

CSP-2

EXTERNAL SENSE COGNITION

in the

SUMMA CONTRA GENTILES

of

THOMAS AQUINAS

by Raymond ven der Buhs, OSB

Thesis presented to the Faculty of Philosophy  
of the University of Ottawa in partial fulfil-  
ment of the requirements for the degree of  
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## CORRIGENDA

Praenota: It is regrettable that so many words were improperly split in this final draft (e.g., p. 5. the word should be split as reveal/ed instead of revea/led). There are so many of these that they will not be listed in the corrigenda. To have corrected all of them before binding would have entailed retyping the entire thesis and because of the expense involved, this task seemed impractical. It is realized that the author and not the typist must bear this responsibility.

Other less serious matters which will not be specifically indicated are: a few instances where the word was split from one page to the next (e.g., p. 7); several times a paragraph was begun with only one line of it on the bottom of a page (e.g., p. 5).

### Specific errors to be corrected are:

p. 8. at the end of the third paragraph, "..."  
should read "...."

p. 11. footnote 23, "An Outline of Philosophy"  
should read "An Outline of Philosophy."

p. 16. footnote 35, "op. cit.," should read  
"op. cit.,"

p. 80. footnote 30, "nisi" should read "vini."

p. 81. footnote 32, "qualitatem" should read  
"quantitatem."

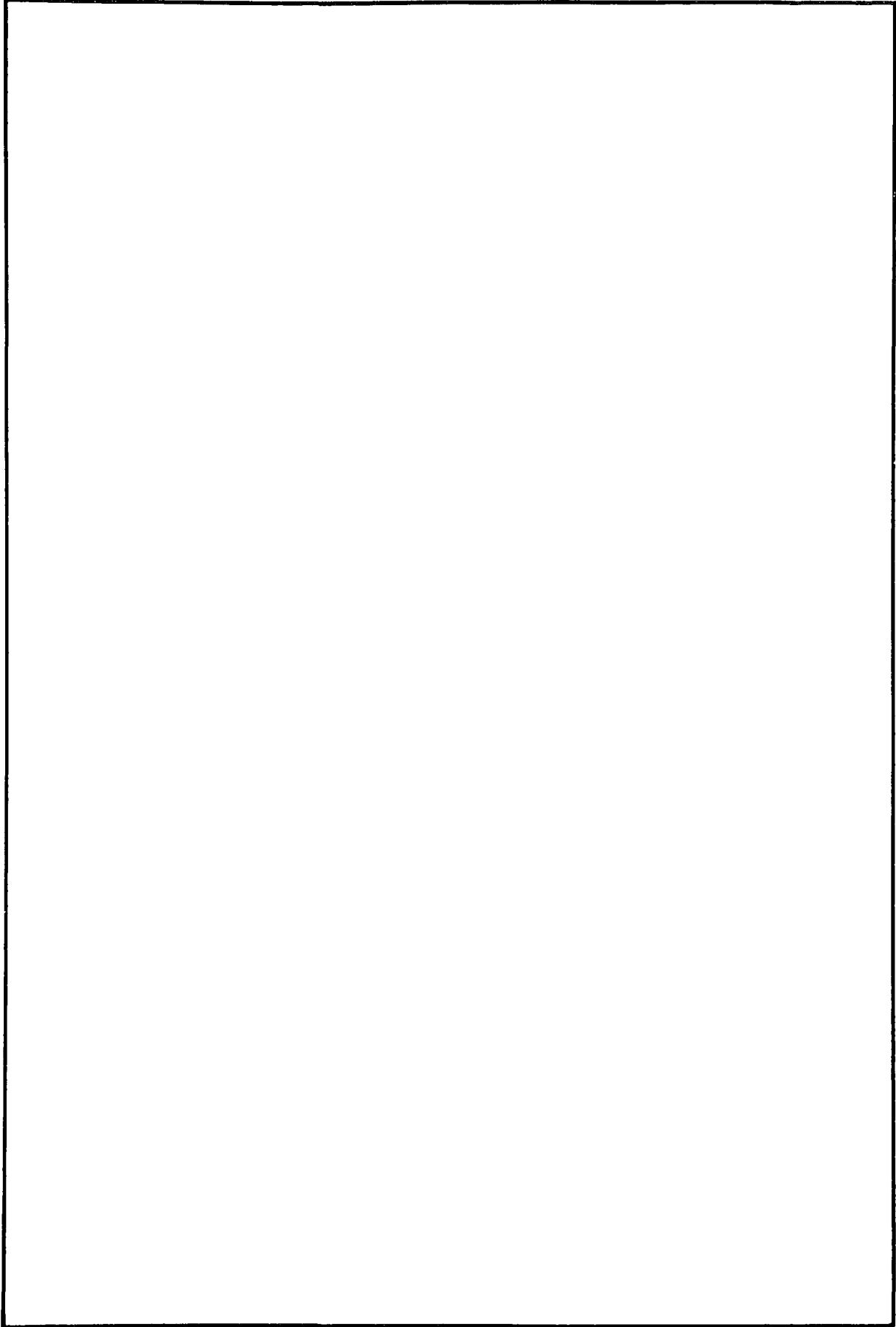
p. 87. footnote 52, "videnti" should read  
"videndi."

p. 115. footnote 17, "Aristotelis Librum de  
Anima Commentarium" should read "Ibid.,"

to my sister

ACKNOWLEDGEMENT

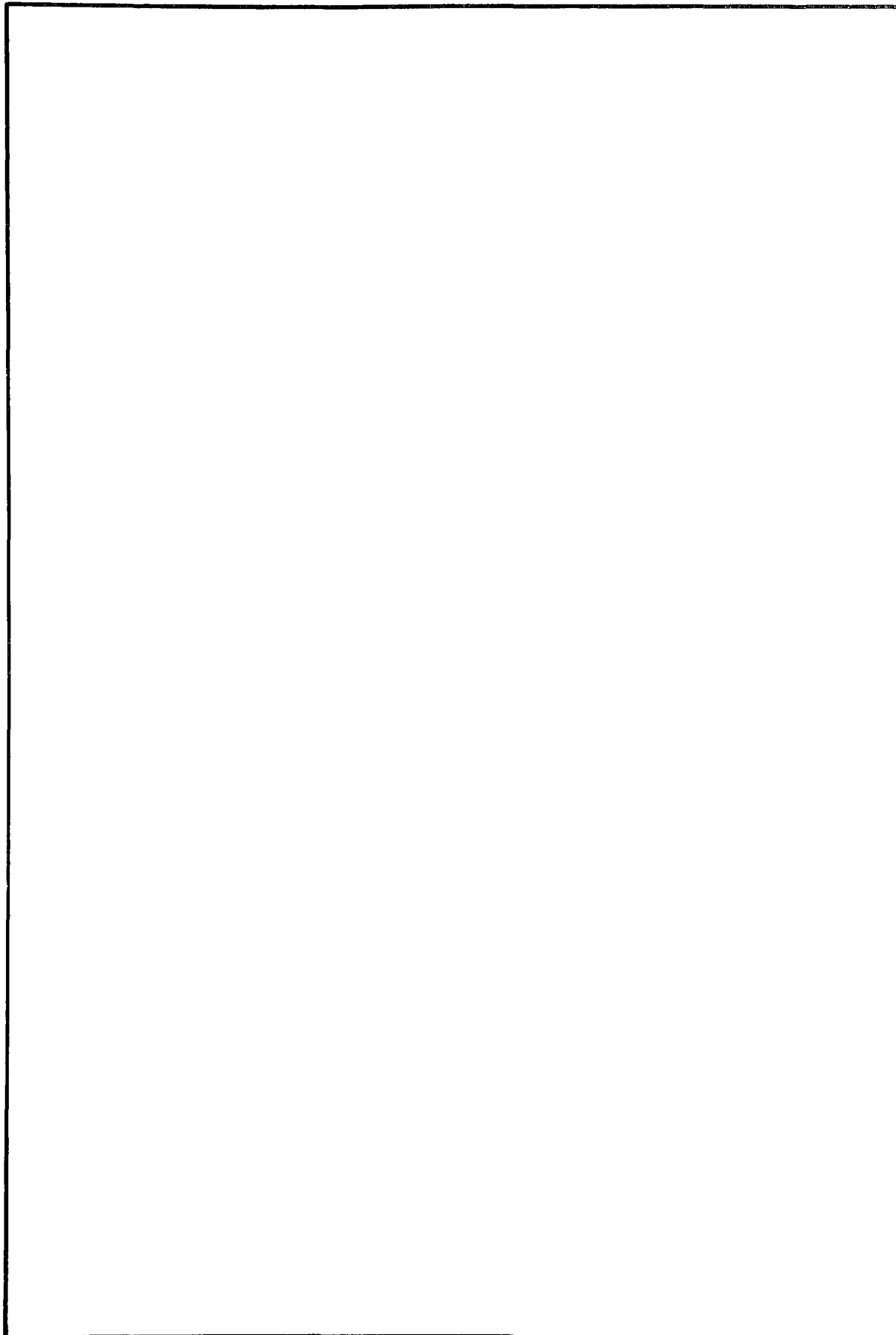
We would like to express sincere thanks to the Rev. C. Stroick and to Dr. Wm. Carlo for their guidance and encouragement.



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## CHAPTER I

## I N T R O D U C T I O N

## A Need for the Study of External Sense Cognition

Thomistic philosophy has always recognized the claims of both sense knowledge and the material world. Thomism, in common with Platonism, maintains the essential difference between sense and intellect; but it also insists, as against every philosophy of Platonic inspiration, on the intelligibility of material things, and on the dependence of the human intellect, precisely as human intellect, on sense data. Problems of sense knowledge and sensation are therefore of capital importance in Thomistic philosophy; indeed they involve crucial issues for any realistic philosophy.<sup>1</sup>

Yet, Neo-Thomism has devoted to these problems neither the extensive research nor the speculative energy that it has given, for example, to the theory of analogy and to the study of intellectual operations. The elaboration of a precise and purified theory of sensation appears to be one of the great tasks facing Thomism today. This elaboration is necessary not only for the proper health and intrinsic development of Thomism itself but for the Thomistic critique

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<sup>1</sup> Etienne GILSON, The Spirit of Medieval Philosophy, New York, Scribners, 1936, pp. 229-247.

of modern and contemporary philosophy and science.

Maritain writes:

The true philosophy of nature pays honor to the mystery of sense perception, and is aware that it only takes place because the boundless cosmos is activated by the first cause whose motion traverses all physical activities so as to make them produce, at the extreme border where matter awakens to esse spirituale, an effect of knowledge on the animated organ ... it is instructive here to notice that the rebirth of philosophy of nature in Germany in our times due to the phenomenological movement ... goes along with a vast effort to rehabilitate sense knowledge .... In my eyes the existence of this effort bears witness to a fundamental and intrinsic need of natural philosophy, which is too frequently neglected by modern scholastics.<sup>2</sup>

#### Historical Perspective--Conflicting Views

Our tentative hypothesis is that a philosophy, even though it is realist in intention, which claims to begin to know sensations rather than things, never does get beyond the mind to material things. Hence it seems of value to begin this work with a very brief survey of a few notable positions which philosophers have held in regard to external sense and sensation. It will help to locate our problem properly and to point up the issues involved in this study. It is hoped that this historical survey will verify our hypothesis and show the need for an approach to external sensation which begins with the material object (res).

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<sup>2</sup> Jacques MARITAIN, Science and Wisdom, New York, Scribners, 1940, pp. 59-60.

Although there are no water-tight compartments among the various theories of how we know reality, it is still useful to speak of empiricists and rationalists, intuitionists and pragmatists. The empiricist is one who holds that, of the various sources of knowledge, perception is the most important or decisive in vindicating beliefs about the world. In the same way, the rationalists, intuitionists, and pragmatists put their main reliance on inference, intuition, and practice respectively.

These philosophers do not deny the importance of the other sources of truth or knowledge; they all maintain simply that one source is the most important. There are also philosophers who insist on the reliability of common sense. The language of common sense embodies the long experience of the human race and much of its wisdom, and is therefore, if properly understood, a most important source of human knowledge. This emphasis can be seen in the current analytic school in Great Britain.

But great philosophers cannot always be confined within these compartments. The analytic philosophers who defer to common sense seem to rely equally on a kind of intuition, and at times it is difficult to see any distinction between the two methods.

Pragmatism furnishes another illustration. Dewey agrees with the present-day logical empiricists that the warrant for empirical knowledge is to be found in the process of verification.<sup>3</sup> He differs from them when he insists that, except in very simple cases, the critical percepts are not simply given but must be understood, and in his refusal to exempt logical statements from the test of verification. He is an empiricist, but with important differences.

It will be noted that the philosophers who appear in the selection below vary according to the weight they give to sense perception, inference, and other sources of knowledge. They disagree in many other respects too but this difference remains a fundamental one.

Since perception is the original source of knowledge on which all the others depend, it is natural to start with the cognitive status of perception. Philosophers have always been concerned with one aspect of perception; the knowledge relation between the perceiver and the perceived object. One question has been whether when we perceive things we know them directly or only indirectly. In the latter case the problem arises: How can we ever be sure that the real

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<sup>3</sup> John DEWEY, Essays in Experimental Logic, New York, Dover, 1916, p. 85 ff.

physical objects we think we are seeing are really there, or are what they seem to be? Common sense takes it for granted that we see physical things directly. A table, a book, a river, or a tree is bodily present in perception, or at least a considerable part of its surface is given or revealed. If there is any doubt about what visual perception discloses, common sense subjects it to the test of touch and manipulation, for the tactual sense is considered more reliable than sight. But the final test for the common sense man is practical utility or importance. If we eat from the table, lie in the shade of the tree, read the book, or swim in the river, any lingering doubts that our perceptions are authentic disappear.<sup>4</sup>

But we have only to remind the common-sense-man that in dreams he is also convinced that he sees, touches and feels the practical impact of things, though in this case the physical objects that he thinks he sees are entirely lacking. We can also explain how he can reduce the size of a tree simply by walking away from it. What he had before him was not an unchanging tree but a changing percept.

The common sense man starts with the view that

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<sup>4</sup> See G. E. MOORE, Some Main Problems of Philosophy, New York, Collier, 1966, p. 41 ff. Also H. H. PRICE, "On the So-Called Space of Sight", in Proceedings of the Aristotelian Society, vol. 28, 1927-28, p. 97 ff.

physical objects are directly revealed to him in perception, but professional philosophers can sometimes be converted to the contrary view that they are only indirectly perceived, via the percepts we have of them. The first view is called epistemological monism, because it holds that the perceived objects and the percepts of it are one and the same; whereas the second view is called epistemological dualism, meaning that the perceived object--the tree or the table-- is different from the percepts of it. Dualism has been given its classical statement by John Locke in the seventeenth century.<sup>5</sup> Monism was not explicitly formulated till the twentieth century.

It was this issue that divided the contemporary realists. At the turn of the century William James developed the theory of neutral stuff.<sup>6</sup> Our percepts are in themselves neither physical nor mental but neutral. They are mental or physical, not according to their nature, but depending on how they are related. When related to our biographies they are mental; when related to the objective physical order they are physical. There was no difficulty, James held, in their belonging to both orders simultaneously.

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<sup>5</sup> John LOCKE, An Essay Concerning Human Understanding, New York, Dover, 1959, IV, I, 1 ff.

<sup>6</sup> William JAMES, Some Problems of Philosophy, Cambridge, Riverside Press, 1924, p. 107 ff.

Ralph Barton Perry<sup>7</sup> argued against Locke's dualism. That is to say he upheld realism, which is a denial of Berkeley's idealism<sup>8</sup>, and defended epistemological monism. In England G.E. Moore<sup>9</sup> also directed his work against Locke's dualism as well as Berkeley's idealism. It challenged the basic contention of the dualists that our percepts are mental.

H.H. Price is one of the British philosophers who went the whole gamut from a violent opposition to the sense data theory, to an acceptance of this theory, to a period of vacillation between the two.<sup>10</sup> He himself admits this change of view in the preface to the second reprinting of his book on Perception: "If I were to take the task (of re-

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<sup>7</sup> Ralph Barton PERRY, Present Philosophical Tendencies, New York, Longmans, 1921, p. 315. "... things may be, and are, directly experienced without owing either their being or their nature to that circumstance."

<sup>8</sup> George BERKELEY, The Works of George Berkeley, edited by A.A. Luce and T.E. Jessop, New York, Nelson, 1948-1957, vol. 2, p. 80. "Ideas imprinted on the senses are real things, or do really exist; this we do not deny, but we deny that they are resemblances of the minds which perceive them, or that they are resemblances of the archetypes existing without the mind: since the very being of a sensation or idea consists in being perceived; and an idea can be like nothing but an idea."

<sup>9</sup> G.E. MOORE, op. cit., p. 17.

<sup>10</sup> Frederick BAUER, H.H. Price's Theory of Sense Perception, thesis presented to the Faculty of Philosophy, St. Paul's University, Ottawa, 1967, p. 16.

writing the present text), I should try to state a theory of perception much more realistic, much less close to phenomenism, than the one which is expounded here."<sup>11</sup>

Yet Price believed the "sense-datum terminology is useful for purposes of phenomenological description, where our aim is to describe how things look, sound, feel, etc., and not how they physically are."<sup>12</sup>

The sense-datum theory holds that in every sense-perceptual situation there is a peculiar type of object(s) which is apprehended by immediate sense awareness (e.g. color patches, sounds, odors, etc.).<sup>13</sup> Ultimately Price's theory, as does that of Frederick Bauer, leaves us with the conclusion that "these entities cannot be identified with the material things which we originally take them to be ..."<sup>14</sup>

Many other authors about this time or a little later embraced a monistic form of realism. In England there

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<sup>11</sup> H.H. PRICE, Perception, 1954 reprint, London, Methuen, 1954, p. vii.

<sup>12</sup> Ibid., p. vii.

<sup>13</sup> BAUER, op. cit., p. 16.

<sup>14</sup> Ibid., Summary, p. 6.

were Bertrand Russell,<sup>15</sup> Samuel Alexander,<sup>16</sup> and others. In the United States a group of monistic realists--R.B. Perry,<sup>17</sup> E.B. Holt,<sup>18</sup> and others argued the claim of epistemological monism against Lockean dualism.

Later another group of American realists opposed the new realists, and upheld, if not Lockean dualism, at least modern and more adequate versions of dualism. Among

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<sup>15</sup> Bertrand RUSSELL, An Outline of Philosophy, London, Allen and Unwin, 1948, p. 147. "The traditional dualism of mind and matter, which I regard as mistaken, is intimately connected with confusions on this point. So long as we adhere to the conventional notions of mind and matter, we are condemned to a view of perception that is miraculous. We suppose that a physical process starts from a visible object, travels to the eye, there changes into another physical process ... this view is so queer ...."

<sup>16</sup> Samuel ALEXANDER, Space, Time, Deity, London, Macmillan, 1934, vol. 1, p. 8. "The real difference between realism and idealism lies in their starting point or the spirit of their method. For the one, in some form or other, however much disguised, mind is the measure of things and the starting point of inquiry. The sting of absolute idealism lies in its assertion that the parts of the world are not ultimately real or true but only the whole is real or true. For realism, mind has no privileged place except in its perfection ... but no sane philosopher has ever been exclusively the one or the other."

<sup>17</sup> See footnote 7.

<sup>18</sup> E.B. HOLT, The Freudian Wish, New York, Holt, 1915, p. 172. "... as the object cognized, the content of consciousness. It is obvious that the object of which an organism's behavior is a constant function corresponds with singular closeness to the object of which the organism is aware, or of which it is conscious."

these critical realists were R.W. Sellars,<sup>19</sup> George Santayana,<sup>20</sup> Arthur O. Lovejoy,<sup>21</sup> J.B. Pratt<sup>22</sup> and others.

This issue is distinctly modern, yet the arguments on both sides were frequently pre-figured in many discussions of previous eras.

The big problem for epistemological dualism is to

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<sup>19</sup> R.W. SELLARS, The Philosophy of Physical Realism, New York, Russell, 1966, p. 75. "It will be recalled that neo-realism tended to denude the mental act of the selective intent and predicative content which I assigned it. Knowing was supposed to be a kind of bare contemplation. We have repeatedly given the reason for this oversimplification of the act of cognition. For critical realism, on the other hand, perceiving is founded on both sense-data and response and is best understood as an act involving categorical meanings and distinctions and denotative intent. There is a sense of an object and a characterization of it."

<sup>20</sup> George SANTAYANA, Scepticism and Animal Faith, London, Constable, 1929, pp. 190-1. "Belief in substance, taken transcendently, as a critic of knowledge must take it, is the most irrational, animal and primitive of beliefs ... but when I yield to this primitive presumption, and proceed to explore the world ...."

<sup>21</sup> Arthur O. LOVEJOY, The Reason, Understanding and Time, Maryland, Hopkins, 1961, pp. 127-8. "... knower, the knowing act, and the reality known, subject and object are identical; and that the reality thus revealed by the intuition of the inner-self is ineffable, repugnant to the very essence of language, since words are merely symbols or counters which we employ to refer to sensible objects or to concepts ...."

