised motion, especially its chiefest and neerest instruments, the Muscles" (2), the Great Parent of Nature had reached the pinnacle of honour. Bulwer is aware that his celebration of muscles is leading him in a strange direction, for the human mind and soul were for millennia the virtually inevitable candidates for the place of honour in God's universe, but he insists on his radical revision of the traditional hierarchy: take away the power to move, he argues, and a man "would degenerate into a Plant or Stock." The qualities and attainments that characterise human identity depend upon the muscles; without them man "would be left destitute of the grace of elocution, and his mind would be enforced to dwell in perpetual silence, as in a wooden extasis or congelation; nay his Soul which is onely known by Action, being otherwise very obscure, would utterly lose the benefit of explaining it self, by the innumerable almost motions of the Affections & passions which outwardly appear by the operation of the Muscles" (3).

In the muscles then lies the key to human identity, and, more particularly, to the link between the soul — "being otherwise very obscure" — and the known world. Human expression demands motion, and for Bulwer the principal sites of significant motion are the head and the hands. In 1644 he published Chirologia: or the Naturall Language of the Hand, an achievement that prompted him thereafter to wish to be known as "the Chirosopher." Words are conventional, slow, and often misleading, but the signs made by the hands are "part of the unalterable laws and institutes of nature" (16). The natural language of the hand, Bulwer writes, "had the happiness to escape the curse at the confusion of Babel" (19). And if we think that the hands are too limited a means of human communication, compared with the tongue, Bulwer proposes to show us that their range of expressiveness is actually greater than that of words. In a flight of rhetorical enthusiasm that leads him to forget that he is himself, after all, using words, Bulwer offers his proof by launching into a list of what we do with our hands:

Sue, entreat, beseech, solicit, call, allure, entice, dismiss, grant, deny, reprove, are suppliant, fear, threaten, abhor, repent, pray, instruct, witness, accuse, declare our silence, condemn, absolve, show our astonishment, proffer, refuse, respect, give honour, adore, worship, despise, prohibit, reject, challenge, bargain, vow, swear, imprecate, humour, allow, give warning, command, reconcile, submit, defy, affront, offer injury, complement, argue, dispute, explode, confute, exhort, admonish, affirm, distinguish, urge, doubt, reproach, mock, approve, dislike, encourage, recommend, flatter, applaud, exalt, humble, insult, adjure, yield, confess, cherish, demand, crave, covet, bless, number, prove, confirm, congee, salute, congratulate, entertain, give thanks, welcome, bid farewell, chide, brawl, consent, upbraid, envy, reward, offer force, pacify, invite, justify, condemn, disdain, disallow, forgive, offer peace, promise, perform, reply, invoke, request, repel, charge, satisfy, deprecate, lament, condole,
bemoan, put in mind, hinder, praise, commend, brag, boast, warrant, assure, inquire, direct, adopt, rejoice, show gladness, complain, despair, grieve, are sad and sorrowful, cry out, bewail, forbid, discomfort, ask, are angry, wonder, admire, pity, assent, order, rebuke, savour, slight, dispraise, disparage, are earnest, importunate, refer, put to compromise, plight our faith, make a league of friendship, strike one good luck, give handsel, take earnest, buy, barter, exchange, show our agreement, express our liberality, show our benevolence, are illiberal, ask mercy, exhibit grace, show our displeasure, fret, chafe, fume, rage, revenge, crave audience, call for silence, prepare for an apology, give liberty of speech, bid one take notice, warn one to forbear, keep off and be gone; take acquaintance, confess ourselves deceived by a mistake, make remonstrance of another's error, weep, give a pledge of aid, comfort, relieve, demonstrate, reargue, persuade, resolve, speak to, appeal, profess a willingness to strike, show ourselves convinced, say we know somewhat which yet we will not tell, present a check for silence, promise secrecy, protect our innocence, manifest our love, enmity, hate, and despite; provoke, hyperbolically extol, enlarge our mirth with jollity and triumphant acclamations of delight, note and signify another's actions, the manner, place, and time, as how, where, when, etc.

