1. Docile bodies

Let us take the ideal figure of the soldier as it was still seen in the early seventeenth century. To begin with, the soldier was someone who could be recognized from afar; he bore certain signs: the natural signs of his strength and his courage, the marks, too, of his pride; his body was the blazon of his strength and valour; and although it is true that he had to learn the profession of arms little by little – generally in actual fighting – movements like marching and attitudes like the bearing of the head belonged for the most part to a bodily rhetoric of honour; 'The signs for recognizing those most suited to this profession are a lively, alert manner, an erect head, a taut stomach, broad shoulders, long arms, strong fingers, a small belly, thick thighs, slender legs and dry feet, because a man of such a figure could not fail to be agile and strong'; when he becomes a pike-bearer, the soldier 'will have to march in step in order to have as much grace and gravity as possible, for the pike is an honourable weapon, worthy to be borne with gravity and boldness' (Montgommery, 6 and 7). By the late eighteenth century, the soldier has become something that can be made; out of a formless clay, an inapt body, the machine required can be constructed; posture is gradually corrected; a calculated constraint runs slowly through each part of the body, mastering it, making it pliable, ready at all times, turning silently into the automatism of habit; in short, one has 'got rid of the peasant' and given him 'the air of a soldier' (ordinance of 20 March 1764). Recruits become accustomed to 'holding their heads high and erect; to standing upright, without bending the back, to sticking out the belly, throwing out the chest and throwing back the shoulders; and, to help them acquire the habit, they are given this position while standing against a wall in such a way that the heels, the thighs, the waist and the shoulders touch it, as also do the backs

of the hands, as one turns the arms outwards, without moving them away from the body. . . Likewise, they will be taught never to fix their eyes on the ground, but to look straight at those they pass . . . to remain motionless until the order is given, without moving the head, the hands or the feet . . . lastly to march with a bold step, with knee and ham taut, on the points of the feet, which should face outwards' (ordinance of 20 March 1764).

The classical age discovered the body as object and target of power. It is easy enough to find signs of the attention then paid to the body – to the body that is manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces. The great book of Man-the-Machine was written simultaneously on two registers: the anatomico-metaphysical register, of which Descartes wrote the first pages and which the physicians and philosophers continued, and the technico-political register, which was constituted by a whole set of regulations and by empirical and calculated methods relating to the army, the school and the hospital, for controlling or correcting the operations of the body. These two registers are quite distinct, since it was a question, on the one hand, of submission and use and, on the other, of functioning and explanation: there was a useful body and an intelligible body. And yet there are points of overlap from one to the other. La Mettrie's *L'Homme-machine* is both a materialist reduction of the soul and a general theory of *dressage*, at the centre of which reigns the notion of 'docility', which joins the analysable body to the manipulable body. A body is docile that may be subjected, used, transformed and improved. The celebrated automata, on the other hand, were not only a way of illustrating an organism, they were also political puppets, small-scale models of power: Frederick II, the meticulous king of small machines, well-trained regiments and long exercises, was obsessed with them.

What was so new in these projects of docility that interested the eighteenth century so much? It was certainly not the first time that the body had become the object of such imperious and pressing investments; in every society, the body was in the grip of very strict powers, which imposed on it constraints, prohibitions or obligations. However, there were several new things in these techniques. To begin with, there was the scale of the control: it was a

question not of treating the body, *en masse*, 'wholesale', as if it were an indissociable unity, but of working it 'retail', individually; of exercising upon it a subtle coercion, of obtaining holds upon it at the level of the mechanism itself – movements, gestures, attitudes, rapidity: an infinitesimal power over the active body. Then there was the object of the control: it was not or was no longer the signifying elements of behaviour or the language of the body, but the economy, the efficiency of movements, their internal organization; constraint bears upon the forces rather than upon the signs; the only truly important ceremony is that of exercise. Lastly, there is the modality: it implies an uninterrupted, constant coercion, supervising the processes of the activity rather than its result and it is exercised according to a codification that partitions as closely as possible time, space, movement. These methods, which made possible the meticulous control of the operations of the body, which assured the constant subjection of its forces and imposed upon them a relation of docility-utility, might be called 'disciplines'. Many disciplinary methods had long been in existence – in monasteries, armies, workshops. But in the course of the seventeenth and eighteenth centuries the disciplines became general formulas of domination. They were different from slavery because they were not based on a relation of appropriation of bodies; indeed, the elegance of the discipline lay in the fact that it could dispense with this costly and violent relation by obtaining effects of utility at least as great. They were different, too, from 'service', which was a constant, total, massive, non-analytical, unlimited relation of domination, established in the form of the individual will of the master, his 'caprice'. They were different from vassalage, which was a highly coded, but distant relation of submission, which bore less on the operations of the body than on the products of labour and the ritual marks of allegiance. Again, they were different from asceticism and from 'disciplines' of a monastic type, whose function was to obtain renunciations rather than increases of utility and which, although they involved obedience to others, had as their principal aim an increase of the mastery of each individual over his own body. The historical moment of the disciplines was the moment when an art of the human body was born, which was directed not only at the growth of its skills, nor at the intensification of its

subjection, but at the formation of a relation that in the mechanism itself makes it more obedient as it becomes more useful, and conversely. What was then being formed was a policy of coercions that act upon the body, a calculated manipulation of its elements, its gestures, its behaviour. The human body was entering a machinery of power that explores it, breaks it down and rearranges it. A 'political anatomy', which was also a 'mechanics of power', was being born; it defined how one may have a hold over others' bodies, not only so that they may do what one wishes, but so that they may operate as one wishes, with the techniques, the speed and the efficiency that one determines. Thus discipline produces subjected and practised bodies, 'docile' bodies. Discipline increases the forces of the body (in economic terms of utility) and diminishes these same forces (in political terms of obedience). In short, it dissociates power from the body; on the one hand, it turns it into an 'aptitude', a 'capacity', which it seeks to increase; on the other hand, it reverses the course of the energy, the power that might result from it, and turns it into a relation of strict subjection. If economic exploitation separates the force and the product of labour, let us say that disciplinary coercion establishes in the body the constricting link between an increased aptitude and an increased domination.

The 'invention' of this new political anatomy must not be seen as a sudden discovery. It is rather a multiplicity of often minor processes, of different origin and scattered location, which overlap, repeat, or imitate one another, support one another, distinguish themselves from one another according to their domain of application, converge and gradually produce the blueprint of a general method. They were at work in secondary education at a very early date, later in primary schools; they slowly invested the space of the hospital; and, in a few decades, they restructured the military organization. They sometimes circulated very rapidly from one point to another (between the army and the technical schools or secondary schools), sometimes slowly and discreetly (the insidious militarization of the large workshops). On almost every occasion, they were adopted in response to particular needs: an industrial innovation, a renewed outbreak of certain epidemic diseases, the invention of the rifle or the victories of Prussia. This did not prevent

them being totally inscribed in general and essential transformations, which we must now try to delineate.

There can be no question here of writing the history of the different disciplinary institutions, with all their individual differences. I simply intend to map on a series of examples some of the essential techniques that most easily spread from one to another. These were always meticulous, often minute, techniques, but they had their importance: because they defined a certain mode of detailed political investment of the body, a 'new micro-physics' of power; and because, since the seventeenth century, they had constantly reached out to ever broader domains, as if they tended to cover the entire social body. Small acts of cunning endowed with a great power of diffusion, subtle arrangements, apparently innocent, but profoundly suspicious, mechanisms that obeyed economies too shameful to be acknowledged, or pursued petty forms of coercion – it was nevertheless they that brought about the mutation of the punitive system, at the threshold of the contemporary period. Describing them will require great attention to detail: beneath every set of figures, we must seek not a meaning, but a precaution; we must situate them not only in the inextricability of a functioning, but in the coherence of a tactic. They are the acts of cunning, not so much of the greater reason that works even in its sleep and gives meaning to the insignificant, as of the attentive 'malevolence' that turns everything to account. Discipline is a political anatomy of detail.