<sup>22</sup> J.B. PRATT, The Religious Consciousness, New York, Macmillan, 1951, p. 198. "It is evident, therefore, that congruity with our already accepted perceptual world is prerequisite to our belief in the reality of even a sensuous object."

account for true and veridical perception. Theories of this kind must explain how, if the physical world is in no sense given in perception, it can be an assured fact of knowledge. If all we are given in perception are private sense-data, experienced by each of us in his own private space, how do we know that these sense-data are not ultimate reality? How to defend realism against the Berkeleyan idealist and phenomenalist? Perhaps the best answer is that the hypothetico-deductive method employed in science must be boldly extended. We are justified in inferring the existence of the physical world because deductions from it square with perceptual experience, and these deductions furnish better explanations of the physical world.<sup>23</sup>

One of the results of the denial of the ability of the sensory power to reach the particular concrete object is that it at least can lead to nominalism as it does in the case of Berkeley. This seems to be the ultimate result of any complete nominalism which pursues its theory--that abstract or general terms, or universals represent no objective real existents, but are mere words or names--to its final termination.

A related problem is faced by epistemological

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<sup>23</sup> See Bertrand RUSSELL, *An Outline of Philosophy*, *op. cit.*, p. 147 ff.

dualism, namely: What do we mean when we point to a given datum, such as a green patch, and say that we point to a tree that is composed of millions of molecules which are invisible and in no sense given? Dissatisfied with Brentano's formalistic approach to this question,<sup>24</sup> some American epistemological dualists, especially Roy Wood Sellars,<sup>25</sup> have worked out a biological, evolutionary explanation, looking upon the perceiver not only as a knower but also as a top-rung organism adapting to the environment.

Bertrand Russell's book, The Problems of Philosophy, furnished an excellent introduction to the subject of universals.<sup>26</sup> The view upheld is a modern version of Plato's theory of ideas, or universals, which is called extreme

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<sup>24</sup> Jan SRZEDNICKI, Franz Brentano's Analysis of Truth, The Hague, Nijhoff, 1965, Appendix "A". "Die Sprache soll ausdrücken, was wir denken. Die Aussage entspricht dann dem Gedanken. Manche glauben daraufhin, dass Aussagen und Gedanken vollständig und darum auch Teil für Teil im Fall der Wahrhaftigkeit einander ähnlich seien. Doch dies ist keinesweges der Fall. Wir sprechen Worte, d.h. wir erwecken in anderem eine Reihenfolge von physischen Phänomenen, welche ihrer Natur nach den physischen nicht gleichen, insbesondere auch bei weitem weniger mannifaltig sind. So würde unser Wortvorrat nicht weit reichen, wenn jedes Gedankenelement durch ein gesprochenes Element wiedergegeben werden sollte."

<sup>25</sup> SELLARS, op. cit., p. 75 ff.

<sup>26</sup> Bertrand RUSSELL, The Problems of Philosophy, London, Oxford Press, 1948.

realism.<sup>27</sup> According to this view a universal such as blue is timeless and spaceless. It can characterize particular things such as violets and summer skies, but is never where and when they are, and could never, therefore, be in them. Thus while we say violets are blue, what is meant is that violets have blue or are instances of blue. Russell extended Plato's theory of relations. Betweenness and similarity are also timeless universals which have instances in our concrete world.<sup>28</sup>

A rival view, moderate realism--held by Aristotle,<sup>29</sup>

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<sup>27</sup> PLATO, The Dialogues of Plato, translated by B. Jowett, Random House, 1937, Republic, VI, 511, c. "... without using the help of anything at all belonging to the senses, but only ideals themselves, and, passing through ideals, it may end in ideals." (i.e. ideas).

<sup>28</sup> Bertrand RUSSELL, The Problem of Philosophy, op. cit., p. 91 ff.

<sup>29</sup> ARISTOTLE, The Works of Aristotle, translated under the editorship of W.D. Ross, Oxford, Clarendon Press, 1928-52, Posterior Analytics, 19, 100b, 5. "When one of the individuals has made a stand, the first universal is formed in the soul, for the singular is indeed perceived by sense, but the content is of the universal, of man, not the man Callais. Again, the intellect stops in the individuals until they constitute the universal as from such an animal to animals, etc. It is clear, therefore, that the primary things become necessarily known to us by induction, for thus sensible perception produces the universal ...."

continued to be a current view through Averroes,<sup>30</sup> Aquinas,<sup>31</sup> Maritain,<sup>32</sup> and many others--asserts that the universal is located in all particulars, but that the mind can abstract it from all qualities of these things and consider it by itself.

Another theory, especially popular today, is nominalism. It contends that there are no universals, but only particular things. Blue must accordingly be a particular word which somehow refers to each and every blue thing. It has been construed as the name of a general image, and also as the class of things similar to a given percept.

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<sup>30</sup> AVERROES, On the Harmony of Religion and Philosophy, Gibb Memorial Series, London, Luzac, 1961, vol. 21, section 11. "... for universals known to us are also the effects of the nature of existent being."

<sup>31</sup> Thomas AQUINAS, Summa Contra Gentiles, Editio Leonina Manualis, Romae, Apud Sedem Commissionis Leoninae, Desclee, 1934, I, 65, 1, "Universalialia autem non sunt res subsistentes, sed habent solum in singularibus ...."

<sup>32</sup> Jacques MARITAIN, The Degrees of Knowledge, New York, Scribners, 1959, p. 100. "... realism and dualism are not transcended. There is no higher position that goes beyond and reconciles them. A choice must be made between the two, or between the true and the false. Every realism that comes to terms with Descartes and Kant shall see one day that it belies its name."

On the current scene, nominalism has attracted a number of logicians such as Quine,<sup>33</sup> who attempts to solve the baffling technical problems it involves. Nominalism appeals to the "tough-minded" type of empiricist, who welcomes ontological simplifications and economy, and desires to eliminate if possible the troublesome hierarchy of entities known as "classes".

The pragmatic outlook presents still another approach to the nominalist-realist controversy. In John Dewey's instrumentalism, universals, far from being accepted as indescribable private entities disclosed only by introspection, are interpreted as "ways of behaving".<sup>34</sup> As such they are public, denotable, describable-- a phase of the process of inquiry. A subtle behaviorism here, as in other cases, seems to go far towards giving an account of phenomena formerly hidden in the individual mind and exempt from checks and confirmation. For the phenomenologists, however, universals are given in consciousness, whatever else may be said about them; and the only problem which remains is to provide adequate description and interpretation.

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<sup>33</sup> W. QUINE, From a Logical Point of View, Cambridge, Harvard U. Press, 1953.

<sup>34</sup> John DEWEY, Experience and Nature, Chicago, Open Court, 1926, p. 330.

Plato<sup>35</sup> and Descartes<sup>36</sup> did not admit of a substantial union of body and soul and thereby claimed that sensation was an act of the soul alone.

An expressed species of sensation was defended by Suarez, who did not admit that the sensible species is a formal representative of the object;<sup>37</sup> also by the interpretationists like Mercier, who deny the objectivity of the secondary sense qualities or proper sensibles (the concrete qualities or objects of each proper sense like color, sound, odor and taste).<sup>38</sup>

Among those who hold that the sense object is intentionally present in the terminus of sensation are

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<sup>35</sup> PLATO, The Dialogues of Plato, op. cit., Phaedo, 66 A. "And he attains purest knowledge of them who goes to each thing with the mind alone ... that if we would have pure knowledge of anything we must be quit of the body--the soul in herself must behold things in themselves ...."

<sup>36</sup> René DESCARTES, Oeuvres de Descartes, Paris, Adam et Tannery, 1897-1930, Méditation VI, vol. IX, p. 62, "... mon âme ... est entièrement et véritablement distincte de mon corps, et qu'elle peut être ou exister sans lui."

<sup>37</sup> See Francois SUAREZ, Formal and Universal Unity, translated by J.F. Ross, Milwaukee, Marquette U. Press, 1964, IV, II, 12, pp. 46-47.

<sup>38</sup> D. MERCIER, Critériologie Générale, Louvain, Institut Supérieur, 1923, vol. 1, p. 232. "L'objet du sens est ce qui se présente à lui. Ce n'est pas la chose telle qu'elle est en elle-même, mais telle qu'elle se rend présente à la puissance sensitive, moyennant un changement qu'elle produit en celle-ci, telle qu'elle est connue par elle."

Cajetan,<sup>39</sup> Renard,<sup>40</sup> and others, while Gredt,<sup>41</sup> Geny,<sup>42</sup> Remer,<sup>43</sup> and before him perhaps also John of St. Thomas<sup>44</sup>

<sup>39</sup> CAJETANUS, De Ente et Essentia, Italia, Marietti, 1934, q. 1. "... notandum est quod universale, quod tantum ab intellectu directe cognosci supponimus, duplicem habet totalitatem: est enim totum definibile et est totum universale."

<sup>40</sup> Henri RENARD, The Philosophy of Man, Milwaukee, Bruce, 1948, p. 98. "The immanent act of the faculty of sensation which follows immediately upon this actuation must terminate not in the object existing corporally, nor in another distinct species, but in the object actually present intentionally by the species by which it actuates the faculty here and now."

<sup>41</sup> Josephus GREDT, De Cognitione Sensuum Externorum, Roma, Desclee, 1924, p. 29. "Species impressa in sensibus externis efficitur ab ipso obiecto sensibili. Nam obiectum sensibile potest agere in sensum, quia est proportio inter agens (obiectum) et passum (sensum); obiectum enim sensibile potest agere in organum sensus ac proinde etiam in ipsum sensum dependentem ab organo. Obiectum sensibile de facto agere in sensum et determinare sensum patet ex experientia."

<sup>42</sup> Paul GENY, Critica de Cognitionis Humane Valore Romae, Gregoriana, 1927, p. 27. "... facultas cognoscitiva suam adaequationem ad rem cognoscit."

<sup>43</sup> Vincentius REMER, Summa Philosophia Scholasticae, Romae, Gregoriana, 1929, vol. II, p. 102. "Cum enim sensatio externa fiat revera in organo extenso et propterea obiectum externum materiale valeat eam immediate terminare, videtur omnino requiri contactus physicus inter partem sentientem organi et rem quae sentitur."

<sup>44</sup> JOANNIS a S. THOMA, Cursus Philosophicus Thomisticus, Paris, Larousse, 1883, iii, p.q. 6a. 1. "... et hoc dicimus essentialiter postulare, quod obiectum exterius in quo fertur sit praesens physice, in quod talis actus immediate terminetur, nec sufficit quod species sit in sensu repraesentans aliquid ut praesens, sed requiritur quod ipsum obiectum praesens sit ut terminet actum." We would like to note here also that it was John of St. Thomas who first made the distinction between the formal and material object of the senses.

defend the view that the sense object is reached as physically present.

It would seem that if there is a summary to our historical introduction it is that if/when we know the sensation rather than the thing, even among philosophers who are realist in intention, we cannot ever get to the reality outside the mind. Our tentative hypothesis then is that it will be necessary to begin with the material object(res) to establish a realist theory of external sense perception.<sup>45</sup>

Now, rather than making another attempt to begin within the mind--which approach history shows cannot reach the material object(thing)--we hope to begin with the material thing, with a study and analysis of the sense object. In this way we hope to shed new light on, and test our personal leaning to the common-sense view that we really do sense physical objects. That we really do know the colored

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<sup>45</sup> We have chosen the Summa Contra Gentiles as a "testing ground" for the study of external sense cognition since the major portion of it is one of Aquinas' later philosophical works. In the Summa Contra Gentiles Aquinas also frequently uses the various senses, especially that of sight, as examples to illustrate his various arguments. We feel, consequently, that the Summa Contra Gentiles can help to give us the most complete picture of the actual position of Thomas Aquinas on external sense cognition. The latin text used in this work will be the one published in Rome, apud sedem commissiones Leoninae et apud liberiam Vaticanam, Desclee, 1934.

thing when we know and not just the color.<sup>46</sup>

#### Method and/or Order of this Study

When the philosopher starts investigating the problems of sensation, he is not supposed to know, as yet, anything about psychical life. In good Aristotelian method, it must be remembered that the philosopher who is becoming acquainted with sensation is achieving his first acquaintance with the universe of knowledge.<sup>47</sup> The procedure followed by many writers who start their books of psychology with considerations on consciousness, and present sensation as a particular "consciousness-phenomena" is a typically Cartesian

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<sup>46</sup> See Thomas AQUINAS, Summa Theologiae, ed. Dominican Fathers, Ottawa, 1941-44, 6 vols., I, q. 45, a. 4, ad 1.

<sup>47</sup> See Aristotle's De Anima. Only in Book II, Chapter 5 does he begin with sensation and this constitutes the very first part of the psychical life.

procedure.<sup>48</sup>

Accordingly, our first notions of sensation will not be acquired by locating sensation in such a genus as "psychological processes" or "consciousness-phenomena", but by describing the objects and their relationship to the senses and from there we will make a test case of the particular sense of sight.

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<sup>48</sup> E. GILSON, "Le réalisme méthodique", in *Philosophia Perennis*, Regensburg, Mélanges Geyer, 1930, vol. II, pp. 747-48, 751. "Whoever begins as an idealist will necessarily end up an idealist. One does not make a passing acquaintance with idealism. The fact should have been suspected, since history was there to teach it. Cogito ergo res sunt: that is Cartesianism, the very antithesis of what is looked upon as Scholastic realism, and the very cause of its ruination. No one has worked harder than Descartes to build a bridge from thought to thing. He rests his case on the principle of causality; he was the very first one to try to do it because he was forced to do it, inasmuch as he placed the starting point of knowledge in the mind's intuition. Thus, it is strictly true to say that every scholastic who considers himself a realist because he accepts that way of stating the problem, is in reality a Cartesian .... The Cartesian experiment was an admirable metaphysical undertaking and boards on the purest genius. We owe him a great deal, even though his achievement is that he gave brilliant proof of the fact that every experiment of this kind is doomed to defeat in advance. It is however, the height of naivete to take up the task once more in the hope of gaining results opposite to those which have always been produced, for it is the very essence of this task to yield just such results .... One may start with Descartes but can only end up with Berkeley or Kant. There is an internal necessity about metaphysical essences, and philosophy's progress consists in the very fact of gaining clearer and clearer insight into the content of those essences .... Justification for St. Thomas' realism will never be obtained from any cogito."

## Problems Related to External Sensation

Some of the problems of external sensation for which we still today need to find more adequate answers are: the difference between sensation and physical processes from the view of passivity; sensation as not merely a passive process; sensation from the point of view of unity; how the physically present object brings about, in the sensorial power, the automatic passion, transitive action or intentional union; the investigation of the adequate cause, inside the physical nature, for the entity which is not a thing but a sensorial "idea",<sup>49</sup> the species sensibilis; the existence of the sensorial "idea" in the medium; sensation as an essentially experimental knowledge; the validity of the sense knowledge; the division of the senses; the consciousness of sensation and the problem of concrete perception.

We do not intend to follow the above order of problems in the succeeding chapters nor do we intend to find a complete answer to each one of these problems. Perhaps our underlying search could be phrased in this manner: If direct realism, in a Platonic sense, on the one hand is

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<sup>49</sup> As Descartes uses idea (in the third and sixth Meditation) to include sensation, i.e. sensation is part of the idea. It is felt that as long as idea is qualified by sensorial it is a more apt expression for the content of external sensation than the word "species".

entangled in internal contradictions and must be relinquished; then, if we do not directly sense material things or their inherent characteristics, how do we come to know them at all.

The plan of this thesis is a straightforward one. There will be two other chapters setting forth the main lines of Aquinas' theory. These will form the body of the thesis. The final chapter will constitute a summary and an overall evaluation of Aquinas' solution to the problem of external sense-perception. More specifically we hope to find an answer to just what it is that the senses perceive. We believe that Aquinas taught it was the material thing we perceived and not just the sensory data. In this way we hope to show Aquinas as pertinent today--by locating this thesis in the contemporary problem of external sense-perception.

## CHAPTER II

## OBJECTS OF THE EXTERNAL SENSES

Now that we have situated the problem of external sense perception, we have ample evidence that an approach beginning with a cogito, implicit or explicit, leaves us without an answer to what the material object really is. Such an approach does not allow us to get outside the mind. In the previous chapter we have also listed the problems of sense perception in the theory of Aquinas for which we may be able to find solutions.

In this chapter we will trace the general characteristics of sensation as found in the Summa Contra Gentiles. Occasional references will be made to his other works to help clarify a point, on the spot, where Aquinas has given a more extensive treatment in one of his other works. We will try first to uncover the general characteristics of external sensation and then give special emphasis to the object(s) of the external senses.

## Preliminary Clarifications

Before we treat of the objects of the external senses a few basic clarifications seem in order.

"To sense" can be taken in two ways: the sense is potential when it is considered as what has the power to hear and see "hears" and "sees", even though it is at the moment asleep; and also the sense is considered as actual when that which is actually hearing or seeing "hears" or "sees". To be sentient means to have a certain power or to manifest a certain activity. The two meanings of sense as passive power and as power in act can be seen in the following text:

The intelligible in act is the intellect in act, just as the sensible in act is the sense in act. Accordingly as the intelligible is distinguished from the intellect, both are in potency, as likewise appears in the case of sense. For neither the sight is seeing in act, nor is the visible object seen in act, except when the sight is informed by the species of the visible object, so that thereby from the sight and the object something one results.<sup>1</sup>

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<sup>1</sup> S.C.G., I, 51, 6, "Intelligibile in actu est intellectus in actu: sicut et sensible in actu est sensus in actu. Secundum vero quod intelligibile ab intellectu distinguitur, est utrumque in potentia, sicut et in sensu patet: nam neque visus est videns actu, neque visibile videtur actu, nisi cum visus informatur visibilis specie, ut sic ex visu et visibili unum fiat." See also Summa Theologica, I, q. 78, art. 3, resp. "The powers are not for the organs, but the organs for the powers; wherefore there are not various powers for the reason that there are various organs, on the contrary, for this has nature provided a variety of organs, that they might be adapted to various powers ... Now, sense is a passive power, and is naturally immuted by the exterior sensible."

There is a difference between the stage of possession of sense and the actual exercise of sensation. Also there is the difference between sensation and knowledge based on the fact that objects that excite the sensory power to activity, the seen, the heard, etc., are outside. "For the sense from which our knowledge begins is occupied with external accidents, which are proper sensibles."<sup>2</sup> The ground of this difference is that what actual sensation apprehends is individuals, while what knowledge apprehends is universals, and these are in a sense within the soul. That is why a man can exercise his knowledge when he wishes. "Once he has acquired knowledge of a thing it is in his power to acquire it again at will."<sup>3</sup> But a man's sensation does not depend only upon himself--a sensible object must be there:

The act of sensation is not an act of movement; rather, to sense is to be moved; since through the sensible objects' altering the condition of the senses in acting upon them the animal is made actually sentient from being only potentially so. The intellect grasps things in abstraction from matter and material conditions, which are individuating principles, whereas the sense data does not, being manifestly limited to the perception of particulars, while the intellect attains to universals. Then the senses are passive to things according as they are abstracted. Thus, in the intellect

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<sup>2</sup> *S.C.G.*, IV, 1, 4, "Nam cum sensus, unde nostra cognitio incipit, circa exteriora accidentia versetur, quae sunt secundum se sensibilia, ut color et odor et huiusmodi . . . ."

<sup>3</sup> *Ibid.*, II, 73, 41, "Unde videmus quod illud cuius scientiam semel accepimus, est in potestate nostra iterum considerare cum volumus."

there is passivity in utter independence of corporeal matter, but not in the sense.<sup>4</sup>

For the present it will be enough to know that the "natural mode of understanding proper to the intellect is different from the mode of understanding required by sense."<sup>5</sup> Yet in human knowing there is an interdependence between these two modes of knowing.

Sensibles by their very nature are the appropriate objects of sense-apprehension. Thus, every cognitive substance that derives its knowledge from sensibles possesses sensitive knowledge, and consequently, has a body united to it naturally, since such knowledge is impossible without a bodily organ.<sup>6</sup>

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<sup>4</sup> Ibid., II, 82, 12, "Non enim sentire est movere, sed magis moveri: nam ex potentia sentiente fit animal actu sentiens per sensibilia, a quibus sensus immutantur. Non autem potest dici similiter sensum pati a sensibili sicut patitur intellectus ab intelligibili, ut sic sentire possit esse operatio animae absque corporeo instrumento, sicut est intelligere: nam intellectus apprehendit res in abstractione a materia et materialibus conditionibus, quae sunt individuationis principia; non autem sensus. Quod exinde apparet quia sensus est particularium, intellectus vero universalium. Unde patet quod sensus patiuntur a rebus secundum quod sunt in materia: non autem intellectus, sed secundum quod sunt abstractae. Passio igitur intellectus est absque materia corporali, non autem passio sensus." See also I, 44, 5; I, 44, 8; II, 66, 3; and II, 37, 2.

<sup>5</sup> Ibid., II, 44, 4, "... non enim est idem modus quo naturaliter intelligit intellectus humanus, qui sensu et phantasia indiget ...."

<sup>6</sup> Ibid., II, 96, 2, "Sensibilia enim secundum suam naturam nata sunt apprehendi per sensum, sicut intelligibilia per intellectum. Omnis igitur substantia cognoscitiva ex sensibilibus cognitionem accipiens, habet cognitionem sensitivam: et per consequens habet corpus naturaliter unitum, cum cognitio sensitiva sine organo corporeo esse non possit."

