Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception,* trans. by A. M. Sheridan Smith (New York: Vintage Books, 1994), ix-xix and 107-123.

Preface

This book is about space, about language, and about death; it is about the act of seeing, the gaze.

Towards the middle of the eighteenth century, Pomme treated and cured a hysteric by making her take 'baths, ten or twelve hours a day, for ten whole months'. At the end of this treatment for the dessication of the nervous system and the heat that sustained it, Pomme saw 'membranous tissues like pieces of damp parchment . . . peel away with some slight discomfort, and these were passed daily with the urine; the right ureter also peeled away and came out whole in the same way'. The same thing occurred with the intestines, which at another stage, 'peeled off their internal tunics, which we saw emerge from the rectum. The oesophagus, the arterial trachea, and the tongue also peeled in due course; and the patient had rejected different pieces either by vomiting or by expectoration' [1].

Less than a hundred years later, this is how a doctor observed an anatomical lesion of the brain and its enveloping membranes, the so-called 'false membranes' frequently found on patients suffering from 'chronic meningitis:'

> Their outer surface, which is next to the arachnoidian layer of the dura mater, adheres to this layer, sometimes very lightly, when they can be separated easily, sometimes very firmly and tightly, in which case it can be very difficult to detach them. Their internal surface is only contiguous with the arachnoid, and is in no way joined to it . . . . The false membranes are often transparent,

> especially when they are very thin; but usually they are white, grey, or red in colour, and occasionally, yellow, brown, or black. This matter often displays different shades in different parts of the same membrane. The thickness of these accidental productions varies greatly; sometimes they are so tenuous that they might be compared to a spider's web. . . . The organization of the false membranes also displays a great many differences: the thin ones are buffy, like the albuminous skins of eggs, and have no distinctive structure of their own. Others, on one of their sides, often display traces of blood vessels crossing over one another in different directions and injected. They can often be reduced to layers placed one upon another, between which discoloured blood clots are frequently interposed [2].

Between Pomme, who carried the old myths of nervous pathology to their ultimate form, and Bayle, who described the encephalic lesions of general paralysis for an era from which we have not yet emerged, the difference is both tiny and total. For us, it is total, because each of Bayle's words, with its qualitative precision, directs our gaze into a world of constant visibility, while Pomme, lacking any perceptual base, speaks to us in the language of fantasy. But by what fundamental experience can we establish such an obvious difference below the level of our certainties, in that region from which they emerge? How can we be sure that an eighteenth-century doctor did not see what he saw, but that it needed several decades before the fantastic figures were dissipated to reveal, in the space they vacated, the shapes of things as they really are?

What occurred was not a 'psychoanalysis' of medical knowledge, nor any more or less spontaneous break with imaginary investments; 'positive' medicine is not a medicine that has made an 'objectal' choice in favour of objectivity itself. Not all the powers of a visionary space through which doctors and patients, physiologists and practitioners communicated (stretched and twisted nerves, burning dryness, hardened or burnt organs, the new birth of the body in the beneficent element of cool waters) have disappeared; it is, rather, as if they had been displaced, enclosed within the singularity of the patient, in that region of 'subjective symptoms' that—for the doctor—defines not the mode of knowledge, but the world of objects to be known. Far from being broken, the fantasy link between knowledge and pain is reinforced by a more complex means than the mere permeability of the imagination;

the presence of disease in the body, with its tensions and its burnings, the silent world of the entrails, the whole dark underside of the body lined with endless unseeing dreams, are challenged as to their objectivity by the reductive discourse of the doctor, as well as established as multiple objects meeting his positive gaze. The figures of pain are not conjured away by means of a body of neutralized knowledge; they have been redistributed in the space in which bodies and eyes meet. What has changed is the silent configuration in which language finds support: the relation of situation and attitude to what is speaking and what is spoken about.

From what moment, from what semantic or syntactical change, can one recognize that language has turned into rational discourse? What sharp line divides a description that depicts membranes as being like 'damp parchment' from that other equally qualitative, equally metaphorical description of them laid out over the tunic of the brain, like a film of egg whites? Do Bayle's 'white' and 'red' membranes possess greater value, solidity, and objectivity—in terms of scientific discourse—than the horny scales described by the doctors of the eighteenth century? A rather more meticulous gaze, a more measured verbal tread with a more secure footing upon things, a more delicate, though sometimes rather confused choice of adjective—are these not merely the proliferation, in medical language, of a style which, since the days of galenic medicine, has extended whole regions of description around the greyness of things and their shapes?

In order to determine the moment at which the mutation in discourse took place, we must look beyond its thematic content or its logical modalities to the region where 'things' and 'words' have not yet been separated, and where—at the most fundamental level of language—seeing and saying are still one. We must re-examine the original distribution of the visible and invisible insofar as it is linked with the division between what is stated and what remains unsaid: thus the articulation of medical language and its object will appear as a single figure. But if one poses no retrospective question, there can be no priority; only the spoken structure of the perceived—that *full* space in the *hollow* of which language assumes volume and size—may be brought up into the indifferent light of day. We must place ourselves, and remain once and for all, at the level of the fundamental *spatialization* and *verbalization* of the pathological, where the loquacious gaze with which the doctor

observes the poisonous heart of things is born and communes with itself.

Modern medicine has fixed its own date of birth as being in the last years of the eighteenth century. Reflecting on its situation, it identifies the origin of its positivity with a return—over and above all theory—to the modest but effecting level of the perceived. In fact, this supposed empiricism is not based on a rediscovery of the absolute values of the visible, nor on the predetermined rejection of systems and all their chimeras, but on a reorganization of that manifest and secret space that opened up when a millennial gaze paused over men's sufferings. Nonetheless the rejuvenation of medical perception, the way colours and things came to life under the illuminating gaze of the first clinicians is no mere myth. At the beginning of the nineteenth century, doctors described what for centuries had remained below the threshold of the visible and the expressible, but this did not mean that, after over-indulging in speculation, they had begun to perceive once again, or that they listened to reason rather than to imagination; it meant that the relation between the visible and invisible—which is necessary to all concrete knowledge—changed its structure, revealing through gaze and language what had previously been below and beyond their domain. A new alliance was forged between words and things, enabling one *to see* and *to say*. Sometimes, indeed, the discourse was so completely 'naive' that it seems to belong to a more archaic level of rationality, as if it involved a return to the clear, innocent gaze of some earlier, golden age.

