Journal of History of Medicine

Articoli/Articles

THE "STAGING" OF PASSIONS BY DUCHENNE DE BOULOGNE (1806-1875) AND JEAN MARTIN CHARCOT (1825-1893)

LIBORIO DIBATTISTA Università degli Studi di Bari Aldo Moro Dipartimento di Studi Umanistici – DISUM, Bari, I

SUMMARY

THE "STAGING" OF PASSIONS BY DUCHENNE DE BOULOGNE (1806-1875) AND JEAN MARTIN CHARCOT (1825-1893)

Photography deceived the nineteenth century scientists on the possibility of "objectively" catching the scientific objects. G. B. Duchenne and J.-M. Charcot made this attempt, respectively for the emotions and the neuroses, with the sole result of obtaining a theatrical staging of the passions themselves.

The field of research relating to the study of emotions is currently very popular: what they are, what are their underlying neurophysiological mechanisms, what are their values from a psychological and pedagogical point of view, what effect do they have in terms of relations... The research delves even further, to studies on empathy, on neuro-aesthetics, on their adaptive value from an evolutionary point of view. There are numerous scientific journals dedicated exclusively to the subject and the literature includes an incredible amount of texts discussing emotions.

Even historians have had their say on the subject, at least since Lucien Febvre launched the research program aimed at *rebuilding* "*La vie affective d'autrefois*" in 1941¹.

Key words: Passions - Objectivity - Photography - Neurology

Historians of science and especially medicine were the first to begin questioning the meaning to give to the lemma (are the *emotions* of today the *passions* of Descartes?), then they decidedly took the path of physiology first, and neurophysiology today, thus entirely circumscribing the question.

For the sake of clarity, a diachronic definition - with respect to the period we are dealing with in this paper - of "passions" can be taken directly from the *Encyclopaedia* written by Louis de Jaucourt (1774-1779):

Les penchans, les inclinations, les desirs & les aversions, poussés à un certain degré de vivacité, joints à une sensation confuse de plaisir ou de douleur, occasionnés ou accompagnés de quelque mouvement irrrégulier du sang & des esprits animaux, c'est ce que nous nommons passions. Elles vont jusqu'à ôter tout usage de la liberté, état où l'ame est en quelque maniere rendue passive; de - là le nom de passions.

As we can see, the Knight of Jaucourt views these passions from a perspective strongly linked to cartesian physiology, where the movement of blood or animal spirits is responsible for *passive* affection. It suffices here to consider the salience of the mechanical aspect, because that is what we will find in the first of the two authors that we will examine: Duchenne de Boulogne.

Guillaume-Benjamin-Amand Duchenne was born in Boulogne on 17 September 1806. Not wanting to follow his family's tradition and become a fisherman or military sailor, and disappointing his father who had earned the Cross of Legion of Honour from Napoleon for his pirate merits, he had decided to study medicine. He had graduated without infamy and without praise in 1831 with a thesis entitled: Essay on Burns. He returned to his native town to practice, but had a tormented family life: his first wife died of puerperal sepsis giving birth to his first son, then he remarried with a young widow who was *très coquette* and soon abandoned him; so even though he

was strongly attached to his hometown, he chose to return to Paris in 1842. However, in the eleven years he spent in Boulogne, Duchenne had an experience that would leave a mark on his entire professional life: in 1835 he was practicing electropuncture on one of his patients when he noticed a particular behaviour of the face's muscular groups: "Did he realise that the abrupt opening of the current at the puncture site produced an isolated, circumscribed contraction limited to a single muscular group? It is supposed, but in any case, he did not confine himself to this small exceptional fact his intuition allowed him to be amazed of. He knew that exceptions in science did not exist, and even if a fact is an extreme rarity, it still follows laws just like everything else. He repeated the experiment, established all the necessary conditions, repeated it again and again until he was satisfied, and from that point on never stopped"². Beyond the rhetorical tone and naive considerations of an epistemological nature, Edouard Brissaud's account actually underlines a significant aspect of Duchenne's work: his attention to detail and his fussiness, which combined with his undoubted talent as a *bricoleur*, were the basis of his important discoveries which were all obtained through a technique he personally developed in an original fashion: localised electrisation. This methodology for exploring neuro-muscular structures was a modification of the galvanic electropuncture that had first been experimented with by Jean Baptiste Sarlandière (1787-1838). First them, and later Magendie, had thus tried to apply electric force in a limited way to an organ or in a very precise location, but the procedure required the technique to be applied "in the open", that is, prior to uncovering the structure to be electrified, and one can well imagine how such a procedure was grisly and little accepted by the patients. In Duchenne's original memoire, he himself focused on the problem: "How can you govern an agent which is so powerful, as fast as electricity, through organs? How can you set limits? This problem which seemed so difficult was actually one of the

