

7 The Scientist as Personality

Elaborating a Science of Intimacy in the Nadar/ Chevreul Interview (1886)

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On 31 August 1886 the French chemist Michel Eugène Chevreul turned 100 years old. The government deemed the event a suitable occasion for a national festival. No expenses were spared to honor the pioneer of organic chemistry, the director of Gobelins' manufacturing for over forty years, the author of the celebrated theory of the contrast of colors, the patriot who had twice refused the Tsar's offer to leave his country for Russia, and the benefactor of mankind whose improved soap and candles were used in every home in the nation. All in all fifty-two speeches were made, a medal was struck, a statue was unveiled, the major Parisian theatres ran plays written for the occasion, delegations of foreign scientists and the President of the Republic assembled, the Paris town hall hosted a banquet for a thousand guests, a festival of poetry and music was held in Chevreul's honor, and a candle-lit procession illuminated the streets of Paris on that evening.¹

The Third Republic was notoriously prone to such great public celebrations, from the burial of Victor Hugo in the previous year, to the French revolution's centenary in 1889. These popular ceremonies were orchestrated by the government with a characteristic display of the young Republic's symbols, busts of Marianne, elected representatives and ubiquitous flags, arguably substitutes for the religious festivals favored by the Second Empire. The distinctive values of the Third Republic, Secularity, democracy, and progress were to take the place of religion and political and social conservatism (Nelms 1987).

In the ideological battle waged by the new regime, science and technology played a central role. Against the Empire's transcendent values, the republicans believed science would bring economic progress, social welfare, and, most importantly, the recovery of national prestige following defeat at the hands of the Germans in 1871. Scientists were hailed as heroes and were literally made to take the place of religious icons as objects of public worship. The republic's secular sanctification of Pasteur is one notorious instance (e.g., Geison 1995: 259–274). On a more modest scale, Chevreul's centenary fulfilled the same function.

The representations of scientists on such occasions were primarily conventional, in the sense that they were portrayed in their public, official capacities rather than as private persons: as icons to be celebrated, heroes to be emulated, public figures to be respected. And when their private selves were mentioned, scientists appeared as hard-working, self-sacrificing, honest, modest individuals devoted to the greater good. The iconography produced by these occasions is unmistakable, as Figure 7.1 reminds us, taken from the special issue of the nationally-distributed journal *Le Courier*



Figure 7.1 Chevreul centenary issue in *Le Courier Français* 3: 35 (31 August 1886), 5.

Français devoted to Chevreul's centenary. The press played an important role in consolidating and spreading such visual and literary conventions of representing scientists.

The printed media could, however, sometimes function as a locus for experimentation, creativity, and renewal in matters of representation: not only materially, for instance with the introduction in the later decades of the nineteenth century of a number of techniques for transferring photographs to the print medium, but more fundamentally in fostering new cultural representations of science and scientists. One such example is the unorthodox contribution to the celebration of Chevreul's centenary published in the *Journal Illustré* on 5 September 1886. This journal published for the occasion an interview between the photographer Nadar (Félix Tournachon) and Chevreul. It consists of a transcript of the conversation, questions by Nadar, and answers by Chevreul on a variety of topics, accompanied by a series of photographs of the two men chatting, taken by the interviewer's son, Paul Nadar (see Figures 7.2–7.5). This is a remarkable document in many respects: part showmanship, part advertising stunt, part technological prowess, and even part science fiction. All these elements were brought together by Nadar to produce a self-consciously novel manner of representing the scientist that focused on his private, intimate self. The Nadar/



Figures 7.2, 7.3 The first two pages of the *Journal Illustré* issue dedicated to the Nadar-Chevreul interview (*Journal Illustré* 23:36 (5 September 1886): 281–282).

Chevreul interview arguably constitutes a milestone in the emergence of a new convention of portraying scientists as personalities.

II

Picking up the classic analysis running from Edgar Allan Poe (*The Man of the Crowd*) through Charles Baudelaire to Walter Benjamin, Richard Sennett has argued in his *Fall of Public Man* that the nineteenth century saw profound social changes in the conduct of public life. He contends that in its later decades “personality entered the public realm”, one manifestation of the increasingly pervasive secular worldview of European societies. Immediacy of sensation and perception prevailed in all spheres, echoed for instance in Baudelaire’s “Modernity is the transitory, the fugitive, the contingent” (cited in Nochlin 1972/1990: 28). In science, it meant a move away from metaphysics and towards phenomena and experimentation, while impressionism and naturalism were its embodiments in literature and the arts. In society also, immanence became more valued than transcendence, and the emphasis placed on appearance: Behavior, dress, the immediate environment were now conceived as reflections of the inner self. People in public ceased to be represented by rank or titles, and instead were differentiated according to personal characteristics. In short, “beliefs in society [...] centered on the immediate life of man himself and his experiences as a definition of all that he can believe in” (Sennett 1986: 150–152).