Another distinction which must be drawn is that a thing can be said to be potential in either of two senses. "We are said to be able as regards both active and passive potentiality."<sup>7</sup> "Active potency relates to acting; passive potency to existing. And so there is potency with respect to being only in these things which have matter subject to contrariety."<sup>8</sup> "A person is said to be able to act or to be passive by active or passive potentiality, just as he is said to be white by whiteness, but not before whiteness is united with him."<sup>9</sup>

What has the power of sensation is potentially like what the perceived object is actually; that is, while at the beginning of the process of its being acted upon the two interacting factors are dissimilar at the end the one acted upon is identical in quality with the perceived object.

The mode of an agent's action is in keeping with the way in which the likeness of its effect exists in it; for every agent produces its like. Now, whatever

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<sup>7</sup> Ibid., II, 25, 2, "Secundum autem untramque potentiam dicimur posse."

<sup>8</sup> Ibid., II, 25, 3, "Primo quidem igitur potentia activa ad agere est, potentia autem passiva ad esse. Unde in illis solis est potentia ad esse quae materiam habent contrarietati subiectam."

<sup>9</sup> Ibid., II, 60, 10, "Sic enim aliquis dicitur potens agere vel pati per potentiam activam vel passivam, sicut dicitur albus per albedinem. Non autem dicitur aliquis albus antequam albedo sit ei coniuncta."

is present in something else exists in it conformable to the latter's mode.<sup>10</sup>

And again,

If any two factors are to be mutually united, so that one of them is formal and the other material, their union must be completed through the action coming from the side of the formal factor and not through the action of the one that is material. In fact form is the principle of action, while matter is the principle of passion.<sup>11</sup>

"Every cognitive power as such is immaterial. The power of sense which occupies the lowest place in the order of cognitive powers, is receptive of sensible species without matter."<sup>12</sup> And the "sense is actualized by being identified with the thing actually sensed."<sup>13</sup>

By senses in general we mean those cognitive potencies by means of which a subject knows concrete and individual qualities of material objects.

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<sup>10</sup> Ibid., II, 23, 4, "Unumquodque agens hoc modo agit secundum quod similitudo facti est in ipso: omne enim agens agit sibi simile. Omne autem quod est in altero, est in eo per modum eius in quo est."

<sup>11</sup> Ibid., III, 52, 4, "Si aliqua duo debeant ad invicem copulari quorum unum sit formale et aliud materiale, oportet quod copulatio eorum compleatur per actionem quae est ex parte eius quod est formale, non autem per actionem eius quod est materiale: forma enim est principium agendi, materia vero principium patiendi." See also I, 23, 3.

<sup>12</sup> Ibid., II, 62, 7, "Omnis autem virtus cognoscitiva, in quantum huiusmodi, est immaterialis: unde et de sensu ... quod est susceptivus sensibilium specierum sine materia."

<sup>13</sup> Ibid., II, 74, 2, "... ex hoc enim fit sensus in actu, quod est idem cum sensato in actu ...."

The measure and quality of a thing's power is judged from the manner and type of its operation, and its power, in turn, manifests its nature; for a thing's natural aptitude for operation follows upon its actual possession of a certain kind of nature.<sup>14</sup>

The essence of sense and the organ of sense are not the same. The organ of sense is that in which such a potency is seated while "sense-power is a certain form of an organ."<sup>15</sup> "If the psychic operation is carried out by means of a bodily organ, then the power of the soul which is the principle of that operation must be the act of that part of the body whereby such an operation is performed; as sight is the act of the eye."<sup>16</sup> "It is on the soul that not only man's essence, but that of his single parts depends, and so, with the soul gone, the eye is (only) equivocally named."<sup>17</sup>

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<sup>14</sup> Ibid., II, 1, 2, "Ex modo enim operationis et specie mensura et qualitas virtutis pensatur, virtus vero naturam rei monstrat: secundum hoc enim unumquodque natum est operari quod actu talem naturam sortitur."

<sup>15</sup> Ibid., II, 69, 9, "Sensu ... quod est quaedam ratio organi."

<sup>16</sup> Ibid., II, 69, 5, "Si igitur operatio animae per organum corporale completur, oportet quod potentia animae quae est illius operationis principium, sit actus illius partis corporis per quam operatio eius completur: sicut visus est actus oculi."

<sup>17</sup> Ibid., IV, 32, 6, "Ex anima non solum ratio hominis, sed et singularium partium eius dependet: unde, remota anima, oculus ... hominis mortui aequivoce dicuntur ...." See also IV, 37, 4; and II, 72, 2.

A sense which is able to reach an object not apprehended by another sense of the same subject, is called an external sense. As Aquinas says, "the soul needs various organs in order to perform its operations, and of these organs the soul's various powers are said to be proper acts; sight of the eye, hearing of the ears, etc."<sup>18</sup> By "proper acts" we mean acts proper only to that one sense, and the external senses, as we shall see, each have their own proper object.

Diverse senses are receptive of diverse sensible objects--sight of color, hearing of sounds, and so on. And it is quite clear that this diversity stems from the diverse dispositions of the organs. The organ of sight, for instance, is, necessarily, in potentiality to all colors, and the organ of hearing to all sounds. But, if this sense receptivity occurred without a corporeal organ, then the same power would be receptive of all sensible objects; for an immaterial power is of itself related indifferently to all such qualities; and that is why the intellect, which employs no bodily organ, is cognizant of all sensible things. Without a bodily organ, then, no sensation takes place.<sup>19</sup>

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<sup>18</sup> *Ibid.*, II, 72, 5, "Unde (anima) indiget diversis organis ad suas operationes complendas, quorum diversae animae potentiae proprii actus esse dicuntur: sicut visus oculi, auditus aurium, et sic de aliis."

<sup>19</sup> *Ibid.*, II, 82, 13, "Diversi sensus sunt susceptivi diversorum sensibilium: sicut visus colorum, auditus sonorum. Haec autem diversitas manifeste ex dispositione diversa organorum contingit: nam organum visus oportet esse in potentia ad omnes colores, organum auditus ad omnes sonos. Si autem haec receptio fieret absque organo corporali, eadem potentia esset omnium sensibilium susceptiva: nam virtus immaterialis se habet aequaliter, quantum de se est, ad omnes huiusmodi qualitates; unde intellectus, qui non utitur organo corporali, omnia sensibilia cognoscit. Sentire igitur non fit absque organo corporeo."

"Every power is directed to its object and the formal notion of the object by one operation or one act, e.g. by the same sight we see light and color, which becomes visible in act through light."<sup>20</sup> "What the agent effects is like itself. And this is much more manifest in the operation of the senses; it is through a power existing in this person, and not in another, that he is enabled to see and to hear."<sup>21</sup>

A sense is called external not so much because it has a receptory organ near the surface of the body as because it directly reaches the external world. "For the exterior sensible impresses its form on the exterior senses; from there it proceeds to the imagination and further, to the storehouse of memory."<sup>22</sup> The above text also shows that the internal senses reach their object through the external senses.

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<sup>20</sup> *Ibid.*, I, 76, 2, "Omnis enim virtus una operatione, vel uno actu, fertur in obiectum et in rationem formalem obiecti: sicut eadem visione videmus lumen et colorem, qui fit visibilis actu per lumen."

<sup>21</sup> *Ibid.*, II, 89, 2, "... cum agens sibi simile agat. Et multo est hoc manifestius in operibus sensus: nam videre et audire convenit alicui per virtutem aliquam in ipso existentem, non in alio."

<sup>22</sup> *Ibid.*, IV, 11, 4, "Sensibile enim exterius formam suam exterioribus sensibus ingerit; a quibus procedit in imaginationem; et ulterius in memoriae thesaurum."

### The Object in General

By the object of a sense is meant that which in any way can be apprehended by the sense. But to understand the object of a sense it will be helpful to realize that the sense itself is a material organ.<sup>23</sup> "Every cognitive substance that derives its knowledge from sensibles possesses sensitive knowledge, and, consequently, has a body united to it naturally, since such knowledge is impossible without a bodily organ."<sup>24</sup>

But if sense receptivity occurred without a bodily organ, then the same power would be receptive of all sensible objects; for an immaterial power is itself related indifferently to all such qualities; and that is why the intellect, which employs no bodily organs, is cognizant of all sensible things. Without a bodily organ, then, no sensation takes place.<sup>25</sup>

But as it is "the diverse genera of sensible objects

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<sup>23</sup> The problem of the organic nature of the senses remains a problem requiring further research than the necessary limitations of space will permit here.

<sup>24</sup> *S.C.G.*, II, 96, 2, "Omnis igitur substantia cognoscitiva ex sensibilibus cognitionem accipiens, habet cognitionem sensitivam: et per consequens habet corpus naturaliter unitum, cum cognitio sensitiva sine organo corporeo esse non possit."

<sup>25</sup> *Ibid.*, II, 82, 13, "Si autem haec receptio fieret absque organo corporali, eadem potentia esset omnium sensibilium susceptiva: nam virtus immaterialis se habet aequaliter, quantum de se est, ad omnes huiusmodi qualitates; unde intellectus, qui non utitur organo corporali, omnia sensibilia cognoscit. Sentire igitur non fit absque organo corporeo."

are perceived by the five external senses."<sup>26</sup> However, it is also true that the soul extends its power to each of these external senses. "The power of the soul which is the principle of that (psychic) operation must be the act of that part of the body whereby such an operation is performed; thus, sight is the act of the eye."<sup>27</sup>

As a consequence of the sense being a material organ, it follows that the sense object must also be material for "every power is proportioned with equality to its principle object, for the power of a thing is measured according to its object ... likewise the sense."<sup>28</sup> The sensible object is the "form of the sense for the sense power only receives sensitively."<sup>29</sup>

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<sup>26</sup> *Ibid.*, II, 100, 3, "... unde videmus quod diversa genera sensibilium, quae quinque sensus exteriores percipiunt, una ...."

<sup>27</sup> *Ibid.*, II, 69, 5, "Si igitur operatio animae per organum corporale completur, oportet quod potentia animae quae est illius operationis principium, sit actus illius partis corporis per quam operatio eius completur: sicut visus est actus oculi." See also *De Sensu et Sensato*, I, 1, 17, "Sensibilia autem materialia sint et corporea, necesse corporeum esse, quod a sensibili patiatur."

<sup>28</sup> *S.C.G.*, I, 74, 6, "Unaquaeque virtus ad suum obiectum principale secundum aequalitatem proportionatur: nam virtus rei secundum obiecta mensuratur, ... et etiam sensus."

<sup>29</sup> *Ibid.*, III, 42, 8, "... sicut forma sensus est sensible: non enim recipit aliquid intellectus, per se loquendo, nisi intelligibiliter, sicut nec sensus nisi sensibiliter."

"The object and effect of an active power is a being made, and no power is operative if the nature of its object is lacking; sight is inoperative in the absence of the actually visible."<sup>30</sup>

Since "act follows upon a power,"<sup>31</sup> and since "acts are distinguished according to their objects,"<sup>32</sup> it follows that the distinction of the senses must also be based on the distinction of objects.<sup>33</sup>

That every agent acts for an end is clear "from the fact that every agent tends toward something definite. ... that toward which an agent acts in a definite way must be appropriate to it."<sup>34</sup> In the case of the senses the

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<sup>30</sup> Ibid., II, 25, 10, "Quia potentiae activae obiectum et effectus est ens factum, nulla autem potentia operationem habet ubi deficit ratio sui obiecti, sicut visus non videt deficiente visibili in actu ...."

<sup>31</sup> Ibid., II, 9, 3, "Actio alicuius rei est complementum quoddam potentiae eius ...." See also II, 94, 5.

<sup>32</sup> Ibid., I, 77, 2, "Nam actus secundum obiecta distinguuntur." See also I, 47, 6; and III, 61, 3.

<sup>33</sup> The problem of the distinction of the senses is another that we do not have the space to deal fully with now.

<sup>34</sup> S.C.G., III, 3, 2, "Inde enim manifestum est omne agens agere propter finem, quia quodlibet agens tendit ad aliquod determinatum. Id autem ad quod agens determinate tendit, oportet esse conveniens ei: non enim tenderet in ipsum nisi propter aliquam convenientiam ad ipsum."

proper operation is an end for it.<sup>35</sup> Sensation terminates in the sense operation itself.<sup>36</sup>

... for this is its secondary perfection. The act is its end. And that which is most perfect in this operation is the ultimate end, particularly in the case of the operations that are not ordered to any products, such as the acts of understanding and sensing. Since operations of this type are specified by their objects, through which they are also known.<sup>37</sup>

The end of the act of external sensation is the assimilation of the external sense and the thing sensed.<sup>38</sup>

"The mode of an agent's action is in keeping with the way in which the likeness of its effect exists in it; every agent produces its like; now, whatever is present in some-

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<sup>35</sup> The problem of the terminus of sensation also requires further study than we can give to it here.

<sup>36</sup> S.C.G., I, 100, 3, "... ex suo genere: ut scilicet sit manens in ipso operante. Dico autem operationem in ipso manentem per quam non fit aliud praeter ipsam operationem: sicut videre et audire. Huiusmodi enim sunt perfectiones eorum quorum sunt operationes, et possunt esse ultimum: quia non ordinantur ad aliquod factum quod sit finis."

<sup>37</sup> Ibid., III, 25, 3, "Propria operatio cuiuslibet rei est finis eius: est enim secunda perfectio ipsius .... Ipsa igitur est finis eius. Quod igitur est perfectissimum in hac operatione, hoc est ultimus finis: et praecipue in operationibus quae non ordinantur ad aliqua operata, sicut est intelligere et sentire. Cum autem huiusmodi operationes ex obiectis speciem recipiant, per quae etiam cognoscuntur ...."

<sup>38</sup> Likewise the problem of the impressed species of external sensation requires further study.

thing else exists in it conformable to the latter's mode."<sup>39</sup>

This assimilation takes place, in human knowledge, through the action of sensible things on man's knowing powers. The form of the sensible thing is individuated through its materiality. It can extend the likeness of its singularity to the level of the powers that use material organs.<sup>40</sup>

The above text also shows that the object of the external sense must be singular or particular as well as material. The object must be material since "sense cognition is limited to material things. This is clear from the fact that sensible qualities, which are the proper objects of sense exist only in such things; without these the senses know nothing."<sup>41</sup> "A thing does not exist in reality without

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<sup>39</sup> S.C.G., II, 23, 4, "Unumquodque agens hoc modo agit secundum quod similitudo facti est in ipso: omne enim agens agit sibi simile. Omne quod est in altero, est in eo per modum eius in quo est."

<sup>40</sup> Ibid., I, 65, 9, "... quod assimilatio in cognitione humana fit per actionem rerum sensibilium in vires cognoscitivas humanas .... Forma igitur rei sensibilis, cum sit per suam materialitatem individuata, suae singularitatis similitudinem perducere ... solum usque ad vires quae organis materialibus utuntur ...."

<sup>41</sup> Ibid., II, 66, 4, "Cognitio sensus non se extendit nisi ad corporalia. Quod ex hoc patet, quia qualitates sensibiles, quae sunt propria obiecta sensuum, non sunt nisi in corporalibus; sine eius autem sensus nihil cognoscit." We would like to emphasize that the object of sense is the material thing as Aquinas does in Summa Theologica, I, q. 45, a. 4, ad I, "... we say that the first visible thing is color, although strictly speaking, the thing colored is what is seen."

material conditions,"<sup>42</sup> and "immaterial substance is foreign to sense power."<sup>43</sup> "We (can) know sensible substances"<sup>44</sup> since "in the sense there is a certain preparedness to receive sensibles in act."<sup>45</sup>

"Every form which is one specifically and many in number is individuated by matter; because things one in species and many in number agree in form and differ in matter."<sup>46</sup> An illustration of the individuation of the (formal) object of sense in matter is the fact that "many whitenesses cannot be apprehended except as they are in different subjects."<sup>47</sup>

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<sup>42</sup> S.C.G., I, 53, 3, "... quod etiam intelligit rem ut separatam a conditionibus materialibus, sine quibus in rerum natura non existit ...."

<sup>43</sup> Ibid., III, 54, 9, "... quasi aliquid omnino extraneum ab ipso, sicut est sonus a visu, vel substantia immaterialis a sensu ...."

<sup>44</sup> Ibid., I, 68, 6, "Deus non minus cognoscit ... vel nos, substantias sensibiles ...."

<sup>45</sup> Ibid., II, 62, 5, "In sensu autem est praeparatio quaedam ad sensibilia in actu recipienda."

<sup>46</sup> Ibid., II, 75, 2, "Videtur enim quod omnis forma quae est una secundum speciem et multiplicatur secundum numerum, individuetur per materiam: quae enim sunt unum specie et multa secundum numerum, conveniunt in forma et distinguuntur secundum materiam."

<sup>47</sup> Ibid., IV, 65, 4, "... et inde est quod non possunt apprehendi multae albedines nisi secundum quod sunt in diversis subiectis ...." See also I, 21, 4.

The act of sensation is not a movement, rather, to sense is to be moved; since through the sensible object's altering the conditions of the senses in acting upon them the animal is made actually sentient from being only potentially so ... the intellect grasps things in abstraction from matter and the conditions of matter, which are individuating principles, whereas the sense does not, being manifestly limited to the perception of particulars, while the intellect attains to universals. Then the senses are passive to things as existing in matter, but not the intellect which is passive to things according as they are abstracted. Thus, in the intellect there is a passivity in utter independence of corporeal matter, but not in the sense.<sup>48</sup>

The objects of sense are received immaterially but not without the conditions of matter. "Every cognitive power, as such, is immaterial. The power of sense which occupies the lowest place in the order of cognitive powers, is receptive of sensible species without matter."<sup>49</sup> In addition to the material change the object produces in the

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<sup>48</sup> Ibid., II, 82, 12, "Non enim sentire est movere, sed magis moveri: nam ex potentia sentiente fit animal actu sentiens per sensibilia, a quibus sensus immutantur. Non autem potest dici similiter sensum pati a sensibili sicut patitur intellectus ab intelligibili, ut sic sentire possit esse operatio animae absque corporeo instrumento, sicut est intelligere: nam intellectus apprehendit res in abstractione a materia et materialibus conditionibus, quae sunt individuationis principia; non autem sensus. Quod exinde apparet quia sensus est particularium, intellectus vero universalium. Unde patet quod sensus patiuntur a rebus secundum quod sunt in materia: non autem intellectus, sed secundum quod sunt abstractae. Passio igitur intellectus est absque materia corporali, non autem passio sensus."

<sup>49</sup> Ibid., II, 62, 7, "Omnis autem virtus cognoscitiva, in quantum huiusmodi, est immaterialis: unde et de sensu, qui est infimus in ordine virtutum cognoscitivarum ... quod est susceptivus sensibilium specierum sine materia."

sense organ, it also changes the sensitive potency immateri-ally by impressing its species upon it, as the above text shows.

"Matter is not the very substance of a thing--or all the forms would be accidents. But matter is only part of the substance."<sup>50</sup> "Whatever matter is it is in potency,"<sup>51</sup> and "matter is not the principle of activity."<sup>52</sup> "The form of sense is the sensible object .... The sense power only receives sensitively."<sup>53</sup>

"The sense is actualized by the species actually sensed."<sup>54</sup> "The sensible in act is the sense in act and as the sensible is distinguished from the sense both are in potency."<sup>55</sup> For example, "colors existing outside the soul

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<sup>50</sup> Ibid., II, 54, 2, "... materia non est ipsa substantia rei, nam sequeretur omnes formas accidentia ... sed materia est pars substantiae."

<sup>51</sup> Ibid., I, 17, 2, "Quia materia id quod est, in potentia est."

<sup>52</sup> Ibid., I, 17, 3, "Materia non est agendi principium ...."

<sup>53</sup> Ibid., III, 42, 8, "... forma sensus est sensibile ... non enim recipit aliquid ... sensus nisi sensibiliter."

<sup>54</sup> Ibid., II, 78, 9, "Sensus enim fit actu per speciem sensatam in actu ...." See also II, 74, 2.

<sup>55</sup> Ibid., I, 51, 6, "... sicut et sensibile in actu est sensus in actu. Secundum vero quod intelligibile ab intellectu distinguitur, est untrumque in potentia, sicut et in sensu patet ...." See also II, 101, 1; and II, 59, 13.

are in the presence of light actually visible as having the power to move sight; but are not actually visible in the sense of being perceived as a result of becoming one with the sense power in act."<sup>56</sup>

### Sensible Object

The object of the sense is called the sensible object. "As the sensible is the object of the sense, so the intelligible is the object of the intellect."<sup>57</sup> It is the "sensibles that move the senses."<sup>58</sup> "Sensibles by their very nature are the appropriate objects of sense apprehension."<sup>59</sup> And without the "sensible objects the sense power is inoperative."<sup>60</sup>

<sup>56</sup> Ibid., II, 59, 14, "Colores enim extra animam existentes, praesente lumine, sunt visibiles actu ut potentes movere visum: non autem ut actu sensata, secundum quod sunt unum cum sensu in actu."

<sup>57</sup> Ibid., II, 55, 10, "Sicut sensibile est obiectum sensus, ita intelligibile est obiectum intellectus."

<sup>58</sup> Ibid., II, 67, 4, "... movent ... sicut sensibilia sensum ...."

<sup>59</sup> Ibid., II, 96, 2, "Sensibilia enim secundum suam naturam nata sunt apprehendi per sensum, sicut ...." See also De Anima, XIII, ad 19, "Sense receives the species of sensible things in the organs of the body and perceives singulars."

<sup>60</sup> S.C.G., II, 60, 18, "... sicut sensibilia sensui, sine quibus sensus non sentit."

