

LUDWIG JÄGER, ERIKA LINZ, IRMELA SCHNEIDER (EDS.)
Media, Culture, and Mediality.
New Insights into the Current State of Research

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What Hands Can Tell Us: From the 'Speaking' to the 'Expressive' Hand

PETRA LÖFFLER

"There is a history of hands; they have their own culture, their particular beauty; one concedes to them the right of their own development, their own wishes, feelings, caprices and pleasures [...]"
Rainer Maria Rilke (45)

The practices of sense making made possible by visual media have been and continue to be reflected by these media over and over again. By doing this, they invoke already existent organizations of knowledge and their cultural formations, simultaneously also modifying them. Thus, ways of communication with gestures represent an almost inexhaustible reservoir for pictorial inventions within the visual arts. The long history of gestures as a system of expressive movements¹—mainly executed with the hand—therefore cannot be separated from its mediated representations. Below, I will present a history of transitions and superimpositions that repeatedly circle around the question: which signs did the hand make visible in the historically different constellations and how were these recognized and interpreted?² It is with good reason that I will be frequently referring to photographs: Photographs of hands represent, so to speak, the gravitational center of an episteme in which that which was called 'language,' 'writing,' or 'image' (of the hand) not only becomes an event but is also at the same time commented upon within this very same medium. Moreover, in this kind of "dramaturgy" a shift is

- 1 "Gesture" goes back to the Latin word "gestus," generally denoting a bodily movement or posture and especially a movement of a bodily part, particularly the hand. The derivative "gestire" is used with the meaning 'to express a feeling.'
- 2 Jacques Derrida has analyzed the topos of the sign character of the hand, referring back to the philosopher Heidegger for whom the hand is "the proper characteristic of man as sign, *monstre (Zeichen)*," pointing out that he considers the hand a singular; see Derrida 35.

being marked that is connected to the ennobling of the hand as a distinctive object of epistemology. It finds its archeological point of culmination in Rilke's term of the "history of hands" that have their "own culture," which he coined on the occasion of Rodin's sculptures.

The 'Speaking' Hand

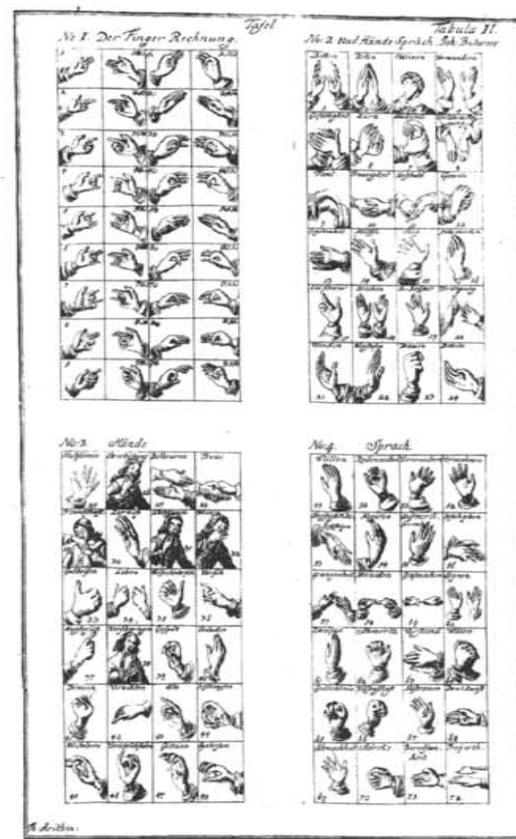
Already in the antique rhetorical teachings of Cicero and Quintilian the gestural repertoire of signs was part of the basic stock of linguistic activity. In its practical use, it was codified, classified, and regulated in the rhetorical *actio*-doctrine. Quintilian's *Institutio oratoria* attributes a status of signs analogous to spoken language to the movements of the hand—and even more: gesticulation impresses by its general comprehensibility and is therefore defined as a universal language of considerable complexity that can not only denote mental but also deictic contents:

"As to the hands, without the aid of which all delivery would be deficient and weak, it can scarcely be told of what a variety of motions they are susceptible, since they almost equal in expression the powers of language itself, for other parts of the body assist the speaker, but these, I may almost say, speak themselves. With our hands we ask, promise, call persons to us and send them away, threaten, supplicate, intimate dislike or fear; with our hands we signify joy, grief, doubt, acknowledgment, penitence, and indicate measure, quantity, number, and time. Have not our hands the power of inciting, of restraining, of beseeching, of testifying approbation, admiration, and shame? Do they not, in pointing out places and persons, discharge the duty of adverbs and pronouns? Amidst the great diversity of tongues pervading all nations and people, the language of the hands appears to be a language common to all men." (bk. XI, ch. 3, pars. 85-87)

This "language common to all men" is further developed in the Middle Ages mainly by monks attempting to classify mimic and gestures while developing a language for deaf-mutes (see Saftien). In it, individual movements of the hand are named according to affects, characteristics or actions and are thus culturally codified as gestures (see Gebauer and Wulf 83f). Their communicative function is also pointed out by John Bulwer in 1644 in his famous *Chirologia: Or the Natural Language of the Hand* drawing on the instructions of rhetorical teachings from antiquity and the classifications of the clerical systems and rules. Apart from that, he adds to his lessons a "manual rhetoric" entitled *Chiromania* in which the hand's gestural forms of expression are introduced as instruments of eloquence. In the classifications of gesticulation, the hand functions as an execut-

ing and performing instrument of either symbolic systems like the alphabet and the numerical system, or of codified positions from which one was supposed to read emotions or characteristics. The gestures of counting and spelling into the 18th century follow the alphanumeric code; those of emotions or characteristics are assigned to the terminological analogies. Jacob Leupold's *Theatrum Arithmetico-Geometricum* published in 1727 gives an outline of these two schemata of classification. Barbara Maria Stafford, in her turn, then also considers this parallelizing of gestures and language as expressions of a "visual culture" in which expressive gestures were "making elusive ideas physical and visible" (195).