Even social relationships were redefined, in particular behavior in public. Since external details were taken to reveal inner character, people in public sought to shield themselves from the scrutiny of others. In theaters, the public increasingly policed itself into silence. On the street, one attempted to be unremarkable and to control one’s feelings. In contrast, public figures were expected to display the character and personality which the spectators themselves repressed. It was in these conditions that the cult of the personality could come into existence: Politicians displayed their character more than their political beliefs and actors’ opinions were echoed throughout the press.

The most cursory survey of today’s media coverage of public figures shows the endurance of this trope into the twenty-first century; and that it is by no means restricted to politicians and actors, but also includes scientists. Focusing on the case of the Nadar/Chevreul interview, this paper examines the contexts of the elaboration of a new type of scientific persona in the printed media and the resources Nadar mobilized to this end; and how different material, visual, and narrative techniques, in particular scientific techniques, were brought together into a “science of intimacy” whose first subject was Chevreul. My analysis relies primarily on the published version of the interview that appeared in the *Journal Illustré*, but I have also made use of unpublished materials pertaining to the interview.



Figures 7.4, 7.5 The second and last pages of the Nadar-Chevreul interview. The whole issue consists of alternating pages of text, as in Figure 7.3 (transcript of the conversation), and pages of photographs with captions as above (*Journal Illustré* 23:36 (5 September 1886): 284–288).

The *Journal Illustré*'s was actually a much-reduced version of the original project, which featured a great many more photographs taken during the *entretien* and included the planned publication of a book by Nadar, *L'Art de Vivre Cent Ans*.²

III

The *Journal Illustré*'s coverage of Chevreul's centenary is in contrast in several crucial respects with contemporary visual representations. To begin with, Chevreul is portrayed in a very plain setting, unlike the glorifying pedestals of the official celebrations. The photographs show him sitting opposite a slouching Nadar in front of a hastily drawn screen. The table is covered with a woolen rug and a crumpled carpet shows between its unadorned legs. While in several of the unpublished photographs, Chevreul is dressed up and posing for a formal portrait, he seems during the interview to have made himself comfortable, shedding his top hat, tie, and even his shoes, swapping them for slippers, as shown in Figure 7.5. The recorded conversation between the two men deals with such mundane topics as Chevreul's eating and drinking habits and the physiological causes of his longevity; anecdotes about Nicephore Niepce are told, and the respective

merits of balloons and airplanes are weighed. In every respect, the interview seems to privilege the trivial, the quotidian about Chevreul, and while it is acknowledged that he is a great scientist, little mention is made of his scientific achievements.

Perhaps the most remarkable aspect of this interview is the way in which it is introduced and set up by the “editors” of the *Journal Illustré* (to all evidence Nadar himself). This, it was claimed, was a new, revolutionary type of journalism, only made possible by technological innovation. Nadar, famous photographer and balloonist, socialite, and caricaturist, a passionate advocate of the *Plus Lourd que l’Air* had, the “editors” contended, now invented a method which “will mark the annals of the human mind.”³ Acknowledging the recent fashion for what was becoming known as “interviews,” a form of journalistic writing borrowed from the United States, the “editors” pointed out that this kind of reporting could easily misrepresent the thought and words of the person interviewed:

When one of our peers in journalism [...] makes an “interview”, that is, goes to ask questions to this or that celebrity of the day, he can only offer his easily mistaken ear and his treacherous memory to the crowd avid for his stories. Yet the sole purpose of such a piece of information resides in its absolute mathematical precision [...]

Only science could provide a solution to this problem of inaccuracy [...] and give the reader the “proof” of the veracity of the reproduced conversation. (*Le Journal Illustré* 1886: 282)

To guarantee the accurate rendering of Chevreul’s utterings, Nadar had resorted to photography which had arguably so far improved since Daguerre that it had become truly instantaneous. Further, Nadar had proposed to record the conversation by means of the phonograph, which he claimed to have had first imagined in the 1850s, describing it as a “daguerreotype of sound”. Unfortunately, the new device did not yet allow the recording of spontaneous speech, so it was replaced by what was referred to as “the official, if not automatic stenographer” (Nadar 1886: “Avis des éditeurs”). Co-ordination between the recording of sound and image was effected by the calling of numbers, making it possible to match photographs closely with the words spoken at the time of exposure, as the captions on Figure 7.5 demonstrate.

In this way, “Nature caught by surprise” could be displayed. “For the first time the reader becomes the spectator [...]. For the first time, he does not need anyone to listen and to see for him: it is he, he himself, who sees, who listens”. From wherever he was, the “editors” contended,

From the back of his flat, sitting at the fire, in his sick-bed, from the lost extremity of the most distant solitudes, onboard a ship beyond the sea

horizon, he is present always and everywhere, always where he wishes to be, penetrating to places no one has ever been to, in the most secret, most remote intimacy of the greatest as well as of the lowest men. [...] He sees, he *hears* the first and the last actors of all the dramas and comedies of our daily life. (Nadar 1886)

The reader was thereby informed, entertained, and educated, the explicit aims of the whole enterprise. The first application of this new method was to Chevreul, from whose lips the reader would gather the secret of his longevity and his exact opinions about science and method, thus making these pages a “genuine encyclopedic breviary of the nineteenth century” (Nadar 1886).

