V. TOUCH AS BASIC TO THE SENSES

In the first chapter we saw that Aristotle and St. Thomas attribute the varying degrees of intelligence found in different men to the quality of their sense of touch. The reason touch is singled out is that it is the foundation of sensation, and so the better the sense of touch the better the sensitive nature. Since intellectual knowledge has its origins in the senses, the better the sense of touch the more fitting is the instrument which the intellect can use. In this way touch is the indispensable though remote disposition for intelligence; the other senses, however, especially sight and hearing, are more proximate dispositions. The question was then raised whether touch, precisely as the foundation of sensation, has a role peculiar to itself in the operation of the other senses, and if so, how this special function contributes to intellectual knowledge.

To answer that question it was first necessary to discuss St. Thomas' theory of sensation and to show that when he says that a sense receives a species "spiritually," he refers to the physical quality received into the sense instantaneously. Since the sense is proximately disposed to receive that sensible quality, no contrary quality need be expelled. Sensation, therefore, consists in a passion in the common meaning of the term. These sensory passions are referred to the common sense, through which sensory awareness is achieved.

Our lengthy discussion was required because of the explanations of sensation given by most modern Thomists, who consider sensation as an activity consequent upon the reception of an immaterial sensible species. But having re-established sensation as the instantaneous reception of a physical quality into the sense, we are now in position to see more clearly the role of touch in the operation of the proper senses, and, consequently, the meaning of touch as the foundation of sensation.

To understand how touch functions even in the operations of the proper senses, it is important to recall that St. Thomas considered all the senses to form a single organic whole.

> Dicit ergo (Aristotles) primo, quod aer immutatus a colore, facit pupillam huiusmodi, id est facit eam aliqualem, imprimens in eam speciem coloris; et ipsa, scilicet pupilla sic immutata immutat alterum, scilicet sensum communem; et similiter auditus immutatus ab aere immutat sensum communem. Et licet sensus exteriores sint plures, tamen ultimum, ad quod terminantur immutationes horum sensuum, est unum; quia est quasi quaedam medietas una inter omnes sensus, sicut centrum, ad quod terminantur omnes lineae, quasi ad unum medium.[1]

In fact, not only does St. Thomas consider the senses to make up this complex whole with the common sense at its center, but he even includes the sensory appetites:

> Et quamvis appetere vel fugere vel sentire, sint diversi actus, tamen principium eorum est idem subiecto, sed ratione differt. Et hoc est quod subiungit, quod "appetitivum et fugitivum," idest pars animae, quae fugit et desiderat, non sunt alterae subiecto, neque abinvicem, neque a parte sensitive: "Sed esse aliud est," idest differunt ratione. Et hoc dicit contra Platonem, qui ponebat in alia parte corporis organum appetitivi, et in alia organum sensitivi.[2]

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[1] In III de An., lect. 12, n.773.

[2] Ibid., n.769

Modern psychologists confirm this analysis, for they have found that while the autonomic division of man's nervous system controls his vegetative functions, all his sense activities are regulated by the cerebrospinal division. They have even located the general areas of the brain which function in distinct sensations, although the human brain is so infinitely complex and delicate that our knowledge of it is still rudimentary. Nevertheless, man's sensory apparatus is recognized as constituting a clearly definable division of the nervous system by which nerve impulses from the organs of the external senses are relayed to the brain and further impulses from the brain are sent to the organs involved in the physical excitation experienced in states of emotion and passion. Thus St. Thomas' comparison of the relationship of the sensus communis to the proper senses is to the point: "the common sense is compared to the proper senses as a certain middle, just as a center is compared to the lines terminating at it."[1]

There are two reasons that prompt Aristotle and St. Thomas to consider the sensory powers as parts of a single organic whole with the common sense at the center. The first reason is the necessity to explain sensory awareness,[2] the second, to explain sensory discernment.[3]

A. Sensory Awareness

Awareness requires a certain presence to self or at least a partial reflection. Every sense has an organ, which is material and

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[1] Ibid., n.768. [2] In III de An., lect. 2.

[3] Ibid., lect. 3.

quantified, having parts outside of parts. Whatever is extended and quantified cannot be completely self-reflective. At most one part may reflect or doubleback upon another part, but the whole cannot as such reflect upon itself completely. As organic powers, therefore, the senses cannot reflect upon themselves and, consequently, cannot be aware of their own acts. Personal experience, however, attests to the fact of man's sensory consciousness; observation of other animals shows that they too have a certain awareness of their operations. Because human awareness at this sensory level is of material singulars, and because a similar awareness is found in other animals, it cannot be attributed to the rational soul as such. Consequently, as a distinct operation it requires a distinct power of the sensitive soul, and, therefore, an organ in the body. Since sensory awareness extends to all sensory operations, both apprehensive and appetitive, this organ must be physically joined to all the proper sensory organs, and, consequently, it must occupy a central position in the body. Thus the image of many lines terminating at a common center is particularly apt. It shows how all the sensory organs, as different parts of one complex whole, are in physical contact with the common sense. Consequently, precisely as the organic center of this organic whole, the common sense "reflects," not upon itself, but upon the other sensory organs.

Is this organic unity, however, sufficient to account for sensation? It would seem not. For the fact that all the senses are parts of one organic complex with the common sense as the center merely explains how a motion is transferred from the external senses

to the common sense, as an electric current travels through a complex circuit. Yet there is no knowledge in an electric circuit. Or to take another example, we do not say that there is knowledge in an electric computer programmed not only to make difficult calculations but also to make adjustments in its own programming if some component should fail. For what is lacking in the computer is awareness, which cannot be explained by mere physical continuity. Accordingly, the fact that all the senses are physically joined to a common center does not, of itself, guarantee awareness and knowledge. Organic unity is not enough: to have awareness the knowing subject must in some way be present to itself. Whatever is material and quantified has parts outside of parts and by this very fact cannot be completely present to itself. Perception, therefore, requires a principle other than matter -- a truth which the ancients understood vaguely when they attributed a soul to whatever has either self-movement or sensation.[1] Aristotle himself considers the soul to be the substantial form of the living thing and, in the case of animals, the ultimate principle of perception: "Sensation is held to be a qualitative alteration, and nothing except what has soul in it is capable of sensation."[2] The soul, then, is the ultimate source of sense knowledge; for Aristotle defines the soul as the principle by which primarily we live and sense and move and understand.[3]

The soul, of course, carries on all its vital activities through its powers, and the power by which it achieves sensory awareness is the common sense. Since awareness is intrinsic to all

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[1] De An., I, 2, 403b, 25-26.

[2] Ibid., II, 4, 415b, 24. [3] Ibid., 2, 414a, 13.

knowledge, the power of sensation which the proper senses have is rooted in the common sense:

> Et sic sensus communis nobiliori modo recipit quam sensus proprius, propter hoc quod virtus sensitiva consideratur in sensu communi ut in radice, et minus divisa.[1]

The proper senses, however, share in the common sense not merely because they are physically joined to it, but chiefly because they are all powers of the same soul: St. Thomas writes:

> Et similiter potest poni de anima, quod unum et idem subjecto est sensitivum omnium sensibilium, tam eorum quae differunt genere sicut album et dulce, quam eorum quae differunt specie sicut album et nigrum. Et secundum hoc dicendum erit quod anima sentit diversa sensibilia quodammodo secundum unum et idem, scilicet subjecto, quodammodo diversa, inquantum ratione differunt.[2]

And again:

> Unde intelligendum est, quod anima, idest sensus communis, unus numero existens, sola autem ratione differens, cognoscit diversa genera sensibilium, quae tamen referuntur ad ipsum secundum diversas potentias sensuum propriorum.[3]

Accordingly, all the operations of the proper senses are related to the common sense as to their root principle: this is possible because all the senses are organic powers of the one substance; this is necessary because the awareness provided by the soul through the common sense is intrinsic to every act of sensation.

The awareness provided by the soul through the common sense explains how the species received in the external senses are intentional forms, that is, forms which function as signs. For, as we saw in the last chapter, the sense organ is by nature deprived of and in

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[1] In III de An., lect. 3, n.612.

[2] In de Sen. et Sens., lect. 19, n.289.

[3] Ibid., n.293.

potency to its proper sensible form and proximately disposed to receive it. Therefore, when it possesses a species, it does so not as its own but as from the external object and only while that object is acting upon the sense organ. The soul, which is "the primary principle by which we sense," is aware of the passions of the external senses through the common sense. Consequently, inasmuch as the soul is aware of the species in the senses as pertaining not to the senses themselves (for ordinarily they are not so informed) but to the external objects, these species are constituted signs of the external objects.