Illustration 1: Jacob Leupold,
Counting with Fingers and Speaking with Hands (1727)



Source: Leupold, pl. II

Rhetorical knowledge of a universal 'language' of the hands thus with this accolade entered the iconic sign systems in which it was quasi conserved.³ Their formal parameters reach from the ritual gestures of medieval painting to the mobile gestural and mimical "primeval vocabulary of passionate gesticulation ('Urworte leidenschaftlicher Gebärdensprache') (Gombrich 263) in Warburg's pathos formulas that have found their way from antiquity via Renaissance to modern painting. In the imagery of painting, as in the figural works of sculpture, the gesticulating hands are permanently included in a compositional context. There they are signs among others—important signs of humanity as well, like the facial expression or the physical posture. The *entire* human being could be represented in the visual arts both by the portrait and by the bust, and countenances could be valued in physiognomy as *pars pro toto*, but no other parts of the body could do this—with one significant exception: for Johann Caspar Lavater, for example, the hand alone was equal to the face and even surpassed it in its "*undisguisability*" and its "*agility*" (*Physiognomische* 199). The movements of the hands for him mainly tell about "human *passions* and *performances*" (201).

'Physiognomizing'—i.e., reading faces—as a "social reading guide" satisfied a "need for physiognomic orientation" that had increased with the functional differentiation of modern society and the ensuing commitment to the individuality of its citizens (Lavater, *Von Hundert* 116 [Afterword]). Part of their (concealed) traditions, however, also included mantic methods that had from the earliest times pretended to be able to interpret individual lines of the hand. Physiognomics share in the idea of mantic methods that the individual character or fate shows on the human body in signs, thereby becoming visible and readable.⁴ Chiromancy introduced lessons of signs into cultural knowledge that was able to subsist next to the "universal language" of gesticulation. Thus the signs of the hand were read either as inscriptions of the character or fate of a person, or as signs of his actions and emotions. The hand thereby becomes a crossing point of two different types of signs and practices of interpretation: the lines that point out a permanent marking and the gestures that reveal the current state of the person. However, both claim an absolute power of codification and readability.

In 1785, Johann Jakob Engel also developed a parallel between the thought process and bodily movement according to the rhetorical concept of *eloquentia corporis* in his *Ideen zu einer Mimik* that in the first place was meant for actors. He especially underlines the

3 On the influence of rhetorical gestures on the painting of the early modern period see Baxandall.

4 A short survey of the history of chiromancy is presented by Schrenck-Notzing 3f.

dexterity of the hand that he equates with the flexibility of thought. However, he additionally makes a momentous differentiation within his systematic presentation of the gestural and mimical way of acting; he contrasts "painting," i.e., indicative gestures that generally accompany speech, with "expressive" gestures as the genuine ones. Only these expressive gestures disclose the inner condition of their originator, either on purpose by "sensually" imitating an idea or by involuntarily divulging emotions with unguarded movements of the hand (126f).

With this contrast, Engel frees gestures from their servile relationship towards rhetorics, defining gestures as an independent expressive sign system. Instead of simply accompanying speech, for him the "expressive" gestures as 'silent' speech represent additional human emotions not visible through spoken speech (see also Gumbrecht). The expression of emotions at the same time lies in the individual responsibility, distinguishable from other individuals by the ability to conquer his or her passions. Engel as well sees expressive gestures as a universal language whose differentiation into "nations, classes, genders, or characters" can be disregarded (34). Since, according to him, the "real substance" of expressive gestures lies in their "sensual representation of the state of the soul" (Pollnow 164) that has its "natural and essential" representation in the signs of these gestures, for Engel they also represent the *principium individuationis* of human beings.

Codifying gestures as an alphanumerical symbol system or as analogous to the logic of spoken language becomes obsolete as soon as the movements of the hand are burdened with the articulation of expressivity and individuality. This discursive movement has its start at the end of the 18th century and lasts until the 20th. It is connected with a shift within the discourse with which the readability of the hand is negotiated and of the media in which it is represented. Already ennobled with its special position in mantics and physiognomics, the hand is treated more and more often as a separate object of knowledge. Thus, in the first half of the 19th century, both physiology and anatomy, but also chiromancy, begin to look at the (bone) structure of the hand and its forms independently of the organic entity of the body. The anatomist and physician Charles Bell, for example, who had already called attention to himself in 1806 with his *Essays on the Anatomy and Philosophy of Expressions*, published a study entitled *The Hand* in 1833.

