11 The Body as the Source of Values and Rhythms

If we agree that the aesthetic sense rests upon a consciousness of form and movement (or of values and rhythms), which is peculiar to the human being because only the human is capable of formulating a value judgment, we must for the same reason inquire into the sources from which we draw our perception of movement and form. A mammal like many others, although with a cerebral apparatus of unique complexity, the human is not known to have any organ of perception not shared with the rest of the mammals. Our sensory equipment, placed at the service of a marvelous apparatus for transforming sensations into symbols, functions like the sensory equipment of animals; their mental life lacks our symbolizing equipment, but our sensory life includes every feature of theirs. We obey the rhythms of our digestion, we feed at fixed times, in a crowd, we obey the collective rhythm like a sheep; our tastes in food are based on the same organs as those of a fish, our muscles flex and relax without our consciousness coming into play. In short, the human animal mechanism functions at several levels which, except for intellectual integration, are the same as those of other living organisms. We could take the a priori view that intelligent symbolization can have a reflex action and that everything in the human being is therefore assimilable to the workings of aesthetically constructive thought. Or, conversely, we could ask ourselves whether aesthetic thought does not stop where "natural" behavior starts. Of these two hypotheses, the former seems to me closer to the position we have adopted thus far. In supporting it, we should have to concede that while our mind does in fact ensure a certain consciousness of our lived experience, the activities of some parts of our sensory apparatus must always remain infrasymbolic: This, for example, is the case with taste in the strict sense of the word, which cannot be rendered by anything other than itself. You cannot create an image of a salty taste.

The Sensory Apparatus

In animals, the simplest forms of behavior can, from the sensory point of view, be reduced to three levels: that of feeding behavior, which ensures the functioning of the body by processing materials assimilable by the organism; that of physical affectivity, which ensures the genetic survival of the species; and that of integration in space, which makes the two others possible. These levels, which are diversified according to the degree of evolution of each species, correspond to three levels involving the relationship of individuals with one another and with their environment. The aesthetic implications of these three levels are still observable in humans; we could describe them as "physiological aesthetics." They bring into play, in varying proportions, all the instruments of the sensory apparatus: visceral sensitivity, muscular sensitivity, taste, smell, touch, hearing and balance, and sight.

Each of these elements forms part of a dynamic whole whose basic machinery is the same in animals and humans. Visceral rhythms are the driving force of feeding behavior, while smell, taste, and touch are the agents of perception. Affective behavior is determined by perception of the play of the muscles as well as by touch, smell, and sight. Behavior pertaining to one's position in space and time is served by the organs of balance, and perception of the body in space is determined by reference to the dominant sense, which in the human is the sense of vision and in other species the senses of smell, touch, or hearing. None of the three levels of relationship with the external environment is conceivable without a certain rhythmicity of the body and without a reference mechanism. Taste without nutritive activity is an abstraction, affective acts expressing sympathy or aggressivity are entirely a matter of the connection between perception and the movements it determines, and integration in space exists only to the extent that the physical body perceives space. In other words, association of movement with form is the primary condition for all active behavior.

Whether animal or human, active individuals have their being within a network of movements that originate inside or outside their body mechanism and whose form is interpreted by their senses. Broadly speaking, individual perception intervenes between external rhythms and an individual's motor responses to them. The movements of the marine annelid as it ascends and descends with the tides inside its tube are determined by its sensory perceptions of taste and touch, which responds to temperature and vibrations. Its feeding behavior and its integration in space and time are the equivalent of its integration in the environment to which it belongs. At a much higher level, the mammal living inside its territory staked out by smells and sounds, sensitive to the alternation of day with night, to temperature variations and

visual images, exists wholly within the synergy of rhythms and forms, the signals received by its senses, their interpretation and its own responses.

With human beings the situation clearly remains the same, with the difference, however, that it can be reflected in a network of symbols and held up for comparison with itself. Over the period of human evolution, rhythms and values thus reflected have tended to create a time and a space proper to humankind, to imprison behavior within a checkerwork of scales and measures, to assume concrete form in "aesthetics" in the narrower sense. Yet the biological infrastructure—our body—still uses the same means and has none other to put at the disposal of the artistic superstructure. The aesthetic sense in its reflected form must continue to be like the world from which it has sprung, with sight and hearing—the senses made dominant by our zoological evolution for purposes of reference in space—maintaining their primacy. Imagine the "syntacties" or "olfacties," paintings in smells, symphonies of touch, architectures of balanced vibrations, poems of salt or acid taste, we should have had if touch or smell or a subtle perception of vibrations had been our principal senses! All these aesthetic forms, though not completely inaccessible to us, have found only a modest place in our arts. It would be a pity, however, to deny them their place in the subterranean regions of our aesthetic life.