This reminder that the Renaissance was the great age of lists is not likely to persuade many readers that "postures of the hand" exceed "the numerical store of words," but it is enough to license Bulwer's lengthy and painstaking analysis of gestures, from scratching the head with one finger (an "effeminate gesture betraying a close inclination to vice" [130]) to putting forth the middle finger, the rest drawn into a fist ("a natural expression of scorn and contempt" [132]). And Bulwer's passionate interest in what he called "manual rhetoric" led him to a singular achievement: in 1648, in a book called Philocophus: Or, the Deafe and Dumbe Mans Friend, he published what appears to be the first hand-alphabet for the deaf.

But if this accomplishment would seem from our vantage point to be the triumph of Bulwer's career, he himself would no doubt have regarded it as a minor bypath on the road to what the Pathomyotomia calls the "universall and naturall Language" (55), now not of the hand but of the head. That is, Bulwer does not consider facial expressions to be merely conventional; they are voluntary — that is, the product of muscular movements under the guidance of the soul — but the expressive system they articulate is not bound by the particular will of either individuals or cultures. After all, Bulwer observes, we do not actually think about most of our facial expressions, nor are we generally aware of commanding them (though they are not, in his view, less voluntary for that). But we are able to read those facial expressions; indeed we count on doing so as part of understanding our social interactions. A face condemned to one fixed posture "would be like a Cabinet lockt up, whose key was lost" (40). There would be no access then to the subjectivity of the other, "no certaine way of entrance into his mind."
The *Pathomyotomia* intends to systematise this entrance by performing what it calls “dissections” — isolating, analysing, and naming the muscles of the head that govern the range of human expressions. Hence, for example, “When we would bow low, as in assenting with reverence, or to adore, worship, or profess a submissive respect, the whole Neck with the Head is inclined and lowly bent forward” (51–52). This motion is performed, Bulwer writes, by two pairs of muscles, the first called *Longus* and the second called *Triangulare*. After describing these in some technical detail, he proposes to rename them in keeping with “the naturall Philosophy of Gesture”: “The first long Muscles which so appeare active in these Declarations of the Mind might by our scope of Denomination be called *Par reverentiale*, the Reverential paire; The other commonly called *Triangulare*, for distinction, *Par adorans*, the Muscle of Worship or Adoration, or the Muscles of the yoke of submissive obedience” (53). This is the basic form for dozens of “dissections,” from the “Muscles of Rejection,” to the “Muscles of Supplication,” to “the Arrogant paire or the Muscles of Disdainfull Confidence” which work in tandem with “the Insulting or Bragging paire or the Muscles of Insolent Pride, and fierce Audacity” — that is, the proud stiffening of the neck and elevation of the head produced “when all the hinder Muscles of the Neck and Head and that confused Chaos and heape of Muscles in the Back, which are like a Labyrinth of many wales, work together” (78).

As Bulwer is fascinated by the movements of the head, he is equally fascinated by the subtily and range of facial expressions: “the pleasant Muscle of Loves pretty Dimple” (109), “the Severe and Threatning Muscles” (148) that cause the brows to contract; “the Muscles of Wonder or Admiration” that lift the eyebrows; “the Muscle of Staring Impudence” that “draws the superior Eye-lid upwards” (158), “the Dastard Muscle, or the Ranke cowards Sphincter” that causes “the affrighted Eyes to twinkle, that is to open and incontinently to shut more than is convenient” (159). No movement — the pursing of the lips, the twitching of the ears, the slight rounding of the eyes — is too small for his attention, but he is particularly taken with that exuberant, convulsive spectacle unique to humans, laughter. Bulwer conceives of laughter as a great “Dance of the Muscles performed ... upon the Theater of Mirth, the Countenance” (106), and he analyses its component parts for many pages. What particularly strikes him is the extent to which laughter is not only an effect of the mind or the heart or the body but “of totius conjuncti, of the whole man” (128). Accordingly, “in laughter the Face swells; for, the whole Countenance is powred out and spread with the Spirits that then swell the Muscles” (110).