Mechanical and (quasi-)automatic recording, it was therefore argued, guaranteed authenticity in capturing and rendering the visual and auditory components of the conversation, such that the reader became a virtual witness of the exchange between Nadar and Chevreul. Instead of admiring him from a distance, as conventional reporting and public celebrations required, the reader was now in a position to experience the great scientist for him- or herself.

IV

This document has often been referred to as the first photographic interview. It evidently belongs to this period of widespread invention and experimentation with sound and image recording devices which led to cinematographic cameras and phonographs in the 1890s, from Thomas Edison’s kinetoscope and phonograph, Edweard Muybridge’s zoopraxiscope, to Jules Janssen’s photographic revolver and Etienne-Jules Marey’s chronophotography. Nadar was well acquainted with these developments, having attended, on Marey’s invitation, the first European demonstration of Muybridge’s technique in 1881. In fact, he had been friends with Marey since the 1860s, sharing with him a fascination for new technologies, including airplanes, photography, and telegraphy (Braun 1992: 35, 37, 52).

Nadar’s set-up indeed bears more than a passing resemblance to some of the proto-cinematographic devices, especially those combining sound and image. The phonoscope, for instance, developed a few years later by Marey’s assistant Georges Demeny, was an apparatus for visualizing speech (originally devised for teaching speech to the deaf) through the projection in rapid succession of a series of photographs of a person articulating a sentence—one of the Marey laboratory’s earliest attempts at synthesizing movement. Demeny described his invention in the popular science journal *La Nature* as “speaking photographs” that “preserved the physiognomy [of speech] just like the phonograph preserved voice. By adjoining the latter to the *phonoscope* the illusion will be complete” (see Figure 7.6) (Demeny 1892: 515).



Figure 7.6 Georges Demeny's articulating 'vive la France!' (detail). The original caption reads 'Spécimen des photographies parlantes. Photographie des mots *vive la France!* (Demeny 1892).

Nadar drew an explicit analogy between the interview set-up and Marey's chronophotographic method: just as "doctor Marey was able to capture and preserve all the successive moments of the flight of birds", Paul Nadar had captured "the attitudes and successive expressions of the venerable centenarian whose face underwent transformations following each evolution of the dialogue, while each play of his physiognomy was recorded by the operator" (Nadar 1886: "Avis des éditeurs"). Nadar had recorded the successive moments of the motion of Chevreul's *thoughts*, as one contemporary commentator put it.⁴ Although the twelve photographs that appeared in the *Journal Illustré* only give an imperfect impression of the intended effect, the technical set-up and the resulting images imitate the chronophotographic method. And indeed, the initial project had been to publish over one hundred pictures, a task which proved technically (and most likely financially) impossible (see Figures 7.7, 7.8, 7.9).⁵



Figures 7.7, 7.8, 7.9 Examples of materials that were not used in the *Journal Illustré* issue. Chevreul is shown explaining his theory of the contrast of colours. (Bibliothèque Nationale de France).

The Nadar/Chevreul interview, then, was put forward as a transposition of chronophotography to the realm of personality. Mechanical recording techniques were extended beyond the physiological characteristics of animal and human motion to encompass the psychology, the thoughts, and character of the subject under investigation. If scientists had often enough involved their own bodies in chronophotographic experiments as the phonoscope example shows, Nadar went a step further and subjected a scientist's *mind* to Marey's technique.

More generally, Nadar drew heavily on scientific rhetoric and emphasized scientific method. He contended that the interview embodied "the conquest of the document by science" (*Le Journal Illustré* 1886: 282). For instance, he repeatedly quoted Chevreul on a central component of the scientific method, observation: "scientific observation solves all material and moral problems", "in all matters, one must prove, one must show",⁶ "I want to show, because it is when I see that I believe!"⁷ Chevreul had summarized his *Méthode à posteriori expérimentale* as follows: "1. observation of a phenomenon; 2. reasoning, whose aim is to discover the immediate cause of the phenomenon; 3. experiment to control the outcome of the reasoning" (Chevreul 1866). Nadar made the principles guiding the interview accord with those guiding Chevreul's work, considering Marey as the finest proponent of Chevreul's *méthode*:

Marey was destined to become the future head of the *a posteriori* school, the foundation of the science of the old Chevreul. Like the stubborn centenarian, when Marey has seen, he will want to see again. He will not rely on his eye, his hand, and his ear. Legitimately cautious

against the illusions of sight and hearing, he only trusts in the automatic, the incontrovertible sincerity of the tool which he has trusted to see, touch and hear for him. (Nadar 1899: 301).