simplest to face. To solve this, all that was necessary was a careful analysis of the phenomena that were produced daily in the practice of galvanising, applying metal exciters to dry or damp skin"³. In short, Duchenne's solution consisted in the application of electricity by means of electrodes, or "rheophores", covered with damp deer skin directly on the patient's skin, which was in turn moistened with saline. The electricity was produced by a battery (galvanic) or a rudimentary coil (faradic).

Once he had this instrumentation and had developed this technique, Duchenne became consumed by a mania that would allow him to create an entirely new field of human pathology: muscular pathology. Constantly modifying and improving this technique, Duchenne made it his means for entering the elite of Parisian medical science: some department heads refused the services of the provincial doctor who they considered euphemistically "extravagant"; others, in particular Armand Trousseau (1801-1867) first and then Charcot, not only welcomed Duchenne and his equipment for testing his theories in their departments, but acquired the relative results relating to neuromuscular physiology and pathology. In 1851 he received a prize for his studies on localised electrisation from the Academy of Medicine. The publication of his main work in 1855⁴ made him a celebrity in the medical field, even though he had never held an academic position. The hospital that he most preferred to visit was the *Salpêtrière*, which was also where he had his greatest therapeutic successes: many "paralytic" hysterics resumed walking after Duchenne's faradising sessions.

But his activity at the *Salpêtrière* was pushed even further when Charcot became *chef de service* in 1862: he truly venerated Duchenne, and had him perform localised electrisation on his patients, welcomed his electrical and photographic techniques, and in turn applied it to the anatomy and pathological histology of the nervous system and the clinical-anatomical method. The two established a close relationship based on mutual esteem: when Duchenne considered moving to London because of the Franco-Prussian War of 1870, he entrusted Charcot with his savings.

Charcot was a regular guest at the dinners Duchenne organised monthly for the medical personalities of Paris towards the end of his career, and he and Carl Potain, two of his closest colleagues, watched over him on his death bed. Duchenne died on 17 September 1875, the day of his sixty-ninth birthday.

Duchenne's work that we are interested in here is Mécanisme de la physionomie humaine. Analyse électrophysiologique de l'expression des passion, applicable à la pratique des artes plastiques of 1862. According to Charles Darwin (1809-1882), Duchenne's book was little known and little appreciated by his contemporaries. To tell the truth, Duchenne was already well known and esteemed at the time, having already published the aforementioned paper on localised electrisation in 1855, which was often taken up by academic authorities such as, in fact, J.M. Charcot in their daily experimental and clinical work. Mécanisme was instead the subject of a lively debate in relation to the Volta Prize Commission, so perhaps the British naturalist's assumption should be considered hasty. In fact, as amply demonstrated by François Delaporte, who dedicated a complex monograph⁵ to the text by Duchenne, his work constituted a true "epistemological break" compared to what had been produced in the field of human physiognomy in the years just before it was published. The French doctor claimed that with "his" technique, which gave him the possibility to limit electric excitation to a few muscle fibres, he could paint a "living anatomy" on his patients' bodies which was absolutely superior to all the previous "dead anatomies". Duchenne's work was composed of a brief general part which discussed questions of a methodological and technical nature together with the effects that can be obtained in anatomy, physiology, psychology and the figurative arts, and a second, more substantial sec-

tion called the Album which contained photographic illustrations of the experiments he had carried out with the rheophores he had invented, along with a detailed description of the relations between muscles, the movement of the same and the emotion involved. I would like to point out for a moment how the doctor from Boulogne simultaneously applied two "scientific instruments" that had already been discovered several decades earlier, but had only very recently been introduced to the study of physiology: in addition to à sa pile et sa bobine, he would walk through the halls of the Parisian hospitals with photographic paraphernalia; he was among the first to document clinical, semeiotic and pathological data with this instrument. In the case of Mécanisme, Duchenne used the rheophores to create an alphabet of the passions: the excitation of the corrugator of the eyebrow, upper eyelid, and zygoma are the letters the face uses to construct the words of pain, surprise, of sadness. The muscles engaged in the expression of each emotion "paint it on the face". He identified "completely expressive" muscles whose isolated contraction coincided with a very precise emotion, becoming "monosyllabic words", and he identified muscles which instead work together with others to express a particular emotion, becoming syllables that contribute to forming the word. For example, the corrugation of the frontal indicates attention, and the contraction of the brow ridge alone coincides with the manifestation of pain.