Visceral Sensibility

The ordinary functioning of our physiological mechanism seems destined to be overlooked. The perceptions relating to it are obscure and difficult to locate and cannot play any part in the process of aesthetic formulation. Yet Freud and the rest of the psychoanalytical school have demonstrated the importance of the libido and of frustrations clearly enough to prove that psychophysiological conditioning can affect the highest forms of aesthetic life—one might say especially the highest forms, for figurative creativity is the main element of individual liberation, whereas technical or social behavior is determined by collective norms that demand a degree of conformism.

The most important expression of visceral sensibility is connected with rhythms. The alternation of periods of sleeping and waking, of digestion and appetite, all such physiological cadences create a fabric upon which all activity is inscribed. These rhythms are generally connected to a wider fabric, that of the alternation of days and nights and of meteorological and seasonal changes. The result is a real conditioning that provides a steady basis for day-to-day operations but affects aesthetic behavior only inasmuch as its instrument is the human body. Visceral com-

fort matters only to the extent that it establishes the conditions for normal functioning; sickness or physiological deficiency can significantly modify the individual's aesthetic field, but only through the effects they exercise upon normal activity in general.

However, if we bear in mind that in all cultures many unusual motor or verbal phenomena occur as a result of individuals being "transported" to a mental state other than their normal one, we must acknowledge that disturbances of the rhythmic balance do play an important role. In exceptional rituals—ecstatic revelations, states of possession during which individuals dance or make music highly charged with the supernatural—one of the methods employed all over the world consists in putting performers outside their daily rhythmic cycles by breaking their physiological routines with fasting and lack of sleep. The end result may be excitement of the psyche, but the starting point is visceral. The change of register cannot be brought about unless it starts in the very depths of the organism.

Privation and Control

Interruptions of natural rhythms—prolonged waking, turning night into day, fasting, sexual abstinence—tend to evoke the religious rather than the aesthetic sphere because in modern culture these two spheres have become divorced from each other. That, however, is only a recent consequence of the evolution of the social organism, the outcome of a process of rationalization of which we are the promoters. At the social level an interruption of the normal cycle is equivalent to a decline in technical performance. Isolating the religious from the aesthetic spheres prevents the disruption of vital rhythms and puts the individual in a situation favorable to the smooth running of the sociotechnical mechanism. This fact has been explicitly or implicitly understood since Confucius and is applied on a decisive scale in modern societies. It presupposes the existence of a small number of virtuoso practitioners specialized in the art of living against the normal rhythms and, for the mass of humanity, the safety valve of events filtered and measured in time and space and consumable without serious disturbance of those rhythms. This is blatantly obvious in the steps taken in some Muslim countries to abolish the Ramadan fast as an obstacle to production and a little less so in the gradual easing of fasting rules by the Catholic church. We must repeat, however, that this is a recent development whose result cannot be projected back over the thirty thousand years in which human life was lived as a totality and physiological control provided the infrastructure for the great imaginative flights of the spirit.

At a different level it could be argued that the initiate was cold sober when he or she learned the dance and that it was a well-fed poet in a state of perfect mental lucidity who composed the verses chanted by the delirious crowd of pilgrims. But even if this were not generally incorrect—even if composition and performance were two completely different things—it would still not alter the facts. Aesthetic behavior is no more confined to the creation of a work of art than the blacksmith's forge is simply a matter of the invention of metallurgy. In any event the role of improvisation in practices that antedate writing is so overwhelmingly obvious that aesthetic production and consumption must be seen as intimately intermingled within the same field.

