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JOHN PAUL II ON RELIGIOUS FREEDOM: THEMES FROM VATICAN II

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There is a widespread opinion to the effect that in the Second Vatican Council's Declaration on Religious Freedom, *Dignitatis humanae*,[1] the Catholic Church belatedly accepted principles that had by that time come to be seen as self-evident in most of the civilized world. Some suspected that the Church was embracing a fundamental principle of the Enlightenment after having opposed it for three centuries. Writing in January 1965, John Courtney Murray maintained that the principle of religious freedom was "accepted by the common consciousness of men and nations. Hence the Church is in the unfortunate position of coming late, with the great guns of her authority, to a war that has already been won."[2]

Such interpretations might be justified if the Catholic Church had simply repeated what had already been recognized, for example, in the Universal Declaration of Human Rights of 1948. But the reader should not underestimate the essentially Christian and Catholic character of the council's teaching. For a better appreciation of these aspects one cannot do better than to follow the statements of John Paul II over the past thirty-five years. As

[1] This declaration, approved on 7 December 1965, will henceforth be abbreviated DH.

[2] John Courtney Murray, "This Matter of Religious Freedom," *America* 112 (1965): 43. Again in his commentary on *DH* Murray wrote that the principle of religious freedom has long been recognized in constitutional law, so that "in all honesty it must be admitted that the Church is late in acknowledging the validity of the principle." See Walter M. Abbott, ed., *The Documents of Vatican II* (New York: America Press, 1966), 673.

a young bishop and, after 13 January 1964, archbishop, Karol Wojtyla took a keen interest in the conciliar declaration. Subsequently, as cardinal and pope, he has continued to celebrate the achievements of Vatican II, applying them to changing situations and interpreting them in the light of his own philosophical and theological perspectives.

In his *Sources of Renewal,* a book written in 1972 for a synod of his archdiocese of Krakow, Cardinal Wojtyla devoted considerable attention to religious freedom. He has returned to the same theme in a number of his encyclicals, such as *Redemptor hominis, Centesimus annus,* and *Veritatis splendor,* as well as in many of his speeches and in his book *Crossing the Threshold of Hope.* The following quotation from his World Peace Day Message for 1988 is indicative of the importance he attaches to the topic:

> Religious freedom, an essential requirement of the dignity of every person, is a cornerstone of the structure of human rights, and for this reason an irreplaceable factor in the good of individuals and of the whole of society, as well as of the personal fulfillment of each individual. It follows that the freedom of individuals and communities to profess and practice their religion is an essential element for peaceful human coexistence .... The civil and social right to religious freedom, inasmuch as it touches the most intimate sphere of the spirit, is a point of reference for the other fundamental rights and in some way becomes a measure of them.[3]

At Vatican II Bishop Wojtyla made no fewer than five interventions on religious freedom, two oral and three in writing.[4] Thanks to criticisms such as his, the schema was significantly revised. In the initial stages it was little more than an effort to defend the Catholic Church from the charge of being intolerant. But in the end the document did far more. It set forth the basic principles of a positive theology of religious freedom quite

[3] John Paul II, "Religious Freedom: Condition of Peace," World Peace Day Message, 7 December 1987, *Origins* 17, no. 28 (24 December 1987): 493-94.

[4] The numbers I through V in parentheses in my text refer to the following: (I) speech of 25 September 1964 in AS III/2, 530-32; (II) written intervention in AS III/2, 838-39; (III) written intervention in AS III/3, 766-67; (IV) speech of 22 September 1965, in name of the Polish bishops in AS IV/2, 11-13; (V) written intervention in AS IV/2, 292-93. The abbreviation AS refers to the *Acta synodalia* of Vatican II (Vatican City, 1970-78).

different from the liberalism of the Enlightenment. In his last two interventions, Archbishop Wojtyla expressed his satisfaction with the changes that had been made up to that time.

John Paul H's understanding of religious freedom may be summarized under ten major headings, all of them touched on by the council's declaration.

I. A THEOLOGICAL DOCTRINE

Although the early drafts of the declaration seemed to treat religious freedom from a perspective similar to that of the Universal Declaration of Human Rights and the civil constitutions of many states, Archbishop Wojtyla, among others, insisted that it would be unworthy of the council simply to issue a repetitive statement of this type. The world, he said, was not looking to the council for a lesson in political philosophy. Presupposing these basic constitutional principles, the council should present the doctrine of the Church with its basis in divine revelation (IV, 11; V, 293).

The very principle of religious freedom, Wojtyla contended, was grounded in revelation, which affirms the dignity of the human person as a responsible subject made to the image and likeness of God and destined to enjoy eternal life in union with Christ the Redeemer (V, 11). According to a properly theological anthropology human persons, as moral subjects, achieve their full humanity by acting on their own initiative and with their own responsibility *(Sources of Renewal,* 23). This is eminently true in the realm of religion, since God cannot be rightly worshiped except by a free decision in the spirit and in truth Oohn 4:23; III, 767). Adherence to the Christian religion requires faith, a free acceptance of God's word and of his self-revelation in that word *(Sources of Renewal,* 23).

The early drafts of *Dignitatis humanae,* following a post-Enlightenment Scholastic methodology, began by expounding the doctrine as knowable by natural reason and then presented the additional insights obtainable from Christian revelation. Archbishop Wojtyla consistently urged the council to proceed in the

opposite direction. Its teaching on religious freedom, he argued, was in fact based on revelation, which is required for human beings to be delivered from captivity to sin and error. If the principle of religious freedom could be perceived to some extent by the light of reason alone, so much the better (V, 293). But the Christian moral order, according to Bishop Wojtyla, "contains in itself the moral order of nature and all the rights of the human person, and yet elevates, animates, and sanctifies them" (Ill, 767).

As late as the fall of 1965, the schema of the declaration was still divided into a first chapter with the title "The Doctrine of Religious Freedom Taken from Reason," followed by a second chapter entitled "The Doctrine of Religious Freedom in the Light of Revelation." Karol Wojtyla objected that the two chapters taught the same doctrine of freedom from the vantage points respectively of reason and revelation. Revelation, however, gives a deeper understanding of the basis for religious freedom in the dignity of the human person (IV, 11; V, 293). To Wojtyla's satisfaction the words "Taken from Reason" were in the end stricken from the title of chapter 1.

In presenting the teaching of the council to his archdiocese of Krakow, Cardinal Wojtyla seemed to be satisfied with the strategy whereby the declaration had expounded the right of religious freedom "primarily on rational principles before proceeding in the second part of the document to expand on it from a theological standpoint, analyzing religious freedom in the light of Revelation."[5]

Again, in his first encyclical, *Redemptorhominis*, John Paul II pointed out that in *Dignitatis humanae* religious freedom was vindicated not only from a theological perspective but also "from the point of view of natural law, that·is to say from a 'purely human' position, on the basis of the premises given by man's own experience, his reason, and his sense of human dignity" (RH 17).

While he expects Catholics to draw their doctrine primarily from revelation, the Pope is conscious of the practical advantages

[1] John Paul II, *Sources of Renewal* (San Francisco: Harper & Row, 1980), 409.

of presenting the doctrine as far as possible in terms that are meaningful to believers and nonbelievers alike.

II. POSITIVE AND NEGATIVE CONCEPTS

Some bishops and theologians, approaching religious freedom as a political problem, wanted the declaration to proffer a purely negative and juridical definition, namely, immunity from external coercion in the practice of religion. Wojtyla was among those who objected to this definition as partial and inadequate. As he put it, this definition corresponds to the notion of religious tolerance rather than freedom (III, 766). The merely negative definition could easily be exploited to promote unacceptable forms of liberalism or indifferentism (IV, 12).

It was imperative, therefore, to work with a positive conception of religious freedom, rooted in a theological understanding of the dignity of the person in relationship with God. In this perspective, freedom is not an end in itself but a means whereby men and women work out their destiny in a manner befitting their dignity as persons. Religious freedom makes it possible for them to commit themselves consciously and deliberately to the transcendent (III, 766; cf. *Sources of Renewal*, 23).

The positive conception of freedom makes it clear that human persons may not be considered as instruments of society, since society is instituted for their benefit. Religion may then be seen as the highest realization of human nature, consisting in the free, personal, and conscientious adherence of the human mind to God. Since religion by its nature transcends everything worldly, it should be evident that no human authority may interpose itself, coercing people in the intimately personal sphere in which they relate to God (I, 532; *Sources of Renewal*, 22). In the words of *Dignitatis humanae*, civil government "would clearly transgress the limits set to its power were it to presume to command or forbid acts that are religious" (DH 3).

Ill. FREEDOM AND TRUTH

Freedom is given to human beings so that they may personally attain and embrace what is truly good. According to the declaration all men are "at once impelled by nature and also bound by a moral obligation to seek the truth, especially religious truth. They are also bound to adhere to that truth, once it is known, and to order their whole lives in accord with the demands of truth" (DH 2).

These statements are in full agreement with the teaching of John Paul II. In his first speech at Vatican II he faulted the current draft of the declaration because it neglected to emphasize the dependence of freedom upon truth. "For freedom on the one hand is for the sake of truth and on the other hand it cannot be perfected except by means of truth" (I, 531). In this connection he quoted the words of Jesus, "The truth shall make you free" Uohn 8:32).

This same theme continues to echo through the present pope's encyclicals. In *Redemptor hominis* he asserts that the words of Jesus just quoted "contain both a fundamental requirement and a warning: the requirement of an honest relationship with regard to truth as a condition for authentic freedom, and a warning to avoid every kind of illusory freedom, every superficial and unilateral freedom, every freedom that fails to enter into the whole truth about man and the world" *(RH* 12).

In *Veritatis splendor* John Paul II traces many of the recent deviations in moral theology to the denial of the dependence of freedom on truth. Authentic freedom, he says, "is never freedom 'from' the truth but always freedom 'in' the truth" *(VS* 64). Later in the same encyclical he asserts: "The essential bond between Truth, the Good, and Freedom has been largely lost sight of by present-day culture" *(VS* 84). In *Centesimus annus* he pursues the same theme in its political ramifications:

> It must be observed in this regard that if there is no ultimate truth to guide and direct political activity, then ideas and convictions can easily be manipulated

for reasons of power. As history demonstrates, a democracy without values easily turns into open or thinly disguised totalitarianism. *(CA* 46)

Wojtyla's analysis of the self-destructiveness of freedom without accountability coincides to a great extent with the reflections of thoughtful writers such as Michael Polanyi and Vaclav Havel.[6]

IV. FREEDOM AND RESPONSIBILITY

Avoiding the excesses of liberalism, *Dignitatis humanae* stated that "in the use of all freedoms, the moral principle of personal and social responsibility is to be observed" (DH 7). It also asserted: "Religious freedom, therefore, ought to have this further purpose and aim, namely that men may come to act with greater responsibility in fulfilling their duties in community life" (DH 8). These passages responded to the desires of bishops such as Wojtyla that the declaration should emphasize that human beings are responsible to God and to others for the use they make of their freedom. It is not enough, he reminded the Fathers, to say "I am free in this matter" unless one also says, "I am responsible." This, he said, is the doctrine of the Church of the confessors and martyrs. Responsibility is the necessary complement of freedom (IV, 12).

Commenting on *Dignitatis humanae* for his archdiocese, Cardinal Wojtyla repeated that liberty and responsibility are mutually interdependent. Unless we are free, we cannot be responsible; and conversely, we cannot evade responsibility for what we do freely *(Sources of Renewal,* 292).

V. RIGHTS OF CONSCIENCE

The first draft of *Dignitatis humanae* seemed to base the right of religious freedom on the personal right to follow one's conscience. In later drafts this argument was significantly muted.

[6] Michael Polanyi, *The Logic of Liberty* (Indianapolis: Liberty Fund, 1998); Vaclav Havel, *Living in Truth* (London: Faber & Faber, 1987).

Wojtyla would have agreed, I think, with the following statement of John Courtney Murray, one of the principal drafters of the declaration:

> It is worth noting that the declaration does not base the right to the free exercise of religion on "freedom of conscience." Nowhere does this phrase occur. And the declaration nowhere lends its support to the theory for which the phrase frequently stands, namely, that I have the right to do what my conscience tells me to do, simply because my conscience tells me to do it. This is a perilous theory. Its particular peril is subjectivism-the notion that, in the end, it is my conscience, and not objective truth, which determines what is right or wrong, true or false.[7]

According to *Dignitatis humanae* "the highest norm for human life is the divine law-eternal, objective, and universal-whereby God orders, directs, and governs the entire universe and all the ways of the human community, by a plan conceived in wisdom and love" (DH 3). The imperatives of the divine law become known to us through the mediation of conscience. For this reason we are bound to follow the judgments of conscience, even when it is erroneous. Wojtyla, commenting on this teaching, contends that we have the right and duty to follow a certain and true conscience, but that we have no such right to follow an erroneous conscience, although we may have a subjective obligation to obey it. Strictly speaking, he said, conscience is not the means whereby we know the divine law, but only a means of applying the law to concrete acts (III, 766-67).

In *Veritatis splendor* John Paul II has a great deal more to say about conscience. He points out that the conception of conscience has been deformed by modern thinkers who have lost the sense of the transcendent. They often depict conscience as a supreme and infallible tribunal that dispenses us from considering law and truth, putting in their place purely subjective and individualist criteria such as sincerity and authenticity (VS 32). The voice of conscience summons us to obey the law of God but does not by itself tell us what that law is. Because it attests to a higher

[7] John Courtney Murray, commentary on *Dignitatis humanae* in Abbott, ed., *Documents of Vatican II*, 679 n. 5.

intelligence and will to which we are subject, conscience arouses a concern or anxiety to find out what course of action is here and now required to do good and avoid evil. Far from overriding authority, conscience on the contrary impels us to seek guidance from competent authority. [8]

VI. LIMITS OF RELIGIOUS FREEDOM

An early draft of the declaration stated that no human authority was entitled to exercise coercion to prevent people from following an erroneous conscience. Archbishop Wojtyla commented that this statement should be amended to say that no human power has the right to exert pressure on human persons holding error unless they are doing harm to themselves or to others. Quite evidently parents and other legitimate superiors may exercise a certain pressure on erring persons, proportionate to the gravity of the danger, to prevent harm from being done (III, 768).

At another point the same draft stated that persons may be restrained in the exercise of religious freedom as required to safeguard the common good. This statement, Wojtyla objected, was open to misunderstanding unless false notions of the common good were excluded. In our utilitarian culture, the common good is often equated with the interests of a particular party (III, 768).