While to express joy, the large zygoma and the lower orbicular eyelid must moderately contract; lewd pleasure requires the intervention of the nose's transverse muscle and the large zygoma which, associated with a spasm in the eyelids, with the upper lid covering a part of the iris, outline sensual delirium, and so on. Duchenne uses an even more significant metaphor than the alphabetic one chosen here: he speaks of a syntax of emotions in which words, when put together, express concepts, thus making it possible to spell out feelings by studying their physiognomy in motion. Indeed, the universality of this syntax is even greater than that of languages, which have multiplied and diversified since Babel: the mimic language of passions the soul paints on the face is the only true universal idiom. Delaporte suggests that Duchenne had managed to materialistically reduce passions into muscular physiology and had inaugurated the functional study of behaviour with Mécanisme, thus the epistemological reorganisation carried out by the doctor of Boulogne consisted in abandoning the ancient idea according to which passions were localised in the brain, shifting its anchoring point to myology. Perhaps the French historian has presumed too much from the research conducted in Mécanisme: the transition from psychology to physiology is difficult to justify and the game of cross-references between sign, signifier and meaning risks deceiving Duchenne, his immediate critics and his contemporary exegetes. The problem lies in identifying how a certain configuration of facial muscles 'signifies' an emotion. What gives content to the sign and makes its meaning intelligible? According to Delaporte, the translation takes place through a comparison between the expression of spontaneous passions (pain contracts the eyebrow muscle) and those caused by localised electrisation (by stimulating the contraction of the eyebrow muscle I get the expression of pain). But this actually involves an infinite regression: indeed, why does the spontaneous expression of pain signify pain? What allows us to capture the corresponding emotion in that particular configuration? In a certain way, *mutatis mutandis*, it is analogous to Searle's objection to a computer's ability to understand the meaning of symbols in his Chinese room argument⁶. Duchenne himself provides the answer:

Si l'homme possède le don de révéler ses passions par cette sorte de transfiguration de l'âme, ne doit-il pas également jouir de la faculté de comprendre les expressions extrêmement, variées qui viennent se peindre successivement sur la face de ses semblables? Quelle serait donc l'utilité d'un langage qui ne serait pas compris? Exprimer et sentir les signes de la physionomie en mouvement me semblent des facultés inséparables que

l'homme doit posséder en naissant. L'éducation et la civilisation ne font que les développer ou les modérer⁷.

In short, the facial language of passions is innate: just as we are instinctively able to configure our facial mimesis to express joy or sadness, we are also able to understand the facial configurations of our fellow beings, a sort of ante-litteram of mirrored neurons⁸. But further then, is it true that there is a mechanistic-materialistic translation-reduction of emotions to facial myology? Maybe, From our point of view, it may be possible to force a revolutionary reading of the French doctor's work in a functional-behavioural sense. But from *his* point of view, we are still entirely in the 17th century. Reread the quote above: passions are revealed thanks to this "transfiguration of the soul". The agent is always psychological, indeed it is spiritual. It is then the belief of Buffon in l'Histoire de l'homme, which Duchenne mentions in the epigraph, which supports the dynamics of the expression of emotions: the soul is responsible for painting feelings, passions and emotions on the face through muscular configurations; better put, it is a sort of reflex mechanism that - with reductionism - crosses somatic and psychic layers: a fact (information, a sensation) reaches the soul through a path of sensibility and is "imprinted" on this. In turn, the soul "expresses" the emotion that has been produced by means of facial muscular movements.

L'âme est donc la source de l'expression; c'est elle qui met en jeu les muscles et qui leur fait peindre sur la face, en traits caractéristiques, l'image de nos passions, en conséquence, les lois qui régissent l'expression de la physionomie humaine peuvent être recherchées par l'étude de l'action musculaire⁹.