In 1764, J. F. Meckel set out to study the alterations brought about in the brain by certain disorders (apoplexy, mania, phthisis); he used the rational method of weighing equal volumes and comparing them to determine which parts of the brain had been dehydrated, which parts had been swollen, and by which diseases. Modern medicine has made hardly any use of this research. Brain pathology achieved its 'positive' form when Bichat, and above all Récamier and Lallemand, used the celebrated 'hammer, with a broad, thin end. If one proceeds with light taps, no concussion liable to cause disorders can result as the skull is full. It is better to begin from the rear, because, when only the occipital has to be broken, it is often so mobile that one misses one's aim. . . . In the case of very young children, the bones are too supple to be broken

and too thin to be sawn; they have to be cut with strong scissors' [3]. The fruit is then opened up. From under the meticulously parted shell, a soft, greyish mass appears, wrapped in viscous, veined skins: a delicate, dingy-looking pulp within which—freed at last and exposed at last to the light of day—shines the seat of knowledge. The antisanal skill of the brain-breaker has replaced the scientific precision of the scales, and yet our science since Bichat identifies with the former; the precise, but immeasurable gesture that opens up the plenitude of concrete things, combined with the delicate network of their properties to the gaze, has produced a more scientific objectivity for us than instrumental arbitrations of quantity. Medical rationality plunges into the marvelous density of perception, offering the grain of things as the first face of truth, with their colours, their spots, their hardness, their adherence. The breadth of the experiment seems to be identified with the domain of the careful gaze, and of an empirical vigilance receptive only to the evidence of visible contents. The eye becomes the depositary and source of clarity; it has the power to bring a truth to light that it receives only to the extent that it has brought it to light; as it opens, the eye first opens the truth: a flexion that marks the transition from the world of classical clarity—from the 'enlightenment' —to the nineteenth century.

For Descartes and Malebranche, to see was to perceive (even in the most concrete kinds of experience, such as Descartes's practice of anatomy, or Malebranche's microscopic observations); but, without stripping perception of its sensitive body, it was a matter of rendering it transparent for the exercise of the mind: light, anterior to every gaze, was the element of ideality—the unassignable place of origin where things were adequate to their essence—and the form by which things reached it through the geometry of bodies; according to them, the act of seeing, having attained perfection, was absorbed back into the unbending, unending figure of light. At the end of the eighteenth century, however, seeing consists in leaving to experience its greatest corporal opacity; the solidity, the obscurity, the density of things closed in upon themselves, have powers of truth that they owe not to light, but to the slowness of the gaze that passes over them, around them, and gradually into them, bringing them nothing more than its own light. The residence of truth in the dark centre of things is linked, paradoxically, to this sovereign power of the empirical gaze that turns their darkness into

light. All light has passed over into the thin flame of the eye, which now flickers around solid objects and, in so doing, establishes their place and form. Rational discourse is based less on the geometry of light than on the insistent, impenetrable density of the object, for prior to all knowledge, the source, the domain, and the boundaries of experience can be found in its dark presence. The gaze is passively linked to the primary passivity that dedicates it to the endless task of absorbing experience in its entirety, and of mastering it.

The task lay with this language of things, and perhaps with it alone, to authorize a knowledge of the individual that was not simply of a historic or aesthetic order. That the definition of the individual should be an endless labour was no longer an obstacle to an experience, which, by accepting its own limits, extended its task into the infinite. By acquiring the status of object, its particular quality, its impalpable colour, its unique, transitory form took on weight and solidity. No light could now dissolve them in ideal truths; but the gaze directed upon them would, in turn, awaken them and make them stand out against a background of objectivity. The gaze is no longer reductive, it is, rather, that which establishes the individual in his irreducible quality. And thus it becomes possible to organize a rational language around it. The *object* of discourse may equally well be a *subject*, without the figures of objectivity being in any way altered. It is this *formal* reorganization, *in depth*, rather than the abandonment of theories and old systems, that made *clinical experience* possible; it lifted the old Aristotelian prohibition: one could at last hold a scientifically structured discourse about an individual.

Our contemporaries see in this accession to the individual the establishment of a 'unique dialogue', the most concentrated formulation of an old medical humanism, as old as man's compassion. The mindless phenomenologies of understanding mingle the sand of their conceptual desert with this half-baked notion; the feebly eroticized vocabulary of 'encounter' and of the 'doctor/patient relationship' (*le couple médecin-malade*) exhausts itself in trying to communicate the pale powers of matrimonial fantasies to so much non-thought. Clinical experience—that opening up of the concrete individual, for the first time in Western history, to the language of rationality, that major event in the relationship of man to himself and of language to things—was soon taken as a simple, unconceptualized confrontation of a gaze and a face, or a glance and a silent body; a sort of contact prior to all discourse, free of the burdens of language, by which two living individuals are 'trapped' in a common, but non-reciprocal situation. Recently, in the interests of an open market, so-called 'liberal' medicine has revived the old rights of a clinic understood as a special contract, a tacit pact made between one man and another. This patient gaze has even been attributed with the power of assuming—with the calculated addition of reasoning (neither too much nor too little)—the general form of all scientific observation:

> In order to be able to offer each of our patients a course of treatment perfectly adapted to his illness and to himself, we try to obtain a complete, objective idea of his case; we gather together in a file of his own all the information we have about him. We 'observe' him in the same way that we observe the stars or a laboratory experiment [4].

Miracles are not so easy to come by: the mutation that made it possible—and which continues to do so every day—for the patient's 'bed' to become a field of scientific investigation and discourse is not the sudden explosive mixture of an old practice and an even older logic, or that of a body of knowledge and some strange, sensorial element of 'touch', 'glance', or 'flair'. Medicine made its appearance as a clinical science in conditions which define, together with its historical possibility, the domain of its experience and the structure of its rationality. They form its concrete a priori, which it is now possible to uncover, perhaps because a new experience of disease is coming into being that will make possible a historical and critical understanding of the old experience.

A detour is necessary here if we are to lay the foundations of our discourse on the birth of the clinic. It is a strange discourse, I admit, since it will be based neither on the present consciousness of clinicians, nor even on a repetition of what they once might have said.

It may well be that we belong to an age of criticism whose lack of a primary philosophy reminds us at every moment of its reign and its fatality: an age of intelligence that keeps us irremediably at a distance from an original language. For Kant, the possibility and necessity of a critique were linked, through certain scientific contents, to the fact that there is such a thing as knowledge. In our

time—and Nietzsche the philologist testifies to it—they are linked to the fact that language exists and that, in the innumerable words spoken by men—whether they are reasonable or senseless, demonstrative or poetic—a meaning has taken shape that hangs over us, leading us forward in our blindness, but awaiting in the darkness for us to attain awareness before emerging into the light of day and speaking. We are doomed historically to history, to the patient construction of discourses about discourses, and to the task of hearing what has already been said.