More important still are the methodical efforts made to break the cycle, to establish a quasi-permanent secondary state. The great mystical schools of India and China, of Islam and the West, have all tended toward physiological control, toward escape from rhythms through contemplation and control of the visceral apparatus. The most popular of such techniques of abstraction is yoga, in which the pursuit of rhythmic control involves all the organs, including the heart. The perfect yoga ascetic forms part of an aesthetic universe of ecstasy, all organs at peace, all rhythms of time and outward space abolished—an antithesis that, as we shall see, is not so different from what has led figurative art to abandon figurative representation. Taoism too has its techniques for escaping from the alternating cycle of the male and female principles, its rigorous dietary rules, its breathing discipline based upon a conception of the universe in which everything obeys rhythms of complementary values, a mobile frame of a cosmos the sage can slip into without brushing against anything at all, outside time and space. We shall reencounter the problem of our insertion between heaven and earth when we discuss the symbols of society. Here it is interesting to note that the sage's *dis*insertion begins with the digestive tract in a process of initial purification that eventually leads to being able to sustain oneself by swallowing nothing but air. To see the spirits that rule each separate organ, to discipline one's liver, to learn to retain one's saliva and one's vital secretions, to control one's breath, to still the whole physiological apparatus until one acquires a body made of jade—such was the dream, pursued for centuries, from which much of Chinese philosophy has sprung. We are still too close to see what our western arts owe to a certain conception of life that borrows its foundations from the pact between oneself and one's body. But in the way of life and the art works of classical China—because a sufficiently great distance separates us from it and also, no doubt, because the expression of that pact was there carried to an extreme—we can observe a continuity between the uttermost depths and the summit.

The superimposition of Buddhism upon Taoism has intensified the effort to escape from the circular rhythms of life on earth. In China, and later in Japan, a complete mode of ideal existence has been created in which the peaceful sage, having achieved complete control over his body, lives out his life in perfect harmony with wind, water, trees, and moon in a state of balance that starts with the stomach and ends with painting.

Muscular Sensibility

Unlike the skeleton, which in the normal state is not perceived, its drapery of muscle is the seat of strong impressions. Our osteomuscular mechanism may be regarded, not as a tool, but as the instrument of our insertion in existence. We must leave aside, as being an intellectual operation, the integration of movements performed within the motor cerebral cortex, but we should not fail to note the paleontological connection between the inner ear and the osteomuscular apparatus in ensuring the individual's balance with respect to the environment, in immediate perception of space, and in organizing movement.

The weight of the body is perceived by the muscles; it combines with spatial balance to hold us down in our concrete universe and, by antithesis, to constitute an imaginary universe from which weight and balance have been banished. Acrobatics, balancing exercises, the dance, are to a large extent the material expression of the attempt to break away from normal operating sequences and create something outside the day-to-day cycle of positions in space. Such a liberation occurs spontaneously in dreams about flying when the inner ear and the muscles are at rest and when sleep has lifted us outside the normal scene. In a different way we experience a sense of liberation during waking hours when we watch an acrobat throw off the shackles of operating logic.

The normal functioning of the intellectual apparatus as a whole is governed by the organic infrastructure, not only in terms of the satisfactory or poor state of the body machine but also, at every moment of our lives, in terms of the rhythms that integrate us in time and space. For animals as well as humans, balance consists in the coordinated play of organs and muscles according to rhythmic sequences of different amplitudes dovetailed into a regular order. A serious disturbance of internal or external rhythmicity causes neuropsychological behavior to diverge from the normal. In wild mammals in captivity, disturbance of the body's operating sequences produces an artificial rhythmicity, often a rocking movement that provides the captive animal with a substitute framework within which it becomes spatially and tem-

porally integrated. In the human, similar phenomena of exteriorized rhythmicity are observed in circumstances where the creation of an artificial framework assists the individual to free him or herself from the normal operating cycle or to engage in a process of intellectual assimilation. There are many examples of this: Chinese schoolchildren rock backward and forward when reciting lists of characters, French ones do likewise with their multiplication tables. The fingering of "worry beads" in the Eastern Mediterranean area is a similar phenomenon. In many cases the trance-like state is maintained by a motion confined to just one part of the body, such as twisting one's thumbs or kneading some plastic substance or rolling a spherical object between the fingers. Obviously such rhythmic practices are rarely a matter of muscular play alone; rather, they form part of a whole in which hearing often plays an important role, as when the Buddhist monk chants while rhythmically striking a gong.