Observation required a careful disciplining of the scientist in order to ensure reliable results, and scientists worked to become as transparent as possible, notably by adopting mechanical recording technologies such as photography. Although the text of the interview places much emphasis on recording technology, it could in this way be presented as the means of providing an unmediated, true to nature, transparent reproduction of the conversation. Deploying the techniques of automatic recording and the rhetoric of mechanical objectivity, Nadar claimed to give a “mathematically exact”, “authentic”, and truthful portrayal of Chevreul unmediated by journalistic subjectivity.

In a potentially ironic reversal, Nadar thus applied in the interview this experimental method to the chemist himself. Nadar took on the pose of the self-effacing scientist observing and recording the external characteristics of his subject of investigation, while Chevreul was turned into the object of investigation - though Nadar’s presence in the text and in the photographs made him simultaneously an object of his own observation.

Clearly, though, this was not quite science. Instantaneous photography made visible the otherwise imperceptible succession of bodily motions.⁸ But what was the added value of Nadar’s set-up for studying a conversation or Chevreul himself? The nature of the journal, Nadar’s own background, the emphatic prose suggested that if this document was an experiment, it was one of a particular, media-oriented kind—not that such hybrids were particularly unusual. A common property of the proto-cinematographic devices was their easy transit between scientific laboratories, research institutes, exhibitions and fun fairs. Many of the optical devices for researching movement rapidly made their way to fun-fairs, where they enjoyed a brief life as entertaining novelties. Muybridge had first become involved with successive photography to investigate the sequence of motion of the legs of running horses, but he later tried to convince Edison to commercialize his instrument for entertainment purposes. Nadar insisted, however, that his set-up had lost none of the original scientificity of Marey’s method.

V

Of course the alleged transparency of Nadar’s set-up was carefully constructed. Not only was the electric phonograph replaced by a perhaps automatic but first and foremost human stenographer, the text of the interview itself was heavily edited, as shown by the variations between the different versions that survive. Indeed, we know that the interview took place over several days. The choice of the photographs and slices of conversation to be

reproduced added of course another element of subjective interpretation. The *Journal Illustré* featured for instance a long section on one of Nadar's obsessions, hot-air balloons, while Chevreul's account of his theory of colors was largely omitted.

So while Nadar explicitly disrupted conventional representations and rules of reading and replacing them with "Nature itself", he was in fact engaged in the elaboration of new conventions for representing spontaneity and authenticity. This is the essence of the realist project in art and literature in the nineteenth century, and in particular of the Naturalistic movement in French literature, a movement which itself claimed to be inspired by scientific method. The most prominent of the naturalists, Emile Zola thus wrote in *Le Roman Expérimental*, first published in 1880:

If it has been possible to transfer the experimental method from chemistry and physics to physiology and medicine, as Claude Bernard had, it can be transferred from physiology to the naturalist novel. From this day, science thus enters this realm of ours, us the novelists, analysts of man in his social and individual action. (Zola 1890: 6)

In mobilizing scientific techniques and rhetoric so explicitly in portraying Chevreul, Nadar was in line with the naturalistic discourse. Observation, attention to detail, authenticity in the portrayal of the social and material realities of the times were the main features of naturalism, as displayed throughout the volumes of Zola's *Rougon-Macquart* series and which we find expressed in similar terms in the interview. In 1885 naturalism also made its first appearance on stage, with the setting-up of André Antoine's *Theatre Libre*, an experimental theatre supported by Zola himself, and which started out by staging some of his plays. The Théâtre Libre caused a scandal throughout the late 1880s in Paris for Antoine's hyperrealist staging. In particular, Antoine asked his actors to speak normally, rather than declaiming as was the norm; he replaced footlights with natural lighting, and encouraged actors to turn their back to the stage when the plot required it, just like Nadar on the interview photographs. The analogy between the interview and theatrical play was furthered by the introduction of sub-text: Chevreul's "Permettez", "Alors", "Voyons," are reproduced in the text; a comment by Nadar at one point is qualified by the word "whispering" in brackets. Such interjections, just like Chevreul's slipper are prime examples of "superfluous details" to the narration that, according to Roland Barthes, through their very redundancy create an "*effet de réel*" and are accordingly a hallmark of realist literature (Barthes 1969/1984: 179–187).

For all its claims of novelty, the Nadar/Chevreul interview in fact imitated the naturalistic project to apply scientific method to the representation of individuals and societies, and it borrowed its conventions to convey the impression of unmediated reality. Nadar appears in this perspective as the director of a naturalistic drama with Chevreul as its main character.

VI

In order to understand not only in what way Nadar mobilized scientific techniques and rhetoric in constructing this representation of the scientist, but also the rationale for elaborating this kind of representation, we need to take into account the immediate purposes the interview was made to serve and the wider context in which it was elaborated.