But is it inevitable that we should know of no other function for speech (*parole*) than that of commentary? *Commentary* questions discourse as to what it says and intended to say; it tries to uncover that deeper meaning of speech that enables it to achieve an identity with itself, supposedly nearer to its essential truth; in other words, in stating what has been said, one has to re-state what has never been said. In this activity known as commentary which tries to transmit an old, unyielding discourse seemingly silent to itself, into another, more prolix discourse that is both more archaic and more contemporary—is concealed a strange attitude towards language: to comment is to admit by definition an excess of the signified over the signifier; a necessary, unformulated remainder of thought that language has left in the shade—a remainder that is the very essence of that thought, driven outside its secret—but to comment also presupposes that this unspoken element slumbers within speech (*parole*), and that, by a superabundance proper to the signifier, one may, in questioning it, give voice to a content that was not explicitly signified. By opening up the possibility of commentary, this double plethora dooms us to an endless task that nothing can limit: there is always a certain amount of signified remaining that must be allowed to speak, while the signifier is always offered to us in an abundance that questions us, in spite of ourselves, as to what it 'means' (*veut dire*). Signifier and signified thus assume a substantial autonomy that accords the treasure of a virtual signification to each of them separately; one may even exist without the other, and begin to speak of itself: commentary resides in that supposed space. But at the same time, it invents a complex link between them, a whole tangled web that concerns the poetic values of expression: the signifier is not supposed to 'translate' without concealing, without leaving the signified with an inexhaustible reserve; the signified is revealed only in the visible, heavy world of a signifier that is itself burdened with a

meaning that it cannot control. Commentary rests on the postulate that speech (*parole*) is an act of 'translation', that it has the dangerous privilege images have of showing while concealing, and that it can be substituted for itself indefinitely in the open series of discursive repetitions; in short, it rests on a psychologistic interpretation of language that shows the stigmatas of its historical origin. This is an exegesis, which listens, through the prohibitions, the symbols, the concrete images, through the whole apparatus of Revelation, to the Word of God, ever secret, ever beyond itself. For years we have been commenting on the language of our culture from the very point where for centuries we had awaited in vain for the decision of the Word.

To speak about the thought of others, to try to say what they have said has, by tradition, been to analyse the signified. But must the things said, elsewhere and by others, be treated exclusively in accordance with the play of signifier and signified, as a series of themes present more or less implicitly to one another? Is it not possible to make a structural analysis of discourses that would evade the fate of commentary by supposing no remainder, nothing in excess of what has been said, but only the fact of its historical appearance? The facts of discourse would then have to be treated not as autonomous nuclei of multiple significations, but as events and functional segments gradually coming together to form a system. The meaning of a statement would be defined not by the treasure of intentions that it might contain, revealing and concealing it at the same time, but by the difference that articulates it upon the other real or possible statements, which are contemporary to it or to which it is opposed in the linear series of time. A systematic history of discourses would then become possible.

Until recently, the history of ideas was only aware of two methods: the first, aesthetic method involved analogy, with diffusion charted in time (geneses, filiations, kinships, influences) or on the surface of a given historical space (the spirit of a period, its *Weltanschauung*, its fundamental categories, the organization of its sociocultural world). The second, which was a psychological method, involved a denial of contents (this or that century was not as rationalistic, or irrationalistic as was said or believed), from which there has since developed a sort of 'psychoanalysis' of thought, the results of which can quite legitimately be reversed—the nucleus of the nucleus being always its opposite.

I should like to attempt here the analysis of a type of discourse—

that of medical experience—at a period when, before the great discoveries of the nineteenth century, it had changed its materials more than its systematic form. The clinic is both a new 'carving up' of things and the principle of their verbalization in a form which we have been accustomed to recognizing as the language of a 'positive science'.

To anyone wishing to draw up an inventory of its themes, the idea of the clinic would undoubtedly seem to be imbued with rather vague values; insipid figures would probably take shape, such as the strange effect of disease on the patient, the diversity of individual temperaments, the probability of pathological evolution, the need for sharp perception (the need to be constantly alert to the slightest visible modalities), the empirical form—cumulative, and endlessly open to medical knowledge—old, threadbare notions that had been medicine's basic tools as far back as the Greeks. Nothing in this ancient arsenal can designate clearly what took place at that turning point in the eighteenth century, when the calling into question of the old clinical theme 'produced'—if we are to believe first appearances—an essential mutation in medical knowledge. Nonetheless, considered on an over-all basis, the clinic appears—in terms of the doctor's experience—as a new outline of the perceptible and statable: a new distribution of the discrete elements of corporal space (for example, the isolation of *tissue*—a functional, two-dimensional area—in contrast with the functioning mass of the organ, constituting the paradox of an 'internal surface') a reorganization of the elements that make up the pathological phenomenon (a grammar of signs has replaced a botany of symptoms), a definition of the linear series of morbid events (as opposed to the table of nosological species), a welding of the disease onto the organism (the disappearance of the general morbid entities that grouped symptoms together in a single logical figure, and their replacement by a local status that situates the being of the disease with its causes and effects in a three-dimensional space). The appearance of the clinic as a historical fact must be identified with the system of these reorganizations. This new structure is indicated—but not, of course, exhausted—by the minute but decisive change, whereby the question: 'What is the matter with you?', with which the eighteenth-century dialogue between doctor and patient began (a dialogue possessing its own grammar and style), was replaced by that other question: 'Where does it hurt?', in which we recognize the operation of the clinic and the principle of its entire discourse. From

then on, the whole relationship of signifier to signified, at every level of medical experience, is redistributed: between the symptoms that signify and the disease that is signified, between the description and what is described, between the event and what it prognosticates, between the lesion and the pain that it indicates, etc. The clinic—constantly praised for its empiricism, the modesty of its attention, and the care with which it silently lets things surface to the observing gaze without disturbing them with discourse—owes its real importance to the fact that it is a reorganization in depth, not only of medical discourse, but of the very possibility of a discourse about disease. The *restraint* of clinical discourse (its rejection of theory, its abandonment of systems, its lack of a philosophy; all so proudly proclaimed by doctors) reflects the non-verbal conditions on the basis of which it can speak: the common structure that carves up and articulates what is seen and what is said.

The research that I am undertaking here therefore involves a project that is deliberately both historical and critical, in that it is concerned—outside all prescriptive intent—with determining the conditions of possibility of medical experience in modern times.

I should like to make it plain once and for all that this book has not been written in favour of one kind of medicine as against another kind of medicine, or against medicine and in favour of an absence of medicine. It is a structural study that sets out to disentangle the conditions of its history from the density of discourse, as do others of my works.