But here we also want to emphasise the Duchenne's use of images in his work to support what we can consider the "orthographic-physiognomic" thesis of emotions as a muscular language. The web is full of photographs taken by the French doctor, but they are often isolated from the context they were taken for and end up taking on new and different meanings. With this paper, we want to bring them back to their place of origin and their original meaning. Duchenne justifies the use of photography in the chapter dedicated to the application of his research to the visual arts. In reality, the expression of emotions is a fleeting, sudden fact, and the artists who have tried to capture expressions on their subjects' faces have always experienced difficulty inducing them to represent emotions through a voluntary act. However, expressive movements are not subject to will; that is why only photography can truly capture the moment and correctly portray the expression of emotions.

La photographie seule, aussi fidèle que le miroir, pouvait atteindre la perfection désirable; elle m'a permis de composer, d'après nature, un album de figures qui feront, pur ainsi dire, assister mes lecteurs aux expérience électro-physiologiques que j'ai faites sur la face de l'homme¹⁰.

Citing *Essai de physiognomie* (1842) by Rodolphe Töpffer (1799-1846), the doctor from Boulogne claims the possibility of inaugurating a *littérature en estampes*, a story made of images, thereby becoming, along with Töpffer the progenitor of comics and *comic art*, and, in the case of Duchenne, photo story books.

The main (but not the only) protagonist of this photographic phenomenology of emotions is, as Duchenne himself reports, an old, edentulous, gaunt face with ungraceful and banal features paired with an inoffensive character and limited intelligence; he was chosen because the thinness of old age sculpts the muscles of the face better and allows for easier electrisation. Moreover, the banality of his traits made him an ideal neutral subject for depicting, thanks to faradising, the most beautiful or the most terrible emotions - which normally do not belong to such a face - in order to demonstrate how the motor organs are responsible for painting passions on the face. And lastly, the poor man suffered from slight anaesthesia in the face and was very patient and quiet, thus also docile to the tortures Duchenne subjected him to...

Here he is portrayed while the reophores precisely cause the contraction of the brow muscle.



Fig. 1. Pain = Brow muscle.

In the second photograph, a young actor who - according to Duchenne - was able to voluntarily reproduce the contraction of muscles that ex-



Fig. 2. Surprise = contraction of the frontal muscles and lowering of the jaw.

press a certain emotion, in this case pain similar to Christ in passion (!?). The third shows a young girl, another favourite subject in *Mécanisme*. Regarding the illustration on the right, Duchenne notes that he had asked the subject to voluntarily express surprise: the subject was not able to



Fig. 3a. Fake laugh = contraction of the large zygoma and the sphincter of the eyelids



Fig. 3b. Natural laugh = contraction of the large zygoma and the lower palpebral orbicular.

express this emotion and therefore cannot effectively open his jaw, making the image "seem more like a yawn than a surprised expression".

According to some historians¹¹, Duchenne's *Mécanisme* did not become famous until the publication of *The Expression of the Emotion in Man and Animals* published by Darwin in London exactly ten years later, in 1872. In fact, the British naturalist not only quoted the work of Duchenne in his essay but used some of his photographs to illustrate his own concepts. We have already had the occasion to comment on how this is only partly true and how Duchenne's work already had a large audience. In reality, these historians do nothing more than take up the opinion expressed by Darwin himself in the Introduction to The Expression:

In 1862 Dr. Duchenne published two editions, in folio and octavo, of his 'Mécanisme de la Physionomie Humaine,' in which he analyses by means of electricity, and illustrates by magnificent photographs, the movements of the facial muscles. He has generously permitted me to copy as many of his photographs as I desired. His works have been spoken lightly of, or quite passed over, by some of his countrymen. It is possible that Dr. Duchenne may have exaggerated the importance of the contraction of single muscles in giving expression; for, owing to the intimate manner in which the muscles are connected it is difficult to believe in their separate action... Nevertheless, it is manifest that Dr. Duchenne clearly apprehended this and other sources of error, and as it is known that he was eminently successful in elucidating the physiology of the muscles of the hand by the aid of electricity, it is probable that he is generally in the right about the muscles of the face¹².

Nevertheless, Duchenne's claim for the objective accuracy that can be obtained through photographs is entirely accurate. To tell the truth, his alphabet of emotions is obtained by resorting to a "staging" that preserves very little of that which can be considered "objective". The controversy on the objectivity of scientific illustration, that is, if it should be as close as possible to "reality" or if it can be somewhat manipulated to best express a concept or scientific idea, has been the subject of copious publications which will not be addressed here¹³. In reality, Duchenne was forced, even if for purely technological reasons (the exposure times with the use of collodion were still too long), to create actual backdrops, even including a headrest for his subjects.