One answer is that the interview also served the prosaic purpose of advertisement. Already Chevreul's birthday had given rise to several initiatives: newspaper advertisements claimed that the lungs of the illustrious centenarian had been preserved thanks to the *Gerandel* throat drops; a Bordeaux pharmacist had likewise suggested that Chevreul would become immortal if he regularly took his special concoction.⁹ The *Journal Illustré* interview was in part an advertisement for Eastman products. Not only was Eastman mentioned several times in the course of the conversation; his products also figured as an advertisement at the bottom of one of the pages: "The images in this issue were obtained with Eastman film which produces an exposure in one two-thousandth of a second" (*Le Journal Illustré* 1886: 287).

Since the move from wet to dry photographic plates in the late 1870s, a whole business of processed, ready-made dry plates had grown, especially in the United States, with George Eastman becoming one of the major manufacturers. In late 1885, Eastman had begun commercializing strip-film as a substitute for glass plates. Simultaneously he started investing in the European market, setting up a central bureau for European sales in London and franchising other establishments throughout the continent (Jenkins 1975: 66–121). In France, the *Office Général de Photographie* on 53 rue des Mathurins became Eastman's privileged partner, as the advertisement in the *Journal Illustré* indicates.¹⁰ This was Paul Nadar's atelier, that a couple of years later also helped commercialize Eastman's new camera aimed at a mass market, the Kodak, as Figure 7.10 suggests.

The interview is then what we would nowadays call an infomercial. The emphasis on spontaneity, on absolute precision in the recording, and truth in the rendering were in part attributed to the new Eastman film, which, it was claimed, enabled photographs to become truly "instantaneous" for the first time. In practice of course the difference between a photograph made in a hundredth of a second and one made in one two-thousandth of a second, while certainly crucial for projects such as Marey's, was insignificant for the recording of a conversation. Further, the introduction's deliberate emphasis on this new interviewing method's ability to reach each reader (readers became spectators, they each attended the event, each of them in the first row), corresponded to Eastman's project to transform photography into an amateur pursuit, to simplify its practice by making training superfluous, and thereby to conquer a large market. The next logical step was that each of the readers might have photographed the conversation them-



Figure 7.10 Kodak-Nadar advertisement, 1888 (*Revue Bleue*, (15 December 1888))

selves as the Kodak advert suggested two years later: as Figure 7.8 implies: “photography by all and for all”. The exclusivity and uniqueness of the interview was made possible, it was argued, by the new Eastman film; but it was implied by the Eastman advertisement on the same page that each purchaser of photographic film would be able to reproduce such a feat. Selling the exclusive to a large public was already then a fine sales argument.

The rise of a large market for new technologies was not confined to photography: the press was another case in point. After the freedom of the press law was passed in 1881, the press grew exponentially in France: more than a million papers were sold daily in Paris alone in the late 1880s. More than anything else, this contributed to turning journalism into a commercial venture, which implied the industrialization of newspaper production as well as a profound change in the content, style, and appearance of newspapers. Photolithographical advances (e.g., the replacement

of photoengraving by the half-tone process for instance made possible the inclusion for the first time of a large number of illustrations). This development, which in Britain was dubbed “new journalism” privileged reporting and news, which became the “heart of the newspaper” as *Bel Ami* stated in Maupassant’s eponymous novel published in 1885. News, novelties, sensationalism, and commercialism were the hallmarks of the new journalism, in which Nadar, stuntman and acknowledged self-publicist, was at home (Wiener 1988: esp. 1–90).

When Nadar promised that the reader, from wherever he was, could from now on be himself in the presence of Chevreul, he was supplying an exaggerated vision of the transformed perceptions of space and time which telegraphy, photography, and railways had initiated, and which his predictions about airplanes and phonographs furthered (no wonder Jules Verne had taken Nadar as his model for Michel Ardan, the brash hero of his early science-fiction novel *De la terre à la Lune!*). Instantaneity captured mechanically or electrically and reproduced at a great distance seemed to abolish time and space, and blurred the boundary between presence and absence, in contrasting it to the biological time represented by Chevreul’s great age.

This made for a dramatic account suited to the emerging new journalism, intended to create a sense of wonder akin to the visit of the great exhibitions so prized by late nineteenth-century Europeans, with its typical display of futuristic, amazing technology. Just like exhibitions, the interview testified to a continuum from science to technology to entertainment, a system which relied on the creation of a large market for innovative and entertaining technology, a growing urban public with a modicum of spare income to spend on entertainment and consumer goods, whether newspapers or photographic cameras.