What counts in the things said by men is not so much what they may have thought or the extent to which these things represent their thoughts, as that which systematizes them from the outset, thus making them thereafter endlessly accessible to new discourses and open to the task of transforming them.

NOTES

[1] Pomme, *Traité des affections vaporeuses des deux sexes* (4th edn., Lyons, 1769, vol. I, pp. 60–5).

[2] A. L. J. Bayle, *Nouvelle doctrine des maladies mentales* (Paris, 1825, pp. 23–4).

[3] F. Lallemand, *Recherches anatomo-pathologiques sur l'encéphale* (Paris, 1820, introduction, p. vii, n.).

[4] J. -Ch. Sournia, *Logique et morale du diagnostic* (Paris, 1962, p. 19).

7 · Seeing and Knowing

'Hippocrates applied himself only to observation and despised all systems. It is only by following in his footsteps that medicine can be perfected' [1]. But the privileges that the clinic had recently recognized in observation were much more numerous than the prestige accorded it by tradition and of a quite different nature. They were at the same time the privileges of a pure gaze, prior to all intervention and faithful to the immediate, which it took up without modifying it, and those of a gaze equipped with a whole logical armature, which exorcised from the outset the naïvety of an unprepared empiricism. We must now describe the concrete exercise of such a perception.

The observing gaze refrains from intervening: it is silent and gestureless. Observation leaves things as they are; there is nothing hidden to it in what is given. The correlative of observation is never the invisible, but always the immediately visible, once one has removed the obstacles erected to reason by theories and to the senses by the imagination. In the clinician's catalogue, the purity of the gaze is bound up with a certain silence that enables him to listen. The prolix discourses of systems must be interrupted: 'All theory is always silent or vanishes at the patient's bedside' [2]; and the suggestions of the imagination—which anticipate what one perceives, find illusory relations, and give voice to what is inaccessible to the senses—must also be reduced: 'How rare is the accomplished observer who knows how to await, in the silence of the imagination, in the calm of the mind, and before forming his judgement, the relation of a sense actually being exercised!' [3] The

gaze will be fulfilled in its own truth and will have access to the truth of things if it rests on them in silence, if everything keeps silent around what it sees. The clinical gaze has the paradoxical ability to *hear a language* as soon as it *perceives a spectacle*. In the clinic, what is manifested is originally what is spoken. The opposition between clinic and experiment overlays exactly the difference between the language we hear, and consequently recognize, and the question we pose or, rather, impose: 'The observer . . . reads nature, he who experiments questions' [4]. To this extent, observation and experiment are opposed but not mutually exclusive: it is natural that observation should lead to experiment, provided that experiment should question only in the vocabulary and within the language proposed to it by the things observed; its questions can be well founded only if they are answers to an answer itself without question, an absolute answer that implies no prior language, because, strictly speaking, it is the first word. It is this privilege of possessing an unsupersedable (*indépassable*) origin that the Double expresses in terms of causality: 'observation must not be confused with experience; the latter is the result or effect, the former the means or cause; observation leads naturally to experience' [5]. The observing gaze manifests its virtues only in a double silence: the relative silence of theories, imaginings, and whatever serves as an obstacle to the sensible immediate; and the absolute silence of all language that is anterior to that of the visible. Above the density of this double silence things seen can be heard at last, and heard solely by virtue of the fact that they are seen.

This gaze, then, which refrains from all possible intervention, and from all experimental decision, and which does not modify, shows that its reserve is bound up with the strength of its armature. To be what it must be, it is not enough for it to exercise prudence or scepticism; the immediate on which it opens states the truth only if it is at the same time its origin, that is, its starting point, its principle and law of composition; and the gaze must restore as truth what was produced in accordance with a genesis: in other words, it must reproduce in its own operations what has been given in the very movement of composition. It is precisely in this sense that it is 'analytic'. Observation is logic at the level of perceptual contents; and the art of observing seems to be

> a logic for those meanings which, more particularly, teach their operations and usages. In a word, it is the art of being in relation with relevant circumstances, of receiving impressions from objects as they are offered to us, and of deriving inductions from them that are their correct consequences. Logic is . . . the basis of the art of observing, but this art might be regarded as one of the parts of Logic whose object is more dependent on meanings [6].

One can, therefore, as an initial approximation, define this clinical gaze as a perceptual act sustained by a logic of operations; it is analytic because it restores the genesis of composition; but it is pure of all intervention insofar as this genesis is only the syntax of the language spoken by things themselves in an original silence. The gaze of observation and the things it perceives communicate through the same Logos, which, in the latter, is a genesis of totalities and, in the former, a logic of operations.

Clinical observation involves two necessarily united domains: the hospital domain and the teaching domain.

The hospital domain is that in which the pathological fact appears in its singularity as an event and in the series surrounding it. Not long ago the family still formed the natural locus in which truth resided unaltered. Now its double power of illusion has been discovered: there is a risk that disease may be masked by treatment, by a regime, by various actions tending to disturb it; and it is caught up in the singularity of physical conditions that make it incomparable with others. As soon as medical knowledge is defined in terms of frequency, one no longer needs a natural environment; what one now needs is a neutral domain, one that is homogeneous in all its parts and in which comparison is possible and open to any form of pathological event, with no principle of selection or exclusion. In such a domain everything must be possible, and possible in the same way.

> What a source of instruction is provided by two infirmaries of 100 to 150 patients each! . . . What a varied spectacle of fevers or phlegmasias, malign or benign, sometimes highly developed in strong constitutions, sometimes in a slight, almost latent, condition, together with all the forms and modifications that age, mode of life, seasons, and more or less energetic moral affections can offer! [7]

The old objection that the hospital causes modifications that are both pathological disorders and disorderings of pathological forms is neither dismissed nor ignored but rigourously annulled, since the

modifications in question are uniformly valid for all events; it is possible, therefore, to isolate them by analysis and to treat them separately; by setting aside modifications due to locality, season, and nature of treatment 'one can succeed in introducing into the hospital clinic and general medical practice a degree of foresight and precision' [8]. The clinic is not, therefore, that mythical landscape in which diseases appear of their own accord, completely revealed; it makes possible the integration, in experience, of the hospital modification in a constant form. What the medicine of species called *nature* is shown to be merely the discontinuity of heterogeneous and artificial conditions; the 'artificial' diseases of the hospital permit pathological events to be reduced to the homogeneous; the hospital domain is no doubt not pure transparency to truth, but the refraction that is proper to it makes possible, through its constancy, the analysis of truth.