Because of his rational soul man's sensory awareness is radically different from that of the animals, and so our understanding of purely sensory awareness must remain somewhat obscure. Perhaps we can best throw light on it by recalling the different levels of substantial forms in nature. For matter is a passive principle, and the forms of non-living things cannot overcome the passivity of matter. Hence, the substantial forms of non-living things do not originate movements. Such things as rocks are moved only from without. The second level is that of plant life, where the substantial forms, in addition to fulfilling the functions of the previous level, also have active powers of nutrition, growth and reproduction, whereby the plant perfects and propagates itself. Consequently, the form here transcends the pure passivity of matter and is an agent in regard to itself. By reason of its soul the animal has the additional powers of sensation and sensory appetite, and some have locomotion. Finally, man can perform acts of understanding and willing. Because his soul has powers which do not have an organ, man can reflect upon himself and

know the nature of his own acts. There is no power in the sensitive soul that can do this, since all its powers are organic. St. Thomas explains this briefly as follows:

> Forma enim, inquantum perfecit materiam dando ei esse, quodammodo supra ipsam effunditur: inquantum vero in seipsa habet esse, in seipsam redit. Virtutes igitur cognoscitivae quae non sunt subsistentes, sed actus aliquorum organorum, non cognoscunt seipsas; sicut patet in singulis sensibus. Sed virtutes cognoscitivae per se subsistentes, cognoscunt seipsas.[1]

Although it has no inorganic power by which it can reflect upon its own acts, the sensitive soul does, however, transcend matter to the extent that the animal is aware of what is happening to it in the concrete situation. It is precisely by the common sense that the animal soul achieves this limited transcendence.

Man's awareness, even on the sensory level, is heightened by being the sensitive operation of an intellectual soul, which is naturally aware of its own knowing and which can further deliberately return upon itself. The animal is only aware of the passions of its proper senses and appetites. There is in the unreasoning animal, therefore, only a rudimentary awareness of itself as a subject, that is, insofar as it knows its sensory activities as its own. The animal, however, cannot be fully conscious of itself as a knowing subject, for this would require a power that reflects, not just upon another, but upon its very self. The center of consciousness for the mere animal, however, is an organic power and, therefore, not self-reflective. Hence, the animal cannot know itself the way man knows himself.

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[1] Sum. Theol., I, q.14, a.2, ad 1m; cf. ibid., q.76, a.1, ad 4m.

Man, on the other hand, can know not only that he is sensing, but also what it is to sense. Furthermore, in his rational activities man is expressly aware that they are his own; and, while they are going on, he is in possession of himself. For the rational soul, being spiritual and without extension, is, in its activities, present to itself. Consequently, the human soul is aware of its rational activities, not only by a type of bending back upon itself, but already by simply being in act. To know the nature of rational activities and powers and, indeed, to know the nature of the soul itself, man must scrutinize and analyze the objects and the very activities that attain them.[1] Such an investigation, however, is consequent upon the self-awareness by which the soul is present to itself and which is implicit in every act of our knowledge. St. Thomas explains this clearly:

> Non ergo per essentiam suam, sed per actum suum se cognoscit intellectus noster.
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> Et hoc dupliciter. Uno quidem modo, particulariter, secundum quod Socrates vel Plato percipit se habere animam intellectivam, ex hoc quod percipit se intelligere. Alio modo, in universali, secundum quod naturam humanae mentis ex actu intellectus consideramus. Sed verum est quod judicium et efficacia huius cognitionis per quam naturam animae cognoscimus, competit nobis secundum derivationem luminis intellectus nostri a veritate divina... Est autem differentia inter has duas cognitiones. Nam ad primam cognitionem de mente habendam, sufficit ipsa mentis praesentia, quae est principium actus ex quo mens percipit seipsam. Et ideo dicitur se cognoscere per suam praesentiam. Sed ad secundum cognitionem de mente habendam, non sufficit eius praesentia, sed requiritur diligens et subtilis inquisitio. Unde et multi naturam animae ignorant, et multi etiam circa naturam animae erraverunt.[2]

Accordingly, man is present to himself by reason of his spiritual soul, but such an endowment must not be attributed anthropomorphically to other animals. The animals are merely aware of what

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[1] Ibid., II, lect. 6, nn. 304-308; Sum. Theol., I. q.87, a.3c.

[2] Sum. Theol., I, q.87, a.1c.

is happening to them and in them; but they are not aware of themselves precisely as a "self." For self-awareness is beyond the range of the common sense.[1]

Proof of the rudimentary nature of the animal's awareness of itself as a "self" is found in the predominant role that instinct plays in the life of the brute. Since the animal cannot be completely present to itself, it cannot reflect upon itself as a supposit nor know the nature of its own acts. Consequently, it does not know the reasons for its activity, and nature must lead the animal by instinct to act in determinate ways.[2]

As led by instinct, however, the animal is unwittingly acting most of the time to preserve itself as a supposit. The estimative sense, therefore, is the highest of the senses. But whereas in its instinctive operations the animal acts for its own good blindly, man performs similar operations in virtue of his ability to deliberate about his own needs. Accordingly, by the estimative sense the irrational animal shares very imperfectly in man's ability to act as a self-possessed, self-conscious and so rational supposit, who in virtue of his intellectual soul can make up his own mind.

B. Sensory Discretion

The first reason, then, for locating the common sense at the center of the whole sensory complex is the need to explain awareness. The second reason is to explain the ability of men and other animals to discern between different sensations. To clarify this point, however, a little digression on the meaning of the word "judgment"

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[1] Ibid., a.3, ad 3m; q.14, a.2, ad 2m; De Ver., q.1, a.9c.

[2] De Ver., q.24, a.2c.

is necessary. St. Thomas explains its meaning as follows:

> Respondeo dicendum quod judicium proprie nominat actum judicis inquantum est judex. Judex autem dicitur quasi jus dicens... Et ideo judicium importat, secundum primam nominis impositionem, definitionem vel determinationem justi sive juris... Nomen judicii, quod secundum primam impositionem significat rectam determinationem justorum, ampliatum est ad significandum rectam determinationem in quibuscumque rebus, tam in speculativis quam in practicis.[1]

According to a first imposition, then "judgment" is a legal term signifying a correct determination of what is just according to the law, but the word has been extended to mean a correct determination in any matter, whether speculative or practical.

In psychology the word judgment is said of both the intellect and the senses, since all these powers, to some extent, have a correct determination of their own acts. Nevertheless, the act of judging, strictly speaking, is proper to reason alone.

> Judicium autem est in potestate judicantis secundum quod potest de suo judicio judicare: de se enim quod est in nostra potestate, possumus judicare. Judicare autem de judicio suo est solius rationis, quae super actum suum reflectitur, et cognoscit habitudines rerum de quibus judicat, et per quas judicat.[2]

Accordingly, judgment is a cognitive act which is explicitly reflective; and since only rational powers can reflect upon their own acts, only the intellect can judge in the proper sense of the word. Therefore, when said of the intellect and the senses, the word "judgment" is analogous. In fact, we may distinguish intellectual judgments in both the order of reasoning[3] and the order of composition

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[1] Sum. Theol., II - II, q.60, a.1c, ad 1m.

[2] De Ver., q.24, a.2c.

[3] In Boetii De Trin., lect. 2, q.2, a.2c; In I Post. Analy., prooemium, n.6; Sum. Theol., II - II, q.51, a.4c, ad 2m.

and division,[1] but to pursue this distinction further would take us too far from our present purpose.

As organic powers, the senses are not self-reflective and so neither can they "judge their own judgments" in the way the intellect does. The "correct determination" which the senses make in regard to their proper objects is completely determined by nature and in no way free. Therefore, when said of the intellect and the senses, the word "judgment" is analogous.

We can distinguish various judgments which the senses make. The first and most basic is that by which each sense judges whether or not its own proper sensible object is proportionate to the organ, e.g., as to the pain or pleasure which ensues. For if the object is proportionate to the sense, the sensation is pleasurable; if not, the sensation may be painful.[2] As we have already seen, both the senses and the sense appetites differ by reason of their respective proper objects; yet they are all part of one complex organic structure which St. Thomas attributes to touch as the foundation of sensation and to the common sense as the principle of sensory awareness. The judgment regarding the suitability of an object for the sense is therefore due to touch as basic and to the common sense.[3] This point will be developed at greater length later on.

The second type of judgment on the sensory level is that which the senses make between the different species of their proper objects:

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[1] In VI Met., lect. 4, n.1236; De Ver., q.1, a.3c.

[2] In II de An., lect. 4, n.265; Sum Theol., I-II, q.32, 1c, ad 3m.

[3] In II de An., lect.5, n.289; Sum. Theol., III, q.15, a.6c.