If they have actual existence, "all bodily elements,"<sup>61</sup> or "every body is sensible."<sup>62</sup> A thing can exist without our having sense knowledge of it but the converse is not true.<sup>63</sup> It is through our senses that we can be united with some things that are our "inferiors, that is with certain sensible objects."<sup>64</sup> "There must be a likeness in the sense of the thing in its sensible accidents."<sup>65</sup> "Diverse kinds of sensible things belong to diverse sensitive powers ... some of the sensitive powers only receive--the senses, for instance; while some retain, as imagination and memory."<sup>66</sup>

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<sup>61</sup> Ibid., I, 20, 6, "Omne autem corpus in rebus existens est sensibile."

<sup>62</sup> Ibid., IV, 63, 5, "... cum elementa corporea sensibilia sint."

<sup>63</sup> Ibid., I, 66, 2, "Est autem haec comparatio scibilis ad nostram scientiam, quod scibile potest esse absque eo quod eius scientia a nobis habeatur ... non autem e converso."

<sup>64</sup> Ibid., III, 27, 6, "... homo secundum sensum coniungitur aliquibus se inferioribus, scilicet sensibilibus quibusdam."

<sup>65</sup> Ibid., IV, 11, 15, "... oportet quod in sensu sit similitudo rei sensibilis quantum ad eius accidentia ...."

<sup>66</sup> Ibid., II, 73, 34, "... diversis generibus sensibilium, quae ad diversas potentias sensitivas pertinet .... Potentiarum autem sensitivarum quaedam recipiunt tantum, ut sensus: quaedam autem retinent, ut imaginatio et memoria ...."

## External Sensible Object

The object of an external sense is called an external sensible. "For the external sensible impresses its form on the external senses ...."<sup>67</sup> "The forms sensed are received ... even by brute animals ... from extrinsic sensible things ... movement derives from external things sensed."<sup>68</sup> "For sense grasps a thing in its exterior accidents, which are color, taste, quantity, and others of this kind ...."<sup>69</sup>

"A thing that cannot initiate its own proper operation without being moved by an external principle is moved

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<sup>67</sup> Ibid., III, 42, 8, "... sicut forma sensus est sensible: non enim recipit aliquid ... sicut nec sensus nisi sensibiliter." See also IV, 11, 4, and Summa Theologica, I, q. 81, ad 3, pt. 1, resp., "The exterior senses require for action extrinsic sensible things, whereby they are affected, and the presence of which is not ruled by reason." He also points out in Aristotelis Librum De Anima Commentarium, III, II, 595, that "they were wrong ... in supposing that nothing was white or black except when it was seen." This indicates his belief in the existence of the object and its accidents independently of the observer.

<sup>68</sup> S.C.G., II, 47, 4, "In animalibus etiam brutis formae sensatae ... sunt receptae in eis ab exterioribus sensibilibus, quae agunt in sensum ... tamen ipsum movere non est eis ex seipsis, sed partim ex exterioribus sensatis ...."

<sup>69</sup> Ibid., IV, 11, 15, "... nam sensus apprehendit rem quantum ad exteriora eius accidentia, quae sunt color, sapor, quantitas, et alia huiusmodi ...."

rather than moves itself .... For the sense is moved by an external sensible object ...."<sup>70</sup> "Our knowledge comes to us from things."<sup>71</sup> "Things that are external stand out as better known, since human knowledge starts from sensible objects."<sup>72</sup> "The diverse genera of the sensible objects are received by the five external senses."<sup>73</sup> And because the sense object comes from without, "the sense neither knows itself nor its operations; for instance, sight neither sees that it sees nor sees itself."<sup>74</sup> "Nothing receives what it already has ... the recipient must be devoid of the thing received."<sup>75</sup>

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<sup>70</sup> *Ibid.*, II, 76, 19, "Unumquodque quod non potest exire in propriam operationem nisi per hoc quod movetur ab exteriori principio, magis agitur ad operandum quam seipsum agat ... sensus enim, motus a sensibili exteriori ...."

<sup>71</sup> *Ibid.*, I, 67, 5, "... cum in nobis ex rebus cognitio causetur ...."

<sup>72</sup> *Ibid.*, III, 26, 19, "... quam cognitionem intellectus ... quia ea quae exterius sunt, magis nota pluribus existunt, eo quod a sensibilibus incipit humana cognitio."

<sup>73</sup> *Ibid.*, II, 100, 3, "... diversa genera sensibilibus, quae quinque sensus exteriores percipiunt ...."

<sup>74</sup> *Ibid.*, II, 66, 5, "Nullus sensus seipsum cognoscit, nec suam operationem: visus enim non videt seipsum, nec videt se videre ...."

<sup>75</sup> *Ibid.*, II, 73, 32, "Nihil recipit quod iam habet: quia recipiens oportet esse denudatum a recepto ...."

Sensation occurs as the result of one's being moved by the external sense object. Hence, man cannot sense without an external sensible object any more than a thing can be moved without a mover. Therefore, the sense organ is moved and is passive in sensing--but in relation to an external sensible object.<sup>76</sup>

#### Division of the External Sensibles

The external sensibles are divided into essential (per se) and accidental (per accidens) sensibles. This division is based on their being sensibles in themselves or not. We call something essential when it belongs so necessarily that without it a thing cannot exist. "To take away an essential principle of any thing is to take away the thing itself."<sup>77</sup> An essential sensible is one that is sensible in itself.

An accident is "a being in another."<sup>78</sup> A sensible is accidental if it is not sensible in itself as when we reach it only through essential sensibles.

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<sup>76</sup> Ibid., II, 57, 8, "... sentire accidit in ipso moveri a sensibilibus exterioribus. Unde non potest homo sentire absque exteriori sensibili: sicut non potest aliquid moveri absque movente. Organum igitur sensus movetur et patitur in sentiendo, sed ab exteriori sensibili."

<sup>77</sup> Ibid., II, 25, 13, "Ad remotionem cuiuslibet principii essentialis sequitur remotio ipsius rei." See Aristotelis Librum de Anima Commentarium, II, VII, 400, "... color as such is essentially visible." This is from the point of view of the sense of sight.

<sup>78</sup> S.C.G., I, 65, 3, "... et accidens sit ens in alio."

Perhaps at the risk of oversimplification we will quickly show, with the aid of a few lengthier texts, that what is accidental to the thing is an essential sensible for the senses and an accidental intelligible to the intellect. Likewise what is of the essence of a thing is an accidental sensible from the view of the senses and an essential intelligible from the view of the intellect.

That which is prior in reality is likewise found to be prior in knowledge .... Substance is prior to accident both in nature, in so far as substance is the cause of accident and in knowledge in so far as substance is included in the definitions of accident. Therefore, being is said of substance by priority over accident both according to nature and the meaning of the name. But when that which is prior in nature is subsequent in knowledge, then there is not the same order of analogicals according to reality and according to the meaning of the name.<sup>79</sup>

And again:

Since nature is always directed to one thing, of one power there must naturally be one object, as color of sight and sound of hearing. Hence, the intellect, being one power, has one natural object, of which it has knowledge essentially and naturally. And this object must be one under which are included all things known by the intellect; just as under color are included all colors essentially visible. Now this is none other than being(ens). Our intellect, therefore, knows

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<sup>79</sup> Ibid., I, 34, 5, "Quando igitur id quod est prius secundum rem, invenitur etiam cognitione prius ... sicut substantia est prior accidente et natura, in quantum substantia est causa accidentis; et cognitione, in quantum substantia in definitione accidentis ponitur. Et ideo ens dicitur prius de substantia quam de accidente et secundum rei naturam et secundum nominis rationem. --Quando vero id quod est prius secundum naturam, est posterius secundum cognitionem, tunc in analogicis non est idem ordo secundum rem et secundum nominis rationem ...."

being naturally, and whatever belongs essentially belongs to being as such; and upon this knowledge is founded the knowledge of the first principles, such as the impossibility of simultaneously affirming and denying and the like. Thus, only these principles are known naturally by our intellect, while conclusions are known through them; just as, through color, sight is cognizant of both common and accidental sensibles.<sup>80</sup>

The following text will show more specifically the relationship of the intellect to the object and this in turn will help us better to understand the difference between the essential and accidental objects of the intellect as compared to the essential and accidental objects of the senses.

Moreover, no cognoscitive power knows a thing except under the rational character of its proper object. For instance, we do not know anything by sight except according as it is colored. Now the proper object of the intellect is that which is, that is, the substance of a thing .... Therefore, whatever the intellect knows about any thing, it knows through knowing the substance of a thing. Consequently, in any demonstration through which the proper accidents became known to us, we take as our principle that which is .... Now, if the intellect knows the substance of a thing through its accidents ... the accidents contribute a good deal to the knowing

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<sup>80</sup> Ibid., II, 83, 31, "Cum natura semper ordinetur ad unum, unius virtutis oportet esse naturaliter unum obiectum: sicut visus colorem, et auditus sonum. Intellectus igitur, cum sit una vis, est eius unum naturale obiectum, cuius per se et naturaliter cognitionem habet. Hoc autem oportet esse id sub quo comprehenduntur omnia ab intellectu cognita: sicut sub colore comprehenduntur omnes colores, qui sunt per se visibiles. Quo non est aliud quam ens. Naturaliter igitur intellectus noster cognoscit ens, et ea quae sunt per se entis inquantum huiusmodi; in qua cognitione fundatur primorum principiorum notitia, ut non esse simul affirmare et negare, et alia huiusmodi. Haec igitur sola principia intellectus noster naturaliter cognoscit, conclusiones autem per ipsa: sicut per colorem cognoscit visus tam sensibilia communia quam sensibilia per accidens."

of that which is, this is accidental, in as much as the intellect must attain to the knowledge of the substance through the knowledge of sensible accidents. For this reason this procedure has no place in mathematics, but only in the area of physical things. Therefore, whatever is in a thing and cannot be known through knowledge of its substance must be unknown to the intellect.<sup>81</sup>

Aquinas then summarizes the difference between the intellect and its essential object and the sense and its essential object in the following text:

Now there is this difference between the intellect and sense, for sense grasps a thing in its exterior accidents, which are color, taste, quantity and others of this kind, but intellect enters into what is interior to the thing. And, since every knowledge is perfected by the likeness between the knower and the known, there must be in the sense the likeness of the thing in its sensible accidents, but in the intellect there must be the likeness of the thing understood in its essence.

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<sup>81</sup> Ibid., III, 56, 5, "Nulla virtus cognoscitiva cognoscit rem aliquam nisi secundum rationem proprii obiecti: non enim visu cognoscimus aliquid nisi in quantum est coloratum. Proprium autem obiectum intellectus est quod quid est, id est substantia rei .... Igitur quicquid intellectus de aliqua re cognoscit, cognoscit per cognitionem substantiae illius rei: unde in qualibet demonstratione per quam innotescunt nobis propria accidentia, principium accipimus quod quid est .... Si autem substantiam alicuius rei intellectus cognoscat per accidentia ... quod accidentia magnam partem conferunt ad cognoscendum quod quid est; hoc est per accidens in quantum cognitio intellectus oritur a sensu, et sic per sensibilibus accidentium cognitionem oportet ad substantiae intellectum pervenire; propter quod hoc non habet locum mathematicis, sed in naturalibus tantum. Quicquid igitur est in re quod non potest cognosci per cognitionem substantiae eius, oportet esse intellectui ignotum."

Therefore, the word conceived in the intellect is the image or exemplar of the substance of the thing understood.<sup>82</sup>

Aquinas shows further that the essential sensible (sensible species) and essential intelligible (intelligible species) necessarily make the sense power or the intellectual power to act when it actualizes it.

However the agent's necessity has reference both to the action itself and the resulting effect. Necessity in the former case is like the necessity that an accident derives from the essential principles; so does action from the necessity of the form by which the agent actually exists; for as the agent actually is, so does it act. But this necessitation of action by form is different in the case of action that remains in the agent itself, as understanding and willing, and in action which passes into something else as heating. In the first case, the necessity of the action itself results from the form by which the agent is made actual, because in order for this kind of action to exist, nothing extrinsic, as the terminus for it is required. Thus when the sense power is actualized by the sensible

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<sup>82</sup> Ibid., IV, 11, 15, "Est autem differentia inter intellectum et sensum: nam sensus apprehendit rem quantum ad exteriora eius accidentia, quae sunt color, sapor, quantitas, et alia huiusmodi; sed intellectus ingreditur ad interiora rei. Et quia omnis cognitio perficitur secundum similitudinem quae est inter cognoscens et cognitum, oportet quod in sensu sit similitudo rei sensibilis quantum ad eius accidentia: in intellectu vero sit similitudo rei intellectae quantum ad eius essentiam. Verbum igitur in intellectu conceptum est imago vel exemplar substantiae rei intellectae."

species, it necessarily acts; and so, too does the intellect when it is actualized by the intelligible species.<sup>83</sup>

An accidental sensible is not the same as an essential sensible for "the idea of man is not the same as the idea of white."<sup>84</sup> Then a man's color and size are essential sensibles, while the man himself is an accidental sensible. This follows from what has been said above and from the fact that "that which is through itself is prior to that which is by accident."<sup>85</sup>

#### Division of Essential Sensibles

Essential sensibles are either common or proper. "Sense cognition is limited to corporeal things. This is

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<sup>83</sup> *Ibid.*, II, 30, 12, "Necessitas vero agentis consideratur et quantum ad ipsum agere; et quantum ad effectum consequentem. Prima autem necessitatis consideratio similis necessitati accidentis quam habet ex principiis essentialibus. Sicut enim alia accidentia ex necessitate principiorum essentialium procedunt, ita et actio ex necessitate formae per quam agens est actu: sic enim agit ut actu est. Differenter tamen hoc accidit in actione quae in ipso agente manet, sicut intelligere et velle; et in actione quae in alterum transit, sicut calefacere. Nam in primo genere actionis, sequitur ex forma per quam agens fit actu, necessitas actionis ipsius: quia ad eius esse nihil extrinsecum requiritur in quod actio terminetur. Cum enim sensus fuerit factus in actu per speciem sensibilem, necesse est ipsum sentire; et similiter cum intellectus est in actu per speciem intelligibilem."

<sup>84</sup> *Ibid.*, II, 56, 12, "... non enim est eadem ratio hominis et albi."

<sup>85</sup> *Ibid.*, II, 91, 2, "Eo autem quod est per accidens, oportet prius esse id quod est per se."

clear from the fact that sensible qualities, which are the proper objects of the senses, exist only in such things; and without them the sense knows nothing."<sup>86</sup> That sense cognition is limited to corporeal things--and essential sensibles are found only in corporeal things--follows from the fact that "accidents and forms do not exist by themselves ... they exist only in another."<sup>87</sup> And it is only through the proper sensibles that we arrive at the common sensible. "Through color, sight is cognizant of both common and accidental sensibles."<sup>88</sup>

#### Proper Sensibles

By a proper sensible is meant an essential sensible which directly refers to only one sense. Aquinas doesn't always draw a distinction in regard to essential sensibles and several times calls them simply proper sensibles--so he does not always adhere to the strict usage of the term proper sensible. For example, he says that "we sense all the

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<sup>86</sup> Ibid., II, 66, 4, "Cognitio sensus non se extendit nisi ad corporalia. Quod ex hoc patet, quia qualitates sensibiles, quae sunt propria obiecta sensuum, non sunt nisi in corporalibus; sine eis autem sensus nihil cognoscit."

<sup>87</sup> Ibid., II, 18, 4, "Quia accidentia et formae, sicut per se non sunt ... sed, sicut in alio sunt ...."

<sup>88</sup> Ibid., II, 83, 31, "... sicut per colorem cognoscit visus tam sensibilia communia quam sensibilia per accidens."

accidents of bread and wine: color, odor, taste, figure, quantity, and weight; and concerning these we cannot be deceived, for the sense is never deceived about the proper sensibles."<sup>89</sup> And again, "sense-cognition is limited to corporeal things. This is clear from the fact that sensible qualities, which are the proper objects of the senses, exist only in such things; and without them the senses know nothing."<sup>90</sup>

On the other hand there are occasions when he lists only proper sensibles under this term: "The sense from which our knowledge begins, is occupied with external accidents, which are proper sensibles--for example, color, odor, and the like."<sup>91</sup>

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<sup>89</sup> Ibid., IV, 62, 10, "... sensu percipimus ... omnia accidentia panis et vini, scilicet colorem, saporē, odorem, figuram, quantitatem et pondus: circa quae decipi non possumus, quia sensus circa propria sensibilia non decipitur ...."

<sup>90</sup> Ibid., II, 66, 4, "Cognitio sensus non se extendit nisi ad corporalia. Quod ex hoc patet, quia qualitates sensibiles, quae sunt propria obiecta sensuum, non sunt nisi in corporalibus; sine eis autem sensus nihil cognoscit."

<sup>91</sup> Ibid., IV, 1, 4, "Nam cum sensus, unde nostra cognitio incipit, circa exteriora accidentia versetur, quae sunt secundum se sensibilia, ut color et odor et huiusmodi ...." See also Summa Theologica, I, q. 78, art. 4, ad 2, "... proper sensibles, which are the objects of the senses. For the proper sensibles first, and of their very nature, affect their senses ...."

Likewise, there are numerous occasions when he tells us that a certain sense is receptive only of one proper object. "Since nature is always directed to one thing, of one power there must naturally be one object, as color of sight and sound of hearing."<sup>92</sup> While it is true that "sight cannot function in the absence of color,"<sup>93</sup> it is also true that "a person who lacks one sense, lacks also, the knowledge of the sensible things which are known through that sense."<sup>94</sup> "Sight is moved by color."<sup>95</sup> And "sight can see colored objects only."<sup>96</sup> "In a thing that is at once white and sweet, sight sees only the whiteness, taste only the sweetness."<sup>97</sup>

As the above text also shows, several proper sensibles can be found in the same subject "just as that which

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<sup>92</sup> S.C.G., II, 83, 31, "Cum natura semper ordinetur ad unum, unius virtutis oportet esse naturaliter unum obiectum: sicut visus colorem, et auditus sonum."

<sup>93</sup> Ibid., II, 80, 6, "... sicut visus non potest videre sine coloribus ...."

<sup>94</sup> Ibid., II, 74, 5, "... qui caret aliquo sensu, caret scientia sensibilium quae cognoscuntur per sensum illum."

<sup>95</sup> Ibid., III, 88, 2, "... movetur ... sicut visus a colore."

<sup>96</sup> Ibid., III, 54, 2, "... non enim potest visus videre nisi colorata."

<sup>97</sup> Ibid., II, 75, 8, "... simul enim una res est et alba et dulcis; visus tamen cognoscit solam albedinem, et gustus solam dulcedinem."

is a body can be white and sweet."<sup>98</sup>

"The visible thing moves the power of sight in the natural order as any power moves a passive potency."<sup>99</sup> And the more perfect the object is the more distinctive it is as an object of sense. "If a white thing is a distinctive object of sight, a whiter thing is a more distinctive object for sight."<sup>100</sup>

Just as it is true that "no cognoscitive power knows a thing except under the rational character of its proper object. For instance we do not know anything by sight except as it is colored."<sup>101</sup> So it is also true that a cognoscitive power is able to know its proper object.

No cognoscitive power fails in the knowing of its proper object unless because of some defect or corrup-

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<sup>98</sup> Ibid., I, 39, 2, "... sicut quod est corpus potest esse album et dulce ...."

<sup>99</sup> Ibid., III, 10, 13, "... movet enim secundum ordinem naturalem visibile visum, et quodlibet obiectum potentiam passivam."

<sup>100</sup> Ibid., III, 139, 16, "... si album est disgregativum visus, quod magis album sit magis disgregativum visus." In the above translation of this text the word distinctive must be taken in the sense of "set apart from" other things i.e. as an object of sight. See Roy J. DEFERRARI, A Latin-English Dictionary of St. Thomas Aquinas, Boston, St. Paul Editions, 1960, p. 304.

<sup>101</sup> S.C.G., III, 56, 5, "Nulla virtus cognoscitiva cognoscit rem aliquam nisi secundum rationem proprii obiecti: non enim visu cognoscimus aliquid nisi in quantum est colorum."

tion in itself, since it is ordered according to its own rational character to the knowledge of this object. Thus, sight does not fail in the knowing of color unless there be some defect or corruption present in the sight itself.<sup>102</sup>

"Sense cannot err in regard to proper sensibles."<sup>103</sup> "A sense dealing with the proper sensible is always true, but in other cases it may be deceived."<sup>104</sup>

Although the effect of the sensible on the sense is contingent, the effect follows if not impeded for "just as from a necessary cause an effect follows with certitude, so it follows from a complete contingent cause if it be not impeded."<sup>105</sup>

Necessity which arises from an efficient cause in some cases depends on the disposition of the agent

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<sup>102</sup> Ibid., III, 107, 10, "Nulla potentia cognoscitiva deficit a cognitione sui obiecti nisi propter aliquem defectum aut corruptionem suam, cum secundum propriam rationem ad cognitionem talis obiecti ordinetur: sicut visus non deficit a cognitione coloris nisi aliqua corruptione circa ipsum existente."

<sup>103</sup> Ibid., III, 91, 5, "... circa quas non potest intellectus errare, sicut nec sensus circa propria sensibilia."