Adopting Walter Benjamin’s pessimistic take on this development, in this economy, the scientist appears to be reduced to a mere *actualité* destined to disappear from the next issue, leaving space for the next amazing novelty. Nadar took on here the role of the all powerful reporter delivering stories (and products) to an avid public. Science, via the techniques and rhetoric of precision and objectivity and the scientist Chevreul, served at best as a pretext, at worst as legitimating agents for a new journalism that was in fact driven by commercial interest. The insistence on authenticity and immediacy only sought to dissimulate the fact that this system destroyed its very authenticity through endless mechanical reproduction (Benjamin 1936/1996: esp. section II).

VII

What position did the reader occupy in this configuration? He or she was drawn into this techno-commercial system, and not just as a customer. If

Nadar's set-up and the newspaper were presented as transparent media, it was up to the reader to observe Chevreul's behavior and interpret the evidence supplied. In Benjamin's words, every spectator became an expert of sorts. This in principle empowered the reader, but only on the condition, of course, that he or she possesses the requisite skill to make sense of "Nature caught by surprise" (Nadar 1886). For this a science of a less mechanical and of a more intuitive kind was required for reading Chevreul's personality from the evidence supplied; a hermetic science of correspondence between appearance and essence, physiognomy. This is the final component of Nadar's science of intimacy I want to consider.

Félix Nadar first became involved with photography in the 1850s when helping his brother Adrien make a series of photographs for the physiologist Guillaume-Benjamin Duchenne de Boulogne. Based in the Salpêtrière Hospital in Paris, Duchenne had set out in the 1840s to "discover the laws which guide the expression of human physiology", as he put it, "provoking, by means of electrical current, the contraction of the muscles of the face, to make them speak the language of passions and of feelings, and starting from the expressive muscle to reach the soul which sets it into motion". In 1854, Duchenne asked Adrien Nadar to assist in the production of a photographic taxonomy of facial expressions for publication in his volume *Mécanisme de la Physiologie humaine, ou analyse électro-physiologique de l'expression des passions applicable à la pratique des arts plastiques* (Duchenne de Boulogne 1862: quotations on pages xi–xii).

The following year Adrien and Félix Nadar realized the *Têtes d'expression de Pierrot*, a series of photographs of the famous mime Debureau acting out attitudes such as "laziness", "surprise", or "attention", echoing Duchenne's project on a theatrical mode (see Figures 7.11 and 7.12). Nadar was well acquainted with Duchenne, sharing with him a profound admiration for the work of Rodolphe Töpffer, the inventor of the comic strip (Jammes 1978: 215–220; for a detailed comparison of Töpffer and Duchenne's physiognomical methods see Dupouy 2005: 24–60).

For the *Têtes d'expression*, the Nadar brothers were awarded the gold medal of the 1855 Paris Exhibition but they soon fell out over the nature and extent of their respective contributions to Duchenne's project, and over the use of the name Nadar. In the ensuing legal battle, Félix Nadar asserted his views on photography:

What cannot be learnt is the moral intelligence of your subject—it is this rapid tact that puts you in communication with the model, and leads you to assess and guide him towards his own habits and ideas and following his character, and enables you to give, not trivially and by chance, an indifferent plastic reproduction within the reach of any laboratory assistant, but the most familiar and the most favorable likeness, the intimate likeness [*la ressemblance intime*]. This is the psycho-



Figure 7.11 Guillaume-Benjamin Duchenne de Boulogne; with Adrien Tournachon, Plate 31: “Excitation électrique un peu plus forte des grand zygomatiques: Rire faux,” from “Ch. 6: Muscles de la joie et de la bien veillance,” in *Mécanisme de la Physionomie Humaine*, before 1857, published 1862.

logical side of photography, the term does not seem over-ambitious to me.¹¹

This intimate likeness Nadar appeals to is fundamentally physiognomic. According to the founding father of the science of physiognomy, Johann Casper Lavater, the role of the portraitist is to capture the features of the person and reveal its inner truth rather than to represent or enhance their beauty (Lavater 1775–1778/1969). Lavater advocated realism in representation, but a realism that revealed a deeper truth. This notion was central to Balzac, for whom the insignificant details, the missing button, the untied laces, revealed social, economic, and personal characteristics of the persons he described in his novel, notably in the opening scene of *Le Père Goriot*, in which each aspect of its inhabitant’s dwellings is minutely described, providing so many clues as to his psychological state.



Figure 7.12 Adrien Tournachon, Gaspard Félix Tournachon (Félix Nadar), Le mime Debureau en Pierrot: La surprise (1854–1855)

The physiognomic taxonomies which run from Lavater to Duchenne and Nadar's Pierrot series provide all the clues necessary for such an interpretation to those wishing to really know who people were. The interview could similarly function as an exemplary case for the readers to practice with, courtesy of Nadar.