A subsequent draft stated that religious freedom could be limited "according to juridical norms that were required by the needs of public order" (V, 292). Archbishop Wojtyla objected that this statement was likewise unsatisfactory because it could be understood as permitting human legislators to impose limits on a divinely given prerogative. Only divine law, he argued, could limit a divinely given right. He therefore proposed to substitute wording to the effect that abuses of religious liberty could not be

[8] For further discussion of these points see Avery Dulles, "The Truth about Freedom: A Theme from John Paul II," in J. A. DiNoia, O.P., and Romanus Cessario, O.P., *Veritatis Splendor and the Renewal of Moral Theology* (Chicago: Midwest Theological Forum, 1999), 129-42, at 135-37.

forcibly restrained unless they were morally evil (V, 293; cf. IV, 12-13). Perhaps as a result of Wojtyla's intervention, the language of the text in numbers 2 and 3 was modified by the insertion of the word "just" before the words "public order."[9]

VII. SOCIAL RAMIFICATIONS

Religious freedom has social ramifications. As stated in *Dignitatis humanae,* "the social nature of man itself requires that he should give external expression to his internal acts of religion; that he should participate with others in matters religious; that he should profess his religion in community" (DH 3). Wojtyla in his interventions at Vatican II had insisted, with the Polish situation in mind, that this right involves the freedom of individuals and communities to transmit their sincere convictions by bearing witness to their faith. It also implies the right of parents to have their children educated in accordance with their religious convictions. These rights are not adequately protected by the principle of tolerance alone (I, 532; III, 766).

In his first encyclical John Paul II protested against the denial of religious freedom to individuals and communities under totalitarian regimes of the day (RH 17). In his address to the United Nations General Assembly in 1979 he quoted the passage from *Dignitatis humanae* 3 cited above. The religious needs of individual persons, he stated, are not protected unless freedom is accorded to institutions that serve religion.[10]

In an address of 1995 John Paul II called attention to another threat to religious freedom, which he called "more subtle than overt persecution." In many democratic societies, he pointed out, the citizens are put under social pressure to keep their religious convictions private and not to let them influence their public behavior. "Does not this mean," he asked, "that society not only

[9] Brian W. Harrison, in *Religious Liberty and Contraception* (Melbourne: John XXIII Fellowship Co-op Ltd., 1988), 99, traces a similar revision in *DH* 7 (the textual change from "public order" to "objective moral order") to the influence of Wojtyla's intervention.

[10] John Paul II, "The U.N. Address," Address to the U.N. General Assembly, 2 October 1979, in *Origins* 9, no. 17 (11 October 1979): 265.

excludes the contribution of religion to its institutional life, but also promotes *a culture which re-defines man as less than what he is?"*[11] This question seems to be particularly pertinent in the United States, where it is taken as almost axiomatic that religion ought not to make itself felt in the public order.

VIII. ECUMENICAL IMPLICATIONS

The Declaration on Religious Freedom originated in the Secretariat for Promoting Christian Unity, where it was drawn up with the intention of removing a serious obstacle to relations with other Christian groups. The state in some traditionally Catholic nations had used its authority to inhibit non-Catholic organizations from publicly professing their faith and worshiping according to their conscience. When the document became separated from the Decree on Ecumenism, its initial preoccupation with the intolerance of established churches was expanded into a concern to vindicate religious freedom as a human right against whoever might oppose it, including atheistic regimes.

Archbishop Wojtyla objected to the schema presented in the third session of the council on the ground that it did not sufficiently distinguish between the issues of Church and state and those of ecumenical action. In the civil sphere, he said, the issue of toleration is central. But in the ecumenical sphere it is not enough to say that different religious groups should tolerate one another. This program might simply harden the existing differences. The goal of ecumenical action is to overcome schisms and unite Christians in the truth. It should be clearly understood that the purpose of ecumenical dialogue is to make progress toward the full acceptance of truth by all participants. Nothing but the truth will liberate Christianity from its manifold separations (I, 531).

[11] John Paul 11, Message of 7 December 1995, to an International Conference on Secularism and Religious Freedom sponsored by the Becket Fund for Religious Freedom and held at the Pontifical Athenaeum "Regina Apostolorum." The text, signed by the Pope himself, is in *L'osseroatore Romano* (20/27 December 1995), 4 and 7.

Archbishop Wojtyla's interventions on this subject at Vatican II foreshadow one of the major themes of his pontificate. He is committed to ecumenism as a high priority, but ecumenism does not consist, for him, in ecclesiastical diplomacy. Christ, he holds, wills all his disciples not simply to be one, but to be one in the truth. In an address to the Roman Curia on 28 June 1980, he declared, "The union of Christians cannot be sought in a 'compromise' between the various theological positions, but only in a common meeting in the most ample and mature fullness of Christian truth." [12] In his major encyclical on ecumenism, *Ut unum sint* (1995), he wrote: "The unity willed by God can be attained only by the adherence of all to the content of revealed truth in its entirety. In matters of faith, compromise is in contradiction with God who is truth" (UUS 18). John Paul II therefore denies that ecumenical or interreligious dialogue is an alternative to proclamation. Authentic dialogue, he asserts, includes proclamation as an inner dimension of itself.

This refusal to compromise stands in perfect agreement with the teaching of Vatican H's Decree on Ecumenism, *Unitatis redintegratio*, which warned against a false conciliatory approach and insisted that the Catholic Church had alone preserved the full deposit of revealed truth and all the means of grace instituted by Christ (UR 4 and 11). Similarly, *Dignitatis humanae* teaches that God has made known the way of salvation by which we are to serve him and be saved in Christ. "We believe that this one true religion subsists in the catholic and apostolic Church" (DH 1). The declaration explicitly left intact "the traditional Catholic doctrine on the moral duty and men and societies toward the one true religion and toward the one Church of Christ" (ibid.). Religious freedom, therefore, does not foster indifferentism or relativism. The nature of the duties of society toward the true religion will be considered below, under the rubric of Church and state.

[12] John Paul II, "The Pope Reviews His Pontificate," Address to the Roman cardinals and members of the Curia, 28 June 1980, §17, in *Origins* 10, no. 11 (28 August 1980): 171.

IX. RELIGIOUS VIOLENCE

In paragraphs that John Paul II would frequently quote in his later writings, *Dignitatis humanae* taught that no coercion should be used to bring people to profess the true religion. In its second chapter it pointed out that the act of faith, being by its very nature free, cannot be coerced (DH 9). It called attention to the meekness and humility of Christ himself, who refused to impose the gospel by force (DH 11). John Paul II agrees that "God absolutely does not want to force us to respond to His word" and that "man cannot be forced to accept the truth."[13]

Turning to the historical record, the declaration insisted that the Church has always taught that the act of faith must proceed from a free and conscientious decision, but it acknowledged that as the Church "has made its pilgrim way through the vicissitudes of human history, there have at times appeared ways of acting that were less in accord with the spirit of the gospel and even opposed to it" (DH 12).

This avowal did not do full justice to the darker chapters of history. Speaking in favor of approval of the declaration, Archbishop Beran of Prague, in the fourth session of Vatican II, recalled the experiences of the people of Bohemia and Czechoslovakia under the Hapsburgs. The oppression of conscience, even when intended for the good of the true faith, he said, was pernicious. "Thus the Church in my country now seems to be making painful expiation for the sins committed in the past against freedom of conscience in the name of the Church, such as the burning of Jan Hus, priest, in the fifteenth century, and in the seventeenth century the external compulsion of a great part of the people of Bohemia to return to the Catholic faith." He asked therefore that the declaration should be issued "in a spirit of penance for the sins committed in this matter in past centuries."[14]

John Paul II notes that the history of the Church is full of protests against those who attempted to make conversions by the

[13] John Paul II, *Crossing the Threshold of Hope* (New York: A. A. Knopf, 1994), 189-90.

[14] Archbishop J. Beran, speech of 20 September 1965, in AS IV/1: 393-94.

sword.[15] But he is deeply conscious that Catholics, like other Christians, have often had recourse to violence is spreading or defending the faith. He may well have had in mind the remarks of Archbishop Beran when he made his own visit to Austria in 1988 and to the Czech Republic in 1995. At Salzburg he expressed regret for the "unjust expulsion of Protestants from this place in the eighteenth and nineteenth centuries."[16] In the Czech Republic, speaking on the occasion of the canonization of a Catholic martyr, he said:

> This canonization must in no way reopen painful wounds, which in the past marked the Body of Christ in these lands. On the contrary, today I, the Pope of the Church of Rome, in the name of all Catholics, ask forgiveness for the wrongs inflicted on non-Catholics during the turbulent history of these peoples; at the same time I pledge the Catholic Church's forgiveness for whatever harm her sons and daughters suffered. May this day mark a new beginning in the common effort to follow Christ, his gospel, his law of love, his supreme desire for the unity of those who believe in him.[17]

The theme of penance for sins of violence committed in the name of religion was a major component of John Paul H's program for the celebration of the Great Jubilee of the year 2000. In his apostolic letter *Tertio millennia adveniente* of 1994 he recalled:

> Another painful chapter of history to which the sons and daughters of the Church must return with a spirit of repentance is that of the acquiescence given, especially in recent centuries, to intolerance and even the use of violence in the service of truth .... From these painful moments of the past a lesson can be drawn for the future, leading all Christians to adhere faithfully to the sublime principle stated by the council: "The truth cannot impose itself except by virtue of its own truth, as it wins over the mind with both gentleness and power." (*IMA* 35, quoting D/-J!l)

At the penitential service in St. Peter's Basilica on the first Sunday of Lent, 12 March 2000, the Pope asked God's pardon

[15] John Paul II, *Crossing the Threshold of Hope,* 192.

[16] Luigi Accattoli, *When a Pope Asks Forgiveness* (Staten Island, N.Y.: Alba House, 1998), 149.

[17] Ibid., 146.

for sins of seven categories, among which figured sins of violence committed in the service of truth. Then on 23 March, speaking at the memorial to the Holocaust in Jerusalem, he expressed the deep sadness of the Catholic Church at the persecutions directed by Christians against Jews at any time and any place.[18]

X. CHURCH AND STATE

In *Dignitatis humanae* Vatican II taught that the civil government should foster conditions favorable to religious life and safeguard the religious freedom of all its citizens. It rejected any union of Church and state that would authorize the state to force a particular religion upon the population or to prevent persons of different persuasions from publicly practicing or professing their religion. Some voices at Vatican II urged the council to rule out the idea of an established religion, but Cardinal Heenan of Westminster pointed out that the style of religious establishment that obtains in England today is entirely compatible with religious freedom. Thus the council contented itself with saying that "if special legal recognition is given ... to one religious body, the right of all citizens and religious bodies to religious freedom should be recognized and made effective in practice" (DH 6).

As noted above, the declaration also claimed to be leaving intact the traditional Catholic teaching concerning the duties of society toward the one true Church (DH 1). The Church's preeminent concern, it later declared, was that she "should enjoy that full measure of freedom which her care for the salvation of men requires" (DH 13). Paul VI, in a message to political rulers issued at the end of the council, put the question, "What does the Church ask of you today?" And he answered: "She tells you in one of the major documents of this council. She asks of you only liberty, the liberty to believe and to preach her faith, the freedom to love God and serve Him, the freedom to live and to bring to men her message of life. Do not fear her.... Allow Christ to

[18] John Paul II, "The Depth of the Holocaust's Horrors," *Origins* 29 (6 April 2000): 679.

exercise his purifying action on society."[19] These words prefigure the inaugural homily of John Paul II, in which he called on the nations of the world to "open wide the doors for Christ."[20]

Following *Dignitatis humanae* and Paul VI, Cardinal Wojtyla in his *Sources of Renewal* refrained from calling upon the state to give any special privileges to Catholicism as the true religion. He asked only that it assure to the Church "true freedom to preach the faith, to proclaim its teaching about society, to carry out its task without hindrance, and to pass moral judgments even in matters relating to politics."[21]

In a 1988 visit to the Parliament of Europe at Strasbourg, John Paul II invoked the distinction made by Christ between the things that belong to Caesar and those that do not. "Integralism," which tends to exclude from the civil community those who do not profess the true faith, oversteps this boundary. Medieval Latin Christianity, in the Pope's estimation, failed to distinguish sufficiently between the spheres of civil and religious life. Even more deplorable was the early modern principle, *Cuius regio eius religio* ("The religion of the people is that of the ruler"), which led to forced conversions, cruel expulsions, and bloody martyrdoms.[22]

In our day the chief offenders against religious freedom have been Marxist atheistic regimes, but the exclusive establishment of certain non-Christian religions in various Asian and African nations has also caused difficulties. In the name of human rights the Pope protests against religious oppression wherever it exists. In the early years of his pontificate he mounted a very effective moral appeal against the Marxist governments in Central and Eastern Europe. In his 1998 visit to Cuba he returned to the theme of religious freedom in the following terms:

[19] Vatican II, "Closing Message to Rulers," in Walter M. Abbott, ed., *The Documents of Vatican II* (New York: America Press, 1966), 730.

[20] John Paul II, "The Inaugural Homily," *Origins* 8, no. 20 (2 November 1978): 307.

[21] Wojtyla, *Sources of Renewal*, 417, quoting Vatican II, *Gaudium et spes* 76.

[22] John Paul II, "The United Europe of Tomorrow," Strasbourg, 11 October 1988, in *Origins* 18, no. 20 (27 October 1988): 332.

When the Church demands religious freedom she is not asking for a gift, a privilege or a permission dependent on contingent situations, political strategies or the will of the authorities. Rather she demands the effective recognition of an inalienable human right.... It is not a matter of a right belonging to the Church as an institution; it is also a matter of a right belonging to every person and every people.[23]

CONCLUSION

Starting from the objection that Vatican II, in its Declaration on Religious Freedom, merely reaffirmed a principle already acknowledged in the law of most civilized nations, I have sought to show that while the declaration did accept the juridical concept of freedom as immunity from coercion it did not stop at that point. Thanks to the input of bishops such as Wojtyla, *Dignitatis humanae* proposed a positive doctrine of religious freedom based upon revelation as well as upon reason.[24] According to this doctrine the right to freedom is grounded in the dignity of the human person as made to the image of God and as called to share in divine life through Jesus Christ. Freedom is oriented to truth and is a means of achieving personal union with God. This theological perspective, unlike utilitarianism and pragmatism, provides a solid rationale for understanding religious freedom as an inviolable right. Like all genuine freedom, religious freedom is inseparable from the true and the good. Inevitably, too, it entails moral responsibility.

Since the council, John Paul II has made religious freedom a central theme in his program for ecumenism and for situating the Church in the world of our day. In some respects, such as in his rejection of integralism, his call for repentance for the religious

[23] John Paul II, "Remarks to the Nation's Bishops," in Cuba, 25 January 1998, *Origins* 27, no. 33 (5 February 1998): 563.