Beyond this point the role of the osteomuscular infrastructure tends to be disguised by the quality of the superstructure. Integration in exceptional sequences through rhythmic treading, whirling, choreography, prostrations, or genuflections performed at set times, and walking in procession is found in both religious and profane events and in all parts of the world. Accompanied by music, unlike the actions described in the preceding paragraph, they assume the character of a real escape from the environment of everyday life. This category of actions always has a dematerializing value. From the military march past to the possession trance, the degree of muscular alienation is total.

Society's hold on the individual through rhythmic conditioning is reflected in certain collective attitudes which are highly characteristic. "Bringing to heel," in French "*mettre au pas,*" literally "bringing into step," is not just a military image. Rhythmic uniformization, the reduction of individuals to a conditioned crowd, is quite as marked in subway cars as it is at a funeral, in dervish exercises as in the sudden rush of schoolchildren when the bell rings for break. The science of muscular conditioning has been practiced empirically for purposes of political uniformization since the dawn of the earliest cities. It forms the basis for today's crowd movements, for the behavior of masses "marching as one being."

The same phenomenon is observed in architectural functionalism, which tends to order—and therefore to organize rhythmically—the movements of people in the environment of their work or their home. The introduction of music on the factory floor can also be viewed as an attempt at muscular conditioning; "music while you work" represents a complete mutation of operating behavior, a technique normally used to lift people out of their ordinary environment being applied in order

to make them work more efficiently inside that environment. A distinction needs to be drawn between the conscious performance of complex operational sequences against a background of sounds rhythmically unconnected with the work being done and the process of complete integration achieved by performing stereotyped sequences against a musical background rhythmically integrated in the work. The latter form is met with in the most diverse societies in connection with collective tasks of all kinds, such as plowing, hoeing, threshing, or hauling. As with industrial manufacture the object is to *dis*integrate a certain number of individuals in order to *re*integrate them into a collective tool. The rhythmic productivity-raising methods employed in industrial societies owe their inhuman quality to the remoteness of the entities for which the individuals are working and the fact that, once the work is done, these individuals will disperse, whereas in traditional societies the technical operation, performed for a visible and known beneficiary, is only a phase in a collective process with all the manifestations of group cohesion.

In the next chapters, the "beautiful," the "good," and the "better" will take on an increasingly intellectual value. We may end up forgetting that even when, lying down and surrounded by complete silence, we read a poem, whatever image is conjured up by the words we read is significant only to the extent that it refers to everything we have experienced in the past in concrete situations comparable enough to the poetic image to make it intellectually graspable. Yet the first reference of all concrete experience is to the body, or rather, all experience relates to time and space as perceived by the body. It is essential to keep this idea in mind when judging aesthetic or intellectual performances or products at a high level. Seen by animals or by organisms fundamentally different from ourselves, we would appear to be obsessed by time and space. Ever since the emergence of civilization these concerns have dominated all our areas of thought. The fabric of our practical life is woven of the material conquest of geographical and—eventually, cosmic space—the compression of time through speed and the efforts of medical research. Speculation about astronomy and light, metrology and the physics of the atom, beguiles our philosophical and scientific dreams. Our spiritual dreams feed upon the conquest of eternity and the celestial spheres. For thousands of years our favorite game has been to organize time and space in rhythms, in the calendar, in architecture. Our microcosmic creations support the religious apparatus in which the fate of the universe is settled. Even negatively, time and space weigh upon every one of our gestures, and if we withdraw into the desert seeking immobility and contemplation, we do so to escape from "the age," that is to say, from both the time and the space in which the rhythms of normal life are taking place. The lives of the great spatiotem-

poral escape artists fill the Taoist with admiration, as they do the Buddhist and the Christian. The reason why human thought is thus invaded by perception of the fugitive nature of time and motion is the perfectly banal one that life on earth is situated at the intersection of time and space. To observe that we are acutely conscious of this fact is to discover nothing at all. Yet discovery there was, once: The image of time and space was new when the human first realized that he could relive them both by saying "he was by the river," "he is at my house," "he will be in the forest tomorrow." For the rest of the living world, time and space have no initial reference other than that of the bowels, the labyrinth of the ear, and the muscles. Hunger, balance, and motion are the tripod upon which rest the higher reference senses of touch, smell, hearing, and sight. All this is also true of us—but with the addition of our enormously complex symbol-making machinery, which underlies the whole of the Cartesian perspective.