If laughter is the very heart of the universal and natural language of the head, it is also the limit case of the claim that this language is essentially voluntary. For Bulwer himself recognises that by his own account laughter resembles the experience that had, at least since St. Augustine, been recognised as the very emblem of the involuntary, the male erection: “So that the Muscles of the Face
are filled with Spirits after the same manner as a certaine member directly opposite unto it which importunately sometimes lookes us in the Face, which being filled with Spirits growes stiff and is extended” (110). The only reason that the laughing face — “at the highest pitch and scrued up to the very Ecla of mirth” — does not actually stand erect is that the facial muscles “adhere most firmly to the bone and skin.” Why then does Bulwer continue to insist on the principle of voluntary motion — not only in the case of laughter but even of sleepwalking? The answer seems to lie in the utopian impulse with which we began: Bulwer is determined to recover and to analyse the pure and unfallen communicative system of mankind, and this system must by definition enhance the power of the human will.

Bulwer’s analysis of the signifying power of the muscles, then, is haunted by two demons that he must hold at bay. The first is the demon of involuntary or non-significant movement: all of the twitches, tics, swellings, and contractions that do not seem to express meanings or that cannot be performed at will. And the second is the demon of culture, the possibility that the expressive motions of the muscles are not primordial, pure, pre-Babel, but rather, like any other language, determined by the varied and changing customs of peoples. The possibility surfaces on occasion in his books on the hands and the head, as when he writes that the Cretans make the sign of refusal or denial by moving their heads straight backward “not as we refuse and deny, who drive the head about him a circumduction” (Pathomyotomia, 54). But somehow such observations never compel Bulwer to abandon or even substantially to modify his conviction that the muscles speak the true language of nature. There is some indirect evidence, however, that he was aware of the problem and troubled by it. In 1653 he published yet another study of the body, but this time his point was not that the body did not lie. The work’s full title sketches its principal argument: Anthropometamorphosis: Man Transform’d: or, The Artificial Changeling Historically presented. In the mad and cruell Gallantry, foolish Bravery, ridiculous Beauty, filthy Finenesse, and loathsome Loveliness of most Nations, fashioning and altering their Bodies from the mould intended by Nature; With Figures of those Transfigurations To which artificiall and affected Deformations are added, all the Native and Nationall Monstrosities that have appeared to disfigure the Humane Fabrick. With a Vindication of the Regular Beauty and Honesty of Nature. The body in its natural state is impeccably “honest,” but as Bulwer makes clear, in more than 500 pages of closely packed and often zany citations, there is virtually no culture in the world that does not fashion and alter the body “artificially.”

Bulwer’s obsession with the body’s natural language has in effect generated a counter-obsession with all of the things that cultures do to change the body from its natural state. In this extraordinary work — a strange precursor of ethnography written out of loathing and disgust — he comes close to imagining the virtually limitless malleability of the body: heads drastically
change shape, the genitals are cut and resewn, the skin is made into a canvas, lips, ears, nose, and nipples are pierced, the thighs are artificially fattened or thinned, breasts are enlarged or reduced or removed altogether, feet are crushed or elongated. Nothing is but what is not. And in an appendix, Bulwer has the tremendous perception that contemporary English clothing actually reproduces many of the transformations that are carried out in other cultures on the flesh itself. He has then one of the first anthropological accounts of the body: he doesn’t think of the body’s transformations in the mythic terms encouraged by Ovid and his followers or in the closely related mythic terms specified in the trials of witches. Rather he wants to understand what is actually done systematically and culture by culture to change the body’s shapes. But he can only have this perception in the mode of horror: after all, he longs for the body in its natural state, a state he imagines precisely as a single, universal norm from which virtually all cultures have fallen away. He stands then in some sense for a turning away from the multiplicity of the languages of the body, even at the moment that this multiplicity is first powerfully acknowledged, precisely because it is the moment in which it is first powerfully acknowledged.

Notes

1. Subtitle: Being an essay to a new method of observing the most important movings of the muscles of the head, as they are the neerest and immediate organs of the voluntarie and impetuous motions of the mind. With the proposall of a new nomenclature of the muscles.