By means of the endless play of modifications and repetitions, the hospital clinic makes possible, therefore, the setting aside of the extrinsic. But this same play makes possible the summation of the essential in knowledge: in fact, variations cancel each other out, and the effect of the repetition of constant phenomena outlines spontaneously the fundamental conjunctions. By showing itself in a repetitive form, the truth indicates the way by which it may be acquired. It offers itself to knowledge by offering itself to recognition. 'The student . . . cannot familiarize himself overmuch with the repeated sight of alterations of all kinds, whose particular practice might later show him the picture' [9]. The genesis of the manifestation of truth is also the genesis of the knowledge of truth. There is, therefore, no difference in nature between the clinic as science and the clinic as teaching. A group is thus formed consisting of the master and his pupils, in which the act of recognition and the effort to know find fulfillment in a single movement. In its structure and in its two aspects as manifestation and acquisition, medical experience now has a collective subject; it is no longer divided between those who know and those who do not; it is made up, as one entity, of those who unmask and those before whom one unmasks. The statement is the same; the disease speaks the same language to both.

The *collective* structure of medical experience, the *collective* character of the hospital field—the clinic is situated at the meeting point of the two totalities; the experience that defines it traverses

the surface of their confrontation and of their reciprocal boundary. There it derives not only its inexhaustible richness but also its sufficient, enclosed form. It is the carving up of the infinite domain of events by the intersection of the gaze and mutual questions. At the Edinburgh clinic, observation consisted of four series of questions: the first concerned the patient's age, sex, temperament, and occupation; the second, his symptoms; the third, the origin and development of the disease; and the fourth, more distant causes and earlier accidents [10]. Another method—one used at Montpellier—consisted of a general examination of all the visible modifications of the organism: 'first, the alterations of the body in general; second, those in the matter excreted; third, those denoted by the exercise of the functions' [11]. Pinel levelled the same criticism at both forms of investigation: they were unlimited. To the first, he objected: 'How, in the midst of this profusion of questions . . . can one grasp the essential, specific features of the disease?' and to the second, in corresponding fashion: 'What an immense enumeration of symptoms . . . ! Will this not throw us back into a new chaos?' [12] The questions to be asked are innumerable; the things to be seen infinite. If the clinical domain is open only to the tasks of language or to the demands of the gaze, it will have no limits and, therefore, no organization. There is boundary, form, and meaning only if interrogation and examination are connected with each other, defining at the level of fundamental structures the 'meeting place' of doctor and patient. In its initial form, the clinic seeks to determine this locus by three means:

1. THE ALTERNATION OF SPOKEN STAGES AND PERCEIVED STAGES IN AN OBSERVATION. In the schema of the ideal investigation sketched by Pinel, the general indication of the first stage is visual: one observes the present state in its manifestations. But the questionnaire already guarantees the place of language within this examination; the symptoms that first strike the senses of the observer are noted, but immediately afterwards the patient is questioned as to the pains he feels, and lastly, by observation, the state of the most important physiological functions is described. The second stage is dominated by language as well as by time, memory, developments, and successive incidents. First what, at a given moment, was perceptible must be recognized (recalling the forms of invasion, the succession of symptoms, the appearance of their present characteristics, and

the medicaments already applied). Then the patient or his entourage must be questioned as to his general appearance, his occupation, his past life. The third stage of observation is again one of perception; a day-by-day account is kept of the progress of the disease under four headings: evolution of the symptoms, possible appearance of new phenomena, state of the secretions, and effect of medicaments used. The final stage is reserved to speech: the prescription of the regime during convalescence [13]. In the event of death, most clinicians—but, as we shall see, Pinel less readily than others—reserved to the gaze the final, most decisive authority, namely, the anatomy of the body. In this regular alternation of speech and gaze, the disease gradually declares its truth, a truth that it offers to the eye and ear, whose theme, although possessing only one *sense*, can be restored, in its indubitable totality, only by two *senses*: that which sees and that which listens. This is why the questionnaire without the examination and the examination without the interrogation were doomed to an endless task: it belongs to neither to fill the gaps within the province of the other.

2. THE EFFORT TO DEFINE A STATUTORY FORM OF CORRELATION BETWEEN THE GAZE AND LANGUAGE. The theoretical and practical problem confronting the clinicians was to know whether it would be possible to introduce into a spatially legible and conceptually coherent representation that element in the disease that belongs to a visible symptomatology and that which belongs to a verbal analysis. This problem was revealed in a technical difficulty that was very revealing of the demands of clinical thinking: the *picture*. Is it possible to integrate into a picture, that is, into a structure that is at the same time visible and legible, spatial and verbal, that which is perceived on the surface of the body by the clinician's eye, and that which is heard by that same clinician in the essential language of the disease? Perhaps the most naïve attempt was made by Fordyce: he included in the x axis all the notations concerning the climate, the seasons, prevalent diseases, the patient's temperament, idiosyncrasy, appearance, age, and previous accidents; and he classified in the y axis the symptoms according to the organ or function in which they were manifested (pulse, skin, temperature, muscles, eyes, tongue, mouth, breathing, stomach, intestines, urine) [14]. It is clear that this functional distinction between visible and expressible (*énonçable*), and their correlation in the myth of an analytic geometry, could be of no use in the work of clinical thought; such

an effort is significant only of the data of the problem and of the terms to be correlated. The pictures drawn up by Pinel seem simpler: their conceptual structure is in fact more subtle. As in Fordyce, the y axis includes the symptomatic elements that the disease offers to perception; but in the x axis, he indicates the significant values that these symptoms may assume. In an acute fever, a painful sensitivity in the pit of the stomach, a headache, and a violent thirst are to be included in a gastric symptomatology; on the other hand, prostration and abdominal tension have an adynamic meaning; lastly, pain in the limbs, a dry tongue, rapid breathing, a paroxysm, especially one occurring in the evening, are signs of both gastricity and adynamism [15]. Thus each visible segment assumes a significant value, and the picture certainly serves an analytical function in clinical knowledge. But it is obvious that the analytical structure is neither produced nor revealed by the picture itself; the analytical structure preceded the picture, and the correlation between each symptom and its symptomatological value was fixed once and for all in an essential a priori; beneath its apparently analytical function, the picture's only role is to divide up the visible within an already given conceptual configuration. The task is not, therefore, one of correlation, but, purely and simply, of redistribution of what was given by a perceptible extent in a conceptual space defined in advance. It makes nothing known; at most, it makes possible recognition.