[24] I do not attempt in these pages to measure the influence of Bishop Wojtyla as an individual. He was in contact with other bishops, not only Polish but also Italian and French. In many respects his input overlapped with that of Carlo Colombo, Giovanni Urbani, and Alfred Ancel, who spoke for numerous Italian and French bishops. The combined effect of their insistence on the grounding of freedom ontologically in truth is discussed by Walter Kasper in his *Wahrheit und Freiheit: Die "Erkliirung uber die Religionsfreiheit" des II. Vatikanischen Konzils* (Heidelberg: Carl Winter, Universitlitsverlag, 1988), 26-28.

violence of times past, and his denunciation of the contemporary tendency to confine religion to the private sector, he has gone beyond the council. Just as the conciliar declaration built on the prior work of recent popes, so it continues to bring forth, in interpreters such as John Paul II, things new and old.[25]

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THE VIABILITYOF ARISTOTELIAN-THOMISTIC COLOR REALISM

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Most of us tend to think and to speak of colors as though they are real attributes of bodies. We say that grass is green, earth is brown, strawberries are red, and the sky is blue. This sort of intuitive or commonsense way of thinking and speaking lies at the basis of what I will call the "color realism" of St. Thomas and Aristotle. Those who look at the world from the contemporary scientific perspective, however, often say that our naive belief that bodies are colored has been shown to be mistaken. It is now clear, the story goes, that color is merely a sensation in me or my mind resulting from light of a certain wavelength striking the back of my retina, causing a chain of chemical reactions that generate certain nerve pulses terminating within my visual cortex. This rejection of color realism, which I will call "color anti-realism," has been the orthodox view among the educated since the Enlightenment.

The following is a reconsideration of the cases for and against color realism. My aim will be to show not only that color realism in general remains tenable even now, but also that the Aristotelian-Thomistic account of color realism is particularly well suited to meet the objections posed by anti-realism. This will be accomplished in four sections, the first three of which will be largely expository, and the final one largely argumentative. First, I will explain the general account of how colors exist offered by Aristotle and further developed by St. Thomas. Second, I will offer an overview of modernity's reasons for rejecting this

account. Third, I will look at how color realism has been resuscitated in various forms by contemporary philosophers not of Aristotelian background, and will consider how these versions of color realism are like and unlike the Aristotelian-Thomistic account. Finally, I will suggest Aristotelian-Thomistic responses to the arguments in the second section, and further, I will make the case in favor of color realism in general. My minimal hope is that Thomists skeptical about the viability of an aspect of Aristotelian-Thomistic epistemology and philosophical psychology commonly thought to have been refuted by the advances of science might rethink their willingness to jettison Thomistic color realism, and will be encouraged by the recent interest in the subject among non-Thomistic philosophers more immersed in the philosophy of science.[1]

I. THE COMMON SENSE APPROACH OF ST. THOMAS AND ARISTOTLE

A) Color as "in rebus"

In ancient Greece and medieval Europe there was little controversy about whether color exists *in rebus.* A disciple of Aristotle in the Lyceum or of St. Thomas at the University of Paris could take it as a starting-point that colors are in bodies; as St. Thomas says, colors "are proper passions of surface" and "are indeed in the colored body as a complete quality in its natural existence."[2] As Aristotle puts it simply, "a body is called white because it contains whiteness."[3] Color is what it seems to be to the common man: a quality of the surface of an opaque body that is immediately apprehended by the sense of sight.

[1] At the very least, this paper will address a topic that often has been neglected by disciples of St. Thomas, in spite of the various reprimands made by many leading voices in Thomism; see Jacques Maritain, *Science and Wisdom* (New York: Scribner's, 1940), 59-60; Yves Simon and J. L. Peghaire, "The Philosophical Study of Sensation," *Modern Schoolman 13* (1946): 111-19.

[2] Aquinas, VII *Metaphys.*, lect. 3; *De Sens.*, c. 4. All translations of St. Thomas and Aristotle will be my own.

[3] Aristotle, *Categories*, 8.9a33.

But one might be a realist as regards color and wonder how self-contained or ontologically independent of external agencies a body's color is. For one might hold colors to be in bodies (more accurately, in surfaces) and then ask whether a body is still colored when the lights are out. Since, after all, colors need light to be visible, one might entertain the possibility that light somehow makes colors exist-that it actualizes them in some sense. Going a little further, one might think that, since it would be a light source that gives a body its color, color itself would be said more properly of light and light sources, while only derivatively of opaque bodies. Saint Thomas admits that there is an extended sense in which light may be said to actualize color in bodies, and that light after a fashion is fundamental to what it is to be colored;[4] nevertheless, he rejects this sort of color realism, and calls Aristotle to his defense:

> It should be known that there are those who said that light is necessary for seeing on the side of the color itself. For they say that color does not have the power to move the transparent except through light . . . which would not be if color were visible through itself, rather than through the power of light, and then only light would be visible through itself. But this is manifestly contrary to what Aristotle says here, [that color is] "what has through itself the cause of being visible." Whence, following the thought of Aristotle, it should be said that light is necessary for seeing, not on the side of color, such that it makes colors to be in act which (some say) exist only in potency when they are in shadows; but on the side of the transparent, inasmuch as [the transparent] makes itself be [transparent] in act, as it literally says [in *De Anima].* And to make this evident, it should be considered that every form as such is a principle of making what is like itself. Whence, since color is a certain form, it has it from its very self that it produces a likeness of itself in the medium.[5]

[4] Saint Thomas on occasion speaks of light as though it actualizes colors in bodies *(De Sens.,* lect. 5); the cause lies in the analogical relationship between color and light (II *De Anima,* lects. 14, 15; *STh* l, q. 14, a. 6; I, q. 48, a. 4; I, q. 77, a. 6, ad 2 and 3; I, q. 77, a. 7). This is especially evident in his exposition (De *Sens.,* c. 5) of Aristotle's definition of color ("the limit of the transparency of a determinately bound body" [Aristotle, *De Sensu et Sensato,* 3.439bl2]); a color is a grade or degree of transparency, and the latter, when actualized, is light. Color, then, is quasi-luminous.

[5] Aquinas, II *De Anima,* lect. 14; see also *Q.* D. *de Anima,* a. 4, ad 4. The quotation from Aristotle is *De Anima,* 2.7.418a32.

Strictly speaking, neither the light source nor the illuminated air makes a body to be or become a certain color. Still more explicitly, Aquinas says that "color is the form and act of the colored body . . . [and] color remains in the colored body whether light be present or absent, although it is not visible in act without light."[6] The very fact that a color is a formal aspect of a body requires that through itself it is able to communicate itself to a suitably disposed medium; hence, even if light is a necessary precondition for a color to be actually visible-to be efficacious at transmitting its likeness to the transparent medium-a color is still an actual form of the surface in which it adheres even when it is not illuminated, not visible. A body's color is *actual* with or without light; it is actually *visible,* however, only with light.

One suspects that at the empirical level Aristotle and St. Thomas's doctrine is based on the common conviction that colors do not appear to "come on" when illuminated; when a room is lit up colors seem to be revealed or manifested, not activated.[7] We do, after all, tend to think of colored things as still being colored even in the dark; the walls are still white even during a "black-out," even though they are not visible. Nonetheless, it is also fair to say that the essence of color realism survives even if one believes light sources produce or actuate colors in bodies. The only salient-and perhaps problematic-physical or ontological aspect of this account is that it means colors are more transient and dependent on their conditions than in the stricter color realism St. Thomas holds and understands Aristotle to hold; even on this light-dependent theory of color, which some Thomists

[6] Aquinas, *De Sens.,* c. 5.

[7] See ibid. Even critics of color realism admit that "the dispelling of darkness looks like the drawing of a curtain from the colours of objects no less than from the objects themselves … [If colors were actualized by a light source,] turning on a light would seem like waking up the colours …• Conversely, when the light was extinguished, the colours would not look as if they were being concealed or shrouded in the ensuing darkness: rather, they would look as if they were becoming dormant …. But colours do not look like that" (Paul A. Boghossian and J. David Velleman, "Colour as a Secondary Quality," in *Readingson Color,* vol. 1, *The Philosophyof Color,* ed. Alex Byrne and David R. Hilbert [Cambridge, Mass.: MIT Press, 1997], 85).

adopt,[8] colors remain unequivocally objective qualities of the surfaces of opaque bodies.

There is also a secondary sort of "color" or visible object, one that Aristotle says can be described but lacks a single name, but that St. Thomas calls "luminous," and we might call "glowing" bodies.[9] Examples of such that St. Thomas and Aristotle mention include glowworms, certain types of fungi, and parts of the heads of certain deep sea fish (to which we might add fireflies, fluorescent-colored fabrics, and the hands on my wristwatch). Although such objects of sight are not the primary concern for an explanation of color-indeed, they seem to be colored in a less evident, and perhaps equivocal way-both Aristotle and St. Thomas admit that they need explanation, if only after a consideration of surface color has already been made.[10] Glowing bodies do not appear with their proper colors; the hands on my watch appear white in daylight, but when they glow in the dark they appear a luminous green.

While St. Thomas and Aristotle have no understanding of light absorption and re-radiation, much less of radioactivity, in terms of which such phenomena are explained today, their explanation seems to be an approximation of the truth. They say that such bodies "have a modicum of light *[modicum de luce]*, their light *[lux]* being hidden at the presence of a greater illumination

[8] "[T]he formal object of sight is light received in the eye.... And since this is a roundabout and awkward way of expression, the technical term 'actual color' will be used to designate the formal object of sight.... [A surface is] actually red when the white surface is illuminated by a pure red light" (George P. Klubertanz, *The Philosophy of Human Nature* [New York: Appelton-Century-Crofts, Inc., 1953], 105, 429). Klubertanz is aware that his view, which he identifies with that of Avicebron, differs from that of St. Thomas and Aristotle, simply claiming that "Considering modern evidence and theories, we can resolve the doubt in favor of Avicebron" (idem, *"De Potentia,* 5.8: A Note on the Thomist Theory of Sensation," *Modern Schoolman* 26 [1948]: 330 n. 32). Note that in the seventeenth century the idea that colors are produced by light was often attributed to Aristotle himself; see Friedrich Steinle, "Newton's Rejection of the Modification Theory of Colour," in *Hegel and Newtonianism,* ed. M. J. Petry (Dordecht: Kluwer, 1993), 547-48.

[9] See Aristotle, *De Anima,* 2.7.418a28, and 419a2; St. Thomas refers to these as what "appear to be ignited and luminous" (II *De Anima,* lect. 15).

[10] In *De Anima* Aristotle treats luminous bodies only after treating ordinary color (2.7.419al-8), and even then postpones a more complete consideration to *De Sensu et Sensato* (2.437a30-438a5).

[luminis]. "[11] Glowing bodies are essentially weak light sources, and are visible or "colored" in the same way that an ember or a dim light bulb is: they are not bright enough to illuminate anything else, actualizing the transparent medium only enough to be seen. As in the contemporary account of radiation, the reason that such things do not appear to glow in the daylight is simply that they *are* glowing, but they are too weak to be seen as light sources in the daylight. Thus the hands on my watch are colored white, properly speaking, but in an equivocal sense they are colored green in the dark. Saint Thomas explains further that the glow of fungi is essentially the same as the radiance of the sun and, to a lesser degree, flame; the three differ only in degree.[12] Thus, this second kind of visible object can be referred to as the "color" of a light source, allowing that we are speaking of color in a secondary sense. This is not a stable surface color, but the color of a glow, a color that is, as it were, given off or radiated. While I will not focus primarily on this notion of color in what follows, it should be implicit in any defense or criticism of color realism. Indeed, as I will show in section II, treating the quasi-color of lights as being prior to, and somehow more fundamental than, the color of surfaces is a critical step toward rejecting color realism.

B) "Quo" versus "Quod"

Given that color is *per se* visible, and that some modern philosophers of nature reject color realism by placing color in the sentient subject, it is necessary as a preliminary to give a brief summary of the Aristotelian-Thomistic account of how color is known by the faculty of vision. Since sight, like all sense powers, is a passive power, a potency for being acted upon in a certain way by its object, color, actual seeing requires that color somehow get from the colored object to the eye, in order to act upon it;[13]

[11] Aquinas, II *De Anima,* lect. 15. On the distinction between *lumen* and *lux,* see II *De Anima,* lect. 14.

[12] See Aquinas, *De Sens.,* cc. 2 and 5.

[13] See Aristotle, *DeAnima,* 2.4.415b24-25; 2.5.416b32-417a22; 2.7.419a7-22; Aquinas, *IIDeAnima,* lects. 10, 15; *STh* l, q. 85,a. 2. It is not problematic for St. Thomas that modern neuroscience has shown that seeing does not occur until the eye, the optic nerve, and the

the color must somehow communicate or transmit itself to the eye. In other words, when one is looking at a ripe strawberry, the air between it and one's eye must somehow be traversed by the color red-in some way it must be true to say that the air receives the quality of redness. Yet, it is apparent that the air between the strawberry and the eye does not possess the color red the way the strawberry does; rather, the strawberry is unqualifiedly red, being the sort of matter that is apt to be formed by this quality, but the air must "be" red in only a qualified way, being the sort of matter that can *receive* a color but without being *formed* by it.[14] Similarly, when the color reaches the eye, the latter must receive it in a modality analogous to the air's reception of it. For though the shade of red in the strawberry is received by the eye, the tissue of the eyeball does not thereby become red (much less a strawberry); indeed, if the eye became unequivocally colored at all, seeing could not occur. Aristotle describes this modality as being "receptive of the sensible species without the matter"[15] of the organ becoming formed by it. In the case of vision, the air or the eye has the power of receiving into itself the form of red without the air's or the eye's matter being formed red. Saint Thomas refers to this as the possession of the sensible form "incompletely, according to a certain intentional existence."[16]

However, I must set aside further reflection on this matter of the intentional presence of sensible qualities.[17] It is enough to see that something like it seems necessary if one is to say that colors

brain are acted upon by the visual stimuli. Saint Thomas himself argues that sensation is not completed at the eye; rather, it is a process that includes the optic nerves and visual cortex; see *De Sens.*, c. 4; *STh* I, q. 115, a. 5, ad 1.

[14] As Aristotle puts it, the air is "the uncolored [that] is receptive of color " *(De Anima,* 2.7.418b27).

[15] Aristotle, *De Anima,* 2.12.424a18; see also 2.12.424a33-b3; and 3.2.425h22-24. For a defense of this as the proper interpretation of Aristotle, see Kurt Pritz!, "On Sense and Sense Organ in Aristotle," *Proceedings of the American Catholic Philosophical Association* 59 (1985): 258-74.

[16] Aquinas, *De Sens.*, c. 4; see also II *De Anima,* lect. 20.

[17] Saint Thomas also refers to this as a "non-natural" or "spiritual" mode of existence (adopting the latter from Averroes); see I *De Anima,* lect. 10; II *De Anima,* lects. 14, 24; *De Sens.*, c. 4; *STh* I, q. 75, a. 1, ad 2; I, q. 78, a. 3. On the parity between the modes of reception of the species in the organ and in the medium, see II *De Anima,* lect. 14; and *STh* I, q. 56, a. 2, ad 3.

are in surfaces and not simply in one's mind. Simply put, if receiving a color in one's eye were the same as receiving color in an ordinary alteration, as when a strawberry ripens from green to red, the strawberry would be seeing the color red![18] What is significant for us at present is that this doctrine appears to make a slight concession to the anti-realists, a concession that will serve as a point of departure in the following section. By positing the intentional existence of color in the power of vision (henceforth referred to as the "sensible species" or "visible species"), in a sense it is true to say that for Aristotle and St. Thomas the known is in the knower, color is in the perceiver.