<sup>104</sup> Ibid., I, 58, 5, "... sicut et sensus qui est priorum semper est verus, in aliis autem fallitur." For a note on the objective truth value of sensation according to Thomas Aquinas see Michael BROWNE, "Elucidatione Doctrinae S. Thomae De Veritate Sensationes (in Qu. Disp. De Ver. I, Art 9 et 11)", in Angelicum, Roma, vol. 6, 1929, p. (241)-252.

<sup>105</sup> S.C.G., I, 67, 4, "Sicut ex causa necessaria certitudinaliter sequitur effectus, ita ex causa contingenti completa si non impediatur."

alone--in others of both agent and patient .... But there is no absolute necessity in those things which are sometimes impeded in their activity either through lack of power or of the violent action of the contrary, such things then, do not act always, and necessarily, but in the majority of cases.<sup>106</sup>

A defect in the effect may be due to the unsuitable matter or to a defect in the sense organ. "In the type of cause that is material, a defect in the effect is caused by the unsuitable character of the matter."<sup>107</sup> "From a defect in the cause there follows a defect in the effect."<sup>108</sup> "No cognoscitive power is deceived in regard to its proper object, but only in regard to something foreign to it. For instance, sight is not deceived in judging color, but when a man judges by sight concerning the taste or species of a

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<sup>106</sup> Ibid., II, 30, 14, "... necessitas quae est ex causa agente, in quibusdam dependet ex dispositione agentis tantum; in quibusdam vero ex dispositione agentis et patientis .... Si autem non fuerit absolute necessaria sed possibilis removeri, non erit necessitas ex causa agente nisi ex suppositione dispositionis utriusque debitae ad agendum: sicut in his quae impediuntur interdum in sua operatione vel propter defectum virtutis, vel propter violentiam alicuius contrarii; unde non agunt semper et ex necessitate, sed ut in pluribus."

<sup>107</sup> Ibid., III, 14, 5, "In specie vero causae materialis, quia ex materiae indispositione causatur in effectu defectus."

<sup>108</sup> Ibid., III, 14, 4, "Ex defectu causae sequitur defectus in effectū."

thing, defect may occur in that case."<sup>109</sup> "Sound if foreign to the object of vision as an immaterial substance is from sense power. So also, objects of extreme character are beyond the capacity of sense power."<sup>110</sup> The "sense is corrupted by objects exceedingly high and intense,"<sup>111</sup> i.e. by "excess in the sensible object."<sup>112</sup>

A defect in the effect may also be due to failure on the part of the sense power or organ. "A false judgement concerning a proper sensible results from a weakness of the sense power involved ... but a defect outside the intention of nature is accidental"<sup>113</sup> and nothing accidental is always and in all things, as we have shown above. "Weariness results from a defect of power."<sup>114</sup> And "the power of sense

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<sup>109</sup> *Ibid.*, III, 108, 4, "Nulla virtus cognoscitiva circa proprium obiectum decipitur, sed solum circa extraneum: visus enim non decipitur in iudicio colorum; sed, dum homo per visum iudicat de sapore vel de specie rei, in hoc deceptio accidit."

<sup>110</sup> *Ibid.*, III, 54, 9, "... sicut est sonus a visu, vel substantia immaterialis a sensu ... sicut excellentia sensibilibus sunt extra facultatem sensus."

<sup>111</sup> *Ibid.*, II, 62, 5, "... sensus corrumpitur ex excellentia obiectorum ...."

<sup>112</sup> *Ibid.*, II, 66, 6, "Sensus corrumpitur ab excellenti sensibili."

<sup>113</sup> *Ibid.*, II, 34, 2, "... sicut et falsum iudicium de sensibili proprio ex infirmitate sensus accidit. Defectus autem per accidens sunt: quia praeter naturae intentionem."

<sup>114</sup> *Ibid.*, II, 25, 7, "Cum fatigatio sit per defectum virtutis ...."

can be destroyed, or weakened, by the more striking sense objects, so that the latter is unable to perceive weaker objects."<sup>115</sup>

When the "sense is overwhelmed by an exceedingly high degree of intensity on the part of the object .... The state of passivity brought about in the sense by the sensible occurs with a bodily organ, the harmonious structure of whose parts is shattered by the pre-eminent power of some sensible objects."<sup>116</sup> Examples of the corruption of a sense due to the exceedingly high intensity of the object are when "sight is corrupted by a very brilliant object, hearing by a very loud sound, etc."<sup>117</sup>

The above are examples of "corruption proper to the thing itself but the sense is also corrupted through its subject being corrupted."<sup>118</sup> "A man born blind has neither knowledge of or has any understanding of colors for he who

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<sup>115</sup> Ibid., III, 59, 2, "... quod sensus ab excellentibus sensibilibus corrumpitur vel debilitatur, ut postmodum minora sensibilia percipere non possit ...."

<sup>116</sup> Ibid., II, 82, 14, "Sensus corrumpitur ab excellentia sensibilium: non autem intellectus ... passio vero sensus cum organo corporali, cuius harmonia solvitur per sensibilium excellentiam."

<sup>117</sup> Ibid., II, 55, 10, "... corrumpitur ... sicut visus a valde fulgidis, et auditus a fortibus sonis, et sic de aliis."

<sup>118</sup> Ibid., II, 55, 10, "... quia sensus corrumpitur etiam per accidens propter corruptionem subiecti."

lacks a certain sense has no knowledge of the sensible objects which are perceived through that sense."<sup>119</sup>

If a person ceases to see what he formerly saw, this cessation will be either because the power of sight fails him, as when one dies or goes blind, or because he is impeded in some other way, or it will be because he does not wish to see any longer, as when he turns away his glance from what he formerly saw or because the object is taken away.<sup>120</sup>

While it is from the viewpoint of the sense power that the object is called the proper sensible, from the viewpoint of the object the proper sensible is a secondary sense quality in the sense that it is "once more removed" from the thing in itself when compared with the common sensible. "As the species of color in the eye is not that which is seen, but that by which we see."<sup>121</sup> "The actually visible species is the form of the power of sight or of the eye itself. ... the power of sight is in touch with the

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<sup>119</sup> Ibid., II, 83, 26, "... quia qui caret sensu aliquo, non habet scientiam de sensibilibus quae cognoscuntur per sensum illum; sicut caecus natus nullam scientiam habet nec aliquid intelligit de coloribus."

<sup>120</sup> Ibid., III, 62, 6, "Si aliquis videre desinat quod prius videbat, aut hoc erit quia deficit ei facultas videndi, sicut cum aliquis moritur vel caecatur, vel aliquo aliter impeditur; aut erit quia non vult amplius videre, sicut cum quis avertit visum a re quam prius videbat; vel quia obiectum subtrahitur."

<sup>121</sup> Ibid., II, 75, 7, "... sicut et species coloris in oculo non est id quod videtur, sed id quo videmus."

color in the stone."<sup>122</sup>

The color is an accident of the thing seen,<sup>123</sup> as in the case of a thing that is one being accidentally which is made from color and a body.<sup>124</sup> So the proper sensibles are accidental qualities, "sort of an accident, something like blackness and whiteness."<sup>125</sup> It is through the proper sensibles that one gets to know the primary or common sensibles which are more intimately united to the object.

Among all the accidents, that inhering more closely to the substance is quantity which tends to measure. Then the qualities are received in the substance with the quantity as medium--color, for example, with the surface as medium; hence even by the division of the quantity they are incidentally divided. But in addition,

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<sup>122</sup> Ibid., II, 59, 10, "... sicut species visibilis in actu est forma potentiae visivae, sive ipsius oculi. ... et potentiae visivae ad colorem qui est in lapide."

<sup>123</sup> Ibid., II, 52, 2, "... non autem est unum cum esse eius, nisi per accidens, in quantum est unum subiectum habens esse et id quod est praeter esse ... non enim idem est esse sortem et esse album, nisi per accidens." See also IV, 41, 6.

<sup>124</sup> Ibid., III, 42, 10, "... sic enim ex colore et corpore fit unum secundum esse accidentale." See also III, 9, 6.

<sup>125</sup> Ibid., III, 7, 11, "... quasi accidens, sicut albedo vel nigredo."

the qualities are the principles of action and passion, as well as certain relations ....<sup>126</sup>

It is to be noted that there is a difference between the proper sensible and the formal notion of the object. "Every power is directed to its object and the formal notion of the object by one operation or one act. For example, by the same sight we see light and color, which becomes visible in act through light."<sup>127</sup> "Sight in every color sees light."<sup>128</sup> "In a certain way light makes potential colors to be colors actually,"<sup>129</sup> for "light in a way makes things actually visible."<sup>130</sup>

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<sup>126</sup> Ibid., IV, 63, 9, "Nam inter omnia accidentia propinquius inhaerēt substantiae quantitas dimensiva. Deinde qualitates in substantia recipiuntur quantitate mediante, sicut color mediante superficie: unde et per divisionem quantitatis, per accidens dividuntur. Ulterius autem qualitates sunt actionum et passionum principia; et relationum quarundam, ut sunt ...."

<sup>127</sup> Ibid., I, 76, 2, "Omnis enim virtus una operatione, vel uno actū, fertur in obiectum et in rationem formalem obiecti: sicut eadem visione videmus lumen et colorem, qui fit visibilis actu per lumen."

<sup>128</sup> Ibid., I, 80, 2, "... sicut visus in omni color videt lumen."

<sup>129</sup> Ibid., II, 78, 2, "... sicut lumen: quoddam enim modo lumen facit potentia colores esse actu colores, inquantum silicet facit eos visibiles actu ...."

<sup>130</sup> Ibid., III, 53, 6, "... sicut lux facit quoddammodo visibilia actu."

It is the proper sensible which specifies the sense potency.

From the diversity of forms by which the species of a thing are differentiated there also results a difference of operations. For since everything acts in so far as it is actual (because things that are potential are found by that very fact to be devoid of action), and since every being is actual through form, it is necessary for the operation of a thing to follow its form. Therefore, if there are different forms, they must have different operations.<sup>131</sup>

Now it is true that "the actually visible species is the form of the power of sight or of the eye itself."<sup>132</sup> This follows because "neither the sight is seeing in act, nor is the visible object seen in act, except when the sight is informed by the species of the visible object so that thereby from the sight and the object something one results."<sup>133</sup>

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<sup>131</sup> Ibid., III, 97, 4, "Ex diversitate autem formarum, secundum quas rerum species diversificantur, sequitur et operationum differentia. Cum enim unumquodque agat secundum quod est actu, quae enim sunt in potentia, secundum quod huiusmodi, inveniuntur actionis expertia; est autem unumquodque ens actu per formam: oportet quod rei sequatur formam ipsius. Oportet ergo si sint diversae formae, quod habeant diversas operationes."

<sup>132</sup> Ibid., II, 59, 10, "... sicut species visibilis in actu est forma potentiae visivae, sive ipsius oculi."

<sup>133</sup> Ibid., I, 51, 6, "... nam neque visus est videns actu, neque visibile videtur actu, nisi cum visus informatur visibilis specie, ut sic ex visu et visibili unum fiat."

Yet a natural agent does not hand over its own form to another subject, but it reduces the passive subject from potency to act."<sup>134</sup> "The pupil, which receives all the species of colors, lacks all colors. For, of itself if it had any color, the latter would prevent it from seeing other colors; indeed, it would see nothing except under that color."<sup>135</sup>

"But to the stone in which the color is present neither the action of the power of sight as it sees nor the action of the sun as it enlightens can be attributed."<sup>136</sup>

While it is true to say that the image in the sense is like its object or proper sensible it would not be true to say that the proper sensible is like the image of it in the sense power. "For that is said to be like something which possesses a quality or form of a thing."<sup>137</sup>

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<sup>134</sup> Ibid., III, 69, 28, "Agens enim naturale non est traducens propriam formam in alterum subiectum: sed reducens subiectum quod patitur, de potentia in actum."

<sup>135</sup> Ibid., II, 59, 3, "Sicut pupilla, quae respicit omnes species colorum, caret omni colore: si enim haberet de se aliquem colorem, ille color prohiberet videri alios colores; quinimmo nihil videretur nisi sub illo colore."

<sup>136</sup> Ibid., III, 43, 7, "Non autem lapidi, in quo est color, potest attribui neque actio visus ut videat, neque actio solis ut illuminet."

<sup>137</sup> Ibid., I, 29, 5, "Similie enim alicui dicitur quod eius possidet qualitatem vel formam."

Common Sensibles<sup>138</sup>

A common sensible is an essential sense object which can be sensed by more than one sense; for example, size can be sensed by sight and touch. Such a common object of the senses would be quantity.<sup>139</sup> And "every bodily form is combined with quantity."<sup>140</sup> Also, both common and proper sensibles can be found in the same thing. White and triangular, although they are diverse, they can because they are not opposed, be in an identical thing."<sup>141</sup>

"Among all the accidents, that inhering more closely in the substance is the quantity which tends to measure. Then the qualities are received in the substance with the quantity as medium."<sup>142</sup> For example, "a surface is said to

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<sup>138</sup> Perhaps it should be noted that we do not intend to deal with the object of the common sense or sensus communis, which is one of the internal senses. See S.C.G. II, 100, 3.

<sup>139</sup> Ibid., IV, 11, 15, "... nam sensus apprehendit rem quantum ad exteriora eius accidentia, quae sunt ... quantitas ...."

<sup>140</sup> Ibid., III, 69, 7, "Nam omnis corporis forma est adiuncta quantitati."

<sup>141</sup> Ibid., IV, 24, 7, "... album enim et triangulare, licet diversa sint, quia tamen non opponuntur, in eodem esse contingit."

<sup>142</sup> Ibid., IV, 63, 8, "Inter accidentia vero quidam ordo considerandus est. Nam inter omnia accidentia propinquius inhaeret substantiae quantitas dimensiva. Deinde qualitates in substantia recipiuntur quantitate mediante, sicut color mediante superficie ...."

be colored."<sup>143</sup> It follows that quantity is primary among the common sensibles in that the others always inhere in it, for example, the position of someone who is seated,<sup>144</sup> "for position, which is the order of parts to the whole, is essentially included in this quantity, for quantity is that which has position."<sup>145</sup>

Local distance is another example of a per se sensible which is a common sensible. "Local distance is through itself related to sense .... The reason why local distance bears such a relationship to sense is that sensibles move the senses in respect to a determinate distance."<sup>146</sup> "For the nearer things are to our senses, the more intelligible they are to us."<sup>147</sup> And "the stronger the power of the agent, the farther does its operation extend to more remote effects. For instance, the bigger a fire is, the farther

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<sup>143</sup> Ibid., II, 58, 4, "... sicut dicitur superficies colorata."

<sup>144</sup> Ibid., I, 67, 10, "Si videtur sedere, sedet."

<sup>145</sup> Ibid., IV, 65, 4, "Quod ideo est, quia positio, quae est ordo partium in toto, in eius ratione includitur: est enim quantitas positionem habens."

<sup>146</sup> Ibid., II, 96, 9, "Localis enim distantia per se comparatur ad sensum ... nam sensibilia secundum determinatam distantiam movent sensum."

<sup>147</sup> Ibid., II, 77, 5, "... nam magis sunt nobis intelligibilia quae sunt sensui proximiora ...."

away are the things it heats,"<sup>148</sup> and the sense knows that "cooling does not result from putting something near a hot object, but only heating."<sup>149</sup>

Although common sensibles are sensed in themselves they are not sensed immediately, but by means of proper sensibles. This is possible because just as several proper sensibles may inhere in one substance,<sup>150</sup> so may proper sensibles and common sensibles inhere in the same substance as when "the same body is both figured and colored."<sup>151</sup> Also, as we have shown, both the common and proper sensibles are "exterior accidents, which are color, taste, quantity and others of this kind."<sup>152</sup>

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<sup>148</sup> Ibid., III, 77, 3, "Quanto virtus alicuius agentis est fortior, tanto in magis remota suam operationem extendit: sicut ignis, quanto est maior, magis remota calefacit."

<sup>149</sup> Ibid., III, 69, 12, "... non enim ex appositione calidi sequitur infrigidatio, sed calefactio tantum ...."

<sup>150</sup> Ibid., I, 39, 2, "... sicut quod est corpus potest esse album et dulce ...."

<sup>151</sup> Ibid., I, 55, 2, "... sicut idem corpus est figuratum et coloratum." In his Aristotelis Librum de Anima Commentarium, II, XIII, 386, Aquinas says that "... the common sense objects are five: movement, rest, number, shape, size. These are not proper to any one sense but are common to all; which we must not take to mean that all these are common to all the senses, but that some of them i.e. number, movement, and rest, are common to all. But touch and sight perceive all five."

<sup>152</sup> S.C.G., IV, 11, 15, "... nam sensus apprehendit rem quantum ad exteriora eius accidentia, quae sunt color, sapor, quantitas, et alia huiusmodi ...."

Because the common sensibles inhere more closely in the substance, especially is this true of quantity,<sup>153</sup> they are called primary sense qualities if seen from the viewpoint of the object as distinguished from the secondary sense qualities mentioned above.

As we have shown to be the case with proper sensibles, so also, we are not naturally deceived in our perception of the common sensibles. "The things which we perceive by the senses ... all the accidents of color, taste, odor, figure, quantity and weight; concerning these we cannot be deceived, for the sense is never deceived about its proper sensible."<sup>154</sup>

#### Accidental Sensibles

The accidental sensible of an external sense is not in itself an object of the sense, but apprehended by another cognitive potency as accompanying that which the

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<sup>153</sup> *Ibid.*, IV, 63, 9, "Nam inter omnia accidentia propinquius inhaeret substantiae quantitas dimensiva."

<sup>154</sup> *Ibid.*, VI, 62, 10, "... sensu percipimus ... omnia accidentia ... scilicet colorem, saporem, odorem, figuram, quantitatem et pondus: circa quae decipi non possumus, quia sensus circa propria sensibilia non decipitur." See also *Summa Theologica*, I, q. 78, a. 3, ad 2, "Size, shape, and the like, which are called common sensibles, are midway between accidental sensibles and proper sensibles, which are the objects of the senses. For the proper sensibles first, and of their very nature affect the senses; but the common sensibles are all reducible to quantity."

external sense grasps. The sensibile per accidens causes no modification in the sense as such as does the sensibile per se as we have shown earlier. But the accidental sensible is presented conjointly with that which is perceived per se, as when the white thing is at the same time a man. The accidental sensible is perceived simultaneously with the quality which is modifying his sensory organ.

The bodily substance of a thing is an accidental sensible object of the sense of sight, because the intellect apprehends it as the object of the colored thing. Perhaps we should recall here that, as we pointed out earlier, accidental refers to different aspects when taken from the view of the object than it does when taken from the view of the senses.

That which is prior in reality is found likewise to be prior in knowledge .... Substance is prior to accident both in nature, in so far as substance is the cause of accident, and in knowledge, in so far as substance is included in the definition of accident. Therefore, being is said of substance by priority over accident both according to nature and the meaning of the name. But when that which is prior in nature is subsequent in our knowledge, then there is not the same order of analogicals according to reality and according to the meaning of the name.<sup>155</sup>

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<sup>155</sup> S.C.G., I, 34, 5, "Quando igitur id quod est prius secundum rem, invenitur etiam cognitione prius, idem invenitur ... sicut substantia est prior accidente et natura, inquantum substantia est causa accidentis; et cognitione, inquantum substantia in definitione accidentis ponitur. Et ideo ens dicitur prius de substantia quam de accidente et secundum rei naturam et secundum nominis rationem. --

Aquinas gives us several instances of the way in which the bodily substance of a thing can be an accidental object of sight. "He who knows whiteness knows that which it receives more or less."<sup>156</sup> "The sight does not proceed discursively to know the stone whose likeness it possesses."<sup>157</sup> "Things attributed to the same thing according to diverse forms are predicated of one another by accident; a white thing is said to be musical by accident, because whiteness and musical are said to be accidental to Socrates."<sup>158</sup> He also has the example of our certainty that the bread and wine are really there in the eucharist because of the proper and common sensibles through which we perceive the substance.

The fact that in this sacrament the same actions appear which previously appeared in the substance of the bread and wine (they change the senses in the same way, let us say; they even in the same way alter the surrounding air, or anything else, by odor and color) now seems fitting enough from what has been said. For we said that in this sacrament the accidents of bread and wine persist. And among these are the sensible

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Quando vero id quod est prius secundum naturam, est posterius secundum cognitionem, tunc in analogicis non est idem ordo secundum rem et secundum nominis rationem ...."

<sup>156</sup> Ibid., I, 50, 7, "... sicut qui cognoscit albedinem, scit quod respicit magis et minus."

<sup>157</sup> Ibid., I, 57, 10, "... non enim visus discurrit ad lapidem cognoscendum cuius similitudo in visu est."

<sup>158</sup> Ibid., II, 58, 3, "Quae attribuuntur alicui eadem secundum diversas formas, praedicantur de invicem per accidens: album enim dicitur esse musicum per accidens, quia Socrati accidit albedo et musica."

qualities of bread and wine which are the principles of actions of this sort.<sup>159</sup>

"Also the likeness of fire is in sight and touch."<sup>160</sup>

Likewise by the sight of a thing one could not directly perceive the sound of a thing, but the imagination and memory are capable of adding the sound to the actual sensation of sight, and in this sense sound may be said to be an accidental object of the sense of sight. "Through color, sight is cognizant of both common and accidental sensibles."<sup>161</sup> "What sight knows by accident the imagination or common sense apprehends under its proper object."<sup>162</sup> And

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<sup>159</sup> Ibid., IV, 66, 2, "Quod enim in hoc sacramento eadem actiones appareant quae prius in substantia panis et vini apparebant, puta quod similiter immutent sensum, similiter etiam alterent aerem circumstantem, vel quodlibet aliud, odore aut colore: satis conveniens videtur ex his quae posita sunt. Dictum est enim quod in hoc sacramento remanent accidentia panis et vini: inter quae sunt qualitates sensibiles, quae sunt huiusmodi actionum principia."