VIII

In this final *coup d'éclat* before his retirement, Nadar returned to his early experiments with physiognomic photography, applying his consummate skill to capture exactly these details important to interpretation, offering to the cued reader all the material necessary for deciphering Chevreul's inner

self through his appearance and utterances. Chronophotography, naturalism, and physiognomy were combined in Nadar's science of intimacy, an attempt to recreate *presence* and to capture Chevreul's personality in the context of the commercialized new journalism. Throughout the interview, Nadar's insistence on authenticity implied that the scientist's private self was more real than the public figure on which the official celebrations focused; and that personal acquaintance was a better source of knowledge than official representations could ever give.

The Nadar/Chevreul interview exemplifies the emergence of the public figure of the *personality* discussed by Sennett (1976/1986). As one of Nadar's correspondents pointed out, Nadar had "perfected the very contemporary art of undressing people in public".¹² Chevreul's science was not so much the focus of the article, but rather his personality: his (and Nadar's) ideas about current affairs primed over his scientific achievements. But science was nonetheless present throughout, put forward as the means of creating this immediacy and intimacy, of making this type of representation possible. The readers were thereby shown what it was like to *be* an eminent scientist.

While the public celebrations of Chevreul imposed an interpretation of his work to the public and gave a standard picture of the personality of the great scientist, the readers of the *Journal Illustré* were given the impression that they could make their own opinion of the scientist. By removing the pedestal on which the republic sat Chevreul, Nadar claimed to bring the public figure closer to the readers. But the very realism and vividness of the scientist's portrayal were the result of careful staging. However intimate Chevreul might appear, he was on a stage, displaying a personality mediated by material and discursive technologies. Nonetheless, the reader was given the impression that the distance between the spectator and the scientist was no longer created by ritual, as in the official demonstrations, nor by the dissimulated technologies but it was implied by an intrinsic difference in character. In this respect, Nadar's article is a forerunner of the modern celebrity interview: a star (or Nobel Prize winner) will pose for photographs in his or her own home, and answer questions totally unrelated to his or her work. It is the very fact that the public figure has a personality which makes them interesting and worth listening to. In a sense, when Nadar advised the readers to learn from the old man's wisdom, he was telling them that this was the source of his greatness, and what distinguished him from them. Chevreul's scientific achievements were to be taken as the expression of such a remarkable personality.

The public's role differed markedly in both types of representations: in the official ceremonies the spectator was kept at a distance from the stages, while in the interview the reader "is present always and everywhere, always where he wishes to be, penetrating to places no one has even been to, in the most secret, most remote intimacy of the greatest as well as the lowest men" (Nadar 1886: "Avis des éditeurs"). On the other hand in the latter,

the public was ubiquitous but physically absent, while in public demonstrations the onlooker could at least have a collective sense of being. Actual presence at a public event implied that the spectator could to some extent interact with it, while the anonymous reader of a paper was made wholly passive.

Opposed, but also complementary to the official heavy machinery of glorification of Chevreul, Nadar's portrayal provided in effect a novel means of sanctification of the scientist. Nadar assembled and concentrated in the interview all the elements instrumental to the rise of the *personnalité* at the very moment when the traditional symbolism and separation between public and private beings was being reaffirmed in the commemoration: photography, an impetus to naturalism in art and literature, experimental science with its concern for immediacy and truthfulness, and journalism, the place where the new styles of representation of public figures were fostered and commercialized.

ACKNOWLEDGEMENTS

For their valuable comments and suggestions I am indebted to Simon Schaffer, Annik Pietsch, Bernd Hüppauf, Cornelius Borck, Peter Geimer, Frédéric Graber, as well as the audience at the University of Cambridge's History and Philosophy of Science Departmental Seminar.

NOTES

1. See, e.g., Célébration du centenaire de M. Chevreul. 31 août 1786–31 août 1886, Rouen: Impr. de J. Lecerf, 1886; de Font-Reaulx 1888; Hommage à M. Chevreul, à l'occasion de son centenaire, 31 août 1886 par MM. M. Berthelot, E. Demarçay, Dujardin-Beaumetz, E. Gautier, Ed. Grimaux, G. Pouchet, Ch. Richet et F. Alcan, Paris: F. Alcan, 1886; Guiard 1886.
2. Nadar, "L'Art de Vivre Cent Ans" is an undated, unpaginated, hand-written manuscript, kept at the Bibliothèque Nationale de France: mss naf 13828 [copie 258 ff] (in the following cited as "Nadar 1886"). On the basis of this manuscript, another version of the interview has been reconstituted and published in Reynes (1981). In addition, over 80 photographs taken of and around the interview exist, e.g., at the BnF and at the Médiathèque de l'Architecture et du Patrimoine in Paris (those kept in the latter can be viewed online: <http://www.mediatheque-patrimoine.culture.gouv.fr>)
3. Nadar 1886: "Avis des éditeurs." All translations are mine unless otherwise indicated. On Nadar's life and work see Gosling (1976).
4. "Lettre critique de M. Gustave Grignan," quoted in Nadar (1886).
5. According to G. Reynes, Nadar initially proposed the interview to the Figaro, but was turned down on account of the technical difficulty of printing so many photographs. A partial version of the interview featuring only 12 photographs subsequently appeared in the Journal Illustré (Reynes 1886: 156).
6. "En toutes choses, il faut prouver, faire voir," cited in Nadar (1886).