As a result of such an ennobling, hands were also valued in art history as *genuine* objects. Thus, for Adolf Koelsch, who in 1929 presented a popular treatise entitled *Hände und was sie sagen* (Hands and what they are saying), "countless individual representations of hands show that the hand by itself alone has its language

as well and is often able to perfectly express the most touching feelings" (9). The hand claims our interest here as well as a *genuinely* 'speaking' one that moreover—quite in the meaning of Johann Jakob Engels—is especially able to create exceptionally expressive gestures. In this talk of the 'speaking' hand that can express even "the most touching feelings," a *topos* is named that has not been lacking in any theory of physical expression since the Enlightenment. For example, in cultural-historical ethno-psychology and in the history of languages, this *topos* becomes a scholarly argument. Here, *gestures* are attributed to the human "mimetic ability" (Walter Benjamin) and are considered a form of language preexistent to speech. Particularly the hands are accorded expressive qualities in comparison to which speech seems impoverished.⁵ Consequently, also the evolutionary history of the program of awareness formation starts with thinking about the free use of the hand. Thus Carl Gustav Carus considers the markedly agile and sensitive hand "as the basis of all other" organs of perception because it is through it alone "that perception is introduced properly into *spatial being*" (372f). Aby Warburg's cultural historical formula "between gripping and being gripped" (Gombrich 303) puts this idea in a nutshell.

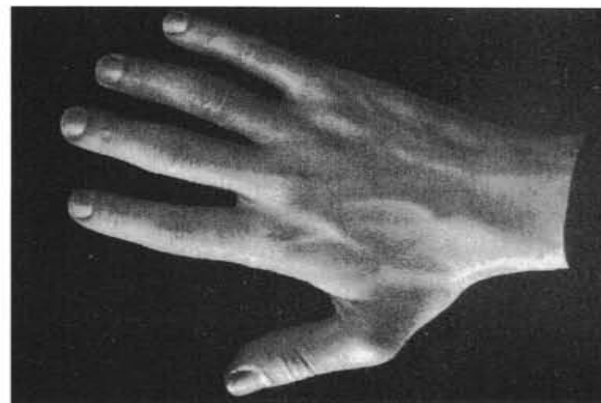
The genesis of expressivity in this point of view is dependent on the free use of the hands whose isolated representation was of specific interest to Koelsch. Thus he finds a plethora of visual representations in past art that *exclusively* show hands. This focus on the 'image' of the hand can be described as an epistemological caesura in the relationship of knowing and seeing that is connected to a change of discourse. The archeological reconstruction of this change leads us to an episteme in which the hand as an object of sign-practices was connected to a technique of visualization that gave it a thus far unequalled visibility.

This constellation is owed to a newly awakened interest in the forms and lines of the hand that in the first half of the 19th century initiated an abundance of publications on this subject, as well as a media innovation—the invention of photography that was announced by Jacques Louis Mané Daguerre in 1839. This technical medium changes the 'image' of the hand and the conditions of its generation. Accordingly, Adolf Koelsch adds a compendium of photographs that only show hands to his treatise, with the help of which he explains the respective forms of the hand and their individual characteristics. The photographs, integrated into a series of images, expose their object by consciously using the pictorial effects of photogra-

5 That sign language supposedly preceded speech, as Wilhelm Wundt has asserted in the first volume of his *Völkerpsychologie*, and thus was a human "Ursprache" (proto-language), is a quite influential argument around 1900 in theories of language. See Braungart, esp. 230-235.

phy. The hands are focused and brightly illuminated while the other parts of the body disappear in a black background. With this photographic direction of lighting, the pictorial object obtains an aura, thus justifying its scientific analysis by way of its pictorial rhetorics.

Illustration 2: H. Linck, "A Motoric Type, somewhat elementary and with a Touch of Sensitivity"



Source: Koelsch, pl. 10

The hand, photographically guided by the gaze of the camera, is discovered as a special pictorial object: "Much more impressively than in painting, we recognize the hand in the artistic images of persons created with photographic technology. Here, there is no shaping or even idealizing like in painting" (Reuter 263).

But photography does not only direct our view to the hand; it also assures the viewer of the 'truth' of the 'pristinely' represented object. The photograph certifies once again the physiognomic truth of the hand that Lavater had already noted: the *photographed* hand thus becomes the real document of the individuality of its bearer. The hand becoming an image and its nobilitation into an object of epistemology is owed to photography because it actuated its isolation into a special pictorial object.

The photographic 'pictorialization' of the hand points out the break by which the 'language' of the hands has freed itself from the hegemony of an episteme that was oriented on the model of spoken language and the alphabet. But this increase in visual evidence is bought with an automatism that forces it into immobilizing its own much-vaunted agility; now it is assigned to the requirements of a photographic generation of images. For the focusing on the hand, its separation from the entity of the body is at first a result of the

technical process of photographing: it is taken into the field of vision of the camera as an object; it is lit up and at first arrested in a pose for the moment of taking the picture before its image can be fixed on the photographic carrier. This is done with the proviso that "in the hands [lies] almost the ultimate possibility of expressing the represented person, and a precious enhancement for the representation of his or her character" (Reuter 264). Thanks to its photographically generated visibility, the hand has become more than equal to the face as a physiognomic 'expression' of the individual because in view of the times, it augments the conciseness of the character's image.