<sup>160</sup> Ibid., II, 46, 6, "... sicut similitudo ignis est in visu vel tactu."

<sup>161</sup> Ibid., II, 83, 31, "... sicut per colorem cognoscit visus tam sensibilia communia quam sensibilia per accidens." See Aristotelis Librum de Anima Commentarium, III, I, 581, "For the senses perceive each others special objects indirectly, as sight that of hearing, and vice versa. Sight does not perceive the audible as such (for the eye takes no impression from the audible, nor the ear from the visible) but both objects are perceived by each sense only in so far as 'one sense', i.e. one actual sensation bears upon the object which contains both."

<sup>162</sup> S.C.G., I, 61, 5, "... unde illud quod visus cognoscit per accidens, sensus communis aut imaginatio apprehendit ut sub proprio objecto contentum."

the proper object of the imagination is broader than the common and proper sensibles for "the one power of imagination extends to all things that the five senses know and more besides."<sup>163</sup>

Without the aid of imagination and memory one who lacks the power of sight (one who lacks sight of all things) could not know the proper sensible of color. "A person who lacks one sense lacks, also, the knowledge of those sensible things which are known through that sense."<sup>164</sup> For example, "a man born blind is not able to achieve understanding of the quiddity of color simply because he understands the quiddity of sound."<sup>165</sup>

There also seems to be greater possibility of error in the sensory apprehension of accidental sensibles.

No cognitive power is deceived in regard to its proper object, but only in regard to something foreign to it. For instance, sight is not deceived in judging

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<sup>163</sup> Ibid., I, 65, 6, "... nam una vis imaginationis se extendit ad omnia quae quinque vires sensuum cognoscunt et ad plura."

<sup>164</sup> Ibid., II, 74, 5, "... qui caret aliquo sensu, caret scientia sensibilium quae cognoscuntur per sensum illum."

<sup>165</sup> Ibid., III, 41, 8, "... caecus enim natus, per hoc quod intelligit quidditatem soni, nullo modo potest pervenire ad intelligendam quidditatem coloris." See also Aristotelis Librum de Anima Commentarium, III, I, 579, "By sight we know whiteness directly, sweetness indirectly."

colors, but, when a man judges by sight concerning the taste of a thing, deception may occur in that case.<sup>166</sup>

Having now investigated the general characteristics of the external senses--with special emphasis on the objects of these external senses--we may conclude that for Aquinas sense means a material organ, serving mainly our cognition of outer reality. Because material, its proper object is the corporeal particular.

For Aquinas sense impressions are the only primary source of knowledge. There are no inborn ideas; nor are there any notions, within the material range of experience, infused into the mind by the divine influence. Stimulation of the senses by some object existing outside the organism is the necessary condition for the start of mental life. If a sense is lacking no corresponding ideas can be formed in the mind. Sense experience is achieved through external objects acting on the sense organs by means of material agents

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<sup>166</sup> S.C.G., III, 108, 4, "Nulla virtus cognoscitiva circa proprium obiectum decipitur, sed solum circa extraneum: visus enim non decipitur in iudicio colorum; sed, dum homo per visum iudicat de sapore vel de specie rei, in hoc deceptio accidit." Also Aristotelis Librum De Anima Commentarium, II, VI, 385, "But the senses can be deceived both about objects only incidentally sensible and about objects common to several senses. Thus sight would prove fallible were one to attempt to judge by sight what a colored thing was or where it was."

In the next chapter we will try to see how Aquinas applies these characteristics of the external senses in general to the particular sense of sight.

## CHAPTER III

## THE EXTERNAL SENSE OF SIGHT

In this treatment of the external sense of sight we will again use as our guide what Aquinas gives to us in the Summa Contra Gentiles. Usually when he uses an example for illustration from the external senses it is the sense of sight to which he makes reference. Accordingly we have chosen the sense of sight as the sense to use as a test case for the study of Aquinas' theory of external sense cognition.

In the previous chapter we traced the general characteristics of external sensation and gave special attention to the objects of the external senses.

In this chapter then, we will study how Aquinas applies the characteristics of the external senses and their objects to the particular sense of sight. We will begin by looking at the organ of sight and proceed to its object and the conditions which are necessary for the external sense of sight to properly perform its task. We will trace too, the scope of the power of sight.

## The Organ of Sight

Sight is one of the powers of the soul and its organ is the eye.

Nor is it incongruous that the soul, since it is a simple form, should be the act of parts so diverse in character. For in every case the matter is adapted to the form according to the latter's requirements. Now, the higher and simpler a form is the greater is its power; and that is why the soul, which is the highest of the lower forms, though simple in substance, has a multiplicity of powers and many operations. The soul, then, needs various organs in order to perform its operations, and of these organs the soul's various powers are said to be proper acts; sight of the eye ....<sup>1</sup>

The soul however is not dependent on this power for its existence and the animal is born without the actual use of the power of sight. "There is no privation of a thing unless one is born to possess that thing; in fact, a new born puppy is not said to be deprived of sight."<sup>2</sup>

The soul can lose the power of sight through destruction of the organ. "A form can be corrupted by the

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<sup>1</sup> S.C.G., II, 72, 5, "Quanto autem aliqua forma est nobilior et simplicior, tanto est maioris virtutis. Unde anima, quae est nobilissima inter formas inferiores, etsi simplex in substantia, est multiplex in potentia et multarum operationum. Unde indiget diversis organis ad suas operationes complendas, quorum diversae animae potentiae proprii actus esse dicuntur: sicut visus oculi, auditus aurium, et sic de aliis. Propter quod animalia perfecta habent maximam diversitatem in organis, plantae vero minimam." See also IV, 36, 7.

<sup>2</sup> Ibid., III, 144, 2, "Privatio enim alicuius non est nisi quando natum est haberi: non enim catulus mox natus dicitur visu privatus."

corruption of its subject: e.g., when the power of sight is destroyed through the destruction of the eye."<sup>3</sup>

While the soul could continue in the body without the power of sight, it does not seem that it could do so without the power of touch. "If the eye is destroyed vision fails. For this reason, when the organ of touch is corrupted, without which the animal cannot exist, the animal must die."<sup>4</sup> Yet for its perfection the animal needs the organ of the eye and "even though the eye is better than the foot, the animal would not be perfect unless it had both eye and foot."<sup>5</sup>

The organ of the eye is more specifically the pupil of the eye.<sup>6</sup> "The pupil, which receives all the species of colors, lacks all colors. For, if of itself it had any color, the latter would prevent it from seeing other colors;

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<sup>3</sup> *Ibid.*, II, 79, 10, "Nulla forma corrumpitur nisi ... per corruptionem autem sui subiecti, sicut, destructo oculo, destruitur vis visiva ...."

<sup>4</sup> *Ibid.*, III, 109, 4, "... corrupto oculo, visio deficit. Propter quod et, corrupto organo tactus, sine quo non potest esse animal, oportet quo animal moriatur."

<sup>5</sup> *Ibid.*, III, 137, 3, "Et quamvis sit melior oculus pede in corpore animalis, non tamen esset perfectum animal nisi haberet et oculum et pedem."

<sup>6</sup> *Ibid.*, II, 59, 13, "... sunt unum: sicut sensus in actu et sensibile in actu. ... sicut nec species coloris est sensata in actu secundum quod est lapide, sed solum secundum quod est in pupilla."

indeed it would see only under that color."<sup>7</sup>

The power of vision is absolutely dependent on the organ of sight.

That the operation of the sensitive soul cannot go on without the body is apparent from the fact that, with the corruption of the organ of sensation, the operation of sense is corrupted. For instance, if the eye is destroyed vision fails.<sup>8</sup>

But the act or form of the eye, sight, is due to the power or essence of the soul.

By the soul's essence it gives being to such and such a body; by its power it performs its proper operations. If the psychic operation is carried out by means of a bodily organ, then the power of the soul which is the principle of that operation must be the act of that part of the body whereby such an operation is performed; thus sight is the act of the eye.<sup>9</sup>

"It is on the soul that not only man's essence, but that of his single parts depends; with the soul gone, the eye is

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<sup>7</sup> *Ibid.*, II, 59, 3, "Sicut pupilla, quae recipit omnes species colorum, caret omni colore: si enim haberet de se aliquem colorem, ille color prohiberet videri alios colores; quinimmo nihil videretur nisi sub illo colore."

<sup>8</sup> *Ibid.*, III, 109, 4, "Quod autem operationes sensitivae animae non possint esse sine corpore, hinc apparet quod, corrupto aliquo organo sentiendi, corrumpitur operatio una sensus: sicut, corrupto oculo, visio deficit."

<sup>9</sup> *Ibid.*, II, 69, 5, "Secundum essentiam quidem suam dat esse tali corpori: secundum potentiam vero operationes proprias efficit. Si igitur operatio animae per organum corporale completur, oportet quod potentia animae quae est illius operationis principium, sit actus illius partis corporis per quam operatio eius completur: sicut visus est actus oculi." See also II, 57, 16.

only equivocally named, like a painted or a dead eye."<sup>10</sup>

### Object of Sight

The object of sight is the visible species. "No power is operative if the nature of its object is lacking; sight is inoperative in the absence of the actually visible."<sup>11</sup>

The actually visible species is the form of the power of sight, or of the eye itself. Now, the species understood is compared to the phantasms as the actually visible species to the colored thing outside the mind. Through the intelligible form, therefore, the possible intellect is in touch with the color present in the stone. But this color does not make the stone to see but only to be seen.<sup>12</sup>

The species is "visible because of its color."<sup>13</sup>

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<sup>10</sup> Ibid., IV, 32, 6, "Ex anima non solum ratio hominis, sed et singularium partium eius dependet: unde, remota anima, oculus, caro et os hominis mortui aequivoce dicuntur, sicut oculus pictus aut lapideus." See also IV, 37, 4; II, 72, 2-3.

<sup>11</sup> Ibid., II, 25, 10, "... nulla autem potentia operationem habet ubi deficit ratio sui obiecti, sicut visus non videt deficiente visibili in actu ...."

<sup>12</sup> Ibid., II, 59, 10, "Sic species intellecta in actu est forma intellectus possibilis, sicut species visibilis in actu est forma potentiae visivae, sive ipsius oculi. Species autem intellecta comparatur ad phantasmata sicut species visibilis in actu ad coloratum quod est extra animam: et hac similitudine ipse utitur .... Similis igitur continuatio est intellectus possibilis per formam intelligibilem ad phantasma quod in nobis est, et potentiae visivae ad colorem qui est in lapide. Haec autem continuatio non facit lapidem videre, sed solum videri."

<sup>13</sup> Ibid., IV, 48, 3, "... dicitur enim simpliciter homo esse ... visibilis, propter colorem." See also II, 59, 3.

"It is the color by which we sense."<sup>14</sup> "The visual power is actually perfected by the species of color."<sup>15</sup> And "sight cannot function in the absence of color."<sup>16</sup> "Under color are included all colors essentially visible."<sup>17</sup> Color is an external accident which is a proper sensible of the power of sight.<sup>18</sup> Through the proper sensibles sight can attain also to common and accidental sensibles.<sup>19</sup>

The organ of sight, then, is "receptive of colors ... and necessarily, in potentiality to all colors."<sup>20</sup> It is

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<sup>14</sup> Ibid., III, 41, 2, "Intellectus enim noster, secundum statum praesentem, nihil intelligit sine phantasmate, quod ita se habet ad intellectum possibilem, quo intelligimus, sicut se habent colores ad visum ...."

<sup>15</sup> Ibid., III, 42, 9, "... per eam perficitur in actu, sicut vis visiva per speciem coloris."

<sup>16</sup> Ibid., II, 80, 6, "... ut colores ad visum: unde, sicut visus non potest viderè sine coloribus ...."

<sup>17</sup> Ibid., II, 83, 31, "... sicut sub colore comprehenduntur omnes colores, qui sunt per se visibiles."

<sup>18</sup> Ibid., IV, 1, 4, "Nam cum sensus, unde nostra cognitio incipit, circa exteriora accidentia versetur, quae sunt secundum se sensibilia, ut color ...." See also IV, 62, 10; and IV, 11, 15.

<sup>19</sup> Ibid., II, 83, 31, "... sicut per colorem cognoscit visus tam sensibilia communia quam sensibilia per accidens." Sight for example can determine distance to the extent that it is affected by distance. See also Aristotelis Librum De Anima Commentarium, II, VII, 435.

<sup>20</sup> S.C.G., II, 82, 13, "Diversi sensus sunt susceptivi diversorum sensibilium: sicut visus colorum ... nam organum visus oportet esse in potentia ad omnes colores ...."

"the visible thing that moves the power of sight in the natural order, as any object moves a passive potency."<sup>21</sup> Or rather, "the proximate mover of the power of sight is its object which is color."<sup>22</sup> "No cognoscitive power knows a thing except under the rational character of its proper object. For instance, we do not know anything by sight except as it is colored."<sup>23</sup>

#### Color Adheres to a Surface

Color is light as reflected by a surface, "for example, as surface is said to be colored."<sup>24</sup> "Whiteness, for example, is said to color a wall."<sup>25</sup> "Qualities are received

<sup>21</sup> Ibid., III, 10, 13, "... movet enim secundum ordinem naturalem visibile visum, et quodlibet obiectum potentiam passivam."

<sup>22</sup> Ibid., III, 88, 2, "Proximum autem motivum voluntatis est bonum intellectum, quod est suum obiectum, et movetur ab ipso sicut visus a colore."

<sup>23</sup> Ibid., III, 56, 5, "Nulla virtus cognoscitiva cognoscit rem aliquam nisi secundum rationem proprii obiecti: non enim visu cognoscimus aliquid nisi in quantum est coloratum." This quotation also shows that it is the thing itself (material object) that we see through color (formal object) as Aquinas also indicates in the Summa Theologica, I, q. 45, a. 4, ad I, "... we say that the first visible thing is color, although strictly speaking, the thing colored is what is seen."

<sup>24</sup> S.C.G., II, 58, 4, "... sicut dicitur superficies colorata."

<sup>25</sup> Ibid., IV, 63, 9, "Deinde qualitates in substantia recipiuntur quantitate mediante, sicut color mediante superficie ...."

in the substance with the quantity as medium."<sup>26</sup> "As in the case of a thing that is one being accidentally as when it is made from color and a body."<sup>27</sup> "The species of color in the eye is not that which is seen but that by which we see."<sup>28</sup>

Because color is found only in extended objects, extension itself can be seen so far as it is affected by color. "Through color sight is cognizant of both common and accidental sensibles."<sup>29</sup> Colors adhere in the object as accidents adhere in their subject, "the accidents of bread and wine, color, taste, odor ...."<sup>30</sup> "... as white from whiteness. Yet in no case is a thing denominated from a relation as existing outside it, but only as adhering in it."<sup>31</sup> As is true of the proper sensibles adhering in their subject, it is also true of the common sensibles for "the accidents of

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<sup>26</sup> Ibid., III, 9, 6, "... per quem modum dicitur albedo parietem colorare quia est ipse parietis color."

<sup>27</sup> Ibid., III, 42, 10, "... sic enim ex colore et corpore fit unum secundum esse accidentale."

<sup>28</sup> Ibid., II, 75, 7, "... sicut et species coloris in oculo non est id quod videtur, sed id quo videmus."

<sup>29</sup> Ibid., II, 83, 31, see footnote 19.

<sup>30</sup> Ibid., IV, 62, 10, "... omnia accidentia panis et nisi scilicet colorem, saporem, odorem ...."

<sup>31</sup> Ibid., II, 13, 3, "... sicut ab albedine albus. A relatione vero non invenitur aliquid denominari quasi exterius existente, sed inhaerente ...."

bread and wine ... figure, quantity, and weight."<sup>32</sup> "For the same body is both figured and colored."<sup>33</sup>

Light is a Necessary Condition in the Medium  
for the Seeing of Color

Colors are made actually visible by light. "Sight in every color sees light."<sup>34</sup> "In a certain way light makes potential colors to be colors actually, i.e. so far as it makes them actually visible."<sup>35</sup> So we can say that light is the form of the color. "Nor is form being itself, but between them there is the relation of order, because form is compared to being itself as light to illuminating."<sup>36</sup>

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<sup>32</sup> *Ibid.*, IV, 62, 10, "... omnia accidentia panis et vini ... figuram, qualitatem et pondus ...."

<sup>33</sup> *Ibid.*, I, 55, 2, "... sicut idem corpus est figuratum et coloratum."

<sup>34</sup> *Ibid.*, I, 80, 2, "... sicut visus in omni color videt lumen." See also *Aristotelis Librum De Anima Commentarium*, II, VII, 431, "... we are now clear that what is seen in light is color and that color is invisible without light; and this because, as has been explained, color of its nature acts upon a transparent medium, which is the latter's actuality. Hence light is necessary if color is to be seen." See also II, VII, 405, "... light is necessary for seeing ...."

<sup>35</sup> *S.C.G.*, II, 78, 2, "... quod est sicut lumen: quodam enim modo lumen facit potentia colores esse actu colores, inquantum scilicet facit eos visibiles actu ...."

<sup>36</sup> *Ibid.*, II, 54, 4, "... nec forma est ipsum esse sed se habent secundum ordinem: comparatur enim forma ad ipsum esse, sicut lux ad lucem ...."

As every power is directed to its object and to the formal aspect of the object by one operation or one act, so by the same sight we see light and color which becomes visible in act through light. ... light is to color as the formal aspect of the object is to the object.<sup>37</sup>

While "colors existing outside the soul are in the presence of light actually visible, as having the power to move sight, they are not actually visible in the sense of being actually perceived as the result of becoming one with the sense power in act."<sup>38</sup> They are still only one with the sense power in act, potentially.

The ultimate source of light is the sun for the "light of the sun is the principle of all visible perception."<sup>39</sup> "These visible objects are seen by the light of the sun. Yet it is obvious that they are not seen in the actual body of the sun, but through its light, which is a

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<sup>37</sup> Ibid., I, 76, 2, "Omnis enim virtus una operatione, vel uno actu, fertur in obiectum et in rationem formalem obiecti: sicut eadem visione videmus lumen et colorem, qui fit visibilis actu per lumen. ... sicut ratio formalis ad obiectum, ut lumen ad colorem."

<sup>38</sup> Ibid., II, 59, 14, "Coloris enim extra animam existentes, praesente lumine, sunt visibiles actu ut potentes movere visum: non autem ut actu sensata, secundum quod sunt unum cum sensu in actu." Nor is the eye the source of light as Aquinas points out in Commentarium in Librum De Sensu et Sensato, I, III, 46, "Et sic lumen extra pervenit, quanto magis fuerit expansum, ab interiori procedens. Vel quod dicit "circulo" referendum est ad circularitatem pupillae."

<sup>39</sup> S.C.G., I, 10, 6, "Sicut enim lux solis principium est omnis visibilis perceptionis ...."

likeness in the air of the solar brilliance transmitted to suitable bodies."<sup>40</sup>

#### Air is the Medium for Light

As the previous text also indicated, air is the medium in which colors become visible by light.

The possible intellect by its very nature is in potentiality with respect to the species actually intelligible, so that it bears the same relationship to them as a transparent medium to light or to color-species. A thing equipped by nature to receive a certain form needs no further disposition to that form ....<sup>41</sup>

Air is the proper subject of light because of its quality of transparency. "Transparency is in relation to the air as the principle of illumination in that it makes the air the proper subject of light."<sup>42</sup> "And an act is followed by a preparedness for a further act; the act of

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<sup>40</sup> Ibid., III, 47, 7, "... sicut haec visibilia in lumine solis, quae constat non videri in ipso corpore solis, sed per lumen, quod est similitudo solaris claritatis in aere et similibus corporibus relictata."

<sup>41</sup> Ibid., II, 76, 9, "Quia intellectus possibilis secundum suam naturam est in potentia ad species intelligibiles actu: unde comparatur ad eas sicut diaphanum ad lucem vel ad species coloris. Non autem indiget aliquid in cuius natura est recipere formam aliquam ...." See also Commentarium in Librum de Sensu et Sensato, I; II, 28, "... inveniuntur principia coloris, quae sunt diaphanum et lux; et ideo plura manifestantur per visum."

<sup>42</sup> S.C.G., II, 54, 5, "... sicut diaphanum est aeri principium lucendi quia facit eum proprium subiectum luminis."

transparency is followed by an order to the act of light."<sup>43</sup>

It is in the medium of air that color and light meet as the immediate "formal" object of sight.

Whenever two things are united in one subject, one of them is like the form of the other. Thus, when color and light are present in a diaphanous body as their subject, one of them, namely, light, must be like the form of the other, namely, color. Now this is necessary when they have an ordered relationship to each other ....<sup>44</sup>

The air is always in a preparedness to receive light because it is perfectly disposed to receive light.