Taste

Taste is the lowliest of the human senses, as it is of all animals. The role of the papillae distributed at the entrance to the digestive tract is essentially defensive: They are nociceptive; they send out alarm signals on contact with acids or salts capable of producing a toxic effect. Their intervention is general in both invertebrates and vertebrates, and they always line the buccal orifice. The register of perceptions is fairly narrow. Most animals, like us, can distinguish more or less clearly between sour, salt, sweet, and bitter tastes. To these one might also add pungency, which, however, is less a matter of taste than of direct assault upon the mucous membranes.

Taste does not operate as a space reference in animals with the exception of fish, where it is associated with the sense of smell. In some insects to which the search for sweet food is of extreme importance, the presence of taste buds on the tarsus of the front legs provides something like a spatial reference, and the same is no doubt true of ant-eating or termite-eating mammals, whose very long and narrow tongue acts as a feeler. In this case, however, the sense of touch certainly predominates.

Gastronomy

The aesthetics of gastronomy are based on a very general biological fact, namely the ability to recognize different foods. Animals all along the scale can absorb a certain range of foods which they recognize not only through their organs of taste but also by association with mutually complementary sensory images. The senses

(not including the sense of hearing) intervene in their relative order as spatial references: Birds, in which visual reference predominates, recognize principally by sight and secondarily by touch and by smell and touch combined; fish, whose spatial references are largely conditioned by smell and taste, recognize their food in the simplest way. The vertebrates' scale of conditioned food acceptance sequences is based on sight and smell for purposes of recognition from a distance and feel in the mouth plus a combination of smell and taste for immediate recognition, memory playing a strong role in orienting preference and rejection. In mammals, acquired preference plays a significant if not a predominant role in carnivores and omnivores because of the long period during which the young of these species depend upon their parents for dietary education. The adult animal is in some measure capable of extending its range of foods, but generally speaking preferences in later life are guided by childhood tastes.

The food aesthetics of human beings are not very different. They are determined by sight and smell as well as by taste and feel in the mouth, and preference sequences formed in early life often guide the tastes of the adult. Everything that is edible can be used in the extraordinarily accommodating digestive tract of the human species, but far from everything is actually eaten. Unless forced by famine, human groups will reject many kinds of food and will show preferences strongly marked by ethnic personality. Yet again, the social organism takes the place of the zoological species in determining the mechanical sequences that mold individual taste. The subdivisions of humankind can be mapped by regional cuisine—not in terms of the worldwide distribution of animals and edible plants but as a function of gastronomical preference systems based on both local and imported foods. Sensory reference systems develop in the same way as gestures, speech, and music, and they lend themselves to aesthetic analysis because, being human, they include the feedback effect of reflection.

Food preferences acquired through ethnic education are like all human systems of tradition in that they are channeled through a code whose general rules form the basis of the tastes of the community at large and whose detailed interpretation is up to the individual.

The reference system of French cooking, for example, relatively complex though it is, can be reduced to a general framework within which the tastes of practically all individuals are accommodated. The range of strictly gustatory effects is rather rigid, some dishes being savory, others sweet, and a few sour. The code goes so far as to prescribe the order in which these gustatory effects must succeed each other: discreetly acidified hors d'oeuvre, savory main dish, acid salad, savory cheese,

sweet pudding. Salt and sour go together, the pungency of pepper or mustard is added up to the cheese course; in the classic tradition, sweet and savory must avoid one another. Thus certain taste associations are considered to be harmonious, but this is entirely a matter of ethnic convention, for certain regions of France and some other countries do combine savory and sweet in their main dishes, marry sweet with sour, and slip bitter-tasting substances among their condiments. In African societies the use of potassic ash in place of salt creates a gustatory register of a special kind.

It is interesting to observe the aesthetic ordering of what is the simplest of our sensory systems, our taste buds, which in biological terms are mere alarm signals designed to prevent the ingestion of dangerous substances or to recognize certain simple foods such as salt and sugar. Primitive peoples who consume a great deal of fruit generally appreciate sour and sweet-tasting food. Appreciation of savory foods is rarer, for Australian aborigines, Eskimos, and Bushmen do not have direct knowledge of salt except for seawater and seaweed in the case of Eskimos. The limited and relatively constant nature of strictly gustatory perceptions explains the role they assume in cultures with developed gastronomical aesthetics. They are like the keynote in music: They strike the prevailing note and provide a basso continuo against which other values enter into play.