Does this put one onto a slippery slope toward color anti-realism? Not really. What is obviously crucial here is that the color is not solely in the eye as a sensible species, but is also in the colored object as a natural quality. But what is still more important in preventing this account from collapsing into anti-realism is that the sensible species in the eye is in no way understood to be the object of the sense power, the color that is seen by vision. Rather, the red sensible species received in the eye is simply the formal principle *by which* the red of the strawberry is seen. As St. Thomas puts it, "the sensible species is not *that which* is sensed *[illudquod sensitur],* but rather, *that by which* the sense senses *[id quo sensussensit].* **...** Whence, the likeness of the visible thing is that according to which vision sees."[19]

This distinction between color as the *quo* of vision (the visible species or intentional red in the eye) and color as the *quod* of vision (the red that is an attribute of the strawberry) is not as subtle as it may seem. Possessing the sensible species in the eye is not possessing the object of one's vision in one's eye; rather, this possession *is* seeing, it is what seeing consists in.[20] Because the sensible species received into the sentient subject is a likeness of

[18] Aristotle makes a similar argument as regards the object of touch at *De Anima,* 2.12.424a34-b3.

[19] Aquinas, *STh* I, q. 85, a. 2; see also I, q. 14, a. 6, ad 1; *De Spir. Creat.,* a. 9, ad 6; III *De Anima,* lects. 8 and 13; *IIDeAnima,* lect. 12; IV *Metaphys.,* lect. 14; *De Unit. Intel.,* c. 5; and *De Verit.,* q. 1, a, 11 .

[20] See Aquinas, *ScG* II, c. 57; III *De Anima,* Jects. 1-2; II *De Anima,* lect. 10; *STh* I, q. 56, a. 1.

the red in the strawberry, it is the principle that unites the knower and the known, the faculty of vision and the visible; this unity is knowing a color, it is seeing. And further, because sensing is a manner of being acted upon by the sensible object, it is completely passive in the actualization of a sense power; the sense power or organ in no way generates or helps to generate the sensible species.[21] The visible species, the reception of which is seeing, is the product of the sensible object alone.

Let this suffice as a summary of color realism as understood by Aristotle and St. Thomas. One naturally wonders whether this position is defensible, since the widespread modern denial of color realism implies that it is not. Indeed, many contemporary Scholastics are willing to discard color realism in favor of what they take to be a more scientifically plausible account.[22]

II. THE MODERN REJECTION OF COLOR REALISM

A) The Widespread Adoption of Anti-Realism

Along with many Aristotelian and Scholastic doctrines concerning the natural world, the conviction that bodies have colors began to fall into disfavor in the seventeenth and eighteenth centuries. By 1783, Kant could say without expecting contradiction that

[21] See Aquinas, *Quodl.* 8, q. 2, a. 1.

[22] Some of those with backgrounds in Scholastic thought claim that even according to St. Thomas the senses "do not know objects or their qualities as they are in themselves ... but as they affect us" Q. F. Donceel, *Philosophical Psychology* [New York: Sheed and Ward, 1961], 181 and 183). Others declare that "Whoever is faintly acquainted with modern physics" knows that Aristotle and St. Thomas's position is erroneous: "The Thomistic sensible qualities are *not* physical properties of material reality as it is known today ... [and] *no* body is actually colored ... Such as a body is seen or sensed, it never is.... The traditional sensible qualities are known today as psychic phenomena" (Marius Schneider, "The Anachronism of Certain NeoThomistic Physical Doctrines," in *Studies in Philosophy and the History of Philosophy*, ed. John K. Ryan [Washington, D.C.: The Catholic University of America Press, 1969], 160-62). Elsewhere Schneider makes the similar claim that "A critical appraisal of the findings of theoretical and applied physics ... leads to the conclusion that the relativity of external sensation ... is a fact scientifically established beyond any reasonable doubt" (idem, "The Dependence of St. Thomas' Psychology of Sensation Upon His Physics," *Franciscan Studies* 22 [1962]: 17).

Long before Locke's time, but assuredly since him, it has been generally assumed and granted without detriment to the actual existence of material things that many of their predicates may be said to belong, not to the things in themselves, but to their appearances, and to have no proper existence outside our representation. Heat, color, and taste, for instance, are of this kind.[23]

Similarly, in 1872 Maxwell states that "It seems almost a truism that colour is a sensation. . . . The science of colour must therefore be regarded as essentially a mental science."[24]

It is not a coincidence that this position came into favor at the same time as the advent of the scientific revolution. As more came to be known about the reflective and refractive properties of light, it became a common opinion among scientists and philosophers conversant in the progress of science that color, rather than being a property of bodies, is at most a property of light (and hence, the colors one sees are merely the light rays that are reflected by a surface). According to this view, red is really something that is issuing forth from the direction of the strawberry; a body's color then is really the color of the light it emits or "gives off." However, many went so far as to say that not even light rays are colored; strictly speaking, color exists only in the mind as some sort of by-product of the interaction of light and the physiology of eye and brain. Although this is evidently a reincarnation of a view at least as old as Democritus, it was taken to be the natural inference from the discoveries of science; for in removing color from bodies one cannot say that color is simply something in the air between the eye and the object, nor that it is something in the eye, since these, too, are bodies.

The list of philosophers of nature who hold this view is lengthy. One of the first and boldest declarations of color anti-realism comes from Galileo:

I think that these tastes, odors, colors, etc. on the side of the object in which they seem to exist, are nothing else than mere names, but hold their residence solely in the sensitive body; so that if the animal were removed, every such

[23] Immanuel Kant, *Prolegomena to Any Future Metaphysics,* trans. Paul Carus, rev. James W. Ellington (Indianapolis: Hackett, 1977), pt. 1, remark 2, p. 33.

[24] James Clerk Maxwell, "On Colour Vision," *Proceedings of the Royal Society Institute* 6 (1872): 260-61.

quality would be abolished and annihilated. Nevertheless, as soon as we have imposed names on them, particular and different from those of the other primary and real accidents, we induce ourselves to believe that they also exist just as truly and really as the latter. [25]

Similarly, Newton states:

If at any time I speak of light and rays as coloured or endued with colours, I would be understood to speak not philosophically and properly, but grossly, and according to such conceptions as vulgar people ... would be apt to frame. . . . [S]o colours in the object are nothing but a disposition to reflect this or that sort of rays more copiously than the rest; in the rays they are nothing but their dispositions to propagate this or that motion into the sensorium, and in the sensorium they are sensations of those motions under the forms of colors. [26]

Locke follows the lead of the Galileo and Newton, further developing their implicit division between primary and secondary qualities. This division rests upon the notion that all secondary qualities (color, sound, temperature, taste, and smell-the traditional proper objects of the senses) are in some way reducible to primary qualities (shape, extension, motion, and in general quantitative modalities of a body). As Locke puts it,

a violet, by the impulse of such insensible particles of matter of peculiar figures and bulks and in different degrees and modifications of their motions, causes the ideas of the blue colour ... to be produced in our minds.... There is nothing like our ideas [of secondary qualities] existing in the bodies themselves. . . . [W]hat is sweet, blue, or warm in idea is but the certain bulk, figure, and motion of the insensible parts in the bodies themselves, which we call so. [27]

Locke takes it as given that only the material world and its inherently measurable attributes exist. Colors, then, must be no more than a by-product in our minds of the bombardment of our eye by minute corpuscles that possess not colors but merely

[25] Galileo Galilei, *Opere Complete di* G. G., 15 vols. (Florence, 1842), 4:333 (as translated by E. A. Burtt in *The Metaphysical Foundations of Modern Science* [Garden City, N.Y.: Doubleday, 1954], 85).

[26] Sir Isaac Newton, *Optics,* in *The Great Books of the Western World,* ed. Robert Maynard Hutchins (Chicago: Britannica, 1952), bk. I, pt. 2, p. 428.

[27] John Locke, *An Essay Concerning Human Understanding* (Oxford: Oxford University Press, 1975), bk. II, ch. 8, sect. 13 and 15.

quantitative attributes, primary qualities. This pos1t1on has become the received opinion of most scientists, and applies to all of the so-called secondary qualities: what we experience as heat, for example, *in rebus* is really nothing more than the vibration of molecules, sound nothing more than a compression wave traversing an expanse of particles.

B) The Arguments Underlying Anti-Realism

As Kant suggests, Locke's criticism of color realism seems to have proven decisive, and since his time the scientific understanding of color has been that it is not a real attribute of bodies. Thus in a recent popularized study of color it is said that "we must recognize ... that colour is a sensation, produced in the brain,"[28] while in a more technical work the author says that "Color, tones, smells, and tastes are mental constructions created by the brain out of sensory experience. They do not exist, as such, outside the brain."[29] In a recent philosophical paper critiquing color realism, the authors state:

> People who spend much time considering these cases [that illustrate the ambiguity of a body's colors] have been known to give up the notion of true colour entirely. We once asked a scientist who performs research on colour vision why people think that most opaque objects have a real colour. His answer was, "They do? How odd."[30]

[28] Hazel Rossotti, *Colour: Why the World Isn't Grey* (Princeton, N.J.: Princeton University Press, 1985), 16.

[29] John H. Martin, "Coding and Processing of Sensory Information," in *Principles of Neural Science*, ed. E. R. Kandel, J. H. Schwartz, and T. M. Jessel, 3d ed. (New York: Elsevier Science Publishing, 1991), 330. Note that these scientists understand themselves to be offering a truly philosophical position: "Where is color-in the world around us or in our minds? Although we view colour as something objective in the world, students of visual perception have known for a long time that ... the brain constructs a colour signal to recover, as well as it can, the true reflective properties of a given surface.... To the cortex life is a movie" (Robert Shapley, "Neurobiology: In the Mind's Eye of the Beholder," *Nature* 395 (1998]: 845-46).

[30] Boghossian and Velleman, "Colour as a Secondary Quality," 103 n. 23.

So what are these cases that seem to force one into anti-realism? I will point out those that seem to me to be the strongest or that seem to receive the greatest hearing.

1. The Superfluity of Positing Color

The first case follows the line of reasoning offered by Locke above, and can be called the argument from the acausality or superfluity of color. It is said that, since one thing can act upon another only in terms of pushes and pulls, which are quantitative aspects of bodies reducible to their mass, shape, and speed, it does not seem that colors as we see them could be the sorts of thing that can act upon our eye or our sense power.[31] The underlying conviction here is that the scientist, in treating all of nature with an eye only to its quantitative aspects (i.e., its primary qualities), seems to have no interest in positing the objective physical existence of colors or other secondary qualities. Our experience of colors can be explained in terms of reflected light of various wavelengths, all of which can be treated geometrically. With a quick slash of Ockham's razor, colors are banished from the physical. Accordingly, "it is quite gratuitous to suppose that physical objects have colours, and therefore there is no justification for making such a supposition."[32]

2. Color as a Function of Distance

Another kind of argument derives from proximity-dependent experiences of color. Mountains at a distance appear to have a bluish cast, but not when viewed up close. Berkeley and Locke offer the case of the color of blood observed in normal conditions as opposed to being seen under a microscope, where it appears

[31] See Locke, *An Essay Concerning Human Understanding*, bk. 2, ch. 1, sect. 23; ch. 8, sect. 11-12 and 19-20. Similar arguments are made by Colin McGinn, *The Subjective View: Secondary Qualities and Indexical Thoughts* (Oxford: Oxford University Press, 1983), 14-15; and J. McDowell, "Values and Secondary Qualities," in *Morality and Objectivity*, ed. T. Honderich (London: Routledge and Kegan Paul, 1985), 118.

[32] Bertrand Russell, *The Problems of Philosophy* (London: Oxford University Press, 1976), 35.

amber spotted with reddish brown specks.[33] Each of the experiences-the mountain observed from far away and from nearby, blood looked at from an ordinary distance and then magnified-seems equally a sensation of color. Obviously one cannot say that the same mountain is both blue and not, the blood both a uniform shade of red and not. But no color experience is more privileged than another, so how can one discriminate, saying that one observation is veridical and the other is not, when they differ only in how far the eye is from the object? The natural resolution, Berkeley and Locke say, is that colors do not reside in objects outside the mind, but are qualities of the perception itself.

3. Color as a Function of Lighting

A third line of reasoning derives from the fact that bodies appear to be different colors in different lighting conditions.[34] If bodies are observed under a mercury-vapor lamp, an object that appears red in daylight now appears chocolate-brown, skin-tones acquire a sickly pale green cast, and blues and blacks are indistinguishable. Why should we say that a color seen in one lighting is more truly the color of the body than another in different lighting? Again, there seems to be no non-arbitrary reason to take the one over the other. It is conceivable that someone who spends the majority of his time working under mercury-vapor lamps might think that faces are naturally a pale and sickly green color, but they are made to seem more orange and pinkish under the glare of the sun. What color a body is said to have "really" is just a matter of habituation.

The matter is made even more perplexing when one considers the more recently studied phenomenon of metamerism. Although different colors have been shown to correspond to characteristic light wavelengths, metameric colors reflect very different combinations of light wavelengths and yet appear even upon close

[33] See George Berkeley, "Three Dialogues Between Hylas and Philonous," in *The Works of George Berkeley*, vol. 1: *Philosophical Works*, ed. A. C. Fraser (Oxford: Clarendon, 1901), 393-95; Locke, *An Essay Concerning Human Understanding*, bk. 2, ch. 23, sect. 11.

[34] See Russell, *The Problems of Philosophy*, 9-11.

scrutiny to be the same color. For example, a specific shade of yellow, while it has its own characteristic wavelength in the visible spectrum at 588 nanometers (nm), is indistinguishable from a surface that reflects only a combination of red and green light (whose characteristic wavelengths are 526 nm and 645 nm, respectively):

> Suppose that the paints in two pots, A and B, appear ... to be the same shade of yellow in sunlight; and suppose that the paint in pot A reflects only light from the red and green parts of the spectrum and the paint in pot B reflects only light from the yellow and blue parts of the spectrum (the large majority of which will be light from the yellow part of the spectrum). A figure is painted on a canvas with paint from pot A, and the background is filled in with paint from pot B. The canvas now appears to be a uniform shade of yellow ... looking at it in the sunlight. What is the color of the canvas?[35]

Do we say that it is mostly yellow with a greenish-red figure on it, or that it is one shade of yellow? The former seems unlikely, both because the color greenish-red is difficult to imagine (mixing green and red paint, for example, yields a dark grayish-brown color, which is obviously not the color we see), and because if we say that we imagine a yellow color, then we have said in effect that the canvas is one color. Yet, if we say that it is one shade of yellow, what do we say when we change the light source? The only lighting conditions under which the canvas would not appear to be a uniform yellow would be where one or more of the reflected wavelengths (588 nm, 526 nm, or 645 nm) were not present, or were of a significantly lower intensity, in the light emitted from the light source. For example, if the light source lacked only the 588 nm wavelength, one would see a yellow figure on a black background. Further, if one holds in front of one's eyes a filter that screens out only light from the red part of the spectrum (645 nm), the canvas will appear to have a green figure on a yellow background. So while two particular shades of

[1.] Edward Wilson Averill, "Color and the Anthropocentric Problem," in Byrne and Hilbert, eds., *Readingson Color,* 1:12-17. Metamerism proves to be a stumbling block to color realism in the majority of recent papers on the subject. See, for example, Boghossian and Velleman, "Colour as a Secondary Quality," 100-101; Keith Campbell, "Colours," in *Contem-porary Philosophy in Australia,* ed. Robert Brown and C. D. Rollins (London: George Allen and lnwin, 1969), 134, 139-40, 144.

color are identical in daylight, they appear radically different in others. Do we say that the canvas is one color or two? Is it not simpler to say that it is not colored at all?