3. THE IDEAL OF AN EXHAUSTIVE DESCRIPTION. The arbitrary or tautological appearance of these pictures led clinical thought towards another form of correlation between the visible and the expressible, namely, the continuous correlation of an entirely—that is, doubly—faithful description; in relation to its object it must be, in effect, without any gap; and in language describing the object it must allow no deviation. Descriptive *rigour* will be the result of *precision* in the statement and of *regularity* in the designation: which, according to Pinel, is 'the method now followed in all other parts of natural history' [16]. Thus language is charged with a dual function: by its value as precision, it establishes a correlation between each sector of the visible and an expressible element that corresponds to it as accurately as possible; but this expressible element operates, within its role as description, a denominating function which, by its articulation upon a constant, fixed vocabulary, authorizes comparison, generalization, and establishment within

a totality. By virtue of this dual function, the work of description ensures 'a prudent reserve in rising to general views without lending reality to abstract terms' and 'a simple, regular distribution, invariably based on the relations of structure or the organic functions of the parts' [17].

It is in this exhaustive and complete passage from the *totality of the visible* to the *over-all structure of the expressible (structure d'ensemble de l'énonçable)* that is fulfilled at last that significative analysis of the perceived that the naïvely geometric architecture of the picture failed to provide. It is description, or, rather, the implicit labour of language in description, that authorizes the transformation of symptom into sign and the passage from patient to disease and from the individual to the conceptual. And it is there that is forged, by the spontaneous virtues of description, the link between the random field of pathological events and the pedagogical domain in which they formulate the order of their truth. To describe is to follow the ordering of the manifestations, but it is also to follow the intelligible sequence of their genesis; it is to see and to know at the same time, because by saying what one sees, one integrates it spontaneously into knowledge; it is also to learn to see, because it means giving the key of a language that masters the visible. The well-made language, which Condillac and his successors saw as the ideal of scientific knowledge, must not therefore be sought, as do certain over-hasty doctors [18], on the side of a language of calculation, but on the side of that *measured language* that has the measure of both the things that it describes and the language in which it describes them. For the dream of an arithmetical structure of medical language must be substituted, therefore, the search for a certain internal measurement consisting of fidelity and fixity, of primary and absolute openness to things and rigour in the considered use of semantic values. 'The art of describing facts is the supreme art in medicine: everything pales before it' [19].

Over all these endeavours on the part of clinical thought to define its methods and scientific norms hovers the great myth of a pure Gaze that would be pure Language: a speaking eye. It would scan the entire hospital field, taking in and gathering together each of the singular events that occurred within it; and as it saw, as it saw ever more and more clearly, it would be turned into speech that states and teaches; the truth, which events, in their repetitions and convergence, would outline under its gaze, would, by this same gaze and in the same order, be reserved, in the form of teaching, to

those who do not know and have not yet seen. This speaking eye would be the servant of things and the master of truth.

It is understandable that, after the revolutionary dream of an absolutely open science and practice, a certain medical esotericism could be revived around these themes: one now sees the visible only because one knows the language; things are offered to him who has penetrated the closed world of words; and if these words communicate with things, it is because they obey a rule that is intrinsic to their grammar. This new esotericism is different in structure, meaning, and use from that which made Molière's doctors speak in Latin: then it was simply a matter of not being understood and of preserving at the level of linguistic formulation the corporate privileges of a profession; now operational mastery over things is sought by accurate syntactic usage and a difficult semantic familiarity with language. Description, in clinical medicine, does not mean placing the hidden or the invisible within reach of those who have no direct access to them; what it means is to give speech to that which everyone sees without seeing—a speech that can be understood only by those initiated into true speech. 'Whatever precepts are given about so delicate a matter, it will always remain beyond the reach of the multitude' [20]. Here, at the level of theoretical structures, we encounter once again the theme of initiation, the outline of which is already to be found in the institutional forms of the same period [21]: we are at the heart of the clinical experience—a form of the *manifestation* of things in their truth, a form of *initiation* into the truth of things. It was this that Bouillaud was to declare as a self-evident banality some forty years later: 'The medical clinic may be regarded either as a science or as a way of teaching medicine' [22].

A hearing gaze and a speaking gaze: clinical experience represents a moment of balance between speech and spectacle. A precarious balance, for it rests on a formidable postulate: that all that is *visible* is *expressible*, and that it is *wholly visible* because it is *wholly expressible*. A postulate of such scope could permit a coherent science only if it was developed in a logic that was its rigorous outcome. But the reversibility, without residue, of the visible in the expressible remained in the clinic a requirement and a limit rather than an original principle. Total *description* is a present and ever-withdrawing horizon; it is much more the dream of a thought than a basic conceptual structure.

There is a simple historical reason for this: Condillac's logic did not allow a science in which the visible and the describable were caught up in a total adequation. Condillac's philosophy gradually shifted from an analysis of the original impression to an operational logic of signs, then from this logic to the constitution of a knowledge that would be both language and calculation: used at these three levels, and each time with different meanings, the notion of *element* sustained throughout this reflexion an ambiguous continuity, but one without a defined, coherent logical structure. Condillac never derived a universal logic from the element—whether this element was perceptual, linguistic, or calculable; he never ceased to hesitate between two logics of operations: of genesis and of calculation. Hence the dual definition of analysis: reduce complex ideas 'to the simple ideas of which they are made up and follow the progress of their generation' [23]; and seek the truth 'by a kind of calculation, that is, by composing and decomposing notions and comparing them in the most favourable way with the discoveries that one has in view' [24].

This ambiguity had its effect on clinical method, but this method followed a conceptual 'slope' that was the exact opposite of Condillac's development: the term by term reversal of the point of origin and the point of culmination.

It redescended from the exigency of calculation to the primacy of genesis; after seeking to define the postulate of equation of the visible with the expressible by a *universal*, rigorous calculability, it gave that postulate the meaning of total, exhaustive *description*. The essential operation was no longer combinative but a matter of syntactic transcription. Nothing is more typical of this movement —which takes up again, in the opposite direction, Condillac's whole approach—than Cabanis's thought, and this is particularly apparent if we compare it with Brulley's analysis. Brulley wished 'to regard certainty as a whole divisible into as many probabilities as one may wish'. 'A probability is therefore a degree, a part of certainty from which it differs as the part differs from the whole' [25]; medical certainty must thus be obtained by a combination of probabilities; after laying down the rules of such a combination Brulley declares that he will go no further, that he must leave to a more celebrated doctor the task of elucidating this subject—a task that he would have great difficulty in carrying out [26]. In all probability, it was Cabanis to whom he referred. For in *Les Révolutions de la médecine* the certain form of science is not defined by a type of calculation but by an organization whose values are essentially expressive; it is not a question of drawing up a calculation to proceed from the probable to the certain, but of determining a syntax in order to proceed from the element of the perceived to the coherence of discourse: 'the theoretical part of a science must, therefore, be the simple statement of the sequence of classification and of the relationship of all the facts which make up this science; it must, so to speak, be its summary expression' [27]. And if Cabanis finds room for the calculation of probabilities in the construction of medicine, it is only as one element among others in the total construction of scientific discourse. Brulley tried to place himself at the level of *La Langue des calculs*; although Cabanis cited this text, his thought is structurally on a footing with the *Essai sur l'origine des connaissances*.