> Unusquisque sensus discernit differentias proprii sensibilis, sicut visus discernit album et nigrum, gustus dulce et amerum, et similiter se habet in aliis sensibus.[1]

Nevertheless, this kind of discernment is also due to the common sense:

> Considerandum est etiam, quod sensus proprius habet discernere inter contraria sensibilia, inquantum proprius participat aliquid de virtute sensus communis, quia et ipse sensus est unus terminus diversarum immutationem, quae fiunt per medium a contrariis sensibilibus. Sed ultimum judicium et ultima discretio pertinet ad sensum communem.[2]

The third type of sensory judgment is that which the common sense makes between the sensations of the proper senses. Now in order for such a judgment to be made, there must be one sense which knows the immutations of the two proper senses, just as a judge must know both sides of a case before making his decision. In explaining how this type of discernment takes place, St. Thomas begins with a similitude. He likens the common sense to a point between two parts of the line. For as joining both parts of the line the point may be considered in itself as one; but as the end of one line and the beginning of another it may be considered as two, being both end-point and beginning. St. Thomas completes the similitude as follows:

> Sic etiam intelligendum est, quia vis sentiendi diffunditur in organa quinque sensuum ab aliqua una radice communi, a qua procedit vis sentiandi in omnia organa, ad quam etiam terminantur omnes immutationes singulorum organorum: quae potest considerari dupliciter. Uno modo prout est principium unum et terminus unus omnium sensibilium immutationum. Alio modo prout est principium et terminus huius et illius sensus...
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> Habet igitur hoc principium sensitivum commune, quod simul cognoscat plura, inquantum accipitur bis, ut terminus duarum immutationum sensibilium; inquantum vero est unum, judicare potest differentiam unius ad alterum.[3]

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[1] In III de An., lect. 3, n.600; cf. In de Sen. et Sens., lect. 17, n.263.

[2] In III de An., lect. 3, n.613.

[3] Ibid., nn. 600-610.

Accordingly, as the principle and term of all the different senses, the common sense knows them all; as the principle common to all of them the common sense has its own unity and so can discern one from the other.

C. The Role of Touch as Basic to Sensation

With this in mind the following passage of St. Thomas is more readily intelligible, where, concerning sensory discernment between distinct proper sensibles and species of proper sensibles, he says,

> Et si per aliquem sensum fit, hoc maxime videtur quod fiat per tactum, qui est primus sensuum, et quodammodo radix, et fundamentum omnium sensuum; et ab hoc, animal habet quod dicatur sensitivum. ...Attribuitur autem ista discretio tactui non secundum quod tactus est sensus proprius, sed secundum quod est fundamentum omnium sensuum, et propinquius se habens ad fontalem radicem omnium sensuum, qui est sensus communis.[1]

It should be carefully noted that in this important passage St. Thomas does three things: (1) he explicitly distinguishes touch as a proper sense from touch as the foundation of all the senses; (2) he assigns to touch, as the foundation of sensation, a role in the operations of the senses, namely, by distinguishing between the sensations of the proper senses; and (3) he attributes this function to touch, precisely because, as the foundation of sensation, it is in closest physical proximity to the common sense.

St. Thomas explains the physical proximity of these two senses as follows:

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[1] Ibid., n.602.

> Oportet autem illud principium sensitivum commune habere aliud organum, quia pars sensitiva non habet aliquem operationem sine organo. Cum enim organum tactus diffundatur per totum corpus, necessarium videtur, ut ibi sit organum huius principii sensitivi communis, ubi est prima radix organi tactus....[1]

The reason for the necessary proximity of the common sense and the center of the sense of touch is the obvious one that unless the two organs were physically united, we would not be aware of all our sensations of touch, which are felt throughout the whole body. The place which St. Thomas, following Aristotle, assigns to the common sense as the "primary root of the organ of touch" is near the heart, which he thought to be the source of sensory powers and to which the organ of touch and taste are joined physically.[2]

Among all the senses touch has a privileged role. Its proper objects were believed to be the natural qualities of the four basic elements, and its organ, unlike the organs of the other senses, was thought to consist of a proportion of all four elements.[3] For extremes of the proper sensibles of touch can destroy an animal, whereas extremes of any other proper object merely destroy that particular sense. Besides, touch is the sense of nutrition, since it makes the animal aware of its need for the basic components of which it is made. Touch, consequently, is necessary for the very existence of the animal and not only for its well-being. Furthermore, touch is the one sense which is, in fact, found to exist in every animal, even in those which lack some of the other senses.[4] The sense of touch, therefore, is convertible with the genus "animal"

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[1] Ibid., n.611.

[2] In de Sen. et Sens., lect. 5, nn. 74-76.

[3] In II de An., lect. 5, n.290; lect. 23, n.548.

[4] Ibid., III, lect. 17, nn. 858-62; lect. 18, nn. 870-71.

for there cannot be an animal without this sense.[1]

We have already seen that Aristotle and St. Thomas (confirmed by contemporary psychologists) consider touch as a generic sense comprising several distinct species, whose sensory organs are imbedded in the flesh over the surface of the whole body. To account for our awareness of touch sensations throughout the body, its external organs must join in a common center and communicate with the common sense. All this demands a complex internal structure which cannot be attributed to any particular species of touch, but which rather belongs to them all.

As we saw, all animals have the sense of touch; the other senses are in addition to it. Consequently, the complex, internal organic structure is attributed to touch precisely as it is the foundation of sensation.

The proper senses have both external and internal organs. The internal organs for sight, hearing and smell are near the brain. But these internal organs must also be in physical contact with the organ of the common sense, which was thought to be located together with the organic center of touch near the heart. The organic structure connecting these two centers, as part of the whole internal sensory complex, is also attributed to touch as the foundation of sensation. Every sensation requires sensory awareness, the proper object of the common sense. Consequently, every sensation demands the operation of touch as the basis of all sensation. Hence, St. Thomas says that the function of discriminating between the different sensations is attributed to touch "according as it is the foundation of sensation and closest to the fontal root of all the senses, the common sense."[2]

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[1] Ibid., lect. 10, n.869. [2] Ibid., lect. 2, n.602.

Are there any functions proper to touch as the foundation of sensation? To answer this question we should remember that touch is a generic sense with at least two distinct species: the pressure sense and the temperature sense, both of which have organs (nerves) over the outer surfaces of the body. These two species of touch are readily seen to be formally distinct. There are other touch sensations, however, which are experienced under normal circumstances only obscurely.

There are kinesthetic sensations,[1] for example, by which we are aware of the position and movement of the body inasmuch as one part exerts pressure on another part through muscular contractions and the like. These sensations seem to have the same formal object as pressure sensations and so are formally functions of the same sense. They can be distinguished, however, to the extent that they are less clearly discerned than external pressure sensations and inasmuch as they have different material objects. For the pressure organs on the outer surface of the body clearly report the pressure of external objects, while the kinesthetic organs within the body, vaguely report the pressure of other parts internal to the body.

Another type of touch sensation is the obscure awareness we have of the functioning of our own body, for we are vaguely aware of the circulation of the blood, breathing, digestion and the like. These organic or intero-captive sensations[2] are even more obscure than the kinesthetic sensations. In fact, we normally avert to them only

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[1] Klubertanz, The Philosophy of Human Nature, p. 109.

[2] Ibid.

when these functions are disturbed, as in indigestion, etc. If these sensations are considered to be formally distinct, the reason for the distinction is a negative one -- their obscurity. Kinesthetic and organic sensations are not sufficiently clear to allow us to judge whether or not they are merely pressure sensations.

If we grant that kinesthetic and organic sensations are not specifically distinct, it seems that they can be distinguished at least materially from the pressure sense. For inasmuch as they directly pertain to the internal workings of the body, they are to be assigned to touch as the foundation of sense, which has as its organ, the complex internal structure common to all the formally distinct senses.

There is one more sense which experimental psychologists distinguish, the pain sense, which is sometimes considered as a species of touch. We will consider pain and pleasure in the next chapter.

We saw earlier that Aristotle and St. Thomas consider taste as a "certain touch," since its object is attained by touching:

> Sed dicitur quod gustus et tactus possunt considerari dupliciter. Uno modo quantum ad modum sentiendi; et sic gustus est quidam tactus. Nam in tangendo, suum objectum percipit.[1]

Yet all the senses require some physical contact with their proper objects. Even sight, the most "spiritual" of all, must be moved by color, a corporeal quality. "For," St. Thomas observes, "bodies do not affect each other unless they are touching."[2]

Nevertheless, only in taste are we conscious of touch as we taste; only in taste does touch also function formally as touch.

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[1] Ibid., II, lect. 21, n.504.

[2] Ibid., lect. 15, n.432; cf. III, lect. 17, n.864.

In the other senses there is normally no awareness of touching, yet touch is there as the foundation of sensation. Nevertheless, since their organs are also organs of touch we sometimes become aware of contact; but to the extent that we do, the sense itself is impeded in its function. For example, when we get a dust particle in our eye we feel it. Furthermore, such physical contacts may be painful, and pain is perceived by the sense of touch: "The object and cause of pain is a wound perceived by the sense of touch."[1] But even when we are not aware of physical contact we can still perceive pain, as when light is too bright, sound too loud. Here again touch as a foundation, together with the common sense, is at work; for the perception of pain is always according to the sense of touch.[2] Consequently, touch functions formally and consciously in every sensation in which we are aware of touching the sensible object, as in sensations of pressure and taste, and likewise in any sensation involving pain. In sensations of sight, hearing and smell, where no contact or pain is felt, touch functions only materially. Accordingly, whether consciously or not, every sensation requires the operation of the basic internal sensory apparatus, which is attributed to touch as the foundation of sense.