Before we lose patience we would do well to recall the words of Marshal de Saxe: 'Although those who concern themselves with details are regarded as folk of limited intelligence, it seems to me that this part is essential, because it is the foundation, and it is impossible to erect any building or establish any method without understanding its principles. It is not enough to have a liking for architecture. One must also know stone-cutting' (Saxe, 5). There is a whole history to be written about such 'stone-cutting' – a history of the utilitarian rationalization of detail in moral accountability and political control. The classical age did not initiate it; rather it accelerated it, changed its scale, gave it precise instruments, and perhaps found some echoes for it in the calculation of the infinitely small or in the description of the most detailed characteristics of natural beings. In any case, 'detail' had long been a category of

theology and asceticism: every detail is important since, in the sight of God, no immensity is greater than a detail, nor is anything so small that it was not willed by one of his individual wishes. In this great tradition of the eminence of detail, all the minutiae of Christian education, of scholastic or military pedagogy, all forms of 'training' found their place easily enough. For the disciplined man, as for the true believer, no detail is unimportant, but not so much for the meaning that it conceals within it as for the hold it provides for the power that wishes to seize it. Characteristic is the great hymn to the 'little things' and to their eternal importance, sung by Jean-Baptiste de La Salle, in his *Traité sur les obligations des frères des Écoles chrétiennes*. The mystique of the everyday is joined here with the discipline of the minute. 'How dangerous it is to neglect little things. It is a very consoling reflection for a soul like mine, little disposed to great actions, to think that fidelity to little things may, by an imperceptible progress, raise us to the most eminent sanctity: because little things lead to greater . . . Little things; it will be said, alas, my God, what can we do that is great for you, weak and mortal creatures that we are. Little things; if great things presented themselves would we perform them? Would we not think them beyond our strength? Little things; and if God accepts them and wishes to receive them as great things? Little things; has one ever felt this? Does one judge according to experience? Little things; one is certainly guilty, therefore, if seeing them as such, one refuses them? Little things; yet it is they that in the end have made great saints! Yes, little things; but great motives, great feelings, great fervour, great ardour, and consequently great merits, great treasures, great rewards' (La Salle, *Traité* . . ., 238–9). The meticulousness of the regulations, the fussiness of the inspections, the supervision of the smallest fragment of life and of the body will soon provide, in the context of the school, the barracks, the hospital or the workshop, a laicized content, an economic or technical rationality for this mystical calculus of the infinitesimal and the infinite. And a History of Detail in the eighteenth century, presided over by Jean-Baptiste de La Salle, touching on Leibniz and Buffon, via Frederick II, covering pedagogy, medicine, military tactics and economics, should bring us, at the end of the century, to the man who dreamt of being another Newton, not the Newton of the immensities of

the heavens and the planetary masses, but a Newton of 'small bodies', small movements, small actions; to the man who replied to Monge's remark, 'there was only one world to discover': 'What do I hear? But the world of details, who has never dreamt of that other world, what of that world? I have believed in it ever since I was fifteen. I was concerned with it then, and this memory lives within me, as an obsession never to be abandoned. . . That other world is the most important of all that I flatter myself I have discovered: when I think of it, my heart aches' (these words are attributed to Bonaparte in the Introduction to Saint-Hilaire's *Notions synthétiques et historiques de philosophie naturelle*). Napoleon did not discover this world; but we know that he set out to organize it; and he wished to arrange around him a mechanism of power that would enable him to see the smallest event that occurred in the state he governed; he intended, by means of the rigorous discipline that he imposed, 'to embrace the whole of this vast machine without the slightest detail escaping his attention' (Treilhard, 14).

A meticulous observation of detail, and at the same time a political awareness of these small things, for the control and use of men, emerge through the classical age bearing with them a whole set of techniques, a whole corpus of methods and knowledge, descriptions, plans and data. And from such trifles, no doubt, the man of modern humanism was born.[1]

The art of distributions

In the first instance, discipline proceeds from the distribution of individuals in space. To achieve this end, it employs several techniques.

1. Discipline sometimes requires *enclosure*, the specification of a place heterogeneous to all others and closed in upon itself. It is the protected place of disciplinary monotony. There was the great 'confinement' of vagabonds and paupers; there were other more discreet, but insidious and effective ones. There were the *collèges*, or secondary schools: the monastic model was gradually imposed; boarding appeared as the most perfect, if not the most frequent, educational régime; it became obligatory at Louis-le-Grand when, after the departure of the Jesuits, it was turned into a model school (cf. Ariès, 308–13 and Snyders, 35–41). There were the military

barracks: the army, that vagabond mass, has to be held in place; looting and violence must be prevented; the fears of local inhabitants, who do not care for troops passing through their towns, must be calmed; conflicts with the civil authorities must be avoided; desertion must be stopped, expenditure controlled. The ordinance of 1719 envisaged the construction of several hundred barracks, on the model of those already set up in the south of the country; there would be strict confinements: 'The whole will be enclosed by an outer wall ten feet high, which will surround the said houses, at a distance of thirty feet from all the sides'; this will have the effect of maintaining the troops in 'order and discipline, so that an officer will be in a position to answer for them' (*L'Ordonnance militaire*, IXL, 25 September 1719). In 1745, there were barracks in about 320 towns; and it was estimated that the total capacity of the barracks in 1775 was approximately 200,000 men (Daisy, 201–9; an anonymous memoir of 1775, in Dépôt de la guerre, 3689, f. 156; Navereau, 132–5). Side by side with the spread of workshops, there also developed great manufacturing spaces, both homogeneous and well defined: first, the combined manufactories, then, in the second half of the eighteenth century, the works or factories proper (the Chaussade ironworks occupied almost the whole of the Médine peninsula, between Nièvre and Loire; in order to set up the Indret factory in 1777, Wilkinson, by means of embankments and dikes, constructed an island on the Loire; Toufait built Le Creusot in the valley of the Charbonnière, which he transformed, and he had workers' accommodation built in the factory itself); it was a change of scale, but it was also a new type of control. The factory was explicitly compared with the monastery, the fortress, a walled town; the guardian 'will open the gates only on the return of the workers, and after the bell that announces the resumption of work has been rung'; a quarter of an hour later no one will be admitted; at the end of the day, the workshops' heads will hand back the keys to the Swiss guard of the factory, who will then open the gates (*Amboise*, f. 12,1301). The aim is to derive the maximum advantages and to neutralize the inconveniences (thefts, interruptions of work, disturbances and 'cabals'), as the forces of production become more concentrated; to protect materials and tools and to master the labour force: 'The order and inspection that must be maintained require

that all workers be assembled under the same roof, so that the partner who is entrusted with the management of the manufactory may prevent and remedy abuses that may arise among the workers and arrest their progress at the outset' (Dauphin, 199).

2. But the principle of 'enclosure' is neither constant, nor indispensable, nor sufficient in disciplinary machinery. This machinery works space in a much more flexible and detailed way. It does this first of all on the principle of elementary location or *partitioning*. Each individual has his own place; and each place its individual. Avoid distributions in groups; break up collective dispositions; analyse confused, massive or transient pluralities. Disciplinary space tends to be divided into as many sections as there are bodies or elements to be distributed. One must eliminate the effects of imprecise distributions, the uncontrolled disappearance of individuals, their diffuse circulation, their unusable and dangerous coagulation; it was a tactic of anti-desertion, anti-vagabondage, anti-concentration. Its aim was to establish presences and absences, to know where and how to locate individuals, to set up useful communications, to interrupt others, to be able at each moment to supervise the conduct of each individual, to assess it, to judge it, to calculate its qualities or merits. It was a procedure, therefore, aimed at knowing, mastering and using. Discipline organizes an analytical space.

And there, too, it encountered an old architectural and religious method: the monastic cell. Even if the compartments it assigns become purely ideal, the disciplinary space is always, basically, cellular. Solitude was necessary to both body and soul, according to a certain asceticism: they must, at certain moments at least, confront temptation and perhaps the severity of God alone. 'Sleep is the image of death, the dormitory is the image of the sepulchre . . . although the dormitories are shared, the beds are nevertheless arranged in such a way and closed so exactly by means of curtains that the girls may rise and retire without being seen' (*Règlement pour la communauté des filles du Bon Pasteur*, in Delamare, 507). But this is still a very crude form.

3. The rule of *functional sites* would gradually, in the disciplinary institutions, code a space that architecture generally left at the disposal of several different uses. Particular places were defined to correspond not only to the need to supervise, to break dangerous

communications, but also to create a useful space. The process appeared clearly in the hospitals, especially in the military and naval hospitals. In France, it seems that Rochefort served both as experiment and model. A port, and a military port is – with its circulation of goods, men signed up willingly or by force, sailors embarking and disembarking, diseases and epidemics – a place of desertion, smuggling, contagion: it is a crossroads for dangerous mixtures, a meeting-place for forbidden circulations. The naval hospital must therefore treat, but in order to do this it must be a filter, a mechanism that pins down and partitions; it must provide a hold over this whole mobile, swarming mass, by dissipating the confusion of illegality and evil. The medical supervision of diseases and contagions is inseparable from a whole series of other controls: the military control over deserters, fiscal control over commodities, administrative control over remedies, rations, disappearances, cures, deaths, simulations. Hence the need to distribute and partition off space in a rigorous manner. The first steps taken at Rochefort concerned things rather than men, precious commodities, rather than patients. The arrangements of fiscal and economic supervision preceded the techniques of medical observation: placing of medicines under lock and key, recording their use; a little later, a system was worked out to verify the real number of patients, their identity, the units to which they belonged; then one began to regulate their comings and goings; they were forced to remain in their wards; to each bed was attached the name of its occupant; each individual treated was entered in a register that the doctor had to consult during the visit; later came the isolation of contagious patients and separate beds. Gradually, an administrative and political space was articulated upon a therapeutic space; it tended to individualize bodies, diseases, symptoms, lives and deaths; it constituted a real table of juxtaposed and carefully distinct singularities. Out of discipline, a medically useful space was born.