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7. “Je veux faire voir, parce que c’est quand je vois que je crois,” cited in Reynes (1981: 169).
8. On instantaneous photography in science and art in the period see Geimer (2004).
9. As reported in “Les réclames Chevreul”, *Le Courrier Français* 1886: 14.
10. “les pellicules EASTMAN [...] se trouvent au seul dépôt pour la France, OFFICE GÉNÉRAL DE PHOTOGRAPHIE, 53, rue des Mathurins, Paris,” *Le Journal Illustré* 1886: 287.
11. Exposé des motifs pour la revendication de la propriété exclusive du pseudonyme Nadar. M. F. Tournachon-Nadar contre MM. A. Tournachon Jeune et Compagnie. Mémoire adressé au tribunal de commerce de la Seine siegeant le 23 avril 1856, Bibliothèque Nationale de France archives: 4-FM-31413.
12. “Lettre critique de M. Gustave Grignan, 25 novembre 1886,” cited in Nadar (1886).

BIBLIOGRAPHY

- Barthes, Roland (1968/1984) “L’effet de réel”, in *Le Bruissement de la Langue, Essais Critiques IV*, Paris: Seuil.
- Benjamin, Walter (1936/1996) *Das Kunstwerk im Zeitalter seiner technischer Reproduzierbarkeit*, Frankfurt am Main: Suhrkamp.
- Braun, Martha (1992) *Picturing Time, The Work of Etienne-Jules Marey (1830–1904)*, Chicago: University of Chicago Press.
- Chevreul, Michel E. (1866) *Introduction à l’Étude des Connaissances Chimiques*, Paris: L. Guérin.
- (1886) “Centenary issue”, *Le Courrier Français* 3:35 (31 August 1886): 5.
- Demenÿ, Georges (1892) “Les photographies parlantes”, *La Nature*, n. 984 (9 April 1892): 51.
- Duchenne de Boulogne, Guillaume-Benjamin (1862) *Mécanisme de la Physiologie humaine, ou analyse électro-physiologique de l’expression des passions applicable à la pratique des arts plastiques*, Paris: J. Renouard.
- Dupouy, Stéphanie (2005) “Künstliche Gesichter. Rodolphe Töpffer und Duchenne de Boulogne”, in A. Mayer and A. Métraux (eds.), *Kunstmaschinen. Spielräume des Sehens zwischen Wissenschaft und Ästhetik*, Frankfurt am Main: Fischer Taschenbuch Verlag.
- de Font-Réaulx, Hyacinthe (1888) *Les Hommes utiles*, Lille: J. Lefort.
- Geimer, Peter (2004) “Picturing the black box: On blanks in nineteenth century paintings and photographs”, *Science in Context*, 17(4): 467–501.
- Geison, Gerald L. (1995) *The Private Science of Louis Pasteur*, Princeton, NJ: Princeton University Press.
- Gosling, Nigel (1976) *Nadar*, London: Secker and Warburg.
- Guiard, Émile (1886) *A Chevreul, stances dites...au théâtre national de l’Odéon, à l’occasion du centenaire de M. Chevreul, le 31 août 1886*, Paris: P. Ollendorff.
- Jammes, André (1978) “Duchenne de Boulogne, La Grimace provoquée et Nadar”, *Gazette des Beaux-Arts*, 6: 17.
- Jenkins, Reese V. (1975) *Images and Enterprise. Technology and the American Photographic Industry 1839–1925*, Baltimore, MD: Johns Hopkins University Press.
- Journal Illustré* 23: 36 (5 September 1886): 281, 282, 284–288.
- Lavater, Johann Caspar (1775–1778/1969) *Physiognomische Fragmente zur Beförderung der Menschenkenntnis und Menschenliebe*, Leipzig: ed. Leipzig.

- Le Courrier Français* (31 August 1886), 3: 35.
Le Journal Illustré (5 September 1886), 23: 36.
Nadar, Félix (1899), *Quand j'étais photographe*, Paris: E. Flammarion.
Nelms, Brenda (1987) *The Third Republic and the Centennial of 1789*, New York: Garland.
Nochlin, Linda (1972/1990) *Realism*, London: Penguin.
Reynes, G. (1981) "Chevreul interviewé par Nadar, premier document audiovisuel (1886)", *Gazette des Beaux Arts*, Ser. 6, 98: 155–184.
Sennett, Richard (1976/1986) *Fall of public man*, London: Faber.
Wiener, Joel H. (ed.) (1988) *Papers for the Millions. The New Journalism in Britain, 1850s to 1914*, New York: Greenwood Press.
Zola, Émile (1880/1890) *Le Roman Experimental*, Paris: Charpentier.