These other values are distributed between the senses of buccal touch and of smell. The sense of touch in gastronomy is determined by temperature and consistency. In very highly developed cuisines, the role of temperature parallels that of basic taste: A well-balanced meal will display a full range of temperatures from piping-hot soup to iced sherbet by way of cold hors d'oeuvres and a hot main dish. The same is true of consistency, with soft and firm, sticky and crisp, chewy, juicy, grainy, and smooth making a counterpoint with the basic savors and the temperatures.

Gustatory sensibility and feel in the mouth thus account for the deeper part of culinary aesthetics, upon which the embellishments of olfactory gastronomy are superimposed. This part—the primitive basis of gastronomy—is known even in the least sophisticated dietary practices through simple associations of olfactory perceptions obtained without the use of condiments.

Olfactory and Visual Gastronomy

The superstructure of gastronomical aesthetics is essentially olfactory. The spatial location apparatus constituted by our organs of smell is capable of infinitely more subtle performance than the reference organs of the mouth. It forms part of a reference system no less rich than sight or hearing, and has to be included under phys-

iological aesthetics only because of the biological factors that separate it from speech.

In the animal world olfactory identification may rank higher than sight or hearing. This is the case with many mammals. Where it is the chief sense of reference, for instance, as in dogs, it forms the bulk of what may be termed the animal's intellectual capital. We cannot clearly visualize what an image of the world based on the senses of smell might be; in the spatial images of primates and anthropoids, it plays a purely secondary role. Among the human reference senses its place is rather special. Sight and hearing—which, like the hand, are involved in language—are the only senses to form part of the emitting and receiving system through which figurative symbols are exchanged. The sense of smell, being purely receptive, has no complementary organ for the emission of symbols of odors. It thus remains outside the most essentially human mechanism. Although reflection can codify its perceptions, they are nontransmissible. That is why gastronomy and olfactory aesthetics in general do not fall within the category of the fine arts.

Still some of the deepest cultural reference systems of ethnic personality have been based on the identifying perception present in all dietary operations, and the links between cuisine and ethnic personality are almost entirely olfactory. There are many national cuisines in which rice is the staple element, but no one can confuse a Malagasy rice dish with an Indian, Chinese, Hungarian, or Spanish one, for the simple reason that culinary processing entails the creation of a bouquet of smells and tastes peculiar to each culture.

The use of condiments is a somewhat special area of culinary art in that, unlike all others, it is entirely without spatial or temporal references. The shape of an implement has a certain movement as its corollary; so does a statuette, and the same is true of a form of social politeness, a building, a poem, or a hymn. The use of thyme in combination with salt and nutmeg is not translatable into movements or even into words. Culinary art does not share that characteristic trait of all other arts which is the possibility of figurative representation; it never reaches the symbolic level. Everything is symbolizable in theory, but in gastronomy too much substitution would be required. You can use a meal as a symbol for the workings of the world at large, but then you are talking about the rhythm at which the courses are served and the meaning of each separate dish apart from its purely gastronomical characteristics. The smell of thyme may symbolize a Mediterranean hillside at daybreak, but that is due to the little that the human sense of smell still has to do with spatiotemporal reference. A dish may be a picture, but then it enters the field of visual reference, and how it looks does not represent how it tastes.

In gastronomy whatever has to do with something other than the aesthetic development of dietary recognition is no longer gastronomical. In theory the real basis of this aesthetic-without-a-language is formed of taste, smell, and consistency. However, the sense of sight in humans is too important to be excluded. In its spatiotemporal reference role sight of course is only secondary: A dish may look terrible but still be very good, which is impossible in the figurative arts and which clearly demonstrates the separateness, in gastronomy, of the basic aesthetics of nutrition from the aesthetics of space and time. The role of sight as a means of food recognition is far more important. In the human, a mammal whose sense of smell is poor, food is recognized above all by sight, so that if a meal is, say, served in a violet light our sense of smell cannot be relied upon and the actual ingestion of the meal, with all the visceral activity it involves, will be disturbed. The phenomenon here is entirely different from what happens if, say, a caramel sponge cake is served in the shape of a chicken: The effect then is similar to trompe l'oeil in painting; an immediate transposition will take place without the food being any the less acceptable. An additional esthetic effect has been created, but the normal harmonies remain intact.