In the factories that appeared at the end of the eighteenth century, the principle of individualizing partitioning became more complicated. It was a question of distributing individuals in a space in which one might isolate them and map them; but also of articulating this distribution on a production machinery that had its own requirements. The distribution of bodies, the spatial arrangement of

production machinery and the different forms of activity in the distribution of 'posts' had to be linked together. The Oberkampf manufactory at Jouy obeyed this principle. It was made up of a series of workshops specified according to each broad type of operation: for the printers, the handlers, the colourists, the women who touched up the design, the engravers, the dyers. The largest of the buildings, built in 1791, by Toussaint Barré, was 110 metres long and had three storeys. The ground floor was devoted mainly to block printing; it contained 132 tables arranged in two rows, the length of the workshop, which had eighty-eight windows; each printer worked at a table with his 'puller', who prepared and spread the colours. There were 264 persons in all. At the end of each table was a sort of rack on which the material that had just been printed was left to dry (Saint-Maur). By walking up and down the central aisle of the workshop, it was possible to carry out a supervision that was both general and individual: to observe the worker's presence and application, and the quality of his work; to compare workers with one another, to classify them according to skill and speed; to follow the successive stages of the production process. All these serializations formed a permanent grid: confusion was eliminated[2]: that is to say, production was divided up and the labour process was articulated, on the one hand, according to its stages or elementary operations, and, on the other hand, according to the individuals, the particular bodies, that carried it out: each variable of this force – strength, promptness, skill, constancy – would be observed, and therefore characterized, assessed, computed and related to the individual who was its particular agent. Thus, spread out in a perfectly legible way over the whole series of individual bodies, the work force may be analysed in individual units. At the emergence of large-scale industry, one finds, beneath the division of the production process, the individualizing fragmentation of labour power; the distributions of the disciplinary space often assured both.

4. In discipline, the elements are interchangeable, since each is defined by the place it occupies in a series, and by the gap that separates it from the others. The unit is, therefore, neither the territory (unit of domination), nor the place (unit of residence), but the *rank*: the place one occupies in a classification, the point at which a line and a column intersect, the interval in a series of intervals that

one may traverse one after the other. Discipline is an art of rank, a technique for the transformation of arrangements. It individualizes bodies by a location that does not give them a fixed position, but distributes them and circulates them in a network of relations.

Take the example of the 'class'. In the Jesuit colleges, one still found an organization that was at once binary and unified; the classes, which might comprise up to two or three hundred pupils, were subdivided into groups of ten; each of these groups, with its 'decurion', was placed in a camp, Roman or Carthaginian; each 'decury' had its counterpart in the opposing camp. The general form was that of war and rivalry; work, apprenticeship and classification were carried out in the form of the joust, through the confrontation of two armies; the contribution of each pupil was inscribed in this general duel; it contributed to the victory or the defeat of a whole camp; and the pupils were assigned a place that corresponded to the function of each individual and to his value as a combatant in the unitary group of his 'decury' (Rochemonteix, 51ff). It should be observed moreover that this Roman comedy made it possible to link, to the binary exercises of rivalry, a spatial disposition inspired by the legion, with rank, hierarchy, pyramidal supervision. One should not forget that, generally speaking, the Roman model, at the Enlightenment, played a dual role: in its republican aspect, it was the very embodiment of liberty; in its military aspect, it was the ideal schema of discipline. The Rome of the eighteenth century and of the Revolution was the Rome of the Senate, but it was also that of the legion; it was the Rome of the Forum, but it was also that of the camps. Up to the empire, the Roman reference transmitted, somewhat ambiguously, the juridical ideal of citizenship and the technique of disciplinary methods. In any case, the strictly disciplinary element in the ancient fable used by the Jesuit colleges came to dominate the element of joust and mock warfare. Gradually – but especially after 1762 – the educational space unfolds; the class becomes homogeneous, it is no longer made up of individual elements arranged side by side under the master's eye. In the eighteenth century, 'rank' begins to define the great form of distribution of individuals in the educational order: rows or ranks of pupils in the class, corridors, courtyards; rank attributed to each pupil at the end of each task and each examination; the rank he

obtains from week to week, month to month, year to year; an alignment of age groups, one after another; a succession of subjects taught and questions treated, according to an order of increasing difficulty. And, in this ensemble of compulsory alignments, each pupil, according to his age, his performance, his behaviour, occupies sometimes one rank, sometimes another; he moves constantly over a series of compartments – some of these are 'ideal' compartments, marking a hierarchy of knowledge or ability, others express the distribution of values or merits in material terms in the space of the college or classroom. It is a perpetual movement in which individuals replace one another in a space marked off by aligned intervals.

The organization of a serial space was one of the great technical mutations of elementary education. It made it possible to supersede the traditional system (a pupil working for a few minutes with the master, while the rest of the heterogeneous group remained idle and unattended). By assigning individual places it made possible the supervision of each individual and the simultaneous work of all. It organized a new economy of the time of apprenticeship. It made the educational space function like a learning machine, but also as a machine for supervising, hierarchizing, rewarding. Jean-Baptiste de La Salle dreamt of a classroom in which the spatial distribution might provide a whole series of distinctions at once: according to the pupils' progress, worth, character, application, cleanliness and parents' fortune. Thus, the classroom would form a single great table, with many different entries, under the scrupulously 'classificatory' eye of the master: 'In every class there will be places assigned for all the pupils of all the lessons, so that all those attending the same lesson will always occupy the same place. Pupils attending the highest lessons will be placed in the benches closest to the wall, followed by the others according to the order of the lessons moving towards the middle of the classroom. . . Each of the pupils will have his place assigned to him and none of them will leave it or change it except on the order or with the consent of the school inspector.' Things must be so arranged that 'those whose parents are neglectful and verminous must be separated from those who are careful and clean; that an unruly and frivolous pupil should be placed between two who are well behaved and serious, a libertine either alone or between two pious pupils'.[3]

In organizing 'cells', 'places' and 'ranks', the disciplines create complex spaces that are at once architectural, functional and hierarchical. It is spaces that provide fixed positions and permit circulation; they carve out individual segments and establish operational links; they mark places and indicate values; they guarantee the obedience of individuals, but also a better economy of time and gesture. They are mixed spaces: real because they govern the disposition of buildings, rooms, furniture, but also ideal, because they are projected over this arrangement of characterizations, assessments, hierarchies. The first of the great operations of discipline is, therefore, the constitution of '*tableaux vivants*', which transform the confused, useless or dangerous multitudes into ordered multiplicities. The drawing up of 'tables' was one of the great problems of the scientific, political and economic technology of the eighteenth century: how one was to arrange botanical and zoological gardens, and construct at the same time rational classifications of living beings; how one was to observe, supervise, regularize the circulation of commodities and money and thus build up an economic table that might serve as the principle of the increase of wealth; how one was to inspect men, observe their presence and absence and constitute a general and permanent register of the armed forces; how one was to distribute patients, separate them from one another, divide up the hospital space and make a systematic classification of diseases: these were all twin operations in which the two elements – distribution and analysis, supervision and intelligibility – are inextricably bound up. In the eighteenth century, the table was both a technique of power and a procedure of knowledge. It was a question of organizing the multiple, of providing oneself with an instrument to cover it and to master it; it was a question of imposing upon it an 'order'. Like the army general of whom Guibert spoke, the naturalist, the physician, the economist was 'blinded by the immensity, dazed by the multitude . . . the innumerable combinations that result from the multiplicity of objects, so many concerns together form a burden above his strength. In perfecting itself, in approaching true principles, the science of modern warfare might become simpler and less difficult'; armies 'with simple, similar tactics, capable of being adapted to every movement . . . would be easier to move and lead' (Guibert, xxxvi). Tactics, the spatial ordering of men; taxonomy,

the disciplinary space of natural beings; the economic table, the regulated movement of wealth.