Après avoir fait prendre au sujet l'attitude en harmonie avec la scène à représenter, et après avoir fixé sa tête (à l'aide d'un appui-tête), l'expérimentateur l'éclaire de manière à mettre en relief les lignes expressives qu'il veut peindre par l'excitation électrique : ensuite, il procède à la mise au point. Pendant ce temps de l'opération – qui exige un grand sens artistique – la plaque est collodionnée et sensibilisée par un aide. Avant de placer cette plaque dans l'appareil, l'expérimentateur se fait mettre au point par son aide, dans la position qu'il doit occuper, sans déranger le sujet qu'il a déjà lui-même mis au point¹⁴. Moreover, even if it is true that Duchenne always visited the Paris clinics with his camera, it is also true that most of the photos in *Mécanisme*, in which Duchenne himself appears or his hands are visible (as can be seen in the two photos below), were taken by Adrien Tournachon (1825-1923), the brother of Félix Nadar, one of the most famous portrait artists.

And here we cannot negate the umpteenth, fruitful cross between photography, cinematography and science that occurred between the nineteenth and twentieth century. Duchenne, however, claimed responsibility for the last poses in the *Album*, those indicated as the "aesthetic part". Here, in partial repudiation of the previous affirmation of the Boulogne doctor's interest for facial mimicry only, a model "interprets" some emotions suggested by Duchenne through whole-body poses. Note, however, the odd fact that the same model interprets opposing and contrasting "emotional scenes".



Fig. 4a. Ecstatic prayer with the holy transport of virginial purity, deep pain on the left, ecstasy on the right.



Fig. 4b. Flirtatious scene with a disdainful look on the right, mocking smile on the left, modest attitude, overly uncovered chest.

As we mentioned, Duchenne was a welcome guest in the wards of the Salpêtrière, where the primary anatomist-pathologist Jean Martin Charcot kindly welcomed the practice of electrifying his paralytic patients and had inherited Duchenne's passion for the photographic documentation of pathological cases.

As for the role Charcot played in creating the specialisation of Neuropathology, both from a conceptual and institutional point of view, historians of the discipline are substantially unanimous: after a period of disregard (by historians, much less than by doctors) of Charcot's neuropathological work, and favouring greater interest in works concerning hysteria and the prevalent focus on psychiatry rather than neurology, a great collection of historical research has repositioned the Parisian clinician at the centre of the foundation of Neurology which, together with other medical specialisations, flourished in the second half of the nineteenth century¹⁵.

Charcot's career as a teacher began with "free medical teaching" at the Salpêtrière in 1866, and was dedicated to diseases of the elderly and chronic diseases.

Charcot never gave up his work as a teacher, and continued to hold his "free course" even after having obtained the chair in pathological anatomy which required him to teach regular courses; Charcot never gave up his weekly lesson (which later became two, Tuesday and Friday); on the contrary, he would dedicate a great amount of time to preparing and updating them: his lessons were mostly collected and published, first in medical journals, then in volumes in the *Oeuvres Complètes*. Moreover, as a teacher he contributed to the fame that, over the years, was first recognised in the academic circles of Paris and then throughout Europe, as the founder of a School (in the pedagogical-didactic sense) of Neurology.

According to his students, he was not a fascinating orator; in fact, it seems he suffered from stage fright, which obliged him to prepare his

lessons in detail. An examination of the synoptic final drafting of his lessons with the corresponding manuscript demonstrates his meticulous preparation of the teachings starting with the outline of the topic, then the collection of references in the French and foreign press of articles dealing with the same subject, up to the collection of iconographic material that Charcot prepared in the form of sketches, drawings and histopathological preparations to be projected, and finally, the list of patients who would be presented to the audience. In fact, his teachings often abandoned a purely theoretical lesson to become "portrayals of the disease" in which the actors were hospitalised patients. Charcot sometimes participated as an actor himself in this didactic staging of the disease, mimicking contractions in the limbs or facial paresis or the progress of Parkinson's disease. The lessons in which sick patients were present became the characteristic of the Lecons du mardi held since 1882: the theoretical aspect fell to the background in these lessons, which instead focused on the clinical interview with patients, thereby making it possible to observe the by-now famous professor's diagnostic practices, which were most often neurological. Beyond their appearance which is only apparently *naïf*, these lessons were also carefully prepared by Charcot, who chose the most interesting cases to present after a pre-selection carried out by his interns. The "representation" of the disease was not limited to the stage of the clinic's classroom, but was solidified in drawing and photography: the image became a means of nosographic affirmation, and with the work published by Bourneville, the Salpêtrière spread the icons isolated and "invented" by Charcot worldwide. He himself said he was a "simple photographer" of nosological reality. The photographic laboratory of the Salpêtrière was initially entrusted to Paul Regnard (1850-1927), a physician and biologist. Together with the alienist Desiré-Magloire Bourneville (1840-1909), Charcot and Regnard created the Iconographie Photographique de la Salpêtrière, a magazine that, following the path opened up by the Revue Photographique des Hôpitaux in 1869, was a singular case in