4. After-Images

A fourth objection to color realism can be formulated in terms of after-images, an experience in which, after staring at a particular color for a minute or two, one looks away to a white wall and sees a haze of the complementary color. Goethe describes this phenomenon from personal experience:

> I had entered an inn towards evening, and a well-favoured girl, with a brilliantly fair complexion, black hair, and a scarlet bodice, came into the room. I looked attentively at her as she stood before me at some distance in half shadow. As she presently afterwards turned away, I saw on the white wall, which was now before me, a black face surrounded with a bright light, while the dress of the perfectly distinct figure appeared of a beautiful sea-green.[36]

Physiologically, after-images are explained by the fatigue of the color sensitive light receptors (called cones) at the back of the retina. Staring at a color (e.g., red) causes the cones particularly sensitive to that wavelength of light to adapt to it, and to respond to it less; hence, when one looks at a white wall these cones momentarily do not respond to the red light affecting them (white being a mixture of all the colors of the visible spectrum), and one sees white minus red, that is, blue-green. Again one can make the argument that we have no good reason to say that a particular shade seen as an after-image is more real than the same shade seen in another body; similarly, we have no good reason for saying that the particular shade we perceive a body to have when our eye is fatigued is less truly the body's color than the shade we perceive when our eye is not fatigued.[37]

[16] Johann Wolfgangvon Goethe, *A Theory of Colours*, translated in Rossotti, *Colour*, 106.

[37] Like metamerism, after-image as a common objection to color realism in contemporary writing. See, for example, Campbell, "Colours," 142-43, and 146; Boghossian and Velleman, "Colour as a Secondary Quality," 85-92; and John Bigelow, John Collins, and Robert Pargetter, "Colouring in the World," *Mind* 99 (1990): 280-84.

5. Spectral Inversion

A final sort of obstacle placed in the path of color realism was first suggested by Locke. Suppose that "by the different structure of our organs, it were so ordered that the same object should produce in several men's minds different ideas at the same time; v.g. if the idea that a violet produced in one man's mind by his eyes were the same that a marigold produced in another man's, and vice versa."[38] This is commonly referred to as the possibility of spectral inversion. In short, how do we know that when the two of us look at the same object we see the same color? Is it not conceivable that, although we both call the violet "purple," what *you* mean by purple is not the same as what *I* mean by purple? Perhaps, due to some idiosyncrasy of my physiological wiring, I have the color sensation contrary to yours when I look at the violet. But if this is possible, why should I be willing to say that my wiring is idiosyncratic and not yours? Each of us is legitimately experiencing a color, so what reason do we have to say one of us sees the real color of the violet? Is it not simpler to say that neither color is veridical and to place the different colors where the disagreement starts: in the two sentient subjects?[39]

The evidence appears to be in favor of anti-realism. But, as the anti-realist himself must admit, appearances can be deceptive. In recent years many philosophers have come to suspect that modernity in a number of instances may have thrown the baby out with the bath water, and the tenability of color realism has come to be reconsidered by a number of philosophers who are not of Aristotelian or Thomistic background.

[38] Locke, *An Essay Concerning Human Understanding*, bk. 2, c. 32, sect. 15. See also C. L. Hardin, "Reinverting the Spectrum," in Byrne and Hilbert, eds., *Readings on Color*, 1:292ff; Alex Byrne and David R. Hilbert, "Colors and Reflectances," in ibid., 1:268ff; Sydney Schoemaker, "Phenomenal Character," in ibid., 1:232ff; Gilbert Harman, "Explaining Objective Color in Terms of Subjective Reactions," in ibid., 1:255ff.

[39] Although there is still no evidence that spectral inversion actually takes place in people, there is a mitigated sense in which those who are colorblind can be said to suffer it, inasmuch as colors that normal people experience as distinct (e.g., red, green, and gray in someone with typical red-green colorblindness) the colorblind experience as one color (variously described as brown or gray).

III. THE CONTEMPORARY RECONSIDERATION OF COLOR ANTI-REALISM

A) Dispositionalism, Physicalism, and Primitivism

While it would be going too far to say that a majority of the philosophers who recently have had an interest in what is being called "the philosophy of color" are color realists, the position is being considered a live option. Although there are often radical differences in details among members of the same school of color realism, the commonly accepted division is between dispositionalism, physicalism, and primitivism.

Dispositionalism is the claim that colors are dispositions to produce certain visual sensations, where "disposition" means a sort of relation of the bearer of the disposition to an experience in a sentient subject and to the circumstances of its manifestation. The idea is that a body has a certain color because it produces the sensation of that color (in normal subjects, under standard lighting conditions, and other such qualifications), and this suggests that what is seen is somehow different from what causes this seeing experience. As one dispositionalist puts it, a strawberry's being red is "its disposition to present itself in a red' *[sic]* region of the visual field under certain conditions," where the red-prime is understood to be some kind of "sensational property," but is distinguished from the red in the strawberry.[40] Here the red-prime is a sort of mental paint or veil, and this implies that the same body could "have" different colors in different lighting conditions (as different dispositions relative to different circumstances could coexist in the same body at the same time). Further, two observers, one of whom is colorblind, looking at the same strawberry (one seeing red, the other brownish gray) would each experience a true color; for the strawberry is disposed to produce a red sensation in one person, but is also disposed to produce a brownish gray sensation in another. Hence, it is true to say that the strawberry is red and brownish gray at the same

[40] Christopher Peacocke, "Colour Concepts and Colour Experiences," in Byrne and Hilbert, eds., *Readingson Color,* 1:62.

time-"red" meaning nothing more than red-for-the-normally-sighted, and "brownish gray" meaning nothing more than brownish-gray-for-the-colorblind.[41] Dispositionalism, then, seems to degenerate into anti-realism in all but name, and even the dispositionalist will declare that "The best kind of dispositionalist is a color relativist.... So the external world is not colored or at least not in the way visual experience represents it as being."[42]

A more objective and influential account is physicalism, which posits that color is a surface's physical property of selectively reflecting incident light. While at first this may sound like an updated version of the Aristotelian-Thomistic account, the misleading word here is "physical." To be a "physical property" in this context means not merely to be a part of the natural world, but to be the sort of thing treated by the science of physics; essentially it includes only what is, or is thoroughly reducible to, primary qualities.[43] Thus, physicalism is usually understood to be reductionistic in nature, so one naturally wonders how different this is from Locke's claim that colors are nothing more than primary qualities. But the physicalist resists being reduced to Locke, and thereby to anti-realism, by claiming that we do in fact see an attribute of a body, and this attribute is color. While the dispositionalist says colors are the dispositions of a surface to affect the perceiver, the physicalist says that they are dispositions of a surface to affect *incident light.* Therein lies physicalism's intuitive plausibility as an account of color realism. For not only is it fairly evident that a body's color is somehow correlated with its spectral reflectance profile, but physicalism also explains color in terms of the relation between the object and the light that

[41] See Dale Jacquette, "Color and Armstrong's Color Realism under the Microscope," *Studies in the History and Philosophy of Science* 26 (1995): 403. He claims (402 n. 36) that his view is compatible with Averill's dispositionalism and Hilbert's physicalism, but he seems to me more of a dispositionalist.

[42] Mark Johnston, "How to Speak of the Colours," in Byrne and Hilbert, eds., *Readings on Color*, 1:158 and 174. Another dispositionalist makes a similar admission that "There is no ontologically significant distinction between real and apparent colours.... colours are properties of physical entities, but not observer-independent properties of those entities" (K. Campbell, "Colours," 147-48).

[43] See John Campbell, "A Simple View of Colour," in Byrne and Hilbert, eds., *Readings on Color*, 1:178; Justin Broackes, "The Autonomy of Colour," in ibid., 1:223 n. 36.

illuminates it, rather than in terms of a relation between object and perceiver, which smacks of subjectivism.

Put more precisely, however, colors according to the physicalist are "non-dispositional properties as 'primary' in their nature as shape and motion. Indeed, . . they are probably complexes of such properties of the object's surface and immediate surroundings. "[44] So the physicalist has a slightly dual position: colors are both the spectral reflectance pattern of a body's surface *and* the electron configuration of the surface molecules[45] that produce this reflectance pattern.[46] Both are quantitative or "primary" and are usually summarized with the blanket name of "microphysical properties." Inasmuch as it is uncontroversial to claim that microphysical properties exist, the physicalist can claim that he is a "direct realist," meaning that "in at least some cases, perception gives us a direct, that is, *non-*

[44] Frank Jackson and Robert Pargetter, "An Objectivist's Guide to Subjectivism about Colour," in Byrne and Hilbert, eds., *Readings on Color,* 1:70 and 67.

[45] We are using the word "surface" loosely; it does not seem to me to be a serious modification of traditional color realism to say that the colors of most bodies are not strictly on their outermost surfaces but slightly within. Metals have the least light penetration of colored bodies, being transparent to a distance of about 100 atoms, but for ordinary pigments penetration occurs at a much greater depth. By "surface molecules," then, we mean molecules *at* or *near* the surface of the body.

[46] Most physicalists, and of course most scientists, agree that the electron configuration is more fundamental. In general, color is the result of the wavelengths, saturation, and brightness of incident light that are reflected (or more precisely, re-emitted) by surface molecules, and this is usually determined by energy transitions of unpaired electrons (most often valence electrons). However, not all colors in a surface are due merely to the activity of the electrons. The precise color of a body can be due to a number of non-electronic-but still electromagnetic--causes, such as photo-induced alternating currents (e.g., the proper color of a metal), or photo-induced vibrations of molecular and intermolecular bonds (e.g., the blue tint of water). Both of these causes of color are due to the emission or transmission of colored light. Another cause works by way of changing the direction of incident light and is due principally to the geometric structure of the surface. Such range from the contours of a surface acting as a diffraction grating (e.g., the green iridescence seen in the exoskeletons of beetles), to the scattering of light off of bodies much larger than the wavelength of light, such that the reflected light is from across the visible spectrum, thereby making the object appear white (e.g., in beer suds). For an extensive treatment of the variety of causes of color, see Kurt Nassau, *The Physics and Chemistry of Color: The Fifteen Causes of Color* (New York: Wiley, 1980).

inferential, awareness of the nature of physical phenomena. "[47] Physicalism claims that we have an immediate acquaintance with the physical world.

There is, however, some ambiguity in the physicalist doctrine. When the physicalist says that colors *are* microphysical properties, he means that microphysical properties are what are being attributed to the surface of a body by its looking colored, and this leaves him open to criticism. For in reducing a body's color to its microphysical properties, physicalism suggests that a body cannot be known with certainty to be of a particular color just from looking at it; for one must check the body's spectral reflectance profile to be certain. This is made all the more bothersome by the case of metamers. Recalling Averill's example of the canvas painted with the metameric colors, it seems that, since the figure and its background reflect different wavelengths of light, the canvas cannot be said to be a uniform shade of yellow. The distinction in the colors, then, cannot be detected by vision, but only by means of the measuring instruments of colorimetry. Hence, there must be a sense in which the color of a body is inferred and not directly experienced, since the experience of color is often illusory.

Physicalists try to address this difficulty by saying that the microphysical property that is a particular color is sometimes really a *set* of distinct and apparently unrelated microphysical properties. [48] A particular color, then, is defined as a *class* of microphysical properties; hence, if reflecting a combination of 526 nm (green) and 645 nm (red), and also reflecting 588 nm (yellow), are postulated as two members of this set, the canvas painted with metamers can be said to be a uniform shade of yellow. But this seems rather ad hoc, since as of yet no common property has been found that is shared by metameric surfaces that can explain why they should appear to be of the same shade;

[47] D. M. Armstrong, "Colour-Realism and the Argument from Microscopes," in Brown and Rollins, eds., *Contemporary Philosophy in Australia,* 119.

[48] See Alex Byrne and David Hilbert, "Colors and Reflectances," in Byrne and Hilbert, eds., *Readings on Color,* 1:264-67; J. J. C. Smart, "On Some Criticisms of a Physicalist Theory of Colors," in Byrne and Hilbert, eds., *Readings on Color,* 1:1-9.

thus, the reasoning appears to be circular, insofar as the metamers are said to be yellow because they have the "same" microphysical properties, and they are claimed to have the "same" microphysical property because they both look yellow.

This identification of colors with microphysical properties has further consequences, insofar as the physicalist is forced to distinguish between a color's "nature" and its "phenomenology";[49] what my experience of red tracks or represents *is* in fact a microphysical property, but I cannot apprehend it *as* a microphysical property. The nature of the color and its essential characteristics are invisible, since my knowledge of it is only by phenomenological designation or detection, not by direct acquaintance. If this is so, I should not be able to tell just from looking whether two colors (e.g., vermilion and burgundy) are like each other, nor whether one (vermilion) is more like a second (burgundy) than it is like a third (blue). For to know these things is to know essential properties of these colors, and physicalism assumes that the natures of these colors are inaccessible to mere observation; such knowledge should be available only to someone with a comprehension of the microphysical properties. Thus, physicalism implies that we cannot see anything of the essential nature of a color; but since in fact *we can-for* example, we are aware of what colors are like and unlike, and the degree to which they are so-physicalism must be incorrect.[50]

The third and minority view[51] is called primitivism. The primitivist is like the physicalist insofar as for him colors are in no way subjective or relational properties of surfaces (and because of this some consider primitivism to be a branch or close relative of physicalism).[52] The primitivist is unlike the physicalist insofar as

[49] D. M. Armstrong, "Smart and the Secondary Qualities," in Byrne and Hilbert, eds., *Readingson Color*, 1:36-38, and 44.

[50] See Paul A. Boghossian and J. David Velleman, "Physicalist Theories of Color," in Byrne and Hilbert, eds., *Readingson Color*, 1:124-25.

[51] See Alex Byrne and David R. Hilbert, "Introduction to Readings on Color," in Byrne and Hilbert, eds., *Readingson Color*, l:xxiv.