Successiveness in the making of things, moreover, derives from a defect of the matter, which is not suitably disposed from the beginning for the reception of the form; so that, when the matter is already perfectly disposed for the form, it receives it immediately. For instance, because a transparent body is always in a state of complete readiness to receive light, it is illuminated at once by the presence of a luminous object; nor is there here any antecedent motion on the part of the illuminable thing, but only the illuminating agent's local motion by which it becomes present ...

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<sup>43</sup> *Ibid.*, II, 62, 12, "... sed actus: praeparatio enim est ordo potentiae ad actum. Sequitur tamen ad actum aliqua praeparatio ad ulteriorem actum: sicut ad actum diaphanitatis sequitur ordo ad actum lucis."

<sup>44</sup> *Ibid.*, III, 43, 3, "Quaecumque autem conveniunt in uno subiecto, alterum eorum est sicut forma alterius: sicut, cum color et lux sint in diaphano sicut in subiecto, oportet quod alterum, scilicet lux, sit quasi forma alterius, scilicet coloris. Hoc autem necesse est quando habent ordinem ad invicem ...."

simultaneously--as a thing at the same moment is being illuminated and is illuminated.<sup>45</sup>

One way in which colors can fail to be visible is by taking away the light. "A form can be corrupted by the failure of its cause as when the air's illumination fails through the failure of its cause, the sun, to be present."<sup>46</sup> "Whatever belongs to the nature of a higher type of being does not last at all after the action of the agent; light, for instance, does not continue in the diaphanous body when the source of the light has gone away."<sup>47</sup>

There is no doubt that the manifestation of color is dependent on light, which is ultimately from the sun.

It is obvious that every action which cannot continue after the influence of a certain agent has ceased

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<sup>45</sup> *Ibid.*, II, 19, 6, "Successio in rerum factionibus ex defectu materiae provenit, quae non convenienter est a principio ad receptionem formae disposita: unde, quando materia iam perfecte disposita est ad formam, eam recipit in instanti. Et inde est quod, quia diaphanum semper est in ultima dispositione ad lucem, statim ad praesentiam lucidi in actu illuminatur; nec aliquis motus praecedit ex parte illuminabilis, sed solum motus localis ex parte illuminantis, per quem fit praesens. ... sicut simul illuminatur et illuminatum est."

<sup>46</sup> *Ibid.*, II, 79, 10, "Nulla forma corrumpitur nisi ... vel per defectum autem causae, sicut lumen aeris deficit deficiente solis praesentia, quae erat ipsius causa."

<sup>47</sup> *Ibid.*, III, 65, 7, "Quod autem pertinet ad naturam superioris generis, nullo modo manet post actionem agentis: sicut lumen non manet in diaphano, recedente illuminante."

results from the agent. The manifestation of colors, for example, could not continue if the sun's action of illuminating the air were to cease, so there is no doubt that the sun is the cause of the manifestation of colors.<sup>48</sup>

#### Air as the Medium for Color

While air is the medium for light it is also the medium for the colors for "they (sensible qualities) change the senses in the same way, let us say; they even in the same way alter the surrounding air, or anything else by ... color. Among these are sensible qualities which are principles of actions of this sort."<sup>49</sup>

The power of sight is able to reach its object at a distance because of the use of the medium and this would not be possible without the medium.

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<sup>48</sup> Ibid., III, 67, 3, "Manifestum est quod omnis actio quae non potest permanere cessante impressione alicuius agentis, est ab illo agente: sicut manifestatio colorum non potest esse cessante actione solis qua aerem illuminat, unde non est dubium quin sol sit causa manifestationis colorum."

<sup>49</sup> Ibid., IV, 66, 2, "... puta quod similiter immutent sensum, similiter etiam alterent aerem circumstantem, vel quodlibet aliud, odore aut colore ... inter quae sunt qualitates sensibiles, quae sunt huiusmodi actionum principia." Water is like air in that it receives color from without. See Commentarium in Librum de Sensu et Sensato, I, VI, 90, "Illa autem quae colorantur ab exteriori, sunt perspicua, sicut aer et aqua: et hoc manifestat per colorem, qui apparet in aurora ex resplendentia radiorum solis et aliqua corpora." This text was used mainly to note that water can also be a medium for light and color.

The stronger the power of the agent is, the farther does its operation extend to more and more remote effects. For instance, the bigger a fire is, the farther away are the things it heats. But it does not occur in the case of an agent that acts without a medium, for whatever it acts on is adjacent to it.<sup>50</sup>

"Colors made actually visible by light unfailingly impress their likeness upon the transparent body and, consequently, upon their power of sight."<sup>51</sup>

#### Light is not Itself an Object of Sight

Light as light is not the object of sight but is a "principle of the act of seeing."<sup>52</sup> It is moreover, a

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<sup>50</sup> S.C.G., III, 77, 3, "Quanto virtus alicuius agentis est fortior, tanto in magis remota suam operationem extendit: sicut ignis, quanto est maior, magis remota calefacit. Hoc autem non contingit in agente quod non agit per medium: quia quidlibet in quod agit, est sibi proximum." That a medium is required for seeing is shown also in Aristotelis Librum de Anima Commentarium, II, VII, 432, "... if a colored body is placed upon the organ of sight it cannot be seen; for then there remains no transparent medium to be affected by the color .... There has to be a medium, say air or something of the kind, which; being actualized by color, itself acts upon the organ of sight as upon a body continuous with itself." So also he shows that a vacuum is not a suitable medium for color. Ibid., II, VII, 433, "But a vacuum is not a medium, it cannot receive or transmit effects from the object."

<sup>51</sup> S.C.G., II, 76, 10, "Colores facti visibiles actu per lucem pro certo imprimunt suam similitudinem in diaphano, et per consequens in visum." See also Aristotelis Librum de Anima Commentarium, II, XI, 544, "Nor is this something to be understood in the order of time only, for in sight the medium is affected by the visible and the eye by the medium, and yet sight occurs without succession in time."

<sup>52</sup> S.C.G., III, 150, 8, "... lux, quae est principium videnti."

necessary principle and "hence we see that the visual power is only receptive of colors, which are illuminated by light."<sup>53</sup> Light and color are so closely associated in the process of visual sensation that "corporeal vision is not accomplished without light. ... as light in a way makes things actually visible."<sup>54</sup> And "sight in every color sees light."<sup>55</sup>

Every power is directed to its object and the formal aspect of the object by one operation or one act. By the same sight, for example, we see light and color which becomes visible in act through light. As light is to color so the formal aspect of the object is to the object.<sup>56</sup>

It would also be correct to say that when there is no light color cannot be seen.

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<sup>53</sup> Ibid., III, 45, 6, "... unde videmus quod visus non est susceptivus nisi colorum, qui illuminantur per lucem."

<sup>54</sup> Ibid., III, 53, 6, "Et quia corporalis visio non completur nisi per lucem ... sicut lux facit quodammodo visibilia in actu."

<sup>55</sup> Ibid., I, 80, 2, "... sicut visus in omni colore videt lumen."

<sup>56</sup> Ibid., I, 76, 2, "Omnis enim virtus una operatione, vel uno actu, fertur in obiectum et in rationem formalem obiecti: sicut eadem visione videmus lumen et colorem, qui fit visibilis actu per lumen. ... sicut ratio formalis ad obiectum, ut lumen ad colorem." In Aristotelis Librum de Anima Commentarium, II, VII, 424, Aquinas says "... light is necessary for seeing, not because of color, in that it actualizes colors (which some say are only in potency so long as they are only in darkness), but because of the transparent medium which light renders actual." And also II, VII, 425, "... note that every form is, as such, a principle of effects resembling itself. Color, being a form, has therefore in itself the power to impress its likeness on the medium."

## The Nature of Color

"White is said to be the measure of all colors."<sup>57</sup>

"That which is the measure in any given genus is most perfect in that genus. That is why all colors are measured by white."<sup>58</sup> "In colors one species is found to be more perfect than another the nearer it approaches to whiteness."<sup>59</sup>

Since color is the object of sight, and white is the perfection of color, it follows that the whiter a thing is the more suitable an object of sight it is. "If a white thing is 'set apart from the surroundings' as an object of sight, a whiter thing is still more 'set apart' as an object for sight."<sup>60</sup> "Something is said to be more or less white according to the mode in which its whiteness is completed."<sup>61</sup>

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<sup>57</sup> S.C.G., I, 28, 8, "... sicut album dicitur esse mensura in omnibus coloribus ...."

<sup>58</sup> Ibid., I, 62, 5, "Illud quod est mensura in unoquoque genere, est perfectissimum illius generis: unde omnes colores mensurantur albo."

<sup>59</sup> Ibid., II, 95, 2, "... in coloribus etiam una species alia perfectior invenitur, secundum quod est albedini propinquior."

<sup>60</sup> Ibid., III, 139, 16, "... sequitur autem, si album est disgregativum visus, quod magis album sit magis disgregativum visus." Disgregativum must be understood here as "separated from". See Roy J. DEFERRARI, op. cit., p. 304.

<sup>61</sup> S.C.G., I, 43, 2, "Dicitur enim aliquid magis vel minus album secundum modum quo in eo sua albedo completur."

Yet under certain conditions of too bright a light, a white object might not be perfectly visible because "sense objects of extreme character are beyond the capacity of sense power."<sup>62</sup>

"Whiteness does not subsist as a singular through itself but is individuated through its existing subjects."<sup>63</sup>

If there were a separately existing whiteness, it could not lack any power of whiteness. For a given white thing lacks something of the power of whiteness through a defect in the receiver of the whiteness, which receives it according to its mode and perhaps not according to the whole power of whiteness.<sup>64</sup>

Whiteness is a sort of accident.<sup>65</sup> And "we cannot say that the whole whiteness is in each part."<sup>66</sup>

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<sup>62</sup> Ibid., III, 54, 9, "... extraneum ab ipso, sicut est sonus a visu, vel substantia immaterialis a sensu .. excellentia sensibilium sunt extra facultatem sensus."

<sup>63</sup> Ibid., I, 21, 4, "... quia albedo non est per se singulariter subsistens, sed individuatur per subiectum subsistens."

<sup>64</sup> Ibid., I, 28, 2, "... sicut, si esset aliqua albedo separata, nihil ei de virtute albedinis deesse posset; nam alicui albo aliquid de virtute albedinis deest ex defectu recipientis albedinem, quae eam secundum modum suum recipit, et fortasse non secundum totum posse albedinis."

<sup>65</sup> Ibid., III, 7, 11, "... quasi accidens, sicut albedo vel nigredo."

<sup>66</sup> Ibid., II, 72, 4, "Secus autem est de totalitate quae per accidens attribuitur formis: sic enim non possumus dicere quod tota albedo sit in qualibet parte."

Every act inhering in another is terminated by that in which it inheres, since what is in another is in it according to the mode of the receiver. Hence an act that exists in nothing is terminated in nothing. Thus, if white were self-existing, the perfection of whiteness in it would not be terminated so as not to have whatever can be had of the perfection of whiteness.<sup>67</sup>

Of course, what is said of whiteness as an accident inhering in a singular would be true of all colors.

While white is a "perfect condition, black is imperfect, connoting something of privation."<sup>68</sup> Black, like evil,<sup>69</sup> is "nothing other than the privation of a due perfection."<sup>70</sup> "What is not mixed with black is more white."<sup>71</sup> "Just as truth is not compatible with falsity, so neither is whiteness with blackness."<sup>72</sup> "When a thing changes from

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<sup>67</sup> Ibid., I, 43, 5, "Omnis actus alteri inhaerens terminationem recipit ex eo in quo est: quia quod est in altero, est in eo per modum recipientis. Actus igitur in nullo existens nullo terminatur: puta, si albedo esset per se existens, perfectio albedinis in ea non terminaretur, quominus haberet quicquid de perfectione albedinis haberi potest."

<sup>68</sup> Ibid., III, 9, 5, "... sicut album et calidum sunt perfecta, frigidum vero et nigrum sunt imperfecta, quasi cum privatione significata."

<sup>69</sup> Ibid., I, 71, 13, "Aut quomodo malum cognoscit, aut nigrum? Contraria enim quodammodo cognoscit."

<sup>70</sup> Ibid., I, 71, 5, "... malum, quod nihil est aliud quam privatio debitae perfectionis."

<sup>71</sup> Ibid., I, 41, 5, "Sicut albius est quod est nigro impermixtius ...."

<sup>72</sup> Ibid., I, 61, 2, "Veritas enim falsitatem non compatitur: sicut nec albedo nigredinem."

white to black, the white is corrupted and black comes into being."<sup>73</sup>

The conversion of white into black is an accidental change, a "natural conversion in which the subject (color) persists and in which different forms succeed themselves ...."<sup>74</sup> "If from white a thing is made black, it indeed, is made both black and colored; but black through itself, because it is made from not-black, and colored by accident, since it was colored before."<sup>75</sup>

"White and black are not contraries in the intellect, since they do not exclude one another; rather they are co-implicative, since by grasping the one we understand the other."<sup>76</sup>

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<sup>73</sup> Ibid., III, 4, 4, "... sicut, cum aliquid alteratur de albo in nigrum, corrumpitur album et fit nigrum."

<sup>74</sup> Ibid., IV, 63, 6, "Nam in qualibet conversione naturali manet subiectum, in quo succedunt sibi diversae formae, vel accidentales, sicut cum album in nigrum convertitur ...." See also Aristotelis Librum de Anima Commentarium, II, XI, 521, "... all contraries found in the visible have but one subject, color."

<sup>75</sup> S.C.G., II, 21, 10, "... ut, si ex albo fiat nigrum, fit quidem et nigrum et coloratum, sed nigrum per se, quia fit ex non nigro, coloratum autem per accidens, nam prius coloratum erat."

<sup>76</sup> Ibid., II, 55, 7, "... album enim et nigrum in intellectu non sunt contraria; non enim se expellunt, immo magis se consequuntur, per intellectum enim unius eorum intelligitur aliud."

## The Product of Visual Perception

The end product of the act of sensory vision is the union of the species of color and the pupil of the eye.

Both are in potency, as likewise appears in the case of the senses. For neither the sight is seeing in act, nor is the visible object seen in act, except when the sight is informed by the species of the visible object, so that thereby from the sight and the object something one results.<sup>77</sup>

"The visible in act is the form of the power of sight."<sup>78</sup>

"The likeness of one thing can be found in another cognitively--e.g., the likeness of fire is in sight ...."<sup>79</sup> "The sense in act and the sensible in act are one. The species of color is not actually perceived as it exists in stone, but only as it exists in the pupil."<sup>80</sup> "Those things whose species are in the knower are comprehended without discursive reasoning. For the sight does not proceed discursively to know the stone whose likeness it possesses."<sup>81</sup>

<sup>77</sup> Ibid., I, 51, 6, "... nam neque visus et videns actu, neque visibile videtur actu, nisi cum visus informatur visibilis specie, ut sic ex visu et visibili unum fiat."

<sup>78</sup> Ibid., II, 59, 10, "... sicut species visibilis in actu est forma potentiae visivae ...."

<sup>79</sup> Ibid., II, 46, 6, "Similitudo autem unius invenitur in altero dupliciter ... alio modo, secundum cognitionem, sicut similitudo ignis in visu ...."

<sup>80</sup> Ibid., II, 59, 13, see footnote 6.

<sup>81</sup> Ibid., I, 57, 10, "Absque rationis discursu comprehenduntur ea quorum species sunt in cognoscente: non enim visus discurrit ad lapidem cognoscendum cuius similitudo in visu est."

## The Scope of the Power of Sight

Sight is not deceived in regard to its proper object, the proper sensible of color. "... the things which we perceive with the senses, all the accidents of bread and wine, namely of color, taste, odor, figure, quantity, and weight; concerning these we cannot be deceived, for the sense is never deceived about the proper sensible."<sup>82</sup> (In this text Aquinas seems to be using figure, quantity and weight as proper sensibles in as much as he is considering the aspects of color or touch by which we perceive the common sensible, i.e. through the proper sensibles.)

In another text Aquinas shows that a sense does not fail in the knowing of its proper object but it can fail if there be some defect in the sense itself.

No cognoscitive power fails in the knowing of its proper object unless because of some defect or corruption in itself, since it is ordered according to its own rational character to the knowledge of its object. Thus, sight does not fail in the knowing of color unless there be some corruption present in the sight itself. But all defect or corruption are apart from nature, because nature intends the being and perfection of a thing.

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<sup>82</sup> Ibid., IV, 62, 10, "... ex his quae in hoc sacramento sensu percipimus. Sentimus enim manifeste ... omnia accidentia panis et vini scilicet colorem, saporem, odorem, figuram, quantitatem, et pondus: circa quae decipi non possumus, quia sensus circa propria sensibilia non decipitur."

So it is impossible that there be any cognitive power which naturally falls short of the right judgment of its object.<sup>83</sup>

There are several other subjective conditions under which a sense can fail in the apprehension of its proper object.

If a person ceases to see what he formerly saw, this cessation will be either because his power of sight fails him, as when one dies or goes blind, or because he is impeded in some other way as when he turns away his glance from a thing which he formerly saw, or because the object is taken away.<sup>84</sup>

"No power is operative if the nature of its object is lacking; sight is inoperative in the absence of the actually visible."<sup>85</sup>

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<sup>83</sup> Ibid., III, 107, 10, "Nulla potentia cognoscitiva deficit a cognitione sui obiecti nisi propter aliquem defectum aut corruptionem suam, cum secundum propriam rationem ad cognitionem talis obiecti ordinatur: sicut visus non deficit a cognitione coloris nisi aliqua corruptione circa ipsum existente. Omnis autem defectus et corruptio est praeter naturam: quia natura intendit esse ad perfectionem rei. Impossibile est igitur quod sit aliqua virtus cognoscitiva quae naturaliter deficiat a recto iudicio sui obiecti."

<sup>84</sup> Ibid., III, 62, 6, "Si aliquis videre desinat quod prius videbat, aut hoc erit quia deficit ei facultas videndi, sicut cum aliquis moritur vel caecatur, vel aliquo aliter impeditur; aut erit quia non vult amplius videre, sicut cum quis avertit visum a re quam prius videbat; vel quia obiectum subtrahitur." See also II, 25, 7 & 10-12.

<sup>85</sup> Ibid., II, 25, 10, see footnote 11.

Aquinas says further of blindness that it "is not universal non-being, but rather, this particular non-being whereby sight is taken away. So, it is not present in the power of sight as its subject, but, rather, in the animal."<sup>86</sup>

"Evil does away completely with the good that is its contrary as blindness does with sight."<sup>87</sup> "If the eye is destroyed the power of sight fails."<sup>88</sup> Yet, "no matter how much the power of sight may seem to be weakened, if the organ of sight be restored, then the power of sight is restored."<sup>89</sup>

"Likewise a sense knows neither itself nor its operation; for instance, sight neither sees itself nor sees that it sees."<sup>90</sup> "Since nothing receives what it already has ... the recipient must be devoid of the thing received."<sup>91</sup>

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<sup>86</sup> Ibid., III, 11, 7, "Caecitas enim non est non ens universale, sed non ens hoc, quo scilicet tollitur visus: non est igitur in visu sicut in subiecto, sed in animali."

<sup>87</sup> Ibid., III, 12, 5, "Ex praemissis enim manifestum est quod malum totaliter bonum cui oppositum est tollit, sicut caecitas visum ...."

<sup>88</sup> Ibid., III, 109, 4, "... sicut, corrupto oculo, visio deficit."

<sup>89</sup> Ibid., II, 79, 11, "... videmus autem quod, quantumcumque vis visiva restauratur ... quod, si senex accipiat oculum iuvenis, videret utique sicut iuvenis."

<sup>90</sup> Ibid., II, 66, 5, "Nullus sensus seipsum cognoscit, nec suam operationem: visus enim non videt seipsum, nec videt se videre ...."

<sup>91</sup> Ibid., II, 73, 32, "Nihil recipit quod iam habet: quia recipiens oportet esse denudatum a recepto ...."

Nor is the sense of sight able to know universals because it cannot receive an immaterial form. The eye is able to begin the knowing process because it takes forms from particular things. "But the forms found in particular things are imperfect because they are there in a particular way and not according to the community of their natures."<sup>92</sup> "Accordingly many whitenesses cannot be apprehended except as they are in different subjects."<sup>93</sup>

... matter and the conditions of matter whereby a particular thing is individuated .... Therefore, the sensitive powers are unable to know universals; they cannot receive an immaterial form, since whatever is received by them is always received in a corporeal organ.<sup>94</sup>

One sense can also be deceived when it judges on the proper object of another sense.

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<sup>92</sup> *Ibid.*, I, 44, 8, "Sed formae in rebus particularibus existentes sunt imperfectae: quia partialiter, et non secundum communitatem suae rationis."

<sup>93</sup> *Ibid.*, IV, 65, 4, "... et inde est quod non possunt apprehendi multae albedines nisi secundum quod sunt in diversis subiectis ...."

<sup>94</sup> *Ibid.*, II, 75, 8, "... a materia et conditionibus materiae, quibus aliquid individuatur. Et ideo potentiae sensitivae non possunt cognoscere universalia: quia non possunt recipere formam immaterialem, cum recipiant semper in organi corporali."