The Sense of Smell

Food recognition apart, our sense of smell fulfills, to varying degrees, the twin functions of identification and spatiotemporal integration. In technical activities, and especially in chemistry, whose processes are similar to cooking, it serves the former of those two purposes.

In affective behavior, which for the most part finds material expression in social aesthetics, the sense of smell still plays an important role in relations between individuals. Perfumes, aromatic oils, and deodorants, whether used to disguise the natural odors of the body or to create an idealized image, are a significant element of relations between the sexes. It is interesting to note that figurative representation is possible to some extent in this context. Between the civet cat or the dog marking out their territory and the human female's use of flower scents or of the contents of the civet cat's glands, the process of figurative representation has entered into play. Smell has become the symbol of a motor process whose references no longer derive from the digestive mechanism (which does not admit figurative representation) but from the muscular dynamic that forms the basis both for affective behavior and for spatial integration. Here the sense of smell stands at the threshold of the imaginary in the strict sense.

That threshold has been crossed when the sense of smell fulfills the function of spatiotemporal integration—in other words, when it serves for perceiving one's situation in time and space. The world of many animals is, above all, a world of smells. It is perfectly conceivable that a fund of knowledge should be based on analyzing smells: Instead of building their perception on sight and hearing, as humans do, dogs build theirs on smell and hearing, the function of sight being only to confirm the perceptions thus received. The gap between human thinking and animal thinking constructed in this way is obviously a wide one. Dogs can, within the limits of their muscular capability, learn deductive sequences, but any possibility of reflective behavior of the human kind is completely lacking. If we tried to invent a dog with a developed brain comparable to ours, we should have to provide it with a rhinencephalus of enormous size wherein the instruments for an extraordinarily fine perception of the world of smells would have developed side by side with a hyperaffectivity that would endow such a creature with a "sentimental" intelligence in place of our rational one. Let us not forget that what makes us human is precisely the duality of the facial and manual operating fields and the basic link between grasping and sight. In the dog the anterior field is located in the narrow space between the nostrils, which explore from a distance, and the canines, which seize; in the human sight serves an exploratory purpose and enables the hand to exercise functions, not only of grasping but also of complex construction. Whereas the dog's evolutive potentialities lay in the direction of areas common to the sense of smell and to affectivity, thus precluding figurative representation, human evolution toward dominant vision and manual motor function opened to us the universe of rational imagination. For us, the world of odor therefore serves as a secondary practical reference, though not a negligible one: Let a smell of smoke pervade a house, and the inhabitant will soon be sniffing the wind to get the spatial references. Aesthetically, the sense of smell is closely connected with the visual and auditory systems; a particular odor, unperceived for many years, will suddenly evoke scenes forgotten since childhood. We do not recollect odors as we do events, but olfactory perception, precisely because it activates physiological areas unrelated to reflection, bestows considerable depth and intensity upon reflective images.

For similar reasons odors can be a determining element in escaping from day-to-day sequences. They can induce a state of beatitude or promote overexcitement. Certain environments located outside the commonplace world of time and space have an olfactory ambience that isolates them from what is experienced normally. This is true of the incense used in holy places, the stench of holocausts, the smell of gunpowder intoxicating to the battleground hero. Their role is far greater than a

mere condiment's; odors in such cases become the chief scene-setting element that releases extremely deep-rooted emotional reactions. We need only imagine a sanctuary pervaded by tempting kitchen smells, or spring breezes wafting suddenly across a battlefield, to realize how seriously this would impair our conditioning. I speak of "conditioning" advisedly, for when all is said and done, the sense of smell remains firmly embedded in the physiological. Piety in biblical times was not incompatible with the odor of roasting meat, and battles are sometimes fought in a flowering meadow. This brings out, on the one hand, the importance of acquired traditions and, on the other, the flexible nature of olfactory behavior as a reference of location. A dog would refuse to believe a piece of meat was a piece of meat if it smelled of freshly mowed hay, and a human would stop believing in a battle if the battlefield was suddenly filled with images associated with a village fete.