[52] Armstrong, for example, considers his own brand of physicalism "Reductivist Direct Colour Realism," and understands this to be opposed but closely related to" Anti-Reductivist Direct Colour Realism," primitivism; see Armstrong, "Colour-Realism and the Argument from Microscopes," 119-20.

he does not unqualifiedly reduce color to a surface's quantitative aspects (i.e., to primary qualities). He believes that it is an error to assume that something is objectively real only to the extent that it can be analyzed quantitatively:

> On this view, redness, for example, is not a disposition to produce experiences in us. It is, rather, the ground of such a disposition. But that is not because redness is a microphysical property-the real nature of the property is, rather, transparent to us . . . [but] someone who holds this simple view may acknowledge that colours are supervenient upon physical properties, if only in the minimal sense that two possible worlds which share all their physical characteristics cannot be differently coloured.[53]

Although they "supervene" on, or are ontologically correlative with, certain quantitative aspects of the surfaces of bodies, colors are what they appear to be; this is why primitivism is sometimes called "the simple view" (by its proponents) or the "naive view" (by its critics).

Primitivistic color realism, then, bears much in common with Aristotelian-Thomistic color realism,s[4] and thus it, too, is a target of the sorts of objections noted in section II. In addition to these, however, it also has its own problems. The first is that, in claiming that the nature of a color is "transparent to us," the primitivist all but claims that the entire essence of a color is revealed to us in seeing it, which seems problematical. Primitivists respond by diluting this "revelation" by explaining the procedure of colorimetry as a way of making more precise and determinate the knowledge we have in sensation.ss A color's essence, then, is revealed in a vague and general manner in sensation, but it is made more clear and specific as color science studies it more carefully. Thereby the immediacy of color knowledge is preserved while allowance is made that this knowledge can be honed and perfected by means of studying spectral reflectance profiles and such. A more difficult problem concerns the nature of the so-called "supervenience" of colors: why would two distinct orders

[53] J. Campbell, "'A Simple View of Colour," 178.

[54] Smart, for example, takes Aristotle to be a primitivist of some sort; see "'On Some Criticisms of a Physicalist Theory of Colors," 6.

[55] See Broackes, "'The Autonomy of Colour," 212-13.

of qualities, colors and microphysical properties, be so correlated? What is it that connects this particular shade of green with a certain spectral reflectance curve whose dominant wavelength is 506 nm? As long as this remains opaque one must say that the connection appears to be merely contingent, so one cannot see that the two are interdependent and correlative.

B) Recent Color Realism in Relation to the Account of Aristotle and St. Thomas

Since color realism seems to have acquired a following once again even in the wake of modernity's rejection of the ancient account, one naturally wonders just how new these versions of color realism are. Would St. Thomas and Aristotle have difficulties with dispositionalism, physicalism, and primitivism?

Setting aside the aforementioned traces of subjectivism implied in dispositionalism, at first glance one might think that the Aristotelian-Thomistic position would fit nicely with dispositionalism. For Aristotle admits that it is *per se* to color that it be visible, and hence that color can be defined in relation to the sense power that apprehends it.[56] This appears to be no different from the dispositionalist's aforementioned claim that colors are dispositions to produce visual sensations.

However, this likeness is misleading. While St. Thomas and Aristotle would agree with the dispositionalist that colors are objective things, they would deny that the relation of being sensible (implied by calling colors dispositions) adequately preserves such objectivity. It is true that, following our natural mode of coming to know, colors are defined as visible objects;[57] nevertheless, visibility is not strictly speaking a real attribute,

[56] See Aristotle, *De Anima*, 2.4.415a18-23; 2.7.418a28-bl; and *Categories* 8.9a29-10a10, where colors are defined as the kind of quality that has the power to affect a sense faculty.

[57] Color is said to be visible through itself in the context of a study of the soul and its powers. Since a power is defined by means of its activity, which is understood through its object (see Aristotle, *De Anima*, 2.4.415a18-23), color comes up only obliquely. It is not incidental that Aristotle offers another definition of color in *De Sensu et Sensato*, 3, one that is more intrinsic to color considered not merely as we know it, but in its own constitution.

much less part of the essence, of colors. For as St. Thomas puts it in commenting on this distinction in Aristotle,

> Double refers to half, and vice versa; similarly, father refers to son, and vice versa. But in another way something is said relatively, from merely this, that something [else] refers to it, just as it is dear that the sensible, the knowable, and the intelligible are said relatively because other things refer to them. For something is said to be knowable because knowledge is had of it, and similarly, something is said to be sensible because it can be sensed. Whence [such] is said relatively . . . only on account of the actions of the other things, which [actions] are nonetheless not completed in them [i.e., the first things]. For if seeing were the action of the one seeing reaching out to the thing seen, just as heating reaches the heatable object, then just as the heatable refers to what heats it, so would the visible refer to the one seeing it. But to see, to understand, and actions of these sorts (as is said in IX *[Metaphysics])* remain in the agents and do not go out into the things acted upon; whence the visible and the knowable do not undergo anything from their being understood or being seen.[58]

Hence, because seeing does not in any way alter or actualize a potency in what is seen (rather, it actualizes a potency in the one seeing), to say that the object is now seen is not to attribute to it a new mode of being in any respect except according to our mode of apprehension. Thus, a thing's potential to be seen, its visibility, is not a real attribute of it. Contrary to dispositionalism, then, a color's relation to the perceiver is not what it is to be colored.[59]

Physicalism, insofar as it is committed to colors as non-relational properties of objects, is more congenial to the Aristotelian-Thomistic account. Even its description of a particular color as the surface's ability or manner of affecting incident light according to a particular spectral reflectance profile fits well with Aristotle's description of color as the "motive of the transparent in act; this is its nature."[60] Color is what is able to act upon the illuminated medium. Because the actualized light

[58] Aquinas, V *Metaphys.*, lect. 17; see also *SI'h* I, q. 13, a. 7; I, q. 45, a. 3.

[59] Indeed, if Aristotle and St. Thomas did say that visibility is essentially a real relation in the colored object, they would be dose to denying the objectivity of color inasmuch as color would then be essentially constituted by the presence (or possible presence) of the perceiving agent. Hence, if there were or could be no one to see them, the colors would not be there, which St. Thomas would not say (see IV *Phys.*, lect. 23).

[60] Aristotle, *De Anima,* 2.7.418b2.

progresses from the light source, through the transparent medium up to the illuminated body,[61] light can be understood to be in a sense "incident" upon the colored body. Hence, in some measure Aristotle agrees with the physicalist that color is the surface's ability to affect incident light.

However, physicalism's reduction of colors to microphysical properties and its denial that sight directly acquaints us with the true character of color distinguish the two views. Once the principle of physicalism is posited-that colors are nothing more than "physical," that is, quantitative, properties-it becomes difficult to discern how this view can avoid having an anti-realistic core. Any comprehensive reductionism must eliminate the thing reduced; this would abandon altogether the Aristotelian-Thomistic view of color, where nature is more rich, more diverse than the metrically oriented physicalist takes it be. Put another way, if color is in reality a microphysical quality though it does not appear as such, then the physicalist must say that colors are seen but not as colors. Since the color is really the microphysical property, the color is seen only indirectly, *per accidens,* by means of an appearance of an essentially different order-color is merely what underlies an experience. The physicalist, by distinguishing a color from its appearance or phenomenology, is forced to say either that the *per se* object of sight is not the color but the appearance itself, or that vision simply has no *per se* object. Either way color becomes invisible. To Aristotle and St. Thomas, this should be dismissed as patently false.[62]

Be that as it may, the Aristotelian-Thomistic position is congenial only with a qualified sort of primitivism. In fact, Aristotle and St. Thomas offer insights that might explain the relation between color and microphysical properties better than the primitivist's language of supervenience. Admitting that there is some tie between a body's color and certain properties of its surface (most notably its peculiar capacity for spectral reflectance), primitivism simply states that the former is nevertheless not reducible to the latter; a color "supervenes" on the microphysical

[61] Albeit, on Aristotle's view this happens instantaneously, and is not, then, strictly a local motion. See *De Anima,* 2.7.418b14-27.

[62] See Aristotle, *De Anima,* 2.6; 3.1.425a15-20; Aquinas, II *De Anima,* lect. 13.

properties of the surface. Saint Thomas and Aristotle can account for this correlation more intelligibly by way of the distinction between form and matter.

While essences and definitions are found most properly and unambiguously in substance, in a secondary and analogical manner even accidents have essences and definitions.[63] Hence, like physical substance, a physical accident will have in its definition a distinction akin to that between matter and form; it will include a material principle or proper subject in which it is present as a form, and without which it cannot exist.[64] Now, this material principle or proper subject is in some cases very particular (e.g., snubness is a curvature found only in noses) while in other cases it is very general (e.g., temperature is a quality in all physical bodies). In each case, the particularity of the proper subject appears to be proportional to the particularity of the accident; for example, while snubness is peculiar to noses because it is a very precise kind of curve, curvature in general is peculiar to one- or two-dimensional continua in general. Hence, if the proper subject of color is surface, one would expect the proper subject of a particular species of color to be a particular kind of surface. Now, surfaces are essentially quantitative and have quantitatively analyzable qualities, such as shape and texture. Thus, it seems that it is in accord with the Aristotelian-Thomistic account to allow for an essentially quantitative proper subject within the definition of color.[65]

[63] See Aristotle, *Metaphysics*,7.4.1030a19-b2; 7.5.103 la2-14; Aquinas, VII *Metaphys.*, lects. 3 and 4.

[64] See Aquinas, V *Metaphys.*, lect. 9; VII *Metaphys.*, lects. 1 and 3; *De Gen. et Cor.*, lect. 2. However, accidents are not somehow composites of matter and form. An accident cannot be understood without reference to its proper subject, and its nature entails some kind of relation to this subject or material principle, but an accident's matter is not strictly speaking a part of the essence of the accident. See II *De Anima*, lect. 1; VI *Metaphys.*, lect. 1; VII *Metaphys.*, lects. 1 and 4. Hence, while composite substances have matter out of which they are composed *(materiaex* qua), accidents and forms have matter in which they exist *(materia in* qua); see *STh* I-II, q. 55, a. 4; *De Pot.*, q. 5, a. 4, ad 9.

[65] See Aquinas, III *Phys.*, lect. 5; V *Metaphys.*, lect. 9. Although in affirming that surface is the proper subject of color St. Thomas is focused simply on the general two-dimensional expanse in which a color inheres, it is unlikely that he wishes to rule out any other, yet to be discovered, properties of the surface that are directly related to the color that forms it. Indeed, should there turn out to be such a property or properties of the subject of color, St.

Saint Thomas and Aristotle's account of the nature of color, then, is congenial to the idea that every color can be correlated with a certain quantitative subject such that it can be treated or analyzed (albeit imperfectly) as though it were a quantity. Further, just as color does not *exist* without certain quantitative properties of its subject, neither does it communicate itself to its surrounding medium, or to the sense faculty itself, without this quantitative aspect. Saint Thomas seems to suggest this when he says that "it is manifest that magnitude immutes the sense, for it is the subject of sensible quality, for example, of color, ... and qualities do not act without their subjects."[66] So in measuring the effects of a colored surface on incident and reflected light, one can give a quantitative expression to a specific color.[67]

Herein lies the connection between colors as the immediate objects of sensation and the quantitative microphysical properties of surfaces that are correlated with individual species of colors. While the two are essentially distinct from each other, they are related such that the former is to the latter as an accident to its proper subject, as form to matter. This allows Aristotle and St. Thomas to join the primitivists in rejecting color's identification with, and *carte blanche* reduction to, microphysical properties, while at the same time giving a greater intelligibility to what the physicalists and dispositionalists criticize as an ad hoc and contingent correlation between color and the microphysical. From a Aristotelian-Thomistic perspective, the notion of supervenience can be replaced by the idea that colors are related to their microphysical subjects as form to matter.[68] There is a natural reason that color cannot exist without its underlying microphysical properties; just as a shape cannot exist without what can possess a shape, neither can form exist without its matter. Thus,

Thomas would admit these to be the most immediate matter of color. For whatever is *per se* related to the distinction of the objects of sight as such is to that degree a part of the objects of sight; see *STh* I, q. 78, a. 3.

[66] Aquinas, III *De Anima*, lect. 1; see also *STh* I, q. 78, a. 3, ad 2.

[67] On the ways in which qualities, in virtue of their ability to admit of degrees, can be quantified and measured by way of a comparison or analogy with true quantities, see Aristotle, *Metaphysics*, 10.1.1052b15-1053b8; *De Generationeet Corruptione*, 2.6.333a20-33; Aquinas, X *Metaphys.*, lect. 2; I *Post. Anal.*, lect. 36.

[68] See Aquinas, *De Pot.*, q. 5, a. 4, ad 9.

simply in terms of what kinds of thing colors are they must have a peculiar kind of subject without which they can never be found.[69]

At the same time, this explains the fruitfulness of color science's reduction of color to microphysical properties and spectral reflectance curves. Just as St. Thomas and Aristotle would not be unreservedly against studying the particularities of an organism from an analysis of its parts, the Aristotelian-Thomistic account of color allows for a sort of reduction of a form to its matter or proper subject-although one that is ultimately incomplete, capturing the nature of color in the indirect and limited manner that is the proper mode of experimental science. This quasi-reduction of color to its surface spectral reflectance profile would be licit because color really has such as its material foundation,[70] and thereby St. Thomas can offer to the primitivist an illuminating account of why the philosophical color realist and the color scientist need not fight for the same "explanatory space"-each is offering an account of different yet complementary aspects of color, the former its formal character and the latter its material and quantitative character.

Thus, the account of color realism offered by St. Thomas and Aristotle would take up a sort of middle position between primitivism and physicalism. While the classical account maintains that colors are not to be *identified* with microphysical properties, as physicalism holds, colors are *essentially related* to them, as an accident is to its proper subject or a form is to its

[69] Hence, one can infer from the presence of a certain color the presence of certain microphysical properties. Can one go further and say that if the right microphysical properties are present, so then must be the color? This would be a bit like saying that, since nose is the proper subject of snubness, if I have a nose, it will be snub. While I have suggested that a specific color is the *proper passion* of a specific kind of surface, this is not to say that color is a strict *property* of such, a correlative with its subject (e.g., as being risible implies being a man, so being a man implies being risible).

[70] The intelligibility-and at the same time limitations-of the quantitative consideration of sensible qualities has been treated in greater detail by others; see Charles De Koninck, "Abstraction from Matter: Notes on St. Thomas's Prologue to the *Physics,"* part 1, *Laval Theologique et Philosophique* 13 (1957): 174-78, 181-83, and 186-96; William A. Wallace, "The Measurement and Definition of Sensible Qualities," *New Scholasticism* 39 (1965): 1-25; *The Modeling of Nature: Philosophy of Science and Philosophy of Nature in Synthesis* (Washington, D.C.: The Catholic University of America Press, 1996), 409-14.

matter. Their unity is so intimate that, just as one might think a sculpture is ultimately nothing more than the clay from which it is made, one can see the grounds for the physicalist and the color scientist's inclination toward unqualified reduction. But whereas the reduction to the microphysical implies that colors are not really visible, St. Thomas and Aristotle, along with the primitivists, take it as evident that colors are visible, and therefore that any reduction, be it ever so insightful, will necessarily prove insufficient to capture the essence of color.