But the table does not have the same function in these different registers. In the order of the economy, it makes possible the measurement of quantities and the analysis of movements. In the form of taxonomy, it has the function of characterizing (and consequently reducing individual singularities) and constituting classes (and therefore of excluding considerations of number). But in the form of the disciplinary distribution, on the other hand, the table has the function of treating multiplicity itself, distributing it and deriving from it as many effects as possible. Whereas natural taxonomy is situated on the axis that links character and category, disciplinary tactics is situated on the axis that links the singular and the multiple. It allows both the characterization of the individual as individual and the ordering of a given multiplicity. It is the first condition for the control and use of an ensemble of distinct elements: the base for a micro-physics of what might be called a 'cellular' power.

The control of activity

1. The *time-table* is an old inheritance. The strict model was no doubt suggested by the monastic communities. It soon spread. Its three great methods – establish rhythms, impose particular occupations, regulate the cycles of repetition – were soon to be found in schools, workshops and hospitals. The new disciplines had no difficulty in taking up their place in the old forms; the schools and poorhouses extended the life and the regularity of the monastic communities to which they were often attached. The rigours of the industrial period long retained a religious air; in the seventeenth century, the regulations of the great manufactories laid down the exercises that would divide up the working day: 'On arrival in the morning, before beginning their work, all persons shall wash their hands, offer up their work to God and make the sign of the cross' (Saint-Maur, article 1); but even in the nineteenth century, when the rural populations were needed in industry, they were sometimes formed into 'congregations', in an attempt to inure them to work in the workshops; the framework of the 'factory–monastery' was

imposed upon the workers. In the Protestant armies of Maurice of Orange and Gustavus Adolphus, military discipline was achieved through a rhythmics of time punctuated by pious exercises; army life, Boussanelle was later to say, should have some of the 'perfections of the cloister itself' (Boussanelle, 2; on the religious character of discipline in the Swedish army, cf. *The Swedish Discipline*, London, 1632). For centuries, the religious orders had been masters of discipline: they were the specialists of time, the great technicians of rhythm and regular activities. But the disciplines altered these methods of temporal regulation from which they derived. They altered them first by refining them. One began to count in quarter hours, in minutes, in seconds. This happened in the army, of course: Guibert systematically implemented the chronometric measurement of shooting that had been suggested earlier by Vauban. In the elementary schools, the division of time became increasingly minute; activities were governed in detail by orders that had to be obeyed immediately: 'At the last stroke of the hour, a pupil will ring the bell, and at the first sound of the bell all the pupils will kneel, with their arms crossed and their eyes lowered. When the prayer has been said, the teacher will strike the signal once to indicate that the pupils should get up, a second time as a sign that they should salute Christ, and a third that they should sit down' (La Salle, *Conduite . . .*, 27–8). In the early nineteenth century, the following time-table was suggested for the *Écoles mutuelles*, or 'mutual improvement schools': 8.45 entrance of the monitor, 8.52 the monitor's summons, 8.56 entrance of the children and prayer, 9.00 the children go to their benches, 9.04 first slate, 9.08 end of dictation, 9.12 second slate, etc. (Tronchot, 221). The gradual extension of the wage-earning class brought with it a more detailed partitioning of time: 'If workers arrive later than a quarter of an hour after the ringing of the bell . . .' (Amboise, article 2); 'if any one of the companions is asked for during work and loses more than five minutes . . .', 'anyone who is not at his work at the correct time . . .' (Oppenheim, article 7–8). But an attempt is also made to assure the quality of the time used: constant supervision, the pressure of supervisors, the elimination of anything that might disturb or distract; it is a question of constituting a totally useful time: 'It is expressly forbidden during work to amuse one's companions by gestures or in any other way, to play

at any game whatsoever, to eat, to sleep, to tell stories and comedies' (Oppenheim, article 16); and even during the meal-break, 'there will be no telling of stories, adventures or other such talk that distracts the workers from their work'; 'it is expressly forbidden for any worker, under any pretext, to bring wine into the manufactory and to drink in the workshops' (*Amboise*, article 4). Time measured and paid must also be a time without impurities or defects; a time of good quality, throughout which the body is constantly applied to its exercise. Precision and application are, with regularity, the fundamental virtues of disciplinary time. But this is not the newest thing about it. Other methods are more characteristic of the disciplines.

2. *The temporal elaboration of the act.* There are, for example, two ways of controlling marching troops. In the early seventeenth century, we have: 'Accustomed soldiers marching in file or in battalion to march to the rhythm of the drum. And to do this, one must begin with the right foot so that the whole troop raises the same foot at the same time' (Montgommery, 86). In the mid-eighteenth century, there are four sorts of steps: 'The length of the the short step will be a foot, that of the ordinary step, the double step and the marching step will be two feet, the whole measured from one heel to the next; as for the duration, that of the small step and the ordinary step will last one second, during which two double steps would be performed; the duration of the marching step will be a little longer than one second. The oblique step will take one second; it will be at most eighteen inches from one heel to the next. . . . The ordinary step will be executed forwards, holding the head up high and the body erect, holding oneself in balance successively on a single leg, and bringing the other forwards, the ham taut, the point of the foot a little turned outwards and low, so that one may without affectation brush the ground on which one must walk and place one's foot, in such a way that each part may come to rest there at the same time without striking the ground' ('Ordonnance du 1er janvier 1766, pour régler l'exercise de l'infanterie'). Between these two instructions, a new set of restraints had been brought into play, another degree of precision in the breakdown of gestures and movements, another way of adjusting the body to temporal imperatives.

What the ordinance of 1766 defines is not a time-table – the general framework for an activity; it is rather a collective and

obligatory rhythm, imposed from the outside; it is a 'programme'; it assures the elaboration of the act itself; it controls its development and its stages from the inside. We have passed from a form of injunction that measured or punctuated gestures to a web that constrains them or sustains them throughout their entire succession. A sort of anatomo-chronological schema of behaviour is defined. The act is broken down into its elements; the position of the body, limbs, articulations is defined; to each movement are assigned a direction, an aptitude, a duration; their order of succession is prescribed. Time penetrates the body and with it all the meticulous controls of power.

3. Hence *the correlation of the body and the gesture*. Disciplinary control does not consist simply in teaching or imposing a series of particular gestures; it imposes the best relation between a gesture and the overall position of the body, which is its condition of efficiency and speed. In the correct use of the body, which makes possible a correct use of time, nothing must remain idle or useless: everything must be called upon to form the support of the act required. A well-disciplined body forms the operational context of the slightest gesture. Good handwriting, for example, presupposes a gymnastics – a whole routine whose rigorous code invests the body in its entirety, from the points of the feet to the tip of the index finger. The pupils must always 'hold their bodies erect, somewhat turned and free on the left side, slightly inclined, so that, with the elbow placed on the table, the chin can be rested upon the hand, unless this were to interfere with the view; the left leg must be somewhat more forward under the table than the right. A distance of two fingers must be left between the body and the table; for not only does one write with more alertness, but nothing is more harmful to the health than to acquire the habit of pressing one's stomach against the table; the part of the left arm from the elbow to the hand must be placed on the table. The right arm must be at a distance from the body of about three fingers and be about five fingers from the table, on which it must rest lightly. The teacher will place the pupils in the posture that they should maintain when writing, and will correct it either by sign or otherwise, when they change this position' (La Salle, *Conduite* . . ., 63–4). A disciplined body is the prerequisite of an efficient gesture.

4. *The body–object articulation*. Discipline defines each of the

relations that the body must have with the object that it manipulates. Between them, it outlines a meticulous meshing. 'Bring the weapon forward. In three stages. Raise the rifle with the right hand, bringing it close to the body so as to hold it perpendicular with the right knee, the end of the barrel at eye level, grasping it by striking it with the right hand, the arm held close to the body at waist height. At the second stage, bring the rifle in front of you with the left hand, the barrel in the middle between the two eyes, vertical, the right hand grasping it at the small of the butt, the arm outstretched, the trigger-guard resting on the first finger, the left hand at the height of the notch, the thumb lying along the barrel against the moulding. At the third stage, let go of the rifle with the left hand, which falls along the thigh, raising the rifle with the right hand, the lock outwards and opposite the chest, the right arm half flexed, the elbow close to the body, the thumb lying against the lock, resting against the first screw, the hammer resting on the first finger, the barrel perpendicular' ('Ordonnance du 1er janvier 1766 . . ., titre XI, article 2'). This is an example of what might be called the instrumental coding of the body. It consists of a breakdown of the total gesture into two parallel series: that of the parts of the body to be used (right hand, left hand, different fingers of the hand, knee, eye, elbow, etc.) and that of the parts of the object manipulated (barrel, notch, hammer, screw, etc.); then the two sets of parts are correlated together according to a number of simple gestures (rest, bend); lastly, it fixes the canonical succession in which each of these correlations occupies a particular place. This obligatory syntax is what the military theoreticians of the eighteenth century called '*manoeuvre*'. The traditional recipe gives place to explicit and obligatory prescriptions. Over the whole surface of contact between the body and the object it handles, power is introduced, fastening them to one another. It constitutes a body-weapon, body-tool, body-machine complex. One is as far as possible from those forms of subjection that demanded of the body only signs or products, forms of expression or the result of labour. The regulation imposed by power is at the same time the law of construction of the operation. Thus disciplinary power appears to have the function not so much of deduction as of synthesis, not so much of exploitation of the product as of coercive link with the apparatus of production.