the repertoire of scientific journals on neurology, as it entrusted almost all scientific communication to photographic documentation. It was published from 1875 to 1880 and was then replaced by the Nouvelle Iconographie Photographique de la Salpêtrière when Albert Londe replaced Regnard at the head of the photo lab. Londe explained the logic of the photographic observation at the Salpêtrière from his point of view: "When a patient enters the hospital, the medical staff carries out a report called an *observation*. This document contains all the information concerning the patient's antecedents and his current state. As changes occur, they are noted and so on until the patient is healed or death occurs. In many cases the observation is sufficient for the doctor, but in other cases the diagnosis benefits from the addition of iconographic documents. As the diagnosis relates to any type of wound or injury, however perfect the description may be, proper photographic evidence always explains much more than any amount of text can. In certain diseases, general appearance, attitude and the facies are decidedly characteristic; in these cases, the addition of a photo advantageously completes the observation. Furthermore, to keep track of a passing state there is nothing better than a *cliche*; in a word, whenever the doctor deems it necessary, a photo must be taken of the patient upon admittance to the hospital. Every time a modification occurs in the patient's state, a new photo will be necessary: doing so makes it possible to follow the progress of healing or illness". Londe also wrote: "The photographic plate is the scientist's true retina"¹⁶. Similar to Charcot's sketches defining the salient features of particular syndromes, photography became an indispensable tool for documenting the scientific object; the symptom is defined and reified so as to escape the proteinic mutability of flux, thus lending itself to its cataloguing, comparison and measurement. In fact, Londe's laboratory with Charcot not only photographed patients, but on the basis of what Marey was teaching at the Collège de France, chronophotography was also carried out: "The same in cases where the eye itself could not perceive overly rapid movements, such as seizures of epilepsy, attacks of hysteria, pathological progress, etc. Chronophotographic methods easily compensate the impotence of the eye in these particular cases and make it possible to obtain highly valuable documents".

In response to the naive claim against the scientist-photographer's objectivity, we can respond with the words of Georges Didi-Huberman in direct reference to Londe's work and the iconography of the Salpêtrière:

Photography would therefore be an unsafe, labile and even an infamous technique. It puts bodies on stage: and moment by moment, falsifies them (invents them)... A photographic portrait will therefore never faithfully represent its model as it is; it will already represent the subject as "complicated", as already framed within something else, perhaps an ideal, perhaps an enigma, perhaps both¹⁷.

The French essayist's criticism underlines how, at the time, all the photographic sessions had to deal with the slowness of the technique: the exact opposite of the contemporary ideal of "instantaneous". This slowness was linked to the preparation of the collodion plate, the need to set up the pose and create the best possible lighting: all facts that definitively denied the possibility of catching - with the highest degree of spontaneity possible - the manifestation of the pathological/emotional acts that were the aim of the documentation. The similarity, then, in Duchenne's work was guaranteed through the use of localised electrisation to "paint" this or that emotion on the face of lethargic or hypnotised patients, which was then photographed; this was carried out with *in situ* electrodes or without them, since the artificially assumed emotion remained fixed on the face of the unfortunate patients for a certain amount of time.

In any case, perhaps the most extensive and, regardless, the best known photographic staging of the Charcotian diseases were of hysteria. This problematic pathology, this enigmatic challenge for anatomical-clinical science, insofar as it manifested in a thousand different ways and con-

cealed its physical origins, was the field of research to which Charcot dedicated - almost exclusively - the last years of his career, with results that were subsequently judged as *petite défaillance*, a "mild" fiasco. If a hemiplegic contracture is in itself a condition with sufficient steadiness to be accurately depicted, even with slow photographic procedures, "hysterical attacks" lend themselves much less to the complications of the shutter speeds necessary for high quality images. And therefore? Therefore, patients were asked to reproduce, almost with a false *slow motion*, the convulsive and/or emotional outbreaks which are characteristic of hysteria. Charcot codified the phases of the great hysterical attack in a well-known series of "moments" illustrated in a famous panel by Paul Richer (1849-1933).