Hand-Writing

The photograph has a special relationship to the hand as its object; one, however, that allows the aporias in the field of visibility to emerge. The attention granted to the hand both in scholarly and aesthetic discourse provokes considering the "specific life of the hand" (Canetti 254) as a photographic image:

"The palm of the hand as a manifestation of the natural impulse to create and leave a trace has intensely engaged photography and has occupied the field of the photographic image; thereby, it became marked not merely with the transitoriness of the merely visual image but also with the permanence of being labeled as script." (Krauss, "Wenn" 208)

According to this statement by Rosalind Krauss, it is mostly photography that provides for a form of mediated securing of evidence in the realm of visual signs that is adequate to script. Photography already seems related to writing by its very name, which makes the self-inscription of light onto a sensitive carrier into its program: *photography*. At the same time, photographs of hands are specifically appropriate to reflect the photographic generation of signs; by storing the signs of the hand on a material carrier and thereby providing it with a trace that mirrors these inscriptions on the skin, the photograph simultaneously makes the process of signification visible. In the analogy of photograph and script the hand as a pictorial symbol makes its appearance, an image that metaphorically confirms the truth of that which is represented and metonymically refers to the process of signification. Contrary to the 'speaking' hand of rhetorics that only accompanies speech, it is seen as an organ that primarily generates writing. In this signifying constellation, writing always means the *handwriting* in the double sense—as a

readable lineament on the palm and as something written by the hand.

An early evidence of this 'elective affinity' can be found in Felix Nadar's photograph *The Hand of the Banker D.* of 1861 that presents one of the first surviving representations of a hand. It was described at the first exhibition of the Société Française de Photographie as "étude chirographique" (chirographic study) "tirée en une heure à la lumière électrique" (printed in one hour with electric lighting) (qtd. in Morris Hambourg, Heilbrun, and Neágu 247). Nadar's experiments with electric light were explicitly connected with his intermittent interest in chiromancy: "Cette photo nous renseigne sur l'intérêt de Nadar pour les prises de vue à la lumière électrique et sa curiosité, à une certaine époque, pour l'étude des lignes de la main."⁶ Where does this simultaneous interest in chiromancy and experiments in artificial light come from? What do these extremely different areas of study let us see *simultaneously*?

Illustration 3: Nadar, *Banker's Hand* (1861)



Source: Maria Morris Hambourg, Françoise Heilbrun, and Philippe Neágu, eds. Nadar. New York, 1995. pl. 89. Print.

Nadar's albumin copy shows the palm of a hand that according to its title is the hand of a banker, brightly illuminated on a dark background. It lies sideways on a repository that is covered with a

6 Nadar 63: "This photograph demonstrates Nadar's interest in photographs with electric light and his temporary interest in the study of the lines of the hand."

dark cloth, kept upright by an object behind it, so that the palm is directed frontally towards the lens. The photograph represents the hand up to the beginning of the arm joining with the sleeve of a jacket. The narrow, well-proportioned hand with slender, long fingers and a splayed out thumb clearly contrasts with the dark environment. The lines on the palm are easily distinguished because they stand out clearly in the artificial light. If one follows the white-shimmering lines, one recognizes a scar that runs from the end of the thenar to the index knuckle—much more distinctive than the other marks. In using chiromantic vocabulary, one could say that it quite accurately covers the so-called “life-line.”⁷

This coincidence brings forth a double marking, since here a line that for chiromancy shows the length of an individual life is superimposed by a trace left by a real injury of the hand. The partial coincidence of chiromantically significant lifelines with this scar entwines two contrary practices of signification and the knowledge contained in it: while the lifeline signifies a predestined fate in a world order given by god, the scar belongs to a modern episteme of subjectivity in which knowledge rests on painful individual experience and likewise on contingent incidents.⁸ The two incompatible terms—fate (providence) and chance (contingency)—merge together in this identification. Nadar's photograph shows a decided interest in the signs of the hand; it points out the scar as a sign that in the modern conception of a self-determined individual is turned into a signifier for individuality under the beams of the artificial light. For this kind of perception, it is not the lines of the hand that show a predestined ‘fate’ but the scar that points out the distinctiveness of a person as his specific mark.

Also the so-called “line of fate” that reaches from the thenar to the middle finger is noticeable in the photograph of this hand. It is remarkably short. In chiromancy this signifies an early death or an “accident towards the end of life” (Schrenck-Notzing 16). Burdened with this sign that becomes visible in Nadar's photograph, the representation of *The Hand of the Banker D.* becomes a *memento mori*. The possibility of an unexpected death quasi doubles the photographic image by mortifying the hand or ce more at a point in time at which the death-prophecy is hovering above the life of an unknown person who is only made visible in the photograph through his hand. Moreover, the identity of the banker is not entirely made public and thus the photograph becomes an allegorical image that

7 A model of the chiromantically relevant lines of the hand can be found in Schrenck-Notzing 14.

8 For Nietzsche, physical pain is the catalyst of pasting processes of memory in which the subject becomes aware of itself and the scar is its trace, because “only that which never ceases to hurt stays in the memory [...]” (61).

directly furnishes its own interpretation. It is an allegory of the photographic practice of signifying mortification.