It might be thought—and all the clinicians of that generation thought so—that things would rest there and that an unproblematic equilibrium was possible at that level between the composition of the visible and the syntactic rules of the expressible. But this was to be no more than a brief period of euphoria, a golden age with no future, in which seeing, saying, and learning to see by saying what one saw communicated in an immediate transparence: experience was rightfully science; and 'knowing' was in step with 'learning'. The gaze saw sovereignty in a world of language whose clear speech it gathered up effortlessly in order to restore it in a secondary, identical speech: given by the visible, this speech, without changing anything, made it possible to see. In its sovereign exercise, the gaze took up once again the structures of visibility that it had itself deposited in its field of perception.

But this generalized form of transparence leaves opaque the status of the language that must be its foundation, its justification, and its delicate instrument. Such a deficiency, which also occurs in Condillac's logic, opens up the field to a number of epistemological myths that are destined to mask it. But these myths are already engaging the clinic in new spatial figures, in which visibility thickens and becomes cloudy, in which the gaze is confronted by obscure masses, by impenetrable shapes, by the black stone of the body.

1. THE FIRST OF THESE EPISTEMOLOGICAL MYTHS CONCERNS THE ALPHABETICAL STRUCTURE OF DISEASE. At the end of the eighteenth

century, the alphabet appeared to grammarians to be the ideal schema of analysis and the ultimate form of the decomposition of a language; by that very fact it constituted the way in which that language was learnt. This alphabetical image was transposed essentially unaltered into the definition of the clinical gaze. The smallest possible observable segment, that from which one must set out and beyond which one cannot go back, is the singular impression one receives of a patient, or, rather, of a symptom of that patient; it signifies nothing in itself, but assumes meaning and value and begins to speak if it blends with other elements:

> Particular, isolated observations are to science what letters and words are to discourse; discourse is founded only on the concourse and coming together of letters and words whose mechanism and value must have been studied and reflected upon before correct and practical use was made of them; the same may be said of observations [28].

This alphabetical structure of disease ensures not only that one can always return to the 'unsupersedable' (*indépassable*) element; it also ensures that the number of these elements will be finite and even small. It is not first impressions that are diverse and apparently infinite, but their combination within a single disease: just as the small number of 'modifications designated by the grammarians under the name of consonants' is enough to give 'to the expression of feeling the precision of thought', so, for pathological phenomena, 'with each new case, one might think that one is presented with new facts, whereas they are merely new combinations of facts. In the pathological state, there is never more than a small number of principal phenomena. . . . The order in which they appear, their importance, and their various relations are enough to give birth to every variety of disease' [29].

2. THE CLINICAL GAZE EFFECTS A NOMINALIST REDUCTION ON THE ESSENCE OF THE DISEASE. Composed as they are of letters, diseases have no other reality than the order of their composition. In the final analysis, their varieties refer to those few simple individuals, and whatever may be built up with them and above them is merely Name. And name in a double sense: in the sense in which the Nominalists use it when they criticize the substantial reality of abstract, general beings; and in another sense, one closer to a philosophy of language, since the form of composition of the being of the disease is of a linguistic type. In relation to the individual, concrete being, disease is merely a name; in relation to the isolated elements of which it is made up, it has all the rigorous architecture of a verbal designation. To ask what is the essence of a disease is like 'asking what is the nature of the essence of a word' [30]. A man coughs; he spits blood; he has difficulty in breathing; his pulse is rapid and hard; his temperature is rising; these are all so many immediate impressions, so many letters, as it were. Together, they form a disease, pleurisy: 'But what, then, is pleurisy? . . . It is the concourse of the accidents that constitute it. The word pleurisy merely retraces them in a more abbreviated manner.' 'Pleurisy' has no more being than the word itself; it 'expresses an abstraction of the mind'; but, like the word, it is a well-defined structure, a multiple figure 'in which all or almost all the accidents are combined. If one or more are lacking, it is no longer pleurisy, or at least not real pleurisy' [31]. Disease, like the word, is deprived of being, but, like the word, it is endowed with a configuration. The nominalist reduction of existence frees a constant truth. That is why:

3. THE CLINICAL GAZE OPERATES ON PATHOLOGICAL PHENOMENA A REDUCTION OF A CHEMICAL TYPE. Until the end of the eighteenth century the gaze of the nosographers was a gardener's gaze; one had to recognize the specific essence in the variety of appearances. At the beginning of the nineteenth century another model emerged: that of the chemical operation, which, by isolating the component elements, made it possible to define the composition, to establish common points, resemblances, and differences with other totalities, and thus to found a classification that was no longer based on specific types but on forms of relations: 'Instead of following the example of the botanists, should not the nosologists have, rather, taken as their model the systems of the chemist-mineralogists, that is, be content to classify the elements of diseases and their more frequent combinations?' [32] The notion of analysis in which, applied to the clinic, we have already recognized a quasi-linguistic sense and a quasi-mathematical sense [33] will now move towards a chemical signification: it will have as its horizon the isolation of pure bodies and the depiction of their combinations. One has passed from the theme of the combinative to that of syntax and finally to that of combination.

And, by reciprocity, the clinician's gaze becomes the functional equivalent of fire in chemical combustion; it is through it that the essential purity of phenomena can emerge: it is the separating agent of truths. And just as combustions reveal their secret only in the very vividness of fire, and it would be useless to ask, once the flame was extinguished, what can remain in the inert powders, the *caput mortuum*, so it is in the act of voice and the brightness that it sheds over phenomena that truth is revealed: 'It is not the remains of the morbid combustion that the doctor should know, but the species of the combustion' [34]. The clinical gaze is a gaze that burns things to their furthest truth. The attention with which it observes and the movement by which it states are in the last resort taken up again in this paradoxical act of consuming. The reality, whose language it spontaneously reads in order to restore it as it is, is not as adequate to itself as might be supposed: its truth is given in a decomposition that is much more than a reading since it involves the freeing of an implicit structure. One can now see that the clinic no longer has simply to read the visible; it has to discover its secrets.