Prodromes	1º Péríode épileptoïde.				2º Période de clownisme.			3ºPériode des attitudes passionnelles		4º Période de délire.	
A	В	c	D	E	P	G	Н	I	J	K	L
Ch.	AL	AR		-	Contraction of the second	AL		De	ANTE:	D	AS5
W.		st	ADE	202	R	200		R.	S		ela
R	A	-		SER S	S.M.	in			A A	A	Mass
20	- Clar			•	120	E2				20	KAR
Q.	APAT	And And	na da 14 miliona Galeria Maria		La)	100	D	12	EX.	ha	
		A.			-	la la			2	SEO.	
		A CAR	ene or fuji oroja in etaj primaro atak			-		The second		<u>A</u>	
	logicanos du il stato esprit estato anyo de				Ales.	- 260		and the second s	19		
	notico is un policita de un policita de una	-	niner ingere pinet sent pinet sent		Tok				1 All		
	alateri 2 sala Selficer del 12 aletteri esterio 2	- Ar	and the second		Ja			100	-A		
		parasteriar pure Castornario d'			Alex -			A.	A.		
		nutraporati nutration area nutrational	an den an a star Originalia na comunitaria		1 AL			33	A		

Fig. 5. The Paul Richer panel.

Passions staging by Duchenne and Charcot

He was the head of Charcot's laboratory from 1882 to 1896, and a member of the Accadémie Nationale de Medecine, but he was also a professor at the École nationale supérieure des Beaux-Arts who produced works on diseases and art together with the neurologist of the Salpêtrière. Richer's drawings fully illustrate the iconic, representative aspect of Charcot's patients; from the photographic poses to the sketches on paper, the "typical positions" and "variants" of the great "regular" hysteric attack constituted a sort of score to be faithfully interpreted by the patients. And interpreted they were, those women suffering from severe forms of hysterical neurosis: an elusive pathology that - in our day - has changed its name to take on a thousand faces (from post-war traumatic stress disorder to panic attacks to chronic fatigue syndrome), no longer visible by the eves of contemporary doctors. One of the two main tragic heroines of this staging was Blanche Whitman, the "diva of hysteria" who was immortalised in Charcot's arms in the famous painting by André Brouillet. In the painting Blanche, who had spent ten years in the halls of Charcot's hospital, is held by Joseph Babinski and demonstrates the great arch



Fig. 6. André Brouillet, Une leçon clinique à la Salpêtrière.

of the hysterical attack, offering the students of the Salpêtrère his *poitrine richement meublée*, as psychologist Joseph Delboeuf expresses in his essay *A visit to the Salpêtrière* in 1886¹⁸.

Blanche, whose real name was Marie Weidmann (or Weidermann) and was a nurse (!), was easily hypnotised and had performed many of the scenes "predicted" by Charcot's theory, so much so that in the *querelle* on the nature of hypnotic suggestion, the supporters of the school opposing Charcot - the followers of Hyppolite Bernheim - accused her of repeating the poses and symptomatologic pictures "on command". But we are more interested in the other patient, Louise Augustine Gleizes, known simply as Augustine in *Iconographie* and even more anonymously as A. as the protagonist of the second volume, whose photographer - we must again point out - was Paul Régnard. Charcot asked Augustine to stage the "passionate attitudes" phase, or the third part of a great hysterical attack. So here is Augustine posing for Régnard's camera - with the technical limitations we have already



Fig. 7. Augustine.

highlighted - to create the expressions of "threat", "supplication", "amorous petition", "eroticism", "ecstasy" and "mockery", to then pass on to depicting hypnotic contracture and catalepsy with muscle hyperexcitability. And further, hysteric-epileptic contracture with its clear charge of eroticism, the central moment of a show that begins with an opening "cry" and closes with the final "crucifixion".