IV. A DEFENSE OF ARISTOTELIAN-THOMISTIC COLOR REALISM

A) The Case for Color Realism

The contemporary resurgence of color realism in spite of the early modern critique and rejection of color realism leads one to reevaluate the latter: Was the case against color realism presented in section II definitive? What kind of defense of color realism can still be made? And would the distinctions St. Thomas and Aristotle offer strengthen this defense? To make the argument in favor of color realism, one must as it were lower his expectations. The proposition that colors are real attributes of surfaces is not something that admits of a strict demonstration. It is a starting-point, something self-evident, and so cannot appeal to something more fundamental in virtue of which it can be proved. To try to prove it would reflect a misunderstanding of how science proceeds, from the better known to the less known. One should not demand a proof for all things, and certainly not for what is evident.[71] Therefore, it is not a legitimate criticism to say that a proof has not been offered. The case, whether for or against color realism, will have to be at the level of dialectic, the arguments being merely probable in nature; the aim will be to reflect upon what vision is in order to help the skeptic to recognize as evident what, by force of habit, he treats as though it were not.

[71] See Aristotle, *Topics*, 1.11.105a2-9; *Posterior Analytics*, 1.3.72b5-73a20; *Physics*, 2.1.193a2-9; *Metaphysics*, 4.4.1006a4-10; Aquinas, IV *Metaphys.*, lect. 6; I *Phys.*, lect. 2; II *Phys.*, lect. 1.

The natural place to begin is with the most obvious motive for saying that colors are real, namely, the fact that colors are seen to be *in things.*[72] This should immediately shift the burden of proof to the anti-realist, and color realism should not be denied unless one is forced to do so. Even the anti-realist admits this, and has to say finally that vision is an essentially mendacious natural faculty in all creatures with eyes.[73] This all the more puts the onus on the anti-realist, since it is unlikely that one of our sense faculties is naturally "wired" in such a way that it does not really work.

The very indescribability of color also suggests that the existence of color *in rebus* is the sort of thing for which one does not argue, but that one takes as a principle or starting-point. When someone tries to answer the question of how to define color, a general account comes to mind right away-color is a quality of surfaces-but when one tries to define a species of color, one seems to be at a loss. In virtue of what specifying difference is red different from blue? A scientist may approximate such a definition by means of quantitative comparisons of spectral reflectance profiles, or by correlating precise colors with precise electromagnetic wavelengths; but this is inadequate. For it seems unlikely that these quantities (e.g., a red that is 620 nm and a blue that is 460 nm) explain what are obviously *qualitative* differences between these colors. These numbers are measurements of a proper effect of each of these colors, but they are not what it is to be these colors. The irreducible nature of color, our inability to put it in terms of something else better known to us, suggests that color is not made known to us through anything else-that color is *per se notum,* and hence its existence *in rebus* does not require proof.

A sign that the sense of sight is veridical can be taken from the way we speak about it, and the way in which we transpose vision-language to awareness and knowledge in general. When someone

[72] *As* St. Thomas notes, "vision does not perceive the color as being of the air, nor as of the water, but as of the distant object" (II *De Anima,* lect. 21).

[73] Boghossian and Velleman cavalierly admit that colors seem real and still conclude that vision is "systematically erroneous .... [But] only an undue fascination with the truth" would allow someone to be bothered by this ("Colour as a Secondary Quality," 95, and 98-99).

comes to understand another's thought, he sometimes says "I see what you mean," and when something strikes us as obvious we say that it is "transparent" or "crystal clear," while when it is not it is "opaque." Analogies with light, the medium of vision, are also commonplace. To "elucidate," to be "illuminating" and "lucid" is to produce comprehension or "insight." Etymologically, to be "evident" is to come "from seeing," as in "seeing is believing."[74] Vision seems to be the exemplar of what certain and unambiguous knowledge consists in. From ordinary speech one is led to the conviction that our knowledge of color must tell us of things as they are.

One can perhaps see this better by focusing on vision as first and most obviously a faculty of cognition, a means for knowing physical reality. Saint Thomas says, "in sensing and in knowing we are measured by the things that are outside of us .... Thus, the things known or apprehended through sense are measures through which it can be known whether we are truly cognizant of something through sense."[75] In all sensation our faculty is "measured up" against the object sensed; to the degree that we are in fact sensing or seeing, our sense tells us about reality. Aristotle puts this simply: "sensing is not a sensing of its very self; it is necessary that there also be something else besides the sense that is prior to it; for what moves is by nature prior to what is moved"[76] and vision does not see itself, but rather color. The anti-realist is forced to say that seeing is an apprehension of oneself, but, more importantly, it is not really a way of knowing things, and is not really *seeing* at all:

> For if the external world is not colored, then we do not see the colors of external things. They are not visible.... So if colors are not visible, then no surface of a material object is visible. But if no surface of a material object is visible, then no material object is visible.... Unless the external world is colored, we do not *see* it and that means *we do not see,* period.[77]

[74] Hence, some physicalists rightly observe that primitivism to some degree "comes from taking the metaphors about transparency seriously" (Byrne and Hilbert, "Introduction to Readings on Color," xxiv).

[75] Aquinas, X *Metaphys.*, lect. 2.

[76] Aristotle, *Metaphysics*, 4.5.1010b35-36; see also Aquinas, IV *Metaphys.*, lect. 14.

[77] Johnston, "How to Speak of the Colours," 168 n. 1 (emphasis added).

According to St. Thomas, Aristotle, and any full-blooded color realist, seeing as such is a success story.[78] If one is truly seeing, one is seeing truly. To the degree that one's vision presents reality other than it is, it is to that degree not functioning as vision. Hence, if it is *impossible* for vision to apprehend its proper object as it is, then vision is not vision; it simply does not work.

To deny that the colors we see are in surfaces, and to place them instead in our psyche, is not essentially different from claiming that vision is an internal sense power, like imagination, since the object known is in no way external. It is not surprising, then, that many anti-realists say that the sensation of color is not unlike the sensation of pain. The only reason that we think of pain as being internal but of color as external, they say, is that pain is caused by rather diverse things (e.g., thorns, flame, electricity, etc.), whereas color is found in a common sort of underlying, an opaque surface.[79] The anti-realist must admit that it is merely an odd fact that we say that feeling pain entails an internal object, and that seeing color entails an external one; we have no good reason for not saying that a thorny plant is pained or has pain in it when it pricks my finger.

In surveying the literature on the matter of color realism vs. anti-realism, one notices that the very language of the authors betrays their semiconscious prejudice that vision is a sort of internal sense. They say that the world is "represented as" colored, that colors are "registered perceptually" and "tracked" by vision; bodies "feel" red, and give us "red sensations" or "red impressions." It is surprising how rarely colors are simply said to be *seen.* Whereas for the color realist the visual species of a color (the *quo)* in the eye is a window to the physical world, and so is more a *means toward* seeing an object than an object itself *(quod),* for the anti-realist it is as though the sentient subject were a homunculus looking *at* a visual monitor that indirectly gives him information about reality. If one thinks there is a real question about whether colors are *in rebus,* the presupposed paradigm of

[78] See Aristotle, *De Anima,* 3.3.428all-15, and 427b9-13; Aquinas, III *De Anima,* lect. 4-5; *De Verit.,* q. 1, a. 11.

[79] See Boghossian and Velleman, "Physicalist Theories of Color," 127; "Colour as a Secondary Quality," 98.

all sense knowledge will be one of sensing internal affections of oneself, as when we feel tickling sensations, butterflies in the stomach, chills running up one's spine, and in general, physical pleasure and pain, commonly called "feelings" and "sensations." It is as though the very sensing of things inside of us were the first things to which we applied the word "sense"-as though we notice first how we *feel* about the things we see before we actually *see* them. As one primitivist puts it, anti-realism is based on

> the supposition that one's experiences of things have their contents, as experiences of those *particular* things, independently of the question of which things they are responses to. That is what makes it possible for the question to arise, whether the experiences really are brought about by the things they are experiences of. But this is a mistake.[80]

To assume the distinction-or even the possibility of the distinction-between the color seen and the color that exists is to assume that we immediately see something in us, and then to wonder whether this "feeling" corresponds to anything outside. Hence, to raise the question is already to assume that seeing is not by definition a kind of knowing, and that colors are not really seen; thus, there is question-begging in the reasoning underlying anti-realism.

Indeed, insofar as color, on the anti-realist account, becomes the affection of the visual power, it is hard to see why all appearances of color would not be equally veridical, since, as St. Thomas points out, on this account "the judgment of a cognitive power will always be of what it judges (namely, of the proper passion [in one's vision]) as it is, and thus every judgment will be true,"[81] even the contrary judgments of different people. Hence, if a colorblind man says that the strawberry is a grayish-brown, and I say it is red, we both speak the truth. At the same time, we can no longer say this man is in any sense colorblind, that he is at all *missing* something when he sees; we can say only that he sees things differently.

[80] Campbell, "A Simple View of Colour," 188.

[81] Aquinas, *STh* I, q. 85, a. 2.

Another argument for color realism comes from a recently studied phenomenon called color constancy. One specialist in the field describes it as follows:

> For example, light striking an object directly from an overhead sun may be strongest in middle wavelengths (yellows), light scattered to an object from clear sky may be strongest in short wavelengths (blues), and light from a setting sun may be strongest in long wavelengths (reds). Depending on such viewing conditions, the light scattered back to our eyes from any given object can accordingly be strongly biased toward the middle, shorter, or longer wavelengths and, so, toward the yellows, blues, or reds. Yet despite these great variations in the light that a surface scatters back to our eyes under these different conditions, the color that we perceive a surface to have remains a fixed, apparently inherent property of the surface itself.[82]

Further, color constancy is not limited to the gradual change of lighting conditions over the course of a day. When one steps indoors into a room lit by fluorescent bulbs-which emit more light of the middle (green) part of the spectrum than daylight-except for an initial darkness of the room corrected by the dilation of the pupil, one's clothes do not appear to change colors, much less do they become green (as they would in fact appear in a photograph taken in this room). Their ordinary color is still seen. What is relevant to the case for color realism is what this suggests about how vision is related to the physical and physiological events occurring in us when we see. For the fact of color constancy means that the color we see is not simply reducible to the way light affects the eye and visual cortex, since the color seen can remain the same while the affection or chemical mutation in us changes upon changes in illumination. Color constancy, then, suggests that the color or light received into the eye-whether we call it a visual species, a mixture of photons of different frequency, or merely an electro-chemical reaction occurring in the eye or brain-is not the object *(quod)* but the means (quo) of sensation.

A final argument lies in the fact that it is hard to see how one who denies color realism will escape the slippery slope toward a

[82] Roger N. Shepherd, "The Perceptual Organization of Colors: An Adaptation to Regularities of the Terrestrial World?" in Byrne and Hilbert, eds., *Readingson Color,* 2:311-12.

sweeping anti-realism encompassing everything in the natural world. For while most anti-realists insist that the common sensibles or primary qualities exist, it is well known that the arguments leading to subjectivism as regards colors apply not only to secondary qualities, but even to primary qualities.[83] Indeed, St. Thomas was perhaps the first to point this out: "If the things we understand were only the [sensible] species which exist in the soul, it would follow that all knowledge would not be of things that are outside the soul."[84] It seems difficult to avoid idealism and perhaps even solipsism when one is willing to deny the veracity of something as evident as vision. Certainly a natural scientist should be hesitant before plunging down a slope that annihilates the very existence of the things he studies.

B) An Aristotelian-Thomistic Response to the Arguments for Anti-Realism

Our defense of color realism will be incomplete without an investigation of how one might respond to the five general lines of anti-realism reasoning noted in section II. Hence, I will summarize what seem to me to be the sorts of responses that St. Thomas and Aristotle would offer to these difficulties.

1. The Superfluity of Positing Color, Revisited

The first argument was that since electromagnetic energy and chemical reactions are sufficient to account for the phenomenon of sensation, colors are superfluous to science. In response one might be skeptical about the claim that, because scientific quantitative and mechanistic analyses do not use color, then neither ought *any* analysis of reality. This is to assume that, because natural science's account of reality is at the level of basic

[83] See George Berkeley, "The Principles of Human Knowledge," in *The Works of George Berkeley*, 1:265-66; "Three Dialogues," in ibid., 1:397ff.; David Hume, *Enquiry of Human Understanding* sect. 12, part I; Russell, *The Problems of Philosophy*, 16. As Kant said in the passage quoted above (note 23), if there is no real problem with denying the existence of some qualities, there should be none with denying that of *all* physical qualities, leaving one only with the unknowable noumenal world.

[84] Aquinas, *STh* I, q. 85, a. 2.

physics, only natural science can offer a legitimate account of reality, which is to give *carte blanche* authority to purely mechanistic and reductionistic science, to basic physics. But it is important to note not only that science since the beginning of the twentieth century has been distancing itself from the view that basic physics must be mechanistic, but also that many forms of causal explanation-from meteorology to economics, from zoology to commonsense-do not involve a reduction to basic physics, and yet it seems foolish to deny them any analytical insight.

As to the specific point that colors are unqualifiedly acausal, besides the fact that there are examples to the contrary-red paint turns pink *because* one adds white to it-there is circular reasoning here. One can respond by saying that a body's color causes our sensation of it (both as an agent and formal cause). If the anti-realist responds that the color of a body is due not to its color, but rather to some other property or properties of the body, this is a blatant *petitio:* it is assumed that colors do not exist *in rebus* in order to show that they are causally inactive, and the latter is assumed to show that colors do not exist *in rebus.*

Indeed, one wonders whether science can make good on its claim to account completely for sensation without employing color. The anti-realist must claim that colors exist only in the mind or psyche, and as such are by-products of the electrochemical events happening on the back of the retina, in the optic nerve, and in the visual cortex. However, anti-realists are unable to explain *how* such a by-product can arise as a result of a merely physiological event. Two of the foremost scientists of the twentieth century admit this. In spite of being a stalwart reductionist, Schrodinger comments that "the sensation of colour cannot be accounted for by the physicist's objective picture of light-waves," and doubts that physics will ever be able to do so.[85] De Broglie is even more explicit:

> We clearly understand how, for instance, light may be collected by our eyes, act on the retina, and induce in our optic nerve an electric influx which excites

[85] Erwin Schrodinger, *What is Life?* (Cambridge: Cambridge University Press, 1967), 167-68.

certain nerve cells in our brain. But the transformation of these purely physical phenomena into a conscious perception of a luminous sensation remains astounding and almost inconceivable.[86]

Thus the anti-realist is stymied as he tries to fit the last piece of the puzzle into place: he cannot show that it is even *possible* for things that are in no way colored and in no way resemble color to produce what he believes is an entirely internal experience of color. The anti-realist thinks of himself as having a little eye in the brain that inexplicably "sees" color at the last step of the physiological process. This is reminiscent of the aforementioned homunculus or Descartes's pineal gland; the physiology is more complex but the theory entails an equally problematical "missing link." Without positing colors themselves in the causal analysis of vision, anti-realism cannot give an adequate account of color vision.