The Sense of Touch

The sense of touch of vertebrates, their source of direct reference in space, has the same topographical location. Tactile organs are very densely concentrated in the anterior facial zone and somewhat less so at the extremity of the forelimb; they are more sparsely scattered over the rest of the body. The lips are the seat of the subtlest sensitivity to temperatures, vibrations, and contact; their sensory equipment is often reinforced by palps, for example, as in fish, or by long stiff whiskers as in felines and rodents. The origin of the sense of touch lies close to that of hearing, and the two appear to combine in many animals, especially fish and mammals with a little or no sense of vision, such as the mole. Hearing and tactile perception in its broadest sense are extremely important in gregarious behavior; they are principally responsible for the movements of shoals of fish and of herds of animals in close formation.

In humans the organs of touch are distributed as they are in other vertebrates: The lips are responsive to a load of as little as 5 to 6 milligrams per 0.1 millimeter of their surface and the fingertips to a load of 30 to 40 milligrams, the sensibility of the rest of the body being variable but much less pronounced.

The importance of touch as a surface of spatial reference is particularly great where visual reference is lacking, that is, in the blind, in darkness, or outside the field of vision. Unlike the sense of smell, it appears to be extremely subtle under such conditions. Unlike the sense of sight, whose mode of perception is synthetic from the start, it can analyze and recreate volume by passing the hand and fingers over the object. This combination of motion and touch makes it one of the senses accessible to figurative perception.

Labial touch relates to feeding or affective behavior more than to types of behavior pertaining to figurative aesthetics. Body touch relates to comfort and physical integration in space. Only in the manual field is there an aesthetic that can properly be described as tactile. It stays very close to the physiological level and, in various ways, has to do with the sensation of caressing. It involves textures—such as those of polished materials, furs, and grains, the consistencies of plastic pastes, and the feel of flexible or elastic substances—and is exercised in techniques aimed at producing surfaces agreeable to the touch—such as sculpture. Tactile judgment is constantly exercised in day-to-day operations. Unlike smell, touch is practically never the source of extraordinary integration, at least not as the dominant perception. Rhythmic sounds and movements as well as unusual odors can trigger states of exteriorization from routine sequences, but conditioning by the sense of touch is hard to imagine. This is principally due to the analytical nature of tactile perception, which stands in the way of complete immersion in a situation.

There can be no doubt, however, that the sense of touch plays a part in that specific area where recurrent tactile movement determines a transposition of muscular behavior. All over the world repeated manipulations of small objects—handling of prayer beads in Christian, Muslim, or Buddhist cultures, rolling grains or pieces of jade between the fingers, prolonged kneading of a flexible substance—accompany states of meditation or peaceful reverie (see the discussion of muscular sensibility earlier in this chapter). Objects specially designed for purposes of tactile aesthetics exist only in this very narrow area where perception of form is focalized and beyond which the machine of the body is entirely at rest.

Spatiotemporal Integration

Our coverage of the subject of physiological aesthetics would be incomplete if we failed to mention the sense of hearing and sight, but only in so far as these still contain elements of infraverbal behavior. Whatever there is in human sensory equipment that is inherited from the common fund of species cannot be understood unless we go right back to the sources. In the case of the senses of taste, smell, and touch, as well as of visceral sensibility and muscular perception, human forms of perception and expression barely impinge upon the common zoological fund. One could pursue the ascent toward the "noble" senses and demonstrate that the spatial integration of the human individual at rest in his hut is not very different from that of the badger in his earth, or that our social recognition systems are remarkably similar to the codes that enable birds to establish relationships among themselves on

the basis of their plumage. But between the living space of the badger and the space symbolically constructed by a human, between the plumage of the grouse and the army officer's symbolic uniform, between the song of the nightingale and a sentimental ditty, the borderline has already been crossed. Our lived behavior is filtered through images, and though we need to acknowledge the deep-seated origins of our behavior, it would be paradoxical and futile to pretend, for the sake of an excessive concern with logic, that they account for the whole of it. That is why, now that the concept of functional aesthetics as it relates to the properties of the human hand has been established, we shall revert to the senses of sight and hearing when discussing the question of bodily balance in the chapters devoted to social and figurative aesthetics.