4. THE CLINICAL EXPERIENCE IS IDENTIFIED WITH A FINE SENSIBILITY. The clinical gaze is not that of an intellectual eye that is able to perceive the unalterable purity of essences beneath phenomena. It is a gaze of the concrete sensibility, a gaze that travels from body to body, and whose trajectory is situated in the space of sensible manifestation. For the clinic, all truth is sensible truth; 'theory falls silent or almost always vanishes at the patient's bedside to be replaced by observation and experience; for on what are observation and experience based if not on the relation of our senses? And where would they be without these faithful guides?' [35] And if this knowledge, at the level of the immediate use of the senses, is not attained at the outset, if it can acquire depth and mastery, it is not a shift in level that enables it to accede to something other than itself, it is a sovereignty that is entirely internal to its own domain; it only acquires depth at its own level, which is that of pure sensory perception; for sense can only spring from sense. What, then, is

> the doctor's glance, which so often involves such vast erudition and such solid instruction, if not the result of the frequent, methodical, and accurate exercise of the senses, from which derive that facility of application, that alertness to relations, that confidence of judgement that is sometimes so rapid that all these acts seem to occur simultaneously, and are comprised together under the name of 'touch'? [36]

Thus this sensory knowledge—which nevertheless implies the conjunction of a hospital domain and a pedagogic domain, the definition of a field of probability and a linguistic structure of the real—is reduced to praise of the immediate sensibility.

The whole dimension of analysis is deployed only at the level of an aesthetic. But this aesthetic not only defines the original form of all truth, it also prescribes rules of exercise, and it becomes, at a secondary level, aesthetic in that it prescribes the norms of an art. The sensible *truth* is now open, not so much to the senses themselves, as to a *fine* sensibility. The whole complex structure of the clinic is summarized and fulfilled in the prestigious rapidity of an art: 'Since everything, or nearly everything, in medicine is dependent on a glance or a happy instinct, certainties are to be found in the sensations of the artist himself rather than in the principles of the art' [37]. The technical armature of the medical gaze is transformed into advice about prudence, taste, skill: what is required is 'great sagacity', 'great attention', 'great precision', 'great skill', 'great patience' [38].

At this level, all structures are dissolved, or, rather, those that constituted the essence of the clinical *gaze* are gradually, and in apparent disorder, replaced by those that are to constitute the *glance*. And they are very different. In fact, the gaze implies an open field, and its essential activity is of the successive order of reading; it records and totalizes; it gradually reconstitutes immanent organizations; it spreads out over a world that is already the world of language, and that is why it is spontaneously related to hearing and speech; it forms, as it were, the privileged articulation of two fundamental aspects of *saying* (what is said and what one says). The glance, on the other hand, does not scan a field: it strikes at one point, which is central or decisive; the gaze is endlessly modulated, the glance goes straight to its object. The glance chooses a line that instantly distinguishes the essential; it therefore goes beyond what it sees; it is not misled by the immediate forms of the sensible, for it knows how to traverse them; it is essentially demystifying. If it strikes in its violent rectitude, it is in order to shatter, to lift, to release appearance. It is not burdened with all the abuses of language. The glance is silent, like a finger pointing, denouncing.

There is no statement in this denunciation. The glance is of the non-verbal order of *contact*, a purely ideal contact perhaps, but in fact a more *striking* contact, since it traverses more easily, and goes further beneath things. The clinical eye discovers a kinship with a new sense that prescribes its norm and epistemological structure; this is no longer the ear straining to catch a language, but the index finger palpating the depths. Hence that metaphor of 'touch' (*le tact*) by which doctors will ceaselessly define their glance [39].

And by that very fact, clinical experience sees a new space opening up before it: the tangible space of the body, which at the same time is that opaque mass in which secrets, invisible lesions, and the very mystery of origins lie hidden. The medicine of symptoms will gradually recede, until it finally disappears before the medicine of organs, sites, causes, before a clinic wholly ordered in accordance with pathological anatomy. The age of Bichat has arrived.

NOTES

[1] Clifton, *État de la médecine ancienne et moderne* (Paris, 1742, preface by the translator, unpaged).
[2] Corvisart, Preface to the French translation of Auenbrugger, *Nouvelle méthode pour reconnaître les maladies internes de la poitrine* (Paris, 1808, p. vii).
[3] *Ibid.*, p. viii.
[4] Roucher-Deratte, *Leçons sur l'art d'observer* (Paris, 1807, p. 14).
[5] Double, *Séméiologie générale*, vol. I, p. 80.
[6] Sénebier, *Essai sur l'art d'observer et de faire des expériences* (2nd edn., Paris, 1802, Vol. I, p. 6).
[7] Ph. Pinel, *Médecine clinique* (Paris, 1815, introduction, p. ii).
[8] *Ibid.*, p. i.
[9] Maygrier, *Guide de l'étudiant en médecine* (Paris, 1818, pp. 94–5).
[10] Pinel, *op. cit.*, p. 4.
[11] *Ibid.*, p. 3.
[12] *Ibid.*, pp. 5 and 3.
[13] *Ibid.*, p. 57.
[14] Fordyce, *Essai d'un nouveau plan d'observations médicales* (Fr. trans., Paris, 1811).
[15] Pinel, *op. cit.*, p. 78.
[16] Pinel, *Nosographie philosophique*, introduction, p. iii.
[17] *Ibid.*, pp. iii–iv.
[18] Cf. above, Chapter 6.
[19] Amard, *Association intellectuelle* (Paris, 1821, vol. I, p. 64).
[20] *Ibid.*, p. 65.

[21] Cf. above, Chapter 5.
[22] Bouillaud, *Philosophie médicale* (Paris, 1831, p. 244).
[23] Condillac, *Origine des connaissances humaines*, p. 162.
[24] *Ibid.*, p. 110.
[25] C.-A. Brulley, *Essai sur l'art de conjecturer en médecine*, pp. 26–7.
[26] *Ibid.*
[27] Cabanis, *Coup d'oeil sur les Révolutions et la Réforme de la médecine* (Paris, 1804, p. 271).
[28] Double, *op. cit.*, p. 79.
[29] Cabanis, *Du degré de certitude* (3rd edn., Paris, 1819, p. 86).
[30] *Ibid.*, p. 66.
[31] *Ibid.*, p. 66.
[32] Demorcy-Delettre, *Essai sur l'analyse appliquée au perfectionnement de la médecine* (Paris, 1818, p. 135).
[33] Cf. above, Chapter 6.
[34] Amard, *op. cit.*, vol. II, p. 389.
[35] Corvisart, *op. cit.*, p. vii.
[36] *Ibid.*, p. x.
[37] Cabanis, *op. cit.*, p. 126.
[38] Roucher-Deratte, *op. cit.*, pp. 87–99.
[39] Corvisart, *op. cit.*