5. *Exhaustive use.* The principle that underlay the time-table in its traditional form was essentially negative; it was the principle of non-idleness: it was forbidden to waste time, which was counted by God and paid for by men; the time-table was to eliminate the danger of wasting it – a moral offence and economic dishonesty. Discipline, on the other hand, arranges a positive economy; it poses the principle of a theoretically ever-growing use of time: exhaustion rather than use; it is a question of extracting, from time, ever more available moments and, from each moment, ever more useful forces. This means that one must seek to intensify the use of the slightest moment, as if time, in its very fragmentation, were inexhaustible or as if, at least by an ever more detailed internal arrangement, one could tend towards an ideal point at which one maintained maximum speed and maximum efficiency. It was precisely this that was implemented in the celebrated regulations of the Prussian infantry that the whole of Europe imitated after the victories of Frederick II:[4] the more time is broken down, the more its subdivisions multiply, the better one disarticulates it by deploying its internal elements under a gaze that supervises them, the more one can accelerate an operation, or at least regulate it according to an optimum speed; hence this regulation of the time of an action that was so important in the army and which was to be so throughout the entire technology of human activity: the Prussian regulations of 1743 laid down six stages to bring the weapon to one's foot, four to extend it, thirteen to raise it to the shoulder, etc. By other means, the 'mutual improvement school' was also arranged as a machine to intensify the use of time; its organization made it possible to obviate the linear, successive character of the master's teaching: it regulated the counterpoint of operations performed, at the same moment, by different groups of pupils under the direction of monitors and assistants, so that each passing moment was filled with many different, but ordered activities; and, on the other hand, the rhythm imposed by signals, whistles, orders imposed on everyone temporal norms that were intended both to accelerate the process of learning and to teach speed as a virtue;[5] 'the sole aim of these commands . . . is to accustom the children to executing well and quickly the same operations, to diminish as far as possible by speed the loss of time caused by moving from one operation to another' (Bernard).

Through this technique of subjection a new object was being formed; slowly, it superseded the mechanical body – the body composed of solids and assigned movements, the image of which had for so long haunted those who dreamt of disciplinary perfection. This new object is the natural body, the bearer of forces and the seat of duration; it is the body susceptible to specified operations, which have their order, their stages, their internal conditions, their constituent elements. In becoming the target for new mechanisms of power, the body is offered up to new forms of knowledge. It is the body of exercise, rather than of speculative physics; a body manipulated by authority, rather than imbued with animal spirits; a body of useful training and not of rational mechanics, but one in which, by virtue of that very fact, a number of natural requirements and functional constraints are beginning to emerge. This is the body that Guibert discovered in his critique of excessively artificial movements. In the exercise that is imposed upon it and which it resists, the body brings out its essential correlations and spontaneously rejects the incompatible: 'On entering most of our training schools, one sees all those unfortunate soldiers in constricting and forced attitudes, one sees all their muscles contracted, the circulation of their blood interrupted. . . If we studied the intention of nature and the construction of the human body, we would find the position and the bearing that nature clearly prescribes for the soldier. The head must be erect, standing out from the shoulders, sitting perpendicularly between them. It must be turned neither to left nor to right, because, in view of the correspondence between the vertebrae of the neck and the shoulder-blade to which they are attached, none of them may move in a circular manner without slightly bringing with it from the same side that it moves one of the shoulders and because, the body no longer being placed squarely, the soldier can no longer walk straight in front of him or serve as a point of alignment. . . Since the hip-bone, which the ordinance indicates as the point against which the butt end should rest, is not situated the same in all men, the rifle must be placed more to the right for some, and more to the left for others. For the same reason of inequality of structure, the trigger-guard is more or less pressed against the body, depending on whether the outer parts of a man's shoulder is more or less fleshy' (Guibert, 21–2).

We have seen how the procedures of disciplinary distribution had their place among the contemporary techniques of classification and tabulation; but also how they introduced into them the specific problem of individuals and multiplicity. Similarly, the disciplinary controls of activity belonged to a whole series of researches, theoretical or practical, into the natural machinery of bodies; but they began to discover in them specific processes; behaviour and its organized requirements gradually replaced the simple physics of movement. The body, required to be docile in its minutest operations, opposes and shows the conditions of functioning proper to an organism. Disciplinary power has as its correlative an individuality that is not only analytical and 'cellular', but also natural and 'organic'.

The organization of geneses

In 1667, the edict that set up the manufactory of the Gobelins envisaged the organization of a school. Sixty scholarship children were to be chosen by the superintendent of royal buildings, entrusted for a time to a master whose task it would be to provide them with 'upbringing and instruction', then apprenticed to the various master tapestry makers of the manufactory (who by virtue of this fact received compensation deducted from the pupils' scholarships); after six years' apprenticeship, four years of service and a qualifying examination, they were given the right to 'set up and run a shop' in any town of the kingdom. We find here the characteristics of guild apprenticeship: the relation of dependence on the master that is both individual and total; the statutory duration of the training, which is concluded by a qualifying examination, but which is not broken down according to a precise programme; an overall exchange between the master who must give his knowledge and the apprentice who must offer his services, his assistance and often some payment. The form of domestic service is mixed with a transference of knowledge.[6] In 1737, an edict organized a school of drawing for the apprentices of the Gobelins; it was not intended to replace the training given by the master workers, but to complement it. It involved a quite different arrangement of time. Two hours a day, except on Sundays and feast days, the pupils met in the school. A

roll-call was taken, from a list on the wall; the absentees were noted down in a register. The school was divided into three classes. The first for those who had no notion of drawing; they were made to copy models, which were more or less difficult according to the abilities of each pupil. The second 'for those who already have some principles', or who had passed through the first class; they had to reproduce pictures 'at sight, without tracing', but considering only the drawing. In the third class, they learnt colouring and pastel drawing, and were introduced to the theory and practice of dyeing. The pupils performed individual tasks at regular intervals; each of these exercises, signed with the name of its author and date of execution, was handed in to the teacher; the best were rewarded; assembled together at the end of the year and compared, they made it possible to establish the progress, the present ability and the relative place of each pupil; it was then decided which of them could pass into the next class. A general book, kept by the teachers and their assistants, recorded from day to day the behaviour of the pupils and everything that happened in the school; it was periodically shown to an inspector (Gerspach, 1892).

The Gobelins school is only one example of an important phenomenon: the development, in the classical period, of a new technique for taking charge of the time of individual existences; for regulating the relations of time, bodies and forces; for assuring an accumulation of duration; and for turning to ever-increased profit or use the movement of passing time. How can one capitalize the time of individuals, accumulate it in each of them, in their bodies, in their forces or in their abilities, in a way that is susceptible of use and control? How can one organize profitable durations? The disciplines, which analyse space, break up and rearrange activities, must also be understood as machinery for adding up and capitalizing time. This was done in four ways, which emerge most clearly in military organization.