In the light of this analysis we are now able to state more clearly what St. Thomas means when he says that "in the genus of man we find that it is because of their sense of touch that some are naturally well endowed mentally and some are not, nor is it because of any other sense."[3]

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[1] Sum. Theol., III, q.15, a.6c.

[2] In III Sent., d.15, q.2, a.3, sol. 2, n.128.

[3] In II de An., lect. 19, n.482.

First of all, it should be clear that when St. Thomas explains how intellectual ability is conditioned by touch, he understands touch as the "foundation of all the other senses."[1] This has already been pointed out at some length. But precisely inasmuch as he considers touch as the foundation of the other senses, St. Thomas distinguishes it from touch as a proper (generic) sense. Therefore as fundamental touch is convertible with animal sensitivity and its complex organic structure. Hence, when St. Thomas holds with Aristotle that the perfection of the sense of touch determines the capacity of the intellect, touch stands for the whole sensory complex, which includes not only the organs of the external senses but especially the internal, sensory structure. The whole complex is attributed to touch because its organ is more widespread than that of any other sense and is, in fact, found in the organs of the other senses. A further reason is that the function of touch is the most basic and necessary, and so without this sense there could be no other. Consequently, a man may have poor eye-sight or poor hearing and still be very intelligent, for these senses, though important, are not basic. Accordingly, when St. Thomas uses "touch" to stand for the whole sensory complex, he usually qualifies the word with the clause "which is the foundation of all the other senses" or with some similar expression. Nevertheless, it should not be forgotten that when he uses "touch" in this way, St. Thomas resorts to a synecdoche.

Since St. Thomas distinguishes touch as a foundation from touch as a proper sense and holds that it is the former which

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[1] Ibid., n.484; Q.D. de An., a.8c.

determines intellectual ability, the question naturally arises whether touch as a proper sense also conditions intelligence. Precisely as a proper sense touch does make an important contribution to the intellect, especially in regard to certitude.[1] The specific senses of touch, however, do not condition intellectual capacity any more than the other proper senses. Nevertheless, inasmuch as the organs of the proper senses of touch are found, though unequally, over the surface of the whole body, whereas the organs of the other senses are located in specific places, the excellence of the proper senses of touch is a sign of the perfection of the whole sensitive nature and, consequently, of intellectual ability. Accordingly, St. Thomas writes:

> Et propter hoc homo inter omnia animalia melioris est tactus. -- Et inter ipsos homines, qui sunt melioris tactus, sunt melioris intellectus. Cuius signum est, quod molles carne bene aptos mente videmus, ut dicitur in II de Anima.[2]

For since the flesh, according to Aristotle and St. Thomas, is the medium for the organ of touch, the more perfectly proportioned the flesh is, the better, too, is the sense of touch. Therefore, the quality of a man's specific senses of touch is a sign of his intellectual capacity.

In brief, St. Thomas maintains that touch as the foundation of all the other senses is to be distinguished from the specific senses of touch and to it is assigned the internal sensory structure by which the organs of the proper senses are joined to the common sense. Consequently, touch as the foundation of sensation relates to animal sensitivity taken as a whole. Since the intellect depends

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[1] Cf. Charles De Koninck, "Sedeo, ergo sum," Laval Theologique et Philosophique, VI (1950), pp. 343-48; Super Evangelium S. Joannis, Cap. XXI, lect. 2, v.5, n.2612.

[2] Sum. Theol., I, q.76, a.5c.

upon the senses for its object, it follows that touch as basic determines intellectual ability. Furthermore, among all the proper senses only the species of touch are found, more or less, over the whole surface of the body. The quality of these specific senses of touch, therefore, is a sign of the perfection of the whole sensitive nature and, consequently, of intellectual capacity.

VI. TOUCH AS BASIC TO THE SENSE APPETITES

A. The Appetites and Passions

To complete our study of the functions of the sense of touch we must now turn our attention to the sense appetites. The existence of such appetites in man and the other animals is a fact of personal experience and comparative observation: we see that the things we know either attract or repel us. Love or hate, desire or aversion and the like are not the same as mere knowledge; for knowledge of some object may excite us to desire or aversion, but it may leave us indifferent. To be attracted or repelled by something known is, therefore, an operation distinct from merely knowing it and reveals a distinct type of power of the soul.[1] Furthermore, since understanding and sensation are distinct operations, tendencies toward an object known by the senses are distinct from tendencies toward an object known by the intellect and reveal the existence in man of appetitive powers on the sensory and intellectual levels. In the sensitive order we observe that we can seek an object either as pleasurable or as arduous, and so we are forced to distinguish two sense appetites: the concupiscible appetite, which seeks the pleasurable good, and the irascible appetite, which seeks the arduous good. There are then three appetitive powers in man: the intellectual appetite or will,

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[1] Sum Theol., I, q.80, a.1; q.19, a.1.

the concupiscible appetite and the irascible appetite, and all of them are consequent upon knowledge.[1]

The term "appetite" has been applied not only to the tendencies of conscious being to seek known objects but also to the tendencies of unknowing things; for the word does not necessarily imply knowledge. Such unconscious tendencies as that of an acorn to grow into an oak or of fire to leap upwards are called "natural appetites" to distinguish them from conscious or "elicited appetites."[2] St. Thomas generalizes:

> Quamlibet formam sequitur aliqua inclinatio: sicut ignis ex sua forma inclinatur in superiorem locum, et ad hoc quod generet sibi simile... In his enim quae cognitione carent, invenitur tantummodo forma ad unum esse proprium determinans unumquodque, quod etiam naturale uniuscuiusque est. Hanc igitur formam naturalem sequitur naturalis inclinatio, quae <u>appetitus naturalis</u> vocatur.[3]

The term natural appetite is even applied to the potencies of the soul; "for a potency is nothing other than a certain ordination to act," and so St. Thomas says:

> Unaquaque potentia animae est quaedam forma seu natura, et habet naturalem inclinationem in aliquid. Unde unaquaeque appetit objectum sibi conveniens naturali appetitu.[4]

and again:

> Appetitus naturalis est inclinatio cuiuslibet rei in aliquid, ex natura sua: unde naturali appetitu quaelibet potentia desiderat sibi conveniens.[5]

In this sense St. Thomas even speaks of the will as tending naturally to the good,[6] for just as nature is determined to one form or to one motion,[7] so the will is determined to its proper object. Of course,

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[1] <u>In III de An.</u>, lect. 14, nn. 803 - 804; <u>Sum Theol.</u>, I, q.80, a.2; q.81, a.2.

[2] <u>In II de An.</u>, lect. 5, n.286. [3] <u>Sum Theol.</u>, I, q.80, a.1c.

[4] <u>Ibid.</u>, ad 3m. [5] <u>Ibid.</u>, q.78, a.1, ad 3m.

[6] <u>De Ver.</u>, q.24, a.8. [7] <u>In II Phy.</u>, lect. 1, n.144.

to speak of the will or the intellect as nature is to use the word "nature" in an analogous sense, since these are spiritual powers with universal objects[1] and are said to be principles of motion only in a broad sense of the word "motion."[2] Nevertheless, these powers are said to be natural appetites inasmuch as they are ordained to their own proper objects.

Our concern, however, is not with natural appetites as such, nor with the will, but with the sensible appetites, which seek a good presented by the senses.

Like the senses, the concupiscible and irascible appetites are passive powers and include bodily organs. Unlike sensations, however, the passions, which are operations of the sensible appetites, are passions in the proper meaning of this word. As we saw in discussing sensation, a proper passion consists in the reception of one corporeal accident and the expulsion of its contrary. Consequently, the physical transmutation of the organ belongs "per se" to the sensible passions, but only "per accidens" to sensations. St. Thomas explains:

> Dupliciter organum animae potest transmuteri. Uno modo, transmutatione spirituali, secundum quod recepit intentionem rei. Et hoc per se invenitur in actu apprehensivae virtutis sensitivae: sicut oculus immutatur a visibili, non ita quod coloretur, sed ita quod recipiat intentionem coloris. Est autem alia naturalis transmutatio organi, prout organum transmutatur quantum ad suam naturalem dispositionem: puta quod calefit aut infrigidatur, vel alio simili modo transmutatur. Et huiusmodi transmutatio per accidens se habet ad actum apprehensivae virtutis sensitivae: puta cum oculus fatigatur ex forti intuitu, vel dissolvitur ex vehementia visibilis. Sed ad actum appetitus sensitivi per se ordinatur huiusmodi transmutatio: unde in definitione motuum appetitivae partis, materialiter ponitur aliqua naturalis transmutatio organi: sicut dicitur quod ira est accensio sanguinis circa

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[1] Sum. Theol., I, q.80, a.2, ad 2m.

[2] In I de An., lect. 10, nn. 160-62.