2. Color as a Function of Distance, Revisited

The second objection was based on the apparent change in a body's color due to a change in proximity. The realist response is that, although a body can appear to be different colors at different distances or from different angles, properly speaking one body cannot be two colors at the same time; one experience of color *can* be more veridical than another, because there is a distinction between how a body is *seen* to be and how it *appears* to be. For instance, is it not preposterous to maintain that a colorblind man sees as well and as much as a normally sighted man, or that a myopic's experience that distant objects are fuzzy is as true as that of someone with perfect vision, or that someone with jaundice sees the real world as truly as those with healthy tissue? Certainly some sensations are more veridical than others, and to the degree that someone truly sees, one sees things truly-one's sense of sight is "privileged."

In the case of the mountains seen from a distance, then, one who sees bluish mountains would have a less accurate sensation

[86] Louis de Broglie, "The Scientist at His Last Quarter of an Hour," in *Mind and Brain*, ed. Sir John Eccles (New York: Paragon House Publishers, 1985), 288.

of the mountains than would one who is up close. In fact, the one viewing the mountains from a distance is really seeing a combination of the mountains' color and the intermediate atmosphere's color, and so one is looking at the mountains, as it were, through milky blue-tinted lenses. As St. Thomas and Aristotle note, air is not perfectly transparent, [87] so when one looks at an object through a great quantity of it (especially if there is a significant admixture of water vapor and other refracting particles) the colors of the object appear to be diluted. [88] In fact, the case of the blue mountains is not so much an ambiguity with regard to color, as it is with regard to the subject(s) of the color; it is an error with respect to *per accidens* sensibles, not with respect to *per se* sensibles. The bluish cast one sees is indeed "out there," but it is in the air, not in the mountains. As St. Thomas puts it,

> the sense [of sight] is not deceived that the white that is seen *is.* But it does happen that the sense is deceived whether the white thing *is this or that-for* example, snow, flour, or something of this sort-especially if it be far away.. . . And about things of this sort the deception is greatest, because one's discernment of these things varies according to the diversity of distance. For what is seen from a greater distance, is seen less *[quod a remotiori videtur, minus videtur].*[89]

The accuracy of one's vision is often contingent upon the distance appropriate for observing the given object. If one wishes to see the mountains' colors undiluted by atmospheric interference, one must pick a clear day and be relatively close to them.

Similarly, the natural distance and conditions for seeing the color of blood might not be from a microscopic distance, for just as the exceedingly distant is not the proper object of sight (at least for humans), neither is the exceedingly small. Indeed, studying

[87] On the degrees of transparency in sublunary bodies, see Aquinas, *De Sens.,* c. 5; Aristotle, *Meteorology,* 1.5.342b4-23.

[88] On distinguishing colors and appearances in virtue of interfering media, refraction, er al., see Aquinas, *De Sens.,* cc. 5 and 6; Aristotle, *De Sensu et Sensato,* 3.439a33-bll; *Meteorology,* 1.6.343a13-b21; 1.7.344b6-10; 2.9.370a12-22; 3.2.372b5-9; 3.4.373b14-375b5; 3.6.377b1-21.

[89] Aquinas, III *De Anima,* leer. 6; see also Aristotle, *De Anima,* 3.3.428b18-25; *Meteorology,* 1.6.343a13-22.

things at micro-distances via a microscope will not necessarily give one a more objective view, since microscopes are intended for investigating fine structure, not for judging color, and necessarily alter the color of the object under study, producing mere appearances.[90] There is no reason to assume that the microscope will be a better measure of real color than the naked eye.

Nonetheless, the pointillistic character of the blood example stands: living blood is in fact a yellow-tinted transparent serum speckled with red cells. This can be seen by the naked eye if a sufficiently thin layer is looked at; are we wrong to say that it is uniformly red? In a way we are, and in a way not. The uniformity of the red we see in a drop of blood is due to the fact that the blood (being partially composed of serum) is partially transparent, so that the red cells behind the serum appear through the medium of serum. Hence, the error consists in attributing the red to the outermost surface of the drop of blood, whereas it is properly in the surfaces of the blood cells, the majority of which are below the surface of the serum. As with the blue mountains above, this is an error not so much as regards the color as it is with regard to the precise subject(s) of the color.[91]

3. Color as a Function of Lighting, Revisited

The resolution of the third objection to color realism is similar. The objection points out that in normal lighting a strawberry is red, but under a mercury-vapor lamp it appears chocolate-brown;

[90] Microscopes operate by bending light through a compound series of lenses, and thus, color distortion due to refraction (longitudinal chromatic aberration) is inescapable; in fact, most microscopes use substage or back lighting, and so employ an unnatural concentration and direction of the light in sending an image into the lenses. See Jacquette, "Color and Armstrong's Color Realism under the Microscope," 395-401.

[91] Something analogous could be said as regards all pointillistic compositions of color. Something that is really dotted with tiny yellow and red dots appears to the naked eye to be orange. Here the error would be in mistaking two colors for one that is a mean between them. Saint Thomas refers to this as a *mixtio ad sensum* (De *Mixtione Elementorum*, l. 34). That being said, it is no great concession to anti-realism to admit that our senses can be mistaken, or that our eyes may be ill-suited to discriminate colors of objects of a particularly minute size.

which is the real color of the object? In response, we point out first that even if one cannot determine *which* is the real color, that does not mean that there is no real color; an epistemological limitation is not necessarily an ontological one. But a more complete answer is based upon the difference in the two light sources; daylight offers a mixture of all the components of the visible spectrum, and in nearly equal proportions, whereas the majority of the light from a mercury-vapor lamp is from the violet part of the spectrum. Hence, if, with St. Thomas and Aristotle, we understand a light source to be what disposes the medium (and perhaps the colored surface also)[92] such that a color can communicate itself to the medium, then if the light source's spectral mixture is incomplete, the color of a body will be unable to transmit itself perfectly to the medium. The strawberry will impress its full spectral reflectance curve to the eye in daylight, whereas under the mercury lamp, because the medium is indisposed, the strawberry will impress only part of it.[93] Thus one can say that the way a strawberry appears under the mercury-vapor lamp is less veridical than the way one sees it in daylight. In the latter case we see the whole color of the strawberry, whereas in the former we see it only partially. Again, some lighting conditions are "privileged" over others.

What about the related difficulty of metamerism; is the canvas with the figure painted against a metamerically identical yellow background one color or two? One should keep in mind that most colors are not metameric pairs, so this sort of objection does not really call into doubt the objective distinction of all colors, but only of some. Further, it seems fair to say that the metamers are one color with multiple different subjects or material realizations. Recalling the distinctions between a body's color and its quantitative analysis in terms of its proper subject, one need not posit a strict correlation between a color and the subject in which it is found. Hence, in the case of a certain shade of yellow, the proper material subject is a body that emits *either* light with a dominant wavelength of 588 nm (yellow), *or* a mixture of light

[92] See note 4 above.

[93] See Aquinas, I *De Anima,* lects. 10, 15; *De Sens.,* c. 14.

with dominants of 526 nm and 645 nm (green and red).[94] When we add the factor of light sources, the above qualification becomes relevant: colors that are metamers in daylight are qualitatively different subjects of the same color. If two colors are metamers under fluorescent lighting for example, they can be distinguished in daylight for the reasons noted above.

4. After-Images, Revisited

From what has been said so far, one can see how the objection from after-images can be handled. The objector is assuming that the experience of an after-image is just as truly a sensation of reality as an ordinary color experience. This seems implausible, especially given that an after-image rarely even *seems* to be in the body in front of which it appears-few people confuse them for real colors. But the color realist's proper account of the phenomena is still more forceful: when one looks at a white wall after staring at a red object and sees the complementary color blue-green, one is seeing the wall's color poorly. Given that white light, and therefore white colors, are a mixture of all the colors of the visible spectrum,[95] one looking at the white wall wherein an after-image appears is seeing only *part* of the whiteness of the wall, the blue-green part. Put differently, he is seeing by means of an ill-disposed sense power, because the cones at the back of the

[94] These are not the only combinations that will produce this shade of yellow; hence there may be a large number of quantitative material dispositions for this property of yellowness. For the case of metamers I am broadening the account of the connection between a color and its spectral reflectance profile/microphysical properties: a precise shade of yellow could have two or more "proper" subjects; see note 69 above. Incidentally, one could also explain metamers by conceding that the two yellow paints are in fact different shades of yellow that human vision is simply inadequate to distinguish. Color realism does not commit one to maintaining that everyone can discern the difference between any two colors; there is simply a limitation to the discriminating power of our sense of sight; see Broackes, "The Autonomy of Colour," 201-2.

[95] This was a discovery of Newton's, but there is also some indication that St. Thomas understood the color white to contain in some way all the other colors. He says that while blackness is caused by a privation of light and white by a surface's maximal possession of light, all other colors are somehow between the contraries black and white, so that each color could be interpreted as imperfect shades of white, and so would be contained virtually in pure white; see *De Sens.*, cc. 6 and 10.

retina are fatigued. His sensation of the color of the wall is incomplete, and so is partly a mere appearance.

5. Spectral Inversion, Revisited

The color realist's rebuttal of the final argument, from the possibility of spectral inversion, is more terse. If two people experience totally different colors when they look at the same object, then one (or both) has a defective faculty of vision. To see is to know reality's visible qualities, and so to experience things other than they are is *not to see* them. Hence the man whose visual spectrum is inverted is, in effect, colorblind; he does not see the real colors of an object. The possibility of spectral inversion can be entertained seriously only by someone who assumes that our sense faculties can be naturally defective, and in fact are not cognitive powers at all. In any case, it should be determinable on independent, neural-physiological grounds whether someone's vision is spectrally inverted; it is no coincidence that no one has ever found someone who was spectrally inverted, and even color anti-realists are beginning to realize that to put forward the argument from spectral inversion is "to exchange hard-won intelligibility for a murky mess of imagery."[96]

So much, then, for the lines of reasoning that appear to some to lead inexorably to color anti-realism. It is evident not only that they are not fatal to Aristotelian-Thomistic color realism, but that this color realism can give a fuller and more satisfying explanation of the very difficulties in question.

V. CONCLUDING REMARKS

It is commonly assumed, even by some neo-Thomists, that Aristotle's color realism has suffered the fate of much of his natural science. As though appealing to a divine oracle, an educated man will say that "Science tells us" that colors are not in things, but in the human psyche, and that we project these entities of the mind onto reality. But more and more

[96] Hardin, "Reinverting the Spectrum," 299.

philosophers, even anti-realists, are beginning to realize that, while science tends to speak about and treat colors as though they did not exist *in rebus*, science has *proved* no such thing.[97]

In this paper I have tried to show that the common sense, or "naive," intuition that bodies are colored, first given a philosophical explication by Aristotle and then enlarged upon by St. Thomas, is still tenable. Not only can it respond in a scientifically and philosophically plausible manner to the difficulties that led early modern philosophers of nature into anti-realism, but it has arguments of its own against anti-realism. Indeed, the recent realization of this fact has driven many contemporary philosophers of science to reassess their own philosophical commitments and to embrace color realism. Disciples of Aristotle and St. Thomas who have sometimes been ashamed of the "obsolete" elements of the classical philosophy of nature should be willing to do the same.[98]

[97] Boghossian and Velleman admit that "The question whether Galileo was right [about color anti-realism] is not really a question about the content of modern scientific theory," but is more a matter of the correct philosophical interpretation of scientific theory ("Colour as a Secondary Quality," 81).

[98] I would like to thank Peter Orlowski and Peter Kwasniewski for their helpful comments and suggestions on an earlier version of this paper, and my wife, Rose, for her editorial help.

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QUANTUM MECHANICS: A DIALECTICAL APPROACH TO REALITY

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In a recent article, Wolfgang Smith states that "the ongoing de-Christianization of Western society is due in large measure to the imposition of the prevailing scientistic world view."[1] One need be neither a philosopher nor a scientist to notice that de-Christianization makes its presence felt in every aspect of the life of a citizen in the modern West-familial, professional, cultural, and religious. Thus it opposes the two-and-a-half-millennial tradition that began in ancient Greece and achieved its full development in medieval Christian philosophy. This tradition is one of constant refinement and crystallization, continuously coupled with and catalyzed by the divine plan of salvation of mankind from the bondage of original sin. This complex phenomenon was well encapsulated by Etienne Gilson:

> It is hardly possible to realize the continuity that prevails through the whole history of Western culture, unless one keeps in mind the important part played by the Church in the work of its transmission. The Greek and Latin Fathers of the Church had so carefully preserved the classical notion of man that when St. Thomas Aquinas, in the thirteenth century, undertook to build up a complete exposition of Christian truth, he did not scruple to borrow for his technical equipment from the pagan Aristotle, whose logic, physics, biology, ethics and

[1] W. Smith, "From Schrodinger's Cat to Thomistic Ontology," *The Thomist* 63 (1999): 49.

metaphysics were then transformed by his medieval disciple into as many elements of Christian synthesis.[2]

This Christian synthesis is central to the understanding of science as an integral part of the classical Western world view. In it all beings are perceived as purposefully ordered in their natures towards their ultimate goal, which is the glory and praise of God. In his *Summa Theologiae* St. Thomas writes

> Therefore since sacred scripture considers things insofar as they are divinely revealed, according to what has been said all things whatsoever that are able to be divinely revealed share in the one formal object of this science, and so they are included under sacred theology as under a single science.[3]

This position radically contradicts the currently dominant mind set that goes back at least to Descartes's decoupling of philosophical and theological wisdom, with its bifurcation of nature into *res cogitans* and *res extensa.*[4] As the term *extensa* indicates, in Cartesian philosophy matter appears to the human mind clearly and distinctly only under the aspect of quantity. All the other Aristotelian categories of accident are thus reducible to quantity. As a result the human mind is unable to discern natures, and so is cut off from the possibility of investigating change, the object of physical science.[5] The Cartesian assimilation of corporeality to pure mathematics, based on Descartes's own distrust of sense experience, has boxed science into, one could say, living a life of extension without any reference to the nature of reality. The mathematicism of Galileo, and in some ways that

[2] E. Gilson, *The Unity of Philosophical Experience* (San Francisco: Ignatius Press, 1999), 221.

[3] *Summa Theologiae* I, q. 1, a. 3.

[4] One of the most striking examples of scientism practically bordering on mythology is the Darwinian theory of evolution. The drastic imposition of stochasticism on the vital mechanisms of natural generation with minimal experimental evidence seems more like an attempt to carry out a deliberate philosophical agenda than an honest scientific investigation. A solid refutation of Darwinian theory based on microbiological and biochemical evidence can be found in Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Touchstone, 1996).

[5] Aristotle, *Physics* 2.2.193b31-35.

of Isaac Newton, further implanted a conviction in the modern mind that physical phenomena can be accounted for simply by the use of mathematical equations. The implications of such reductionism were well summarized by Alfred North Whitehead:

> The laws of nature are nothing else that the observed identities of pattern persisting throughout the series of comparative observations. Thus a law of nature says something about things observed and nothing more. The preoccupation of science is then to search for simple statements which in their joint effect will express everything of interest concerning