1. Divide duration into successive or parallel segments, each of which must end at a specific time. For example, isolate the period of training and the period of practice; do not mix the instruction of recruits and the exercise of veterans; open separate military schools for the armed service (in 1764, the creation of the École Militaire in Paris, in 1776 the creation of twelve schools in the provinces);

recruit professional soldiers at the youngest possible age, take children, 'have them adopted by the nation, and brought up in special schools' (Servan, J., 456); teach in turn posture, marching, the handling of weapons, shooting, and do not pass to another activity until the first has been completely mastered: 'One of the principal mistakes is to show a soldier every exercise at once' ('Règlement de 1743 . . .'); in short, break down time into separate and adjusted threads. 2. Organize these threads according to an analytical plan – successions of elements as simple as possible, combining according to increasing complexity. This presupposes that instruction should abandon the principle of analogical repetition. In the sixteenth century, military exercise consisted above all in copying all or part of the action, and of generally increasing the soldier's skill or strength;[7] in the eighteenth century, the instruction of the 'manual' followed the principle of the 'elementary' and not of the 'exemplary': simple gestures – the position of the fingers, the bend of the leg, the movement of the arms – basic elements for useful actions that also provide a general training in strength, skill, docility. 3. Finalize these temporal segments, decide on how long each will last and conclude it with an examination, which will have the triple function of showing whether the subject has reached the level required, of guaranteeing that each subject undergoes the same apprenticeship and of differentiating the abilities of each individual. When the sergeants, corporals, etc. 'entrusted with the task of instructing the others, are of the opinion that a particular soldier is ready to pass into the first class, they will present him first to the officers of their company, who will carefully examine him; if they do not find him sufficiently practised, they will refuse to admit him; if, on the other hand, the man presented seems to them to be ready, the said officers will themselves propose him to the commanding officer of the regiment, who will see him if he thinks it necessary, and will have him examined by the senior officers. The slightest mistakes will be enough to have him rejected, and no one will be able to pass from the second class to the first until he has undergone this first examination' (*Instruction par l'exercise de l'infanterie*, 14 mai 1754). 4. Draw up series of series; lay down for each individual, according to his level, his seniority, his rank, the exercises that are suited to him; common exercises have a differing role and each

difference involves specific exercises. At the end of each series, others begin, branch off and subdivide in turn. Thus each individual is caught up in a temporal series which specifically defines his level or his rank. It is a disciplinary polyphony of exercises: 'Soldiers of the second class will be exercised every morning by sergeants, corporals, *anspessades*, lance-corporals. . . The lance-corporals will be exercised every Sunday by the head of the section . . .; the corporals and *anspessades* will be exercised every Tuesday afternoon by the sergeants and their company and these in turn on the afternoons of every second, twelfth and twenty-second day of each month by senior officers' (*Instruction . . .*).

It is this disciplinary time that was gradually imposed on pedagogical practice – specializing the time of training and detaching it from the adult time, from the time of mastery; arranging different stages, separated from one another by graded examinations; drawing up programmes, each of which must take place during a particular stage and which involves exercises of increasing difficulty; qualifying individuals according to the way in which they progress through these series. For the 'initiatory' time of traditional training (an overall time, supervised by the master alone, authorized by a single examination), disciplinary time had substituted its multiple and progressive series. A whole analytical pedagogy was being formed, meticulous in its detail (it broke down the subject being taught into its simplest elements, it hierarchized each stage of development into small steps) and also very precocious in its history (it largely anticipated the genetic analyses of the *idéologues*, whose technical model it appears to have been). At the beginning of the eighteenth century, Demia suggested a division of the process of learning to read into seven levels: the first for those who are beginning to learn the letters, the second for those who are learning to spell, the third for those who are learning to join syllables together to make words, the fourth for those who are reading Latin in sentences or from punctuation to punctuation, the fifth for those who are beginning to read French, the sixth for the best readers, the seventh for those who can read manuscripts. But, where there are a great many pupils, further subdivisions would have to be introduced; the first class would comprise four streams: one for those who are learning the 'simple letters'; a second for those who are learning the 'mixed' letters; a

third for those who are learning the abbreviated letters (*â, ê . . .*); a fourth for those who are learning the double letters (*ff, ss, tt, st*). The second class would be divided into three streams: for those who 'count each letter aloud before spelling the syllable, *D.O., DO*'; for those 'who spell the most difficult syllables, such as *bant, brand, spinx*', etc. (Demia, 19–20). Each stage in the combinatory of elements must be inscribed within a great temporal series, which is both a natural progress of the mind and a code for educative procedures.

The 'seriation' of successive activities makes possible a whole investment of duration by power: the possibility of a detailed control and a regular intervention (of differentiation, correction, punishment, elimination) in each moment of time; the possibility of characterizing, and therefore of using individuals according to the level in the series that they are moving through; the possibility of accumulating time and activity, of rediscovering them, totalized and usable in a final result, which is the ultimate capacity of an individual. Temporal dispersal is brought together to produce a profit, thus mastering a duration that would otherwise elude one's grasp. Power is articulated directly onto time; it assures its control and guarantees its use.

The disciplinary methods reveal a linear time whose moments are integrated, one upon another, and which is orientated towards a terminal, stable point; in short, an 'evolutive' time. But it must be recalled that, at the same moment, the administrative and economic techniques of control reveal a social time of a serial, orientated, cumulative type: the discovery of an evolution in terms of 'progress'. The disciplinary techniques reveal individual series: the discovery of an evolution in terms of 'genesis'. These two great 'discoveries' of the eighteenth century – the progress of societies and the geneses of individuals – were perhaps correlative with the new techniques of power, and more specifically, with a new way of administering time and making it useful, by segmentation, seriation, synthesis and totalization. A macro- and a micro-physics of power made possible, not the invention of history (it had long had no need of that), but the integration of a temporal, unitary, continuous, cumulative dimension in the exercise of controls and the practice of dominations. 'Evolutive' historicity, as it was then constituted – and so profoundly that it is still self-evident for many today – is bound up with a mode

of functioning of power. No doubt it is as if the 'history-remembering' of the chronicles, genealogies, exploits, reigns and deeds had long been linked to a modality of power. With the new techniques of subjection, the 'dynamics' of continuous evolutions tends to replace the 'dynastics' of solemn events.

In any case, the small temporal continuum of individuality-genesis certainly seems to be, like the individuality-cell or the individuality-organism, an effect and an object of discipline. And, at the centre of this seriation of time, one finds a procedure that is, for it, what the drawing up of 'tables' was for the distribution of individuals and cellular segmentation, or, again, what '*manoeuvre*' was for the economy of activities and organic control. This procedure is 'exercise'. Exercise is that technique by which one imposes on the body tasks that are both repetitive and different, but always graduated. By bending behaviour towards a terminal state, exercise makes possible a perpetual characterization of the individual either in relation to this term, in relation to other individuals, or in relation to a type of itinerary. It thus assures, in the form of continuity and constraint, a growth, an observation, a qualification. Before adopting this strictly disciplinary form, exercise had a long history: it is to be found in military, religious and university practices either as initiation ritual, preparatory ceremony, theatrical rehearsal or examination. Its linear, continuously progressive organization, its genetic development in time were, at least in the army and the school, introduced at a later date – and were no doubt of religious origin. In any case, the idea of an educational 'programme' that would follow the child to the end of his schooling and which would involve from year to year, month to month, exercises of increasing complexity, first appeared, it seems, in a religious group, the Brothers of the Common Life (cf. Meir, 160 ff). Strongly inspired by Ruysbroek and Rhenish mysticism, they transposed certain of the spiritual techniques to education – and to the education not only of clerks, but also of magistrates and merchants: the theme of a perfection towards which the exemplary master guides the pupil became with them that of an authoritarian perfection of the pupils by the teacher; the ever-increasing rigorous exercises that the ascetic life proposed became tasks of increasing complexity that marked the gradual acquisition of knowledge and good behaviour; the striving

of the whole community towards salvation became the collective, permanent competition of individuals being classified in relation to one another. Perhaps it was these procedures of community life and salvation that were the first nucleus of methods intended to produce individually characterized, but collectively useful aptitudes.[8] In its mystical or ascetic form, exercise was a way of ordering earthly time for the conquest of salvation. It was gradually, in the history of the West, to change direction while preserving certain of its characteristics; it served to economize the time of life, to accumulate it in a useful form and to exercise power over men through the mediation of time arranged in this way. Exercise, having become an element in the political technology of the body and of duration, does not culminate in a beyond, but tends towards a subjection that has never reached its limit.