Nadar's interest in chiromancy needs to be placed in a discursive field whose contours—like his experiments with artificial light—begin to show the epistemological conditions of this interest. Significantly, contemporary authors attempted on the one hand to collect and systematize chiromantic knowledge and to adapt it to the scientific standard of their time on the other. Stanislas d'Arpentignys work *La Science de la main, ou l'Art de reconnaître les tendances de l'intelligence d'après les formes de la main* (The science of the hand or the art of recognizing the tendencies of intelligence according to the forms of the hand) was published in a second edition already in 1856, i.e., only a few years before Nadar's photograph of *The Hand of the Banker D.* was taken. In 1843, the same author had already published his *Chiromnomie, ou l'Art de reconnaître les tendances de l'intelligence d'après les formes de la main* (Chiromnomy, or the art of recognizing the tendencies of intelligence according to the forms of the hand) dealing with the structure of the hand. This treatise is criticized by Carl Gustav Carus only three years later in his morphological study *Über Grund und Bedeutung der verschiedenen Formen der Hand in verschiedenen Personen* (On the reason and meaning of the different forms of the hand for different people). Adolphe Desbarolle's publication *Les mystères de la main* (The mysteries of the hand) of 1859 which was followed in 1884 by *Les mystères de l'écriture* (The mysteries of writing) has been edited, expanded and translated until the 20th century so that we can also attribute a high level of popularity to this work.

Within this discursive realm, photography—because of its semiotic characterization as a trace “that is causally connected with the things in the world to which it refers, like fingerprints, footprints or water rings left by cold glasses on a table” (Krauss, “Die photographischen” 116)—takes on a distinctive position. Relating photographs with fingerprints is only peculiar on a first glance. Rather, Rosalind Krauss' comparison has a method. It goes back to Charles Sanders Peirce's classification of signs that he established in 1893 in order to answer the question *What is a Sign?* At that moment photography had already become part of a lasting semiotic inventory of culture. It therefore is not astonishing that Peirce used it as an example for the illustration of his three classes of signs.

For him, photographs are indices in contrast to other pictorial forms like drawings or paintings which can represent similes but also symbols. Peirce, however, is pointing out the heteronymous semiotic status of photography at the same time. He assigns the technical medium functional-logically both to the indices and to the similes:

"Photographs, especially instantaneous photographs, are very instructive, because we know that they are in certain respects exactly like the objects they represent. But this resemblance is due to the photographs having been produced under such circumstances that they were physically forced to correspond point by point to nature. In that aspect, then, they belong to the second class of signs, those by physical connection." (5f)

Peirce semiotically allocates the technically generated similarity that the photographs have to the objects which they represent to the mechanical-chemical process of the generation of signs—i.e., to the process of taking and developing the photograph. Thus, it is signified primarily as the trace of a real contact. In this way it seems to be related to fingerprints and footprints. Semiotically, Peirce establishes an elective affinity between the signs of the hand and the signs of the photograph that Nadar had made visible in his *Hand of the Banker D*. His simultaneous interest in experiments with electric light and chiromancy is fed by the epistemological impulse to let the signs on the hand photographically appear and to make them readable as inscriptions of the real.

In the practice of chiromancy this logic of signs is doubled once more. By reading the lines on the palm as signs of future events and not as past ones—as traces that point to something that invariably will happen and which they quasi attest to "before its time"—chiromancy attributes to the hand the role of a material carrier of signs and simultaneously correlates it to writing as a foundational mode of an interpreting "reading." But from now on the form and size of the hand will also become scientifically relevant signs that can be read and classified as types. Thus, Nadar's photograph *The Hand of the Banker D*, with its chiromantic or chirognomonic pattern of interpretation already confronts two contrary ones within *one* hand.

In the transition from a 'language' of hands to the logic of signs of hand-writing, an epistemological break emerges: the gestures of the hand are not codified or grammatized any longer according to the logic of (analog) language; rather, the hand is signified in the model of script as a heteronymous field of signs. This means that the signs of the hand are, like script, subject to spatialization and can be read in a similar way as the succession of letters on the page of a book. The photograph, "as a paradoxical stage for the hand and its relationship to writing" (Krauss, "Wenn" 208) displays this reading of the signs of the hand and its effects of meaning.

In the 'older' medium of script, the photograph is reflecting the mediated form of its generation of signs. It addresses writing as a practice of signification that precedes it. The hand in this case distinguishes itself as a photographic object *par excellence*. Like the scar on Nadar's photograph of the banker's hand is an allegory of photographic mortification, photographs of writing hands can thus

be considered as allegorical unfoldings of this logic of signification. Handwriting indeed discloses its originator just as distinctively as does that scar or the fingerprint. Thus, the Latin *stylus* does not only signify the writing implement but also the individual style of writing. It is therefore hardly astonishing that Adolf Koelsch has incorporated a great number of representations of writing hands in his photographic pictorial atlas.

Illustration 4a and 4b: Willot and Gret Widman, "Two Expressive, Elaborated Representations of the Sensitive Type. Arranges by Stages of Life"



Source: Koelsch, pl. 22 and 23

Hand-Work

It becomes clear from Koelsch's photographic tableau that visually isolating the hand, thereby making it more 'scientific,' allows it to become more classifiable. The observed object thus becomes more differentiated. D'Arpentigny and Desbarolles had distinguished seven basic forms of the hand in their chiromony, "in which a spe-

cific occupation, character traits or certain types of employment, i.e., psychic characteristics corresponded to certain physical attributes and forms of the hand" (Schrenck-Notzing 5; all following quotations 6f). The basic form is represented by the so-called "elemental hand" that is attributed to people with limited intelligence who do physical work. The "working hand" usually characterizes businessmen "in whose occupation numbers play an important role." The characteristics of the "artistic hand" are its shapely build. In comparison, the "useful hand" of the "good citizen and civil servant" is less well proportioned. The "philosophical hand" possesses gnarled hands that indicate "abstract logical thought and the solution of difficult mental problems." The form of the "mental" hand is pointed and it is "the most beautiful and exceptional form." "This type indicates persons who rise far beyond their milieu by way of their intelligence, their lofty nature and their idealism." The seventh and last class of hands represents "a mix without any specific type" that is "characteristic for individuals that know something of everything and also of nothing, thus for example Journalists, and middlemen."