Augustine had entered the Salpêtrière as a fourteen-year-old in 1874, and had perhaps been raped by her mother's companion a year before:

Durant les vacances elle avait l'occasion de voir un monsieur C. qui était l'amant de sa mère...C., qui était en froid avec sa femme, profitait de ses absences pour avoir des rapportes avec A...âgée de 13 ans... une troisième fois... voyant qu'elle ne voulait pas céder, la menaça d'un rasoir; profitant de sa frayeur, il lui fit boire une liqueur, la déshabilla, la jeta sur son lit et eut des rapport complets.. La malaise continuant, elle vomissait souffrait du ventre...puis ont éclaté les attaques...¹⁹.

Whether true or imagined, the violence Augustine suffered was perpetuated in every hysterical attack, in every convulsion with perfect mnestic reproduction; as Freud said: "hysterics especially suffer from memories, and Augustine thus became the preferred subject for the reproduction and staging of the passions. She would pose and interpret them on command either in front of the photographer or before the general audience in the amphitheatre on Friday.

A simple emotion, for example the mere fact of entering the amphitheatre where lessons were held at the Salpêtrière, to be presented to the audience by Professor Charcot was enough to provoke an attack²⁰.

Charcot was not able to cure her; on the contrary, the girl ran away from the hospital and disappeared forever disguised as a male: the last irony for a pathology that - at that time - was exclusively female. Charcot would certainly disapprove of the popularity of the hypnosis shows that spread in France and Italy towards the end of the century,

but he himself had been their initiator: while he was convinced of ostensibly demonstrating a pathology, he had been the unwitting writer and director. His staging of the passions and pathologies will survive him for a long time.

BIBLIOGRAPHY AND NOTES

- 1. Febvre L, La sensibilité et l>histoire: comment reconstituer la vie affective d'autrefois? Annales d'histoire sociale 1941;3:5-20.
- Brissaud E, L'oeuvre scientifique de Duchenne de Boulogne. (Discours prononcé au congrès de Boulogne le 21 Septembre 1899). Revue internationale d'électrothérapie 1899;3.
- 3. Duchenne GB, Exposition d'une nouvelle méthode de galvanisation, dire galvanisation localisée. Archives Générales de Médecine 1850;4(23):257-289.
- 4. Duchenne GB, De l'électrisation localisée et de son application à la physiologie, à la pathologie et à la thérapeutique. Paris: Baillère; 1855.
- Delaporte F, Anatomie des passions. Paris: Presses Universitaires de France; 2003.
- Searle J, Minds. Brain and Programs, Behavioral and Brain Sciences, 1980;3:417-457.
- Duchenne de Boulogne GB, Mécanisme de la physionomie humaine. Analyse électrophysiologique de l>expression des passion, applicable à la pratique des artes plastiques. Paris: Jules Renouard; 1862. p. 50.
- 8. Rizzolatti G, Sinigaglia C, So quel che fai. Il cervello che agisce e i neuroni specchio. Milano: Raffaello Cortina; 2006.
- 9. Ref. note 7. p. 50.
- 10. Ref. note 7. p. 127.
- 11. Sicard M, Duchenne de Boulogne, médecin-photographe (1806–1875), http://www.item.ens.fr/index.php?id=577835. (Accessed January 25 2018)
- 12. Darwin C, L'espressione delle emozioni. Edizione definitiva a cura di Paul Ekman. Torino: Bollati Boringhieri; 1999. pp. 47-48.
- 13. Daston L & Galison P, Objectivity. NY: MIT Press Zone Books; 2007.
- 14. Ref. note 7. p. 134.
- 15. Dibattista L, Storia della SLA. Forme nel tempo della malattia di Charcot. Roma: FrancoAngeli; 2015.

Passions staging by Duchenne and Charcot

- 16. Londe A, La photographie moderne: pratique et applications. Paris: Masson; 1888.
- 17. Didi-Huberman G, Charcot et l'Iconographie Photographique de la Salpêtrière. Paris: Macula; 1982. pp. 46-47.
- Delboeuf J, Une visite à la Salpêtrière. Revue de Belgique 1886;54:121-147, 258-275.
- Bourneville DM, Iconographie photographique de la Salpêtriere. Service de M. Charcot / par Bourneville et P. Regnard. Paris: Bureau du Progrès Médical; 1878. pp. 126-127.
- Gilles de la Tourette G, Guinon G & Huet E, Contribution à l'étude des bâillements hystériques. Nouvelle Iconographie de la Salpêtrière 1890. pp. 97-119, p. 111.

Correspondence should be addressed to:

Liborio Dibattista, Università degli Studi di Bari Aldo Moro, Dipartimento di Studi Umanistici

liborio.dibattista@uniba.it