The composition of forces

'Let us begin by destroying the old prejudice, according to which one believed one was increasing the strength of a troop by increasing its depth. All the physical laws of movement become chimeras when one wishes to adapt them to tactics.'[9] From the end of the seventeenth century, the technical problem of infantry had been freed from the physical model of mass. In an army of pikes and muskets – slow, imprecise, practically incapable of selecting a target and taking aim – troops were used as a projectile, a wall or a fortress: 'the formidable infantry of the army of Spain'; the distribution of soldiers in this mass was carried out above all according to their seniority and their bravery; at the centre, with the task of providing weight and volume, of giving density to the body, were the least experienced; in front, at the angles and on the flanks, were the bravest or reputedly most skilful soldiers. In the course of the classical period, one passed over to a whole set of delicate articulations. The unit – regiment, battalion, section and, later, 'division'[10] – became a sort of machine with many parts, moving in relation to one another, in order to arrive at a configuration and to obtain a specific result. What were the reasons for this mutation? Some were economic: to make each individual useful and the training, maintenance, and arming of troops profitable; to give to each soldier, a precious unit,

maximum efficiency. But these economic reasons could become determinant only with a technical transformation: the invention of the rifle:[11] more accurate, more rapid than the musket, it gave greater value to the soldier's skill; more capable of reaching a particular target, it made it possible to exploit fire-power at an individual level; and, conversely, it turned every soldier into a possible target, requiring by the same token greater mobility; it involved therefore the disappearance of a technique of masses in favour of an art that distributed units and men along extended, relatively flexible, mobile lines. Hence the need to find a whole calculated practice of individual and collective dispositions, movements of groups or isolated elements, changes of position, of movement from one disposition to another; in short, the need to invent a machinery whose principle would no longer be the mobile or immobile mass, but a geometry of divisible segments whose basic unity was the mobile soldier with his rifle;[12] and, no doubt, below the soldier himself, the minimal gestures, the elementary stages of actions, the fragments of spaces occupied or traversed.

The same problems arose when it was a question of constituting a productive force whose effect had to be superior to the sum of elementary forces that composed it: 'The combined working-day produces, relatively to an equal sum of working-days, a greater quantity of use-values, and, consequently, diminishes the labour-time necessary for the production of a given useful effect. Whether the combined working-day, in a given case, acquires this increased productive power, because it heightens the mechanical force of labour, or extends its sphere of action over a greater space, or contracts the field of production relatively to the scale of production, or at the critical moment sets large masses of labour to work . . . the special productive power of the combined working-day is, under all circumstances, the social productive power of labour, or the productive power of social labour. This power is due to cooperation itself' (Marx, *Capital*, vol. I, 311–12). On several occasions, Marx stresses the analogy between the problems of the division of labour and those of military tactics. For example: 'Just as the offensive power of a squadron of cavalry, or the defensive power of a regiment of infantry, is essentially different from the sum of the offensive or defensive powers of the individual cavalry or infantry

soldiers taken separately, so the sum total of the mechanical forces exerted by isolated workmen differs from the social force that is developed, when many hands take part simultaneously in one and the same undivided operation' (Marx, *Capital*, vol. 1, 308).

Thus a new demand appears to which discipline must respond: to construct a machine whose effect will be maximized by the concerted articulation of the elementary parts of which it is composed. Discipline is no longer simply an art of distributing bodies, of extracting time from them and accumulating it, but of composing forces in order to obtain an efficient machine. This demand is expressed in several ways.

1. The individual body becomes an element that may be placed, moved, articulated on others. Its bravery or its strength are no longer the principal variables that define it; but the place it occupies, the interval it covers, the regularity, the good order according to which it operates its movements. The soldier is above all a fragment of mobile space, before he is courage or honour. Guibert describes the soldier in the following way: 'When he is under arms, he occupies two feet along his greatest diameter, that is to say, taking him from one end to the other, and about one foot in his greatest thickness taken from the chest to the shoulders, to which one must add an interval of a foot between him and the next man; this gives two feet in all directions per soldier and indicates that a troop of infantry in battle occupies, either in its front or in its depth, as many steps as it has ranks' (Guibert, 27). This is a functional reduction of the body. But it is also an insertion of this body-segment in a whole ensemble over which it is articulated. The soldier whose body has been trained to function part by part for particular operations must in turn form an element in a mechanism at another level. The soldiers will be instructed first 'one by one, then two by two, then in greater numbers. . . For the handling of weapons, one will ascertain that, when the soldiers have been separately instructed, they will carry it out two by two, and then change places alternately, so that the one on the left may learn to adapt himself to the one on the right' ('Ordonnance . . .'). The body is constituted as a part of a multi-segmentary machine.

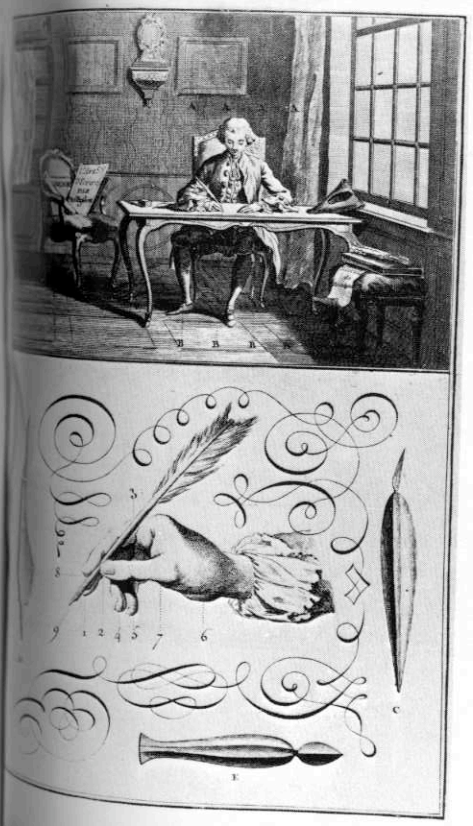
2. The various chronological series that discipline must combine to form a composite time are also pieces of machinery. The time of

each must be adjusted to the time of the others in such a way that the maximum quantity of forces may be extracted from each and combined with the optimum result. Thus Servan dreamt of a military machine that would cover the whole territory of the nation and in which each individual would be occupied without interruption but in a different way according to the evolutive segment, the genetic sequence in which he finds himself. Military life would begin in childhood, when young children would be taught the profession of arms in 'military manors'; it would end in these same manors when the veterans, right up to their last day, would teach the children, exercise the recruits, preside over the soldiers' exercises, supervise them when they were carrying out works in the public interest, and finally make order reign in the country, when the troops were fighting at the frontiers. There is not a single moment of life from which one cannot extract forces, providing one knows how to differentiate it and combine it with others. Similarly, one uses the labour of children and of old people in the great workshops; this is because they have certain elementary capacities for which it is not necessary to use workers who have many other aptitudes; furthermore, they constitute a cheap labour force; lastly, if they work, they are no longer at anyone's charge: 'Labouring mankind', said a tax collector of an enterprise at Angers, 'may find in this manufactory, from the age of ten to old age, resources against idleness and the penury that follows from it' (Marchegay, 360). But it was probably in primary education that this adjustment of different chronologies was to be carried out with most subtlety. From the seventeenth century to the introduction, at the beginning of the nineteenth, of the Lancaster method, the complex clockwork of the mutual improvement school was built up cog by cog: first the oldest pupils were entrusted with tasks involving simple supervision, then of checking work, then of teaching; in the end, all the time of all the pupils was occupied either with teaching or with being taught. The school became a machine for learning, in which each pupil, each level and each moment, if correctly combined, were permanently utilized in the general process of teaching. One of the great advocates of the mutual improvement schools gives us some idea of this progress: 'In a school of 360 children, the master who would like to instruct each pupil in turn for a session of three hours would not be able to give half a minute

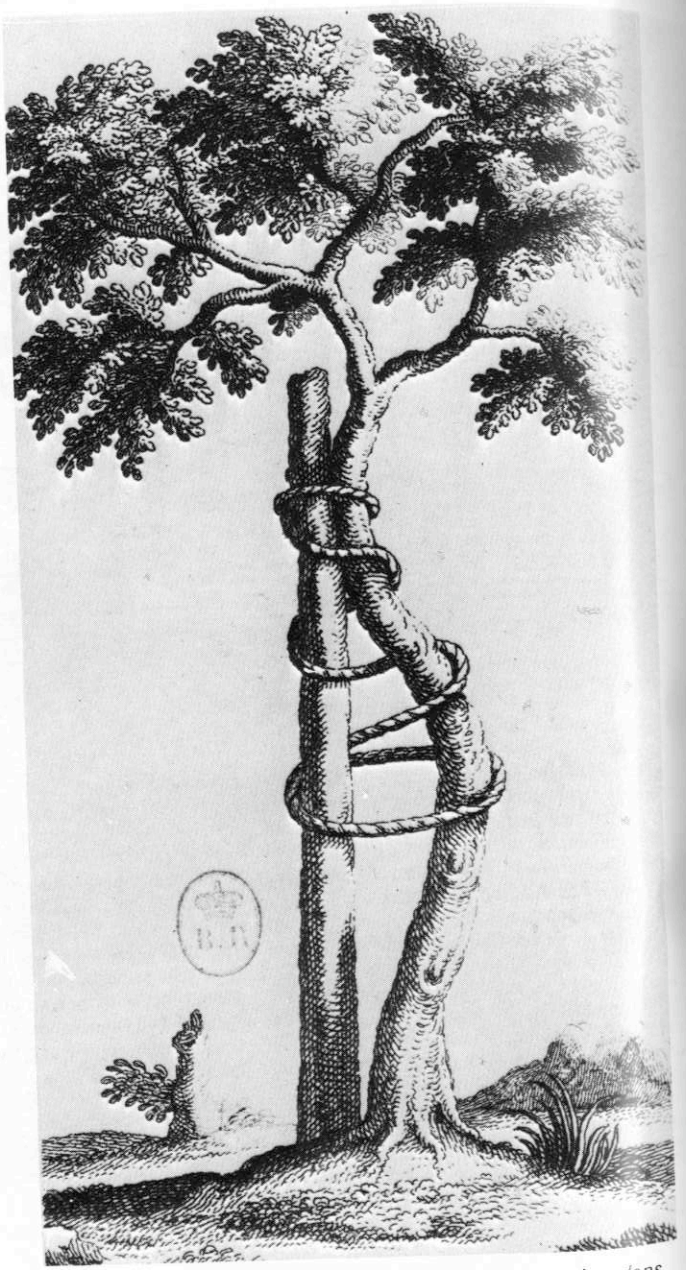
to each. By the new method, each of the 360 pupils writes, reads or counts for two and a half hours' (cf. Bernard).