... so no cognitive power is deceived in regard to its proper object but only in regard to something foreign to it. For instance, sight is not deceived in judging colors, but when a man judges by sight concerning the taste or species of a thing, deception may occur in that case.<sup>95</sup>

The eye cannot take in the formal, proper, object of another sense. "... in a thing that is at once white and sweet, sight knows only the whiteness, taste only the sweetness."<sup>96</sup> So also is "sound foreign from the object of vision, as an immaterial substance is from sense power. Also objects of extreme character are beyond the capacity of sense power."<sup>97</sup> Nor can any light that "is added to the power of vision elevate this power to a vision of things which exceed the capacity of bodily sight, for the power of sight can see colored objects only."<sup>98</sup>

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<sup>95</sup> *Ibid.*, III, 108, 4, "Nulla virtus cognoscitiva circa proprium obiectum decipitur, sed solum circa extraneum: visus enim non decipitur in iudicio colorum; sed, dum homo per visum iudicat de sapore vel de specie rei, in hoc deceptio accidit."

<sup>96</sup> *Ibid.*, II, 75, 8, "... enim una res et alba et dulcis; visus tamen cognoscit solam albedinem, et gustus solam dulcedinem."

<sup>97</sup> *Ibid.*, III, 54, 9, "... extraneum ab ipso, sicut est sonus a visu, vel substantia immaterialis a sensu ... excellentia sensibilibus sunt extra facultatem sensus." See also II, 83, 31.

<sup>98</sup> *Ibid.*, III, 54, 2, "Nullum enim lumen adveniens visui potest visum elevare ad videndum ea quae naturalem facultatem visus corporalis excedunt; non enim potest visus videre nisi colorata."

It is only "through the power existing in this person and not in another that one is able to hear and to see."<sup>99</sup> Nor can the sight see objects when the source of light fails as we have shown.<sup>100</sup>

Sense is not corrupted by a corruption proper to itself except on account of the exceedingly high intensity of its object. Therefore, sight is corrupted by very brilliant objects, hearing by very loud sounds, etc. Now, I say by corruption proper to the thing itself because the sense is corrupted also accidentally through its subject being corrupted.<sup>101</sup>

Only the eye can perform the task of sensory vision.

To understand the quiddity of one sensible thing it is not enough to understand the quiddity of another sensible thing. For instance, a man born blind is not able to achieve understanding of the quiddity of color simply because he understands the quiddity of sound.<sup>102</sup>

"A man born blind has neither knowledge nor any understanding

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<sup>99</sup> *Ibid.*, II, 89, 2, "... nam videre et audire convenit alicui per virtutem aliquam in ipso existentem, non in alio."

<sup>100</sup> *Ibid.*, II, 79, 10, see footnote 46.

<sup>101</sup> *Ibid.*, II, 55, 10, "Sensus autem propria corruptione non corrumpitur nisi propter excellentiam sui obiecti: sicut visus a valde fulgidis, et auditus a fortibus sonis, et sic de aliis. Dico autem propria corruptione: quia sensus corrumpitur etiam per accidens propter corruptionem subiecti."

<sup>102</sup> *Ibid.*, III, 41, 8, "Sed intelligere quidditatem unius sensibilis non sufficit ad intelligendam quidditatem alterius sensibilis: caecus enim natus, per hoc quod intelligit quidditatem soni, nullo modo potest pervenire ad intelligendam quidditatem coloris." See also II, 83, 32.

of colors."<sup>103</sup> "To be seeing and blind is to be seeing and not seeing ... opposites cannot exist in the same subject at the same time in the same respect."<sup>104</sup>

Finally, the eye is an organ which is initially able to present an object of desire. "The origin of bodily love lies in the vision accomplished through the bodily eye."<sup>105</sup> "Brute animals delight in ... sights only to the extent that they signify for them food or sex, the sole object of their pleasures."<sup>106</sup>

We have been able, in this chapter, to discover a rather complete treatment of the sense of sight. Many of the principles learned here could be applied to the other senses even though we shall not do this in this work.

In this chapter we have seen that color is the "formal" object of the power of sight, the medium through

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<sup>103</sup> Ibid., II, 83, 26, "... sicut caecus natus nullam scientiam habet nec aliquid intelligit de coloribus."

<sup>104</sup> Ibid., II, 25, 12, "... si est videns et caecum, quod sit videns et non videns ... non possit facere opposita simul inesse eidem secundum idem."

<sup>105</sup> Ibid., III, 118, 2, "Sicut enim amationis corporalis principium est visio quae est per oculum corporalem ...."

<sup>106</sup> Ibid., II, 82, 5, "Delectationes autem brutorum animalium omnes referuntur ad conservantia corpus non enim delectantur in ... aspectibus, nisi secundum quod est indicativa ciborum vel venereorum, circa quae est omnis eorum delectatio." See also III, 33, 4.

which the eye sees the material object or thing. The object of sight is the actually visible. It is the visible thing that moves the power of sight in the natural order, as any object moves a passive potency. We saw also that the species of color is not that which is seen but that by which we see the material thing.

From the sight and the object something one results. The eye takes the form from the particular thing. While the power of sight can see colored objects only, yet it is not color that it perceives but the thing itself.

In our concluding chapter we hope to show that the theory of Aquinas comes closer to answering the problems of external sensation than does a theory which begins in the mind rather than with the material thing and the external senses.

## CHAPTER IV

## CONCLUSION

In our introductory chapter we tried to situate the problem of sense perception briefly. Here we gave special emphasis to the work of H.H. Price and the analysis of his works by Frederick R. Bauer. We saw that an approach to sensation that begins with a cogito, implicit or explicit, leaves us without an answer to what the material object really is for it does not allow us to get outside the mind. We also merely listed a few of the possible problems in the theory of Aquinas on sense perception for which we may be able to find solutions.

In the second chapter we traced the general characteristics of external sensation as found in the Summa Contra Gentiles, a work in which Aquinas did not specifically treat the problem of external sensation in detail. Occasionally we have referred to his other works in our footnotes to help clarify a point, on the spot, where Aquinas had given a more extensive treatment in one of his other works.

We saw that for Aquinas sense means a material organ, serving mainly our cognition of outer reality. Because material, its proper object is the corporeal particular.

For him sense impressions are the only primary source of knowledge. There are no inborn ideas; nor are

there any notions, within the material range of experience, infused into the mind by the divine influence. Before the intellect has received the impressions of sense it is like a clean wax tablet without any scratch on it. Stimulation of the senses by some object existing outside of the organism is the necessary condition for the start of mental life. If a sense is lacking no corresponding ideas can be formed by the mind.

Sense experience is achieved through external objects acting on the sense organs by means of material agents. The object acts either immediately on the sense-organ, as in the case of touch, or mediately, its influence being transmitted to the organ through the medium, as in the case of hearing and seeing. The effect of this action is a passive immutation of the sense organ.

The alteration of the sense organ is, ontologically speaking; an information of the sense-organ by the accidental form originating in the sense object. This power of sense is receptive of sensible species without matter. There is a likeness in the sense of the thing in its sensible accidents. The forms are received from the external thing and not vice versa. This is only a particular application of the general principle, according to which all change demands an agent from which the power of change emanates, and is to

be explained by an accessory being added to the thing affected.

In chapter three we made a test case of the sense of sight, based again on the Summa Contra Gentiles of Aquinas with clarifications from his other works where this seems helpful. Here we saw that color is the "formal" object of the power of sight, the medium through which the eye sees the material object or thing. The object of sight is the actually visible. It is the visible thing that moves the power of sight in the natural order, as any object moves a passive potency. We saw also that the species of color is not that which is seen but that by which we see.

From the sight and the object something one results. The eye takes the form from the particular thing. While the power of sight can see colored objects only, yet it is not color that it perceives but the thing (res).

It is through the proper sensible (color) that the eye reaches the common and accidental sensibles--and with the involvement of all the senses the object itself is perceived. It is from the material object (stone), to the formal object (color) in the stone, to the formal object (color) in the medium (air) plus the necessary condition (light), that the eye gets its "friendly principle" to

complete external sensation.<sup>1</sup> The effect in the eye together with the results of the other external senses involved results in the totality of the material object being sensed.

In our concluding chapter we propose to look again at some aspects of the problems of external sensation which we have mentioned in the introductory chapter. We will look for an underlying answer to how we know external things. Finally we will give our proposed partial solution.

#### Unsolved Problems of External Sensation

Several major areas need further study in Aquinas' theory of external sensation. It is clear that we need to consider the difference between sensations and physical process from the view of passivity. A physical passion is a complex event, which implies a loss as a necessary condition for an acquisition. For example, a piece of wax cannot receive a new shape without suffering the loss of the shape which it previously possessed. Here the patient undergoes a law which is not its own, but that of the agent. It would do to designate such a passion as heteronomic passion.

On the other hand, while it is obvious that the

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<sup>1</sup> Cf. supra, p. 58 ff. We also noted that the distinction between the formal and material object of sense is that of John of St. Thomas and not that of Aquinas. See also the explanation of Aquinas in S.C.G. I, 76, 2, quoted on p. 88 above.

sense undergoes the influence of its object, it is no less obvious that such an influence does not necessarily and intrinsically imply any loss or destruction, but constitutes an actuation of the potency of sense. The sense receives its own perfection from the object, which acts as a friendly principle. Let us call this an automatic passion.

By saying that sensation is a passion of a certain kind, we do not mean that it is a merely passive process. Considering sensation from the point of view of activity, we find in it the first example of immanent action. We need to put a strong emphasis on the contrast between immanent action and the common type of action. On the one hand, the concept of immanent action is but imperfectly realized in sensation inasmuch as the immanent action of sensing necessarily coincides with the transitive action exercised by a physically present object.

Considering sensation from the point of view of unity, we see it as an intentional union. Here is a crucial point: whereas the union of a matter and a form--matter-form union--gives birth to a third reality made of the two united terms, the union that takes place between the senses and its object does not give birth to any composite; sense and object remain face to face in their union, without altering each other.

We have now firmly established the main characteristics of sensation as a physical event. We know, at least historically, what we have to account for. Many other theories are already ruled out in as much as they treat sensation as if it were a heteronomic passion, a transitive action, a matter-form union.

On the question of how the physically present object can bring about, in the sensorial power, this automatic passion, the immanent action, this intentional union, the theory of the species sensibiles (let us say sensorial "idea") is a way toward an answer.

Considering on the one hand, that the most intimate union that can result from the putting together of two things is matter-form union; on the other hand, that the union that the sensorial "idea" is intended to account for is an intentional union, we can describe the sensorial "idea" as an entity that is to an intentional union what a thing is to a matter and form union. So we have the following proposition: the sensorial "idea" is to the intentional union as the physical thing is to the matter-form union. The above proposition constitutes a definition of sensorial "idea", that, though obscure, is entirely safe.

In the comparison of sensorial knowledge with higher

forms of knowledge,<sup>2</sup> we see that there are ideas in the intellect: let us call them concepts; in the imagination we call them images; in the memory we call them memories. These ideas are known to us through an experience. Their existence, if it is to be established at all, has to be established by a rational analysis. One of the major distinguishing features of Thomistic psychology is the proposition that there are species, "ideas", not only in the intellect and in the internal senses, but also in the external senses.

The causation of the sensorial "idea" raises the problem of the first magnitude. Other ideas (those of intellect, imagination and memory) are born within the soul; they result, in some way or other, from previous acts of knowledge; in the last analysis from sensations. The sensorial "idea" is not born inside the soul. It is born in the physical nature, produced in the sense by the action of the sensible object. The proposition is that the gap between nature and the soul is bridged by "ideas" of an absolutely initial character, which originate in the physical nature i.e. which exist as qualities in the physical nature before they come to exist as ideas in the soul.

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<sup>2</sup> This does not imply that, contrary to our initial proposition, higher forms of knowledge should be studied before sensation; it only implies that the theory of sensation cannot be completed without some acquaintance with higher cognitive processes.

The problem of an adequate cause inside the physical nature, for that entity which is not a thing, but an "idea", the species sensibles, is an important question that has been given little treatment. In most of his writings on sensation, Aquinas abstracts from the question whether the object, which causes the species, causes by the power that it owes to its proper nature or by some participated power. Yet in De Potentia<sup>3</sup> he explicitly traces the sensorial "idea" to the participation of physical things in a way of acting that is proper to separate substances.<sup>4</sup>

As we investigate the existence of the sensorial "idea" in the medium, we can see that the forms may be spiritualized gradually and may enjoy, in the medium, (between their material condition in the object and their physical condition in the sense) a condition that is intentional and non-psychical. The concept of such a condition will solve the problem of the termination of the act of sensorial know-

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<sup>3</sup> De Potentia, 5, 8c.

<sup>4</sup> Perhaps we should take as a starting-point the data of contemporary psychology as it differentiates between stimulus and response; the impression made on the nervous system and the psychic reaction which is sensation in the proper sense, an act of cognition. There would have to be an inquiry into the extent to which this analysis prepares the way for the Thomistic analysis, which, it seems, is concerned exclusively with the final stage, the question on which contemporary psychologists seem to have reached a maximum of confusion. Here is also the place for the solution of the question of impressed sensible species.

ledge. No species expressa is needed in the external sense because the form is in the medium as a term whose immateriality is proportionate to the degree of immateriality of sense knowledge.<sup>5</sup>

On the question of the validity of sense knowledge,<sup>6</sup> with Aquinas we can use the Aristotelian division into per se proper, per se common and per accidens sensible objects. With regard to per accidens objects of sensation, the sense data does not enjoy any natural guarantee of validity; no natural guarantee either, of validity, with regard to common sensible objects. With regard to proper sensible objects, the sense enjoys an essential indefectibility, compatible however, with incidental failures. Those considerations suffice to destroy the grounds for most objections against the reliability of sense knowledge, since such sense objects are generally relative to the perception of per accidens sensible objects, or to incidental failures in the knowledge

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<sup>5</sup> The question of the expressed sensible species (its existence) involves the whole question of sensible intuition and the question of the validity of the external and internal senses.

<sup>6</sup> We are presuming that sensation is an essentially experimental knowledge. In the Thomistic system sensation without a physically present object implies a contradiction. Perhaps we need to make a psychological point of view the foundation of the study of the value of truth that comes from sensation. In this study we may be able to bring out clearly the possible contribution of experimental psychology as well as the pertinent facts and problems from rational psychology.

of proper sensible objects. Yet serious difficulties concern the normal perception of the very proper object of each sensorial power. In order to clear them up we need to ponder over the mutability of sense qualities and analyse its consequences with regard to the kind of truth that can be expected of the powers of knowledge whose object is thoroughly mutable. The temptation is great to attribute to the object of sense knowledge a steadiness which is a property of intelligible objects.

On the problem of the division of the external senses, it should be granted that it is not any more possible for philosophy to define any particular sense than to define any particular chemical or living species in its ultimate specificity. We can re-study the principles on which the distinction is based historically.

But philosophy can go beyond the generic study of the external senses. The distinction made by Gredt<sup>7</sup> between higher and lower senses seems philosophically relevant and can be greatly clarified by using the concepts proprio-

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<sup>7</sup> J. GREDET, De Cognitione Sensuum Externorum, Roma, Desclee, 1924, p. 16. See also S.C.G., III, 53, 6.

ceptive and extero-ceptive sensations.<sup>8</sup> Lower senses (e.g. touch) are those whose operations are proprio-ceptive sensations. Higher senses (e.g. sight) are those whose operations are pure extero-ceptive sensations.

The theory of sensation normally ends with the problem of concrete perception. It would be relevant to show how the knowledge of the common sensible objects and the per accidens sensible objects acquire some kind of steadfastness, despite the fact that the sense lacks any natural guarantee with regard to any object that is not its proper object.

The problem of perception is also the problem of the construction of the sensible object. This meaning of perception does not seem to be contained in Aquinas' doctrine nor is it reducible to his principles.

#### A Proposed Partial Solution

In summing up our conclusion we must point out

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<sup>8</sup> The questions of affective sensations (pleasure and pain) should be treated in connection with proprio-ceptive sensations. This requires a serious historical re-study of Aquinas' position and a careful thinking out of the relation which is established between validity granted to the senses and the corresponding theories in the field of psychology and physics (optics and acoustics). These principles of Aquinas need to be thought out in the setting furnished by contemporary physiology and experimental psychology.

that the object of sense is outside (external) and this object must exist before a sensation of it is possible. In solving the problem of external sensation we must place emphasis on what the material object of sensation is. These sense objects are individual things existing outside the soul. While Aquinas really refers to the proper object of the sense of sight, for example, as color, yet he speaks of the object of the sense of sight as the thing (res): "We use a way of speaking when we say that the first visible thing is color, although strictly speaking, the colored thing is what is seen."<sup>9</sup> And again, "Sensation is of objects in the particular ...."<sup>10</sup> "Sight needs a body as object--because its object is color--which is only found in bodies ...."<sup>11</sup>

This extrinsic object exists independently of reason.<sup>12</sup> Aquinas points out that "it is wrong to suppose that nothing exists as white or black except when it is seen."<sup>13</sup>

It should be noted that the sense powers are diversified according to their "formal objects" and not by their

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<sup>9</sup> Summa Theologica, I, q. 45, a.4, ad I.

<sup>10</sup> Aristotelis Librum de Anima Commentarium, II, I, 242.

<sup>11</sup> Ibid., I, II, 19.

<sup>12</sup> Summa Theologica, I, q.81, a.3, ad 3.

<sup>13</sup> Aristotelis Librum de Anima Commentarium, III, II, 595.

"material objects." The material object, i.e. thing sensed, may be the same for all the powers. However, each power grasps a different formal aspect of the thing, and is thereby distinguished from the others. So it is that Aquinas points out that "not any variety of objects diversify the soul's powers, but a difference in that to which the power of its very nature is directed."<sup>14</sup> The material object is the thing which is perceived, and this object is common to all the powers. "... the knower's actuality as such being the actuality of the known, it follows that the sense faculty receives a similitude of the thing sensed in a bodily and material way, whilst the intellect receives a similitude of the thing understood in an incorporeal and immaterial way."<sup>15</sup>

The manner in which we sense this material object is one of man sensing as a unit--the process in man beginning with the united work of all the senses involved in perceiving a particular object and the senses receiving the species from the thing itself and so the species is received in a simpler and more immaterial way in the sense than it is in the thing that is known through it. As Aquinas points out: "Color has two modes of being, a material mode in the object,

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14 Summa Theologica, Ia, q.77, ad 3.

15 Aristotelis Librum de Anima Commentarium, II, V, 377.

and a (more) spiritual mode in sensation."<sup>16</sup>

As a result of the progressive "spiritualization" of the object, it can be said that after sensation the perceived object is actually like the sense potency was potentially before sensation--this identity is one of quality.

While the process of sensation is taking place, the various proper objects are separately perceived by each of the senses but at the end of this process--external sensation--we have, as an end product of external sensation, a similarity of sense-faculty and its object. "At first and while the transforming process is going on there is a dissimilarity; but at the end, when the thing is transformed, there is a similarity and so it is between the sense-faculty and its object."<sup>17</sup>

So, in external sensation we sense, by the collective working of the external senses, an external material object (res) by a process of progressive spiritualization of the formal object of sensation. We possess the same quality, by a spiritual union, of the original object as the end product of external sensation.

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<sup>16</sup> Ibid., III, II, 589.

<sup>17</sup> Aristotelis Librum de Anima Commentarium, II, V, 357.

To understand and explain the process of sensation (external sense perception) we must begin, not in the mind with a cogito, explicit or implicit, but with the object itself. This object is a material thing, e.g. we never have just color but a colored thing. Our answer must lie, further, in looking at man as a unit. He is not just an eye or an ear. We must look at external sensation, too, as a unit. Further still, we must take the totality of the evidence provided by every source and then we are as certain as we will ever be that we do perceive external objects "objectively" in external sensation.

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## ABSTRACT

The general historical study of the works of Thomas Aquinas under the aspect of the external senses and their perception of material objects has for its purpose the reconstruction of Aquinas' philosophy of external sense perception and its evaluation in the light of modern and contemporary philosophy. This thesis is a contribution to that study. In this present form it is concerned with external sense perception as exposed in the Summa Contra Gentiles.

The introductory chapter situates the problem of external sensation historically. In it we express our dissatisfaction with an approach which begins in the mind, for it must also end there. The idealist approach leaves us without an answer to what the material object really is since it does not allow us to get outside the mind. The most such an approach can offer is an admission that starting with a "cogito" will not produce a satisfying answer to external sense perception. Hence we have established a need to investigate a "realist" approach such as that of Aquinas to discover if his direction will lead us to real sense perception of the external object.

The second chapter considers the texts which deal with the object of external sense perception and shows that this object--while the formal object can be proper for each sense, or common when grasped by several senses, or acciden-

tal as when one sense considers the proper sensible of another sense--when considered in the light of all the participating senses is the total material thing (res). It is through the formal objects that each sense singly and all participating senses sense the material thing (res).

In chapter three we made a test case of the external sense of sight in the light, again, of the texts of the Summa Contra Gentiles. Here we found too that it is the thing (res), the material object, that is the object of the sense of sight. The material object is sensed through the medium of the "formal" object (color) in the medium of air under the necessary condition of light.

In the concluding chapter we first re-examined some of the problems of external sensation in the light of our findings and concluded that it is the material object we know in sensation--the object which exists outside of me and independently of my sensing it.

This material object is sensed by the external senses as a unit, even though each participating sense does so through its own proper "formal" object. Through the "formal" object there is a process of progressive "spiritualization" of the object so that it becomes one in quality with the external sense powers. It is the totality of the external senses that gives us the greatest certainty that we

do perceive external objects "objectively".

To understand and explain the process of external sense perception we must begin, not in the mind with a cogito, explicit or implicit, but with the material object (res) itself.