This classification, as arbitrary as their logic may be, should make one thing clear: the hand is now no longer a mediator of a rhetorical body language or of a visual symbol system; it substitutes as *pars pro toto* a very current social body. Also the lines of the hand are no longer interesting, nor the interpretation of the character or the future of a certain individual. Nadar's *The Hand of the Banker D.* in this context seems to be evidence for a certain professional typology. 'Modern' chirologists like Hans Reuter assume that the social conditions of life like the occupations are represented in the forms of the hand.

"It is interesting that the comparison of the hands of a carpenter and of a wood carver show quite important differences in their structure, even though both have to use the mallet, the plane, etc., with the same strength. The exterior form of the hand is influenced to that extent by physical and intellectual occupation." (Reuter 266f)

This morphology concedes the merit of the structures of the hand—i.e., chirognomony—in comparison to chiromancy, the reading of fate from the lines of the hand. This is the scientific turn that all "readings of the hand" in the 19th century take.

This turn can be also concluded from Koelsch's study *Hände und was sie sagen* (Hands and what they say). Initially he rejects any aesthetic or physiognomic approach to his object—there is "almost nothing to figure out" (5). It is hardly any different with chiromancy whose interpretations he also criticizes. Rather, he bases his analysis on the contemporary theories of constitution and classifies culturally, ethnically and socially different types of hands, like

D'Arpentigny and Desbarolles before him, and varies them again by gender and age. Finally, Koelsch defines three basic types that can be combined with each other so that a variety of mixed forms can be deduced from them.

The admission of "mixed forms without a specific type" that make D'Arpentigny, Desbarolles, and Koelsch alike also indicates the limits of the normative impulse of their typologies. However, in their classification we can observe a fundamental differentiation of the hand into a working instrument and into an expressive organ. This differentiation at the beginning of the 20th century characterizes the discourse on the cultural meaning of the hand. It permits describing a renewed change in discourse in which the hand is released from any functional logic and is stylized as the symbol of an increased individuality.

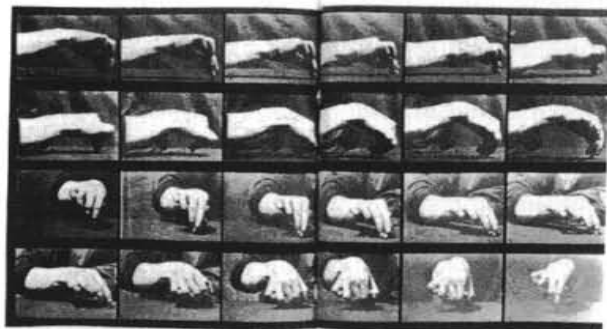
The Working Hand

The typologies of the hand that had been developed since the middle of the 19th century had drawn a picture of a functionally differentiated society whose citizens could be classified by their professional categories and their predominant manual occupation. Towards the end of the century, occupational physiology and ergonomics became interested in human motion sequences in order to optimize their efficiency from the point of view of labor economics. The aim was specifically to discipline and standardize the movements of the hand in order to prepare it for the use in industrial mass production. The analysis of motion sequences, however, needed a specific recording technique—chronophotography that makes it possible to take a temporally shifted succession of individual photographs. In order to study motion in its temporal succession, for example Eadweard Muybridge constructed mobile batteries of up to 24 cameras connected to a clock mechanism that triggered pictures one shortly after the other. The individual photographs were composed into series and these pictorial sequences then copied onto a negative in order to illustrate the recorded motion-sequence.

Muybridge's chronophotographic series *Movements of the Hand* that was part of his encyclopedic presentation *Animal Locomotion* shows pictorial series of different movements of the hand consisting of four rows with six individual pictures each: clapping hands, hands holding a ball or holding a pencil. In these sequences, individual steps making up the movements of such purposeful gestures can be studied for the first time. It is remarkable that Muybridge chose exclusively everyday activities that can occur in different situations. His photographic series spatialize the movements of the

hand so that the temporal and the spatial extension of a gesture *simultaneously* become visible.