> cor. Unde patet quod ratio passionis magis invenitur in actu sensitivae virtutis appetitivae quam in actu sensitivae virtutis apprehensivae, licet utraque sit actus organi corporalis.[1]

It is important for our purpose to study carefully the three different stages in the development of a sensory passion as St. Thomas has described them:

> Ex apprehensione sensus non sequitur motus in corpore nisi mediante appetitiva, quae est immediatum movens. Unde secundum modum operationis eius statim disponitur organum corporale, scilicet cor, unde est principium motus, tali dispositione quae competat ad exequendum hoc in quod appetitus sensibilis inclinatur. Unde in ira fervet, et in timore quodammodo frigescit et constringitur.[2]

Accordingly, the first requirement is that there be an object presented by the senses. Secondly, if that object is then judged to be merely pleasurable or harmful (we will see how later) then the concupiscible appetite is aroused; if the object is judged to be pleasurable but difficult to attain, or harmful but difficult to avoid, then the irascible appetite is also aroused. Thirdly, when the appetites are stimulated, a physical reaction takes place at once in the bodily organs, as, for example, in anger there is a rush of blood. Since these physical changes are due to different psychological states, St. Thomas calls them "passiones animales" as opposed to bodily changes which have a source outside the body, such as a wound, and which he calls "passiones corporales." He writes:

> Dupliciter ergo passio corporis attribuitur animae per accidens.
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> Uno modo ita quod passio incipiat a corpore et terminetur in anima, secundum quod unitur corpori ut forma; et haec est quaedam passio corporalis: sicut cum laeditur corpus...

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[1] Sum. Theol., I-II, q.22, a.2, ad 3m; cf. a.1c; a.3c.

[2] De Ver., q.26, a.3c; cf., ad 9m.

> Alio modo ita quod incipiat ab anima, in quantum est corporis motor, et terminetur in corpus; et haec dicitur passio animalis; sicut patet in ira et timore, et aliis huiusmodi: nam huiusmodi per apprehensionem et appetitum animae peraguntur, ad quae sequitur corporis transmutatio.[1]

We will see later that St. Thomas does not always confine himself to this terminology, but the context usually makes his meaning clear. Consequently, it would seem pointless to discuss his terminology further here.

We have already seen that a sensible passion is a proper passion because the physical change in the body is intrinsic to the very passion. The physical change is related to the act of the appetitive power of the soul as matter is related to form. Yet according to St. Thomas it is from the act of the appetite as a power of the soul and not from the physical reaction in the body that the passion is specified. The corporeal transmutation of the organs, however, makes the sensible passion a proper passion. St. Thomas explains this as follows:

> ...Ira, et similiter quaelibet passio animae, dupliciter potest considerari: uno modo secundum propriam rationem irae; et sic per prius est in anima quam in corpore; et alio modo in quantum est passio: et sic per prius est in corpore: ibi enim primo accipit rationem passionis. Et ideo non dicimus quod anima irascatur per accidens, sed quod per accidens patiatur.[2]

This observation has been borne out by the experiments of Walter B. Cannon,[3] who found that the bodily changes which take place in states of emotion are fewer than the passions. These changes in fact are the same in "such readily distinguishable emotional states

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[1] Ibid., a.2c. [2] Ibid., ad 5m.

[3] Walter B. Cannon, Bodily Changes in Pain, Hunger, Fear and Rage (2nd. ed.; Boston: Charles T. Branford Co., 1953), pp. 346-59.

as fear and rage." They also occur when the body is subject to fever or exposed to cold, neither of which can be classified as emotional states. Furthermore, in experiments where the physical changes were artificially induced by the injection of chemicals into the bloodstream, it was found that the patients did not experience real sensory passions. They felt "as if" they were angry, or joyful, or sad. All these facts confirm the observation that a sensible passion is a "passio animalis" and must receive its specification from the psychological state.

St. Thomas distinguishes eleven types of passions: six in the concupiscible appetite and five in the irascible. In the concupiscible, the basic passions are love and hate which have as their objects the sensible good or harm unqualified. Longing and aversion arise in regard to the good or harm in the future; joy and sadness occur when the good or the harm is present.[1] In the irascible appetite, the sensible object is judged to be hard to reach or avoid. Thus when an arduous good is judged to be attainable, hope is aroused; if judged unattainable, desperation. When harm is seen as imminent but conquerable, one feels bold; but if it is judged to be unconquerable, fear is felt. Anger arises in the presence of a harm that is difficult to escape, and presupposes both hope of victory and courage, for when one ceases to resist a present harm, one ceases to be angry and becomes sad. There is, finally, no passion which has a present arduous good for its object, since as present the good is no longer difficult to attain and so joy arises.[2] All

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[1] Sum. Theol., I-II, q.25, a.2.

[2] Ibid., a.3.

the other passions that can be distinguished are to be considered as species of these basic types.[1] For our purpose, the only passions we need consider further are joy and sadness, for they have a role to play at the beginning and at the end of any causal chain of passions.

B. How the Sense Appetites are Aroused

1. St. Thomas' Explanation

In contrasting how the will and the sensible appetites are aroused, St. Thomas clearly indicates the different stages in the formation of the passions. He writes:

> Dicit ergo (Aristotales) primo, quod phantasmata se habent ad intellectivam partem animae, sicut sensibilia ad sensum. Unde sicut sensus movetur a sensibilibus, ita intellectus a phantasmatibus. Et sicut, cum sensus apprehendit aliquid sicut delectabile vel triste, prosequitur illud aut fugit, ita etiam cum intellectus apprehendit aliquid, affirmans vel negans esse bonum vel malum, fugit aut prosequiter.
>
> Ex ipso autem modo loquendi Aristotelis duplex est attendenda differentia inter intellectum et sensum: quia in sensu erant tria. Nam ex apprehensione boni vel mali, non statim sequebatur desiderium vel fuga, sicut hic circa intellectum; sed sequebatur delectatio et fuga. Cuius ratio est, quia sicut sensus non apprehendit bonum universale, ita appetitus sensitivae partis non movetur a bono vel malo universali, sed a quodam determinato bono, quod est delectabile secundum sensum, et quodam determinato malo quod est contristans secundum sensum. In parte autem intellectiva est apprehensio boni et mali universalis: unde et appetitus intellectivae partis movetur statim ex bono vel malo apprehenso.[2]

In arousing the sensible passions, accordingly, there is first a sensible apprehension; second, sensible pleasure or pain; third, the passions of longing or aversion, etc. The will, on the other hand, is moved to its acts directly upon the apprehension of the good or evil

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[1] De Ver., q.26, a.4, ad 5m, 6m, 7m, 8m.

[2] In III de An., lect. 12, nn. 770-71.

by the intellect. The reason for this difference is that the will has the good as such for its object and so to attract the will the goodness of the object alone suffices.[1] The will, therefore, need not be moved to its object on the basis of pleasure. Accordingly, the first passion to arise in the will - and in this context the word "passion" is used analogously, since the will is immaterial[2] - is not pleasure but love.

The sensible appetites, however, seek particular, determinate objects, and these must be judged good for the animal here and now in order for the animal to seek them. This judgment is based upon the experience of sensible pleasure or pain. For example, a hungry dog is delighted by the smell of meat and this sensible pleasure triggers the passions of longing which in turn leads to locomotion. When the dog is not hungry, however, such delight will not be present and the passion of longing will not arise. Sensible pleasure or sadness is the sign to the animal that this particular object is a good to be sought or a harm to be avoided. Indeed, if it were not for the fact that an animal must sometimes seek what is not pleasant and avoid what is not painful, sensible pleasure and pain would suffice for its activity. It is precisely to account for the animal's seeking what is not pleasurable and avoiding what is not painful that St. Thomas posits the estimative sense:

> Si animal moveretur solum propter delectabile et contristabile secundum sensum, non esset necessarium ponere in animali nisi apprehensionem formarum quas percipit sensus, in quibus delectatur aut horret. Sed necessarium est animali ut quaerat aliqua

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[1] Sum. Theol., I, q.80, a.2, ad 2m.

[2] Ibid., I-II, q.22, a.3c.

> vel fugiat, non solum quia sunt convenientia vel non convenientia ad sentiendum, sed etiam propter aliquas alias commoditates et utilitates, sive nocumenta: ...Et huius perceptionis oportet esse aliquod aliud principium: cum perceptio formarum sensibilium sit ex immutatione sensibilis, non autem perceptio intentionum praedictarum... Ad apprehendendum autem intentiones quae per sensum non accipiuntur, ordinatur vis aestimativa.[1]

With the exception of instinctive activities, therefore, all animal operations are set in motion by pleasure or pain.

2. Difficulties regarding this Explanation

This explanation is clear enough, but it raises further questions. First of all, are sensible pleasure and pain needed to arouse the sensible passions of longing or aversion, etc., themselves sensible passions? If so, why does St. Thomas repeatedly state that pleasure and pain arise only when the object is actually possessed, so that they are the last passions to arise in a given sequence?[2] In the passage quoted above, however, pleasure and pain are prior to longing and aversion.