3. This carefully measured combination of forces requires a precise system of command. All the activity of the disciplined individual must be punctuated and sustained by injunctions whose efficacity rests on brevity and clarity; the order does not need to be explained or formulated; it must trigger off the required behaviour and that is enough. From the master of discipline to him who is subjected to it the relation is one of signalization: it is a question not of understanding the injunction but of perceiving the signal and reacting to it immediately, according to a more or less artificial, prearranged code. Place the bodies in a little world of signals to each of which is attached a single, obligatory response: it is a technique of training, of *dressage*, that 'despotically excludes in everything the least representation, and the smallest murmur'; the disciplined soldier 'begins to obey whatever he is ordered to do; his obedience is prompt and blind; an appearance of indocility, the least delay would be a crime' (Boussanelle, 2). The training of schoolchildren was to be carried out in the same way: few words, no explanation, a total silence interrupted only by signals – bells, clapping of hands, gestures, a mere glance from the teacher, or that little wooden apparatus used by the Brothers of the Christian Schools; it was called *par excellence* the 'Signal' and it contained in its mechanical brevity both the technique of command and the morality of obedience. 'The first and principal use of the signal is to attract at once the attention of all the pupils to the teacher and to make them attentive to what he wishes to impart to them. Thus, whenever he wishes to attract the attention of the children, and to bring the exercise to an end, he will strike the signal once. Whenever a good pupil hears the noise of the signal, he will imagine that he is hearing the voice of the teacher or rather the voice of God himself calling him by his name. He will then partake of the feelings of the young Samuel, saying with him in the depths of his soul: "Lord, I am here." ' The pupil will have to have learnt the code of the signals and respond automatically to them. 'When prayer has been said, the teacher will strike the signal at once and, turning to the child whom he wishes to read, he will make the sign to begin. To make a sign to stop to a pupil who is reading, he will strike the signal

1 Medal commemorating Louis XIV's first military review in 1668 (B.N. Cabinet des medailles). Cf. p. 188.



Handwriting model (Collections historiques de l'I.N.R.D.P.). Cf. p. 152.



10 N. Andry, *L'orthopédie ou l'art de prévenir et de corriger dans les enfants les difformités du corps* (Orthopaedics or the art of preventing and correcting deformities of the body in children). 1749.

once. . . To make a sign to a pupil to repeat when he has read badly or mispronounced a letter, a syllable or a word, he will strike the signal twice in rapid succession. If, after the sign had been made two or three times, the pupil who is reading does not find and repeat the word that he has badly read or mispronounced – because he has read several words beyond it before being called to order – the teacher will strike three times in rapid succession, as a sign to him to begin to read farther back; and he will continue to make the sign till the pupil finds the word which he has said incorrectly' (La Salle, *Conduite* . . . 137–8; cf. also Demia, 21). The mutual improvement school was to exploit still further this control of behaviour by the system of signals to which one had to react immediately. Even verbal orders were to function as elements of signalization: 'Enter your benches. At the word *enter*, the children bring their right hands down on the table with a resounding thud and at the same time put one leg into the bench; at the words *your benches* they put the other leg in and sit down opposite their slates . . . *Take your slates*. At the word *take*, the children, with their right hands, take hold of the string by which the slate is suspended from the nail before them, and, with their left hands, they grasp the slate in the middle; at the word *slates*, they unhook it and place it on the table'.[13]

To sum up, it might be said that discipline creates out of the bodies it controls four types of individuality, or rather an individuality that is endowed with four characteristics: it is cellular (by the play of spatial distribution), it is organic (by the coding of activities), it is genetic (by the accumulation of time), it is combinatory (by the composition of forces). And, in doing so, it operates four great techniques: it draws up tables; it prescribes movements; it imposes exercises; lastly, in order to obtain the combination of forces, it arranges 'tactics'. Tactics, the art of constructing, with located bodies, coded activities and trained aptitudes, mechanisms in which the product of the various forces is increased by their calculated combination are no doubt the highest form of disciplinary practice. In this knowledge, the eighteenth-century theoreticians saw the general foundation of all military practice, from the control and exercise of individual bodies to the use of forces specific to the most complex multiplicities. The architecture, anatomy, mechanics, economy of the disciplinary body: 'In the eyes of most soldiers,

tactics are only a branch of the vast science of war; for me, they are the base of this science; they are this science itself, because they teach how to constitute troops, order them, move them, get them to fight; because tactics alone may make up for numbers, and handle the multitude; lastly, it will include knowledge of men, weapons, tensions, circumstances, because it is all these kinds of knowledge brought together that must determine those movements' (Guibert, 4). Or again: 'The term tactics . . . gives some idea of the respective position of the men who make up a particular troop in relation to that of the different troops that make up an army, their movements and their actions, their relations with one another' (Joly de Maizeroy, 2).

It may be that war as strategy is a continuation of politics. But it must not be forgotten that 'politics' has been conceived as a continuation, if not exactly and directly of war, at least of the military model as a fundamental means of preventing civil disorder. Politics, as a technique of internal peace and order, sought to implement the mechanism of the perfect army, of the disciplined mass, of the docile, useful troop, of the regiment in camp and in the field, on manoeuvres and on exercises. In the great eighteenth-century states, the army guaranteed civil peace no doubt because it was a real force, an ever-threatening sword, but also because it was a technique and a body of knowledge that could project their schema over the social body. If there is a politics-war series that passes through strategy, there is an army-politics series that passes through tactics. It is strategy that makes it possible to understand warfare as a way of conducting politics between states; it is tactics that makes it possible to understand the army as a principle for maintaining the absence of warfare in civil society. The classical age saw the birth of the great political and military strategy by which nations confronted each other's economic and demographic forces; but it also saw the birth of meticulous military and political tactics by which the control of bodies and individual forces was exercised within states. The '*militaire*' – the military institution, military science, the *militaire* himself, so different from what was formerly characterized by the term '*homme de guerre*' – was specified, during this period, at the point of junction between war and the noise of battle on the one hand, and order and silence, subservient to peace, on the other.

Historians of ideas usually attribute the dream of a perfect society to the philosophers and jurists of the eighteenth century; but there was also a military dream of society; its fundamental reference was not to the state of nature, but to the meticulously subordinated cogs of a machine, not to the primal social contract, but to permanent coercions, not to fundamental rights, but to indefinitely progressive forms of training, not to the general will but to automatic docility.

'Discipline must be made national,' said Guibert. 'The state that I depict will have a simple, reliable, easily controlled administration. It will resemble those huge machines, which by quite uncomplicated means produce great effects; the strength of this state will spring from its own strength, its prosperity from its own prosperity. Time, which destroys all, will increase its power. It will disprove that vulgar prejudice by which we are made to imagine that empires are subjected to an imperious law of decline and ruin' (Guibert, xxiii–xxiv; cf. what Marx says about the army and forms of bourgeois society in his letter to Engels, 25 September 1857). The Napoleonic régime was not far off and with it the form of state that was to survive it and, we must not forget, the foundations of which were laid not only by jurists, but also by soldiers, not only councillors of state, but also junior officers, not only the men of the courts, but also the men of the camps. The Roman reference that accompanied this formation certainly bears with it this double index: citizens and legionaries, law and manoeuvres. While jurists or philosophers were seeking in the pact a primal model for the construction or reconstruction of the social body, the soldiers and with them the technicians of discipline were elaborating procedures for the individual and collective coercion of bodies.