Illustration 5: Eadweard Muybridge, *Movements of the Hand* (1887)



Source: Eadweard Muybridge. *Muybridge's Complete Human and Animal Locomotion. Vol. II. Mineola, n.d. pl. 532. Print.*

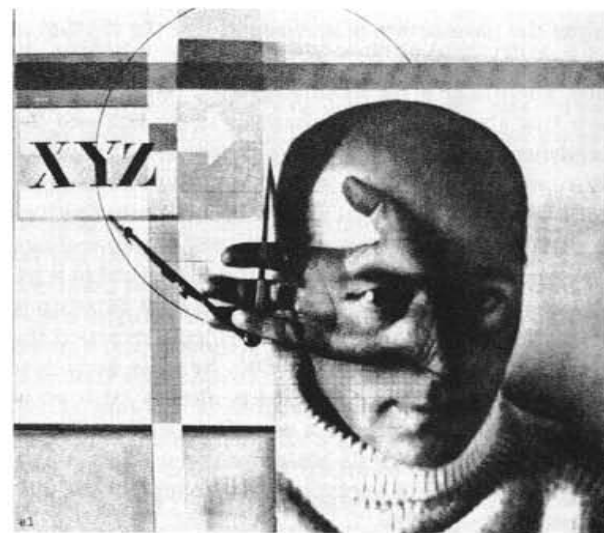
Moreover, Muybridge used chronophotography in order to schematize motion sequences. For the background for his pictures, he often used a light grid. Thus, movements of the body are transferred onto a system of coordinates that allows spatially defining each position of every part of the body involved in the movement and by the serialization of the individual pictures, also temporally. By way of chronophotography, Muybridge resignifies a limited repertoire of physical techniques that are easily comprehensible by their concrete practical orientation. Thus, freeing the hand from its quasi static gestural system of rhetorics and its codification analogous to language leads to a geometrical-mathematical formalization of the movements of the hand, which thus can be described as an effect of the media-change to chronophotography.

The motion-curves that can be abstracted from Muybridge's chronophotographic pictorial sequences signified manual activities that could be incorporated into work-processes. The photographs of working hands, as deictic instruments also point to the work carried out by the hands—this means that they exhibit what they are doing as activity. However, equally fascinated with the representation of objects, photography stages the expressive positions and movements of the hand in such a way that they cannot be associated with any specific function. Here, in these various functionaliza-

tions of the hand, the difference between the working and the expressive hand that had already come to the foreground in the typologies of D'Arpentigny and Desbarolles was taken up again and also expanded upon.

El Lissitzky's photo collage *The Constructor* of 1924 comments on this difference by superimposing the eye and the hand of the artist. It shows a hand lying on a sheet of graph paper holding dividers as an iconographic symbol for the constructor of the world. Its positioning showing the palm can be compared to Nadar's banker. With this positioning of a hand in action, El Lissitzky reveals himself as a mental worker. He simultaneously stages his artistic self-portrait in this picture of a hand in action because it metonymically presents his creative individuality as a typographer. Thus, the hand differs from working hands that perform monotonous movements in optimized operational sequences. El Lissitzky's *Constructor* initiates the transition from the general physical techniques of the hand to its individual expressive techniques in which the mobility and sensitivity of the hand are signified again.

Illustration 6: El Lissitzky, *The Draftsman* (1924)



Source: Foto-Auge: 76 Fotos der Zeit, zusammengestellt von Franz Roh und Jan Tschichold. *Tübingen, 1973. Cover. Print.*

The Expressive Hand

In the beginning of the 20th century, experimental psychology developed an interest in the study of gestural movements based on the information from the earlier chronophotographic studies of movement. Auguste Flach, student of the psychologist Karl Bühler, in her treatise *Die Psychologie der Ausdrucksbewegung* (The psychology of expressive movement), using the example of the conventional gesture of appeal, maintains that "... the mere gesture as a static posture is dead, empty, and ambiguous. Only when the pleading behavior is added does the gesture truly unambiguously express an emotion" (461).

Experimental psychology has recognized that gestures have to be studied in their situational connection and in their process of motion. Thus, it distances itself from a static inventory of gestures as it was passed on by rhetorics and maintains the fundamental openness of meaning of every seemingly quite conventional gesture like that of the hand raised for an appeal. Only in connection with the process of motion and the behavior accompanying the gesture does it divulge a *specific* meaning. However, in order to observe this openness of meaning, we need a technical medium that can practically analyze the parameters of movement, like the rhythm and field of tension within a gesture.

Already Muybridge's chronophotographic studies of movement had shown that the gesticulating hand is never still and that it indeed establishes the gesture by way of coordinated individual movements. But only with film does scientific research and popular entertainment have at its disposal a technical medium that re-invents the hand as the Proteus of gestures. In 1888, Étienne-Jules Marey had demonstrated the filmic illusion of the movement of a hand and had already recorded its opening and closing on a filmstrip (see also Braun 151). And his assistant, George Demeny, recorded the movements of the hand of a magician in 1893. In these early documents of gestures recorded by film, the hand is already both an object of physiological research as well as a suggestive carrier of expression, and thus the hand also owes its emancipation from its function as a "motor" (Leroi-Gourhan) of operational sequences to the increase of its expressivity through film.

The industrial psychologist Fritz Giese therefore calls the "working hand" a precursor of the "expressive hand" that "wants to be a mirror of the spiritual dispositions of the self and thus stays away from useful expressive behavior" (55). Only in the realm of aesthetics does the hand acquire the dignity that puts it on par with the eye as a mirror of the soul. There it is assigned to the hermeneutical basic differentiation of surface versus depth and is interpreted as a

shaped form pointing out a hidden meaning. Giese simultaneously relates the question of a "formal language" of the expressive hand to its cultural shaping. Moreover, he distinguishes static from dynamic, intuitive from learned forms of expression. Thus, the autonomous formation of motion sequences distinguishes the expressive hand that "can be unreserved, spontaneous and 'productive' in a more narrow sense" (56) from the working hand, leading to Stefan Rieger's reasoning:

"In this way, the expressive hand is contrasted with the working hand. This contrast is an effect of the complexity of movements and therefore, if nothing else, an effect of whether and to what extent which systems in their motor skills have which degrees of freedom at their disposal." (434)

For Giese, the formation of the individual expressive hand takes place according to a pedagogical program. He names four stages of emancipation from the working hand: starting with the "denoting, representing expressive hand," the "'suggestive' expressive hand" represents its highest development which only becomes effective in relation to the environment and its audience (57). For its description, Giese invokes the motion picture as a model of reception:

"One could add that it is something that needs an environment, it is aimed inside out like cinematic drama: it needs an audience and participants. It is never meant to be strictly self-referring. This expressive hand lures, threatens, commands, drives ahead, wards off, etc., others who are situated around the self." (58)

Only the cinema, therefore, offers the ideal media stage on which the hand can be formed into an expressive hand. By depicting the expressive hand perfected in the "cinematic drama," he repeats what film theories arguing from a psychological point of view like Hugo Münsterberg's "psychological study" *The Photoplay* of 1916 have already described about the meaning of the hand for calling attention, for suspense, and for narration in filmic close-ups (see Münsterberg 31-39). Lew Kuleschow's plan for a study entitled *Expressive Hände* (Expressive hands) from 1923 therefore can be seen as a filmic blueprint for Giese's "suggestive expressive hand." Kuleschow's film project was supposed to represent the expressivity of hands only, irrevocably freeing the signs of the hand from the rhetoric inventory of gestures, from their labeling as scripture and their functionalizing as the working hand. With this, the hand's function becomes the expression of emotions. In the visual field, new forms of meaning are opened up for it by film; however, it also transfers the hand's expressions to their controlling mechanisms:

"Thus, from the perspective of construction, the chopping up of movements in cinematography corresponds to the partitioning of the body [...], its permeation with time, meticulously controlling rhythm, etc. In film then from the perspective of diachrony, the latency of encoding whose medium was script becomes visible—if it was perceived at all." (Rieger 80)

Film projects like Kuleschow's attempted to leave this latent encoding behind. By fragmenting the body in photography, increased again by the "atomization of the visible" (Starl 95) in chronophotography, the resistance against the codifying of the body was also created.

This resistance formed against the typological schemata of classification and its photographic pictorial atlases, the ennobling of the expressive hand, and the individual gesture. While photography had discovered and at the same time arrested a congenial pictorial object that could on the one hand be staged and auraticized while on the other remain open for scientific productions of meaning, film awakened the interest in the mobility and the freedom of gesticulation of the hand instead; one began to analyze movement as such. While Muybridge synchronized the motion sequence of a gesture with his representative range of individual photographs—thereby seeming to extinguish retrospectively the fragmentation of the motion processes—cinema intensified the perception of the rhythm and choreography of a gesture. Thus, the film takes back the schematization of movement again, which chronophotography had used in order to test the individual shape of gestures with the help of the technical possibilities of random repetition and variation.

But this liberation from the logic of speech, from the codification of script, and from the functionalizing in operational processes is itself only an effect of a cultural-historical caesura. Many activities of the hand in the work process have become obsolete in industrial, profoundly industrialized mass-production. By transferring more and more functions of the hand to machines that are able to accomplish complex manufacturing processes, the once trained and practiced motion sequences of handling tools or material and the storing of "operational sequences" (Leroi-Gourhan 253) in the ontogenetic memory are losing their meaning. This seems to mean that also *the fate of the hand* is sealed. Its "regression" (Leroi-Gourhan 255) caused by automatization is the other side of the seeming autonomy as expressive hand.

It is not for nothing that Fritz Giese speaks of a "double culture of the working and the expressive hand" that has to be overcome "in order to better substantiate the final goal, the development of solidly self-contained personalities." He sees a future with mankind at peace with itself within the "possibility of a culture of the hand" and therefore he recommends the "education of the hand" as a proven

therapeutic means (59). The culturalization of the hand as an expressive one reaches its high point with Fritz Giese's pedagogical project of a "hand culture." In the autonomous expressive hand, a process of individualizing the gesture is accomplished that had been envisioned in Engel's theory of expression and that—with the representational practice of photography by way of which the hand had risen to become a distinctive object of epistemology—has reached the level of visibility. This process becomes collectively effective in the suggestiveness of an increase of the "cinematic drama" of the expressive hand. Giese's project of the "education of the hand," however, remains utopian. With view to an incommensurable individuality, resisting codification is only possible against the backdrop of the inevitability of encoding.

Such a radical renunciation of gestural codification finds its home in photographic and filmic representations of hands that fetishize the object as such or that peremptorily demand expressivity. By photographing hands "that are individuals of unmistakable uniqueness," the photographer—according to Arthur Gläser—is "granted epiphanies that have revelatory effects in the ultimate sense," because "these hands emerge almost ghostlike from some nothingness," revealing "a new form of observing, a new form of presenting, a new truth and beauty" (717). Rilke saw the hands' "own culture" in their history. It is the history of their varied generation of meaning about which their images inform us.

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- auch d. unterschiedene Instrumente u. Maschinen, welche theils in d. Ausübung auf d. Papier, theils auch im Felde besonderen Vortheil geben können, insonderheit wird hierinnen erkläret d. Nutzen u. Gebrauch d. nicht gnugsam zu preisenden Proportional-Zirckels.* Leipzig, 1727. Print.
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