On the other hand, if by pleasure St. Thomas here means a sensation, by which sense is it perceived? Not, it would seem, by all the proper senses, since we are told in the Ethics that animals do not take pleasure in sensations of sight, hearing, and smell for themselves, but only as they are related to touch and taste.[3] These latter senses, however, require that their objects be possessed. Pleasure and pain experienced in the possession of an object, then, would hardly give rise to longing and aversion in respect to that

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[1] Ibid., I, q.78, a.4c. [2] Ibid., q.25, a.1c; a.3c; a.4c, ad 2m.

[3] In III Eth., lect. 19, nn. 609-611.

object; for we do not long for what we actually possess. We are then still faced with the original difficulty: namely, how can pleasure and pain give rise to longing and aversion.

Furthermore, it seems that we cannot say that pleasure and pain, which move the sensible appetites, are experienced by the proper senses when moved by their proportionate proper object, because these "pleasurable" sensations occur even when no appetite follows. For example, any "pleasure" the dog might experience in seeing meat would be present whether he is hungry or not; yet when the dog is not hungry, the "pleasure" of seeing does not arouse any passions in the appetites.[1]

How then can we explain the "pleasure" which is requisite to move the sensible appetites? What power perceives sensible pleasure and pain?

As a matter of fact, certain authors believe that St. Thomas' opinion regarding this point changed somewhat.[2] It is important for us to determine his position as precisely as possible since it directly concerns the sense of touch.

3. Pleasure and Pain: Sensations or Passions

A quick scanning of a few passages will indicate the problem clearly. In his commentary on The Sentences, St. Thomas writes:

> In dolore et tristitia duo inveniuntur: scilicet contrarietas contristantis et dolorem inferentis ad contristatum et dolentem, et perceptio eius; et quantum ad haec tripliciter differunt.
>
> Primo quantum ad contrarietatem: quae quidem in dolore attenditur quantum ad ipsam naturam dolentis quae per laesivum corrumpitur; sed in tristitia quantum ad repugnantiam appetitus

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[1] Ibid., n.609.

[2] Jean Langlois, S.J., "La Definition de la delectation," Laval Theologique et Philosophique, V (1949), pp. 170-96.

ad aliquid quod quis odit.

Secundo quantum ad perceptionem: quae quidem in dolore semper est secundum sensum tactus, ut dictum est; in tristitia autem secundum apprehensionem interiorem.

Tertio, quantum ad ordinem istorum duorum, quia dolor incipit in laesione et terminatur in perceptione sensus, ibi enim completur ratio doloris: sed ratio tristitiae incipit in apprehensione et terminatur in affectione. Unde dolor est in sensu sicut in subjecto, sed tristitia in appetitu. Ex quo patet quod tristitia est passio animalis, sed dolor est magis passio corporalis.[1]

This passage is clear. The object of pain is repugnant to nature, the object of sadness is repugnant to the sense appetite; pain is perceived by touch, an external sense, sadness by an internal power; pain is caused by a wound and felt in the sense, sadness is caused by an act of apprehension and is experienced in the appetite. Whence the subject of pain is the sense, the subject of sadness is the appetite.

These same ideas are repeated in De Veritate where St. Thomas writes:

Tristitia et dolor hoc modo differunt: quod tristitia est quaedam passio animalis, incipiens scilicet in apprehensione nocumenti, et terminatur in operatione appetitus, et ulterius in transmutatione corporis; sed dolor est secundum passionem corporalem. Unde Augustinus dicit XIV de Civitate Dei, cap. VII, in fine, quod dolor usitatius in corporibus dicitur; et ideo incipit a laesione corporis, et terminatur in apprehensione sensus tactus, propter quod dolor est in sensu tactus ut in apprehendente.[2]

He makes a similar distinction between pleasure and joy:

Delectatio et gaudium eodem modo differunt sicut tristitia et dolor... et sic delectatio utrobique incipit a conjunctione reali, et perficitur in eius apprehensione. Gaudium vero incipit in apprehensione et terminatur in affectu.[3]

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[1] In III Sent., d. 15, q.2, a.3, sol. 2, n.128.

[2] De Ver., q.26, a.3, ad 9m; cf. ibid., a.4, ad 4m; a.9c.

[3] Ibid., a.4, ad 5m.

In the Summa Theologica, however, St. Thomas says that pleasure and pain, like joy and sadness, are passions and pertain to the appetite.

> Sicut ad delectationem duo requiruntur, scilicet conjunctio boni et perceptio huiusmodi conjunctionis; ita etiam ad dolorem duo requiruntur: scilicet conjunctio alicuius mali (quod ea ratione est malum, quia privat aliquod bonum); et perceptio huiusmodi conjunctionis... Ex quo patet quod aliquid sub ratione boni et mali; est objectum delectationis et doloris. Bonum autem et malum, inquantum huiusmodi, sunt objecta appetitus. Unde patet quod delectatio et dolor ad appetitum pertinet.
>
> Omnis autem motus appetitivus, seu inclinatio consequens apprehensionem, pertinet ad appetitum intellectivum vel sensitivum... Cum igitur delectatio et dolor praesupponent in eodem subjecto sensum vel apprehensionem aliquam, manifestum est quod dolor, sicut et delectatio, est in appetitu intellectivo vel sensitivo.[1]

In the Summa, accordingly, St. Thomas no longer considers pleasure and pain as sensations but, like joy and sadness, as passions of the appetite; no longer as "passiones corporales" but as "passiones animales." In fact, he explicitly states that "pain is said to be a sense not because it is the act of a sensitive power; but because (sense) is required for a bodily pain, as also for pleasure."[2] And pleasure is described as a "motion in the animal appetite following the apprehension of sense."[3]

Although classifying pleasure and pain as passions of the sensible appetites, St. Thomas still distinguishes them according to their causes. Thus pain from an external source, such as a wound, is called "exterior," while pain from an internal source, such as an image or thought, is called "interior." He writes:

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[1] Sum. Theol., I-II, q.35, a.1c.

[2] Ibid., ad 2m. [3] Ibid., q.31, a.1c.

> Respondeo dicendum quod dolor interior et exterior in uno conveniunt, et in duobus differunt. Conveniunt quidem in hoc, quod uterque est motus appetitivae virtutis, ut supra dictum est. Differunt autem secundum illa duo quae ad tristitiam et delectationem requiruntur: scilicet secundum causam, quae est bonum vel malum conjunctum; et secundum apprehensionem. Causa enim doloris exterioris est malum conjunctum quod repugnat corpori: causa autem interioris doloris est malum conjunctum quod repugnat appetitui. Dolor etiam exterior sequitur apprehensionem sensus, et specialiter tactus: dolor autem interior sequitur apprehensionem interiorem, imaginationis scilicet vel etiam rationis.[1]

It is clear, therefore, that there has been a shift in St. Thomas' position. In the early works, he considered pain as the perception by the sense of touch of an unsuitable bodily passion, such as a wound, and sadness as a passion of the appetites produced by an interior apprehension. In his later works, however, he considered pain along with sadness as passions of the appetite but distinguished pain into interior and exterior, to correspond to what he had earlier called sadness and pain.

This new interpretation of the facts of experience seem to be due in some measure to the influence of St. Augustine[2] and the Epistle to the Romans,[3] and likewise to his commentaries on the De Anima and the De Sensu et Sensato, both of which were composed about the same time as the Prima Secundae. At any rate St. Thomas seems to have come to a fuller realization of the strict bond between the senses and the sense appetites, for the reason he gives for attributing pain and pleasure to the sense appetite is the fact that the senses and the sense appetite are in the same subject:

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[1] Ibid., q.37, a.7c. [2] Ibid., q.35, a.2, "sed contra," ad 1m.

[3] Ibid., a.2, "sed contra."

> Omnis autem motus appetitivus, seu inclinatio consequens apprehensionem, pertinet ad appetitum intellectivum vel sensitivum... Cum igitur delectatio et dolor praesupponant in eodem subjecto sensum vel apprehensionem aliquam manifestum est quod dolor, sicut et delectatio, est in appetitu intellectivo vel sensitivo.[1]

Another reason is that he stresses the greater scope of the internal cognitive powers: the imagination and the intellect know whatever the external senses perceive, but the converse is not true:

> Delectatio et dolor ex duplici apprehensione causari possunt: scilicet ex apprehensione exterioris sensus: et ex apprehensione interiori sive intellectus sive imaginationis. Interior autem apprehensio ad plura se extendit quam exterior: eo quod quaecumque cadunt sub exteriori apprehensione, cadunt sub interiori, sed non e converso.[2]

St. Thomas had always held that the passions of joy and sadness are aroused in the appetite by an internal act of apprehension. Since, however, the internal cognitive powers know whatever the external senses know, then any stimulation of the external senses is necessarily linked with an internal apprehension of it. This internal apprehension in turn causes pain or pleasure in the appetite - a fact confirmed by modern scientific experiment.

It is possible, however, to have an internal apprehension of something harmful which will cause us pain without the object being present to the external senses. Thus he distinguishes interior pleasure and pain from exterior pleasure and pain, as we saw above.[3] When, however, exterior and interior pain are present together in the same subject, then pain increases: "Quandoque...dolor exterior est cum interiori dolore: et tunc dolor augetur."[4]

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[1] Sum. Theol., q.35, a.1c. [2] Ibid., a.2c; cf. a.7c.

[3] Ibid., q.37, a.7c. [4] Sum. Theol., I-II, q.35, a.7c.

St. Thomas, then, has sufficient ground for modifying his earlier teaching by stressing the appetitive rather than the cognitive aspects of pain. Accordingly, in the Summa Theologica he describes pleasure and pain as passions of the sensible appetite: "Unde patet quod delectatio et dolor ad appetitum pertinent."[1]

With this clarification in mind we can now return to the problem raised earlier, namely, how the sense appetites are aroused.

4. The Place of Pleasure and Pain in a Sequence of Passions

The passions of pleasure and pain are aroused in the sense appetites by the known presence of the object, which is judged harmful or beneficial for the one sensing. The object may be present in two ways: by intention only or in reality also; and both ways produce pleasure or pain.

A sensible object is present only intentionally when there is an image of it in the imagination.[2] An image by itself is not sufficient to arouse the appetite. There must also be a judgment of the suitability or unsuitability of the object.[3] Such a judgment is made by the estimative sense, or else recalled by the memorative power, where estimations already made are stored.[4] Given these image-estimations the sensory appetite is aroused to pleasure or pain according as the object is judged to be or is remembered as pleasurable or painful. For a mere animal only touch sensations, especially regarding food and sex, arouse the passions. Man's passions can be aroused by image-estimations regarding the other senses as well.

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[1] Ibid., a.1c. [2] Ibid., q.32, a.1, ad 1m.

[3] In III de An., lect. 4, n.635.

[4] Sum. Theol., I, q.78, a.4; q.81, a.3; I-II, q.17, a.2, ad 3m.

The merely intentional presence of an object, however, is not final.[1] As merely imagined the sense object is not yet attained in fact. Consequently, the pleasure or pain aroused in the sensible appetite by the intentional presence of the object leads to acts of love or hate, desire or aversion in the concupiscible appetite: "Pleasure causes love according as it is prior in intention."[2] If the estimative power also judges the object to be difficult to attain or to avoid, then it also arouses the irascible appetite to hope or desperation, boldness or fear, or to anger. Finally the concupiscible appetite evokes the passions of pleasure or pain when the object is achieved, even if only imperfectly. St. Thomas explains this point clearly:

> Delectatio dupliciter potest considerari: uno modo secundum quod est in actu; alio modo, secundum quod est in memoria....
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> Secundum quidem igitur quod est in actu, delectatio non causat sitim vel desiderium sui ipsius, per se loquendo, sed solum per accidens: si tamen sitis vel desiderium dicatur rei non habitae appetitus: nam delectatio est affectio appetitus circa rem praesentem. - Sed contigit rem praesentem non perfecto haberi. Et hoc potest esse vel ex parte rei habitae, eo quod res habita non est tota simul: unde successive recipitur, et dum aliquis delectatur in eo quod habet, desiderat potiri eo quod restat... Et hoc modo omnes fere delectationes corporales faciunt sui ipsarum sitim, quousque consummentur, eo quod tales delectationes consequuntur aliquem motum: sicut patet in delectationes ciborum. - Ex parte autem ipsius habentis, sicut cum aliquis aliquam rem in se perfectam existentem, non statim perfecte habet, sed paulatim acquirit. Sicut in mundo isto, percipientes aliquid imperfecte de divina cognitione, delectamur; et ipsa delectatio excitat sitim vel desiderium perfectae cognitionis...
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> Si vero consideretur delectatio prout est in memoria et non in actu, sic per se nata est causare sui ipsius sitim et desiderium: quando scilicet homo redit ad illam dispositionem in qua erat sibi delectabile quod praeteriit. Si vero immutatus sit ab illa dispositione, memoria delectationis non causat in eo delectationem, sed fastidium: sicut pleno existenti memoria cibi.[3]

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[1] Ibid., I-II, q.32, a.3. [2] Ibid., q.25, a.2, ad 3m.

[3] Ibid., q.33, a.2c.

In a given sequence of sensible passions, therefore, pleasure or pain are the first to arise in the concupiscible appetite and also the last.[1] In each instance, however, the object is present in different ways; for at the start of a sequence of passions the object is present intentionally and at the end it is present really.

There might at first seem to be some doubt as to the force of pleasure or pain when the object is only present in the imagination. But a moment's reflection will dissipate any doubts, for such is the stuff that temptations are made of. Because these passions are so real, they lead the appetites to break through the bonds of right reason and make moral virtue so hard to achieve.

With these clarifications in mind we can now take up the role of touch in the sense appetites.

C. Touch and the Passions

1. Touch as the Principal Cause of the Passions

In the beginning of the Metaphysics Aristotle says that the senses are loved for two reasons: for the knowledge they provide and for their usefulness in sustaining life.[2] Only man, who seeks knowledge for its own sake, values the senses for the sake of knowing, but together with all the other animals he also values them for their usefulness.

From the viewpoint of sense knowledge man takes the greatest pleasure in sight, since this sense has a greater range than any other and so reveals more to the intellect. From the viewpoint of utility,

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[1] Ibid., q.34, a.3, ad 4m; q.32, a.1, ad 1m; In III de An., lect. 12, n.771.

[2] Met., I, 1, 980, a, 21-24.

however, the sense of touch is most pleasurable. St. Thomas gives the following explanation:

> Si autem loquamur de delectatione sensus quae est ratione utilitatis, sic maxima delectatio est secundum tactum. Utilitas enim sensibilium attenditur secundum ordinem ad conservationem naturae animalis. Ad hanc autem utilitatem propinquius se habent sensibilia tactus: est enim tactus cognoscitivus eorum ex quibus consistit animal, scilicet, calidi et frigidi, et huiusmodi. Unde secundum hoc delectationes quae sunt secundum tactum sunt majores quasi fini propinquiores. Et propter hoc etiam alia animalia quae non habent delectationem secundum sensum nisi ratione utilitatis, non delectatntur secundum alios sensus, nisi in ordine ad sensibilia tactus: neque enim odoribus leporum canes gaudent, sed cibatione; neque leo voce bovis, sed comestione, ut dicitur in II Ethic.[1]

It helps to understand St. Thomas' explanation to recall that he considered that "just as all living bodies are composed of the hot and the wet, the cold and the dry, so they are nourished on these elements; and touch is the sense which discerns them." He therefore considered touch as the "sensus alimenti."[2] Even though we no longer consider the body to be composed of the four elements, we distinguish these four qualities in our food and drink. We like coffee to be hot and water ice cold. Furthermore, we will see later that touch functions in our awareness of pleasure and pain; and so touch makes us aware of the pains of hunger and thirst which signal our need for food and drink. Considered in this way, touch is the "sensus alimenti."[3] Furthermore, by sight, hearing and smell the animal is led to his food; but touch and taste (a certain touch) are engaged in the eating of food once acquired. Consequently, the other senses are ordained to touch as means to end. Just as a means is sought only because it leads to

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[1] Sum. Theol., I-II, q.31, a.6c.

[2] In II de An., lect. 5, n.290. [3] Ibid., n.291.

an end, so also brute animals are found to take pleasure in sense operations only insofar as they lead to pleasures of touch, such as the animal experiences in eating. Therefore, precisely as the end of the other sensations touch is the most pleasurable.

We can find yet another reason why touch sensations are the most pleasurable of all. The more basic and necessary the operation, the more pleasurable it must be, since nature must be assured that the operation be performed. The operations of nutrition and reproduction, however, are the most basic: for by nutrition the individual animal is preserved in being and by reproduction the species is perpetuated. Consequently, the sensations of touch intrinsic to these functions are the most pleasurable of all. St. Thomas explains this as follows:

> ...quia delectatio consequitur operationem connaturalem, tanto aliquae delectationes sunt vehementiores quanto consequuntur operationes magis naturales. Maxime autem naturales animalibus sunt operationes quibus conservatur natura individui per cibum et potum, et natura speciei per conjunctionem maris et feminae. Et ideo circa delectationes ciborum et potuum, et circa delectationes venereorum, est proprie temperantia. Huiusmodi autem delectationes consequuntur sensum tactus. Unde relinquitur quod temperantia est circa delectationes tactus.[1]

It is not difficult to grant that sensations of touch are the most pleasurable for the animal when we consider the difficulty men have in controlling their appetites for such pleasures and in acquiring the virtue of temperance.

If some sensations of touch in respect to the basic operations are the most pleasurable, so others are the most painful -- and for similar reasons. For unlike the other senses which have extrinsic

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[1] Sum. Theol., II-II, q.141, q.4c; a.5c.

media, the medium for touch is the flesh, so that the body of the animal must be in direct contact with the sensible object in order to perceive it, with the exception of heat and cold, which can be radiated from an object. The object, therefore, produces a physical change in the body, which, if disproportionate, can even destroy the animal; whereas the objects of the other senses, which have extrinsic media, cannot do so. Consequently, unless the animal had the sense of touch to discriminate between the suitable and the corruptive, it would be unable to accept the one and flee the other and so the animal could not survive.[1] It is important for the preservation of the animal, therefore, that those things which could destroy the animal be the most painful in order that the animal avoid them with greater care. This is why among all the senses the greatest pains are in fact due to the sense of touch, as when the body is burned or wounded.

> Sensibilia tactus sunt dolorosa, non solum inquantum sunt improportionate virtuti apprehensivae, sed etiam inquantum contrariantur naturae. Aliorum vero sensum sensibilia possunt quidem esse improportionata virtuti apprehensivae, non tamen contrariantur naturae, nisi in ordine ad sensibilia tactus.[2]

From this discussion, accordingly, it is clear that the greatest sources of pleasure and pain to the animal are all related to touch as basic; for the pleasures entailed in nourishment and reproduction are related not so much to the proper, external species of touch as to touch as basic; and so, likewise, are the pains caused by a burn or a wound.

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[1] In III de An., lect. 17, n.860.

[2] Sum. Theol., I-II, q.35, a.2, ad 3m; cf. a.7c.

This is not to say, however, that the proper species of touch are not pleasurable or painful. To the animal these senses are the most pleasurable of all the proper senses. For example, dogs like to be stroked and petted, and they can be taught to obey by being beaten. Furthermore, in cold weather they seek out a warm place by the fire or lie down in the sunshine. The senses of pressure and temperature, then, give the animal great pleasure, whereas the other proper senses do not seem to excite them very much unless in relation to sensations of touch, as Aristotle pointed out. Nevertheless, the greatest and principle cause of the sensible passions are the operations of nutrition and reproduction, both of which are intrinsically related to the sense of touch as basic.

2. Touch as Intrinsic to the Passions

Although the animals take pleasure in sense knowledge only as related to touch, they do experience pain when the object of any of the senses is disproportionate to the organ. Thus the ringing of a church bell or a shrill whistle may start a dog howling with pain. Man, of course, finds pleasure in sense knowledge for itself. He delights in harmonious sounds, beautiful color combinations, the fragrance of a flower, but a sound that is too loud or a flash of light that is too bright or a drink that is too hot is extremely painful.

What power judges whether the sensible object is proportionate or not? According to Aristotle and St. Thomas it is the common sense, which makes us aware of the operations of the other senses and by that very fact judges them to be suitable or not. Depending upon the judgment of the common sense pleasure or pain is produced in the sense appetite.

Of course we are more keenly aware of painful sensations caused by excessive stimulations like a blinding flash of light or an ear-splitting noise than we are of simple sensible pleasures. Yet we do take pleasure in the taste of an apple and the fragrance of a flower and the like. When these sensible pleasures are ordered by art into one harmonious whole, as when flowers and shrubs are arranged in a garden for the best possible effect or when the sounds of musical instruments are ordered as in a symphony, then our enjoyment is enhanced. For then not only are the senses delighted but the mind as well. On the purely sensible level, however, it is the common sense which judges the different sensations to be proportionate or not and so causes pleasure or pain in the sensible appetite.

St. Thomas explains how sensation and the sense passions are related in the following passage, quoted in a previous chapter in a different context:

> Delectari et tristari est agere sensitiva medietate, idest actio quaedam sensitivae virtutis, quae dicitur medietas, inquantum sensus communis comparatur ad sensus proprios ut quoddam medium, sicut centrum comparatur ad lineas terminatas ad ipsum. Non autem omnis actio sensitivae partis est delectare et tristari, sed quae est respectu boni vel mali inquantum huiusmodi. Nam bonum sensus, scilicet quod est ei conveniens, causat delectationem; malum autem quod est repugnans et nocivum, causat tristitiam. Et ex hoc quod est tristari vel delectari, sequuntur fuga et appetitus, id est desiderium, quae sunt secundum actum.
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> Patet igitur, quod motus sensibilis in sensum procedit quasi triplici gradu. Nam primo apprehendit ipsum sensibile ut conveniens vel nocivum. Secundo ex hoc sequitur delectatio et tristitia. Tertio desiderium vel fuga. Et quamvis appetere vel fugere vel sentire, sint diversi actus, tamen principium eorum est idem subjecto, sed ratione differt. Et hoc est quod subjungit, quod "appetitivum et fugitivum," idest pars animae, quae fugit et desiderat, non sunt alterae subjecto, neque abinvicem, neque a parte sensitiva; "sed

esse aliud est," idest differunt ratione. Et hoc dicit contra Platonem, qui ponebat in alia parte corporis organum appetitivi, et in alia organum sensitivi.[1]

St. Thomas, then, considers the common sense as the principle and common center not only of the senses but also of the sense appetites. Consequently, when the common sense judges that a sensation is suitable or not, a movement of pleasure or pain takes place immediately in the appetitive organs, which are physically joined to the sensory organs.

The apprehension of the suitable or unsuitable, however, is also attributed to touch as basic. For if touch as basic by reason of its proximity to the common sense is said to discern between the different kinds of sensations,[2] with even more reason does it discern the suitability and the unsuitability of a sensation. For these are characteristics intrinsic to the sensation as such, inasmuch as each sensory organ is constructed by nature to receive a sensible quality within a limited range, beneath which no sensation is registered and above which the sense organ is harmed.[3] The discretion of the suitability or unsuitability of a sensation, therefore is due to touch as basic as well as to the common sense.

This conclusion is strengthened by another passage. For in determining the powers which are found in the halves of a lower animal that lives after being cut in two, he points out that both parts have the sense of touch and the power of locomotion, for each withdraws if it is pricked. In addition, each half must have at least an

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[1] In III de An., lect. 12, nn. 768-69.

[2] Ibid., lect. 3, n.602.

[3] Ibid., II, lect. 23, n.549.

indeterminate imagination, and likewise an appetite. He explains why as follows:

> Et similiter si habeat sensum pars decisa, necesse est, quod habeat appetitum: ad sensum enim de necessitate sequitur laetitia et tristitia, sive delectatio et dolor. Necesse est enim, si sensibile perceptum est conveniens, quod sit delectabile; si autem est nocivum, quod sit doloresum. Ubi autem est dolor et delectatio, oportet quod sit desiderium et appetitus; unde necesse est quod si pars decisa sentit, quod etiam habeat appetitum.
>
> Sic ergo manifestum est, quod vegetativum, sensitivum appetitivum et motivum inveniuntur in una pars decisa: ex quo patet quod non distinguuntur loca in corpore animalis. ...Sed primus sensus qui est tactus, et necessarius animali, est in toto.[1]

In the lower forms of animal life where the organs are relatively simple and unspecialized, every part of the body is sufficiently organized to carry on vital functions even when the animal is cut in two. The sense of touch at this low degree of animal life is rudimentary, as is the imagination. Yet even here the sense of touch at its most basic and the common sense can distinguish sensations as suitable or harmful, and this gives rise to pleasure or pain in the animal's appetite. Consequently, in the lower as in the higher animals, it is the sense of touch as basic, together with the common sense, that distinguishes suitable and unsuitable sensations and gives rise to pleasure or pain in the sensory appetite.

Earlier we saw that of all the external senses St. Thomas considered the specific senses of touch to be more apt to cause pain inasmuch as their objects are capable of destroying the body. Nevertheless, he considers touch as basic, which has as its organ

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[1] Ibid., lect. 4, nn. 265-66.

the internal sensory structure common to all the senses, to cause the greatest pain when stimulated adversely. It is, in fact, precisely because he thought that internal wounds near the heart are the most painful of all, that St. Thomas locates the organic center of touch there:

> Principium tactivum est intrinsecum circa cor. Cuius signum est quod lassio, si accidit in locis circa cor, est maxime dolorosa.[1]

Touch as basic is, therefore, the greatest cause of pain in the sense appetite.

If touch as basic has a special role to play in arousing the sensible passions, it also provides awareness of the passions themselves. As we saw, a sensory passion is caused by a sensation-estimation of some sensible object, whether the object is really or only intentionally present. This estimation actuates the sensory appetites which tend either towards or away from the object and in so doing produce physical changes in the body. These physical changes, which follow immediately upon the act of the appetites, take place in the whole body and involve such complex organs as the circulatory and respiratory systems. These internal bodily changes are an essential element of the sensory passions.[2] It is, however, by means of the common sense and the sense of touch as basic that these internal bodily changes are known.[3] Consequently, the sense of touch as basic, together with the common sense, makes us aware of the sensory passions.

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[1] In de Sen. et Sens., lect.5, n.75.

[2] Sum. Theol., I-II, q.22, a.2, ad 3m.

[3] Cf., pp. 91-92.

D. Conclusion

Such, then, are the functions of touch as Aristotle and St. Thomas conceive them. It would be interesting to continue this search in order to see in detail how their teaching corresponds with the discoveries of modern science on the functioning of the senses and the sense appetites and to investigate its application to the formation of intellectual and moral virtues. The possibilities for further development and elaboration are, in fact, infinite - and for this reason it is best to end this study here. For it was the aim of this thesis to discover the functions of touch. The application of these ideas to other areas will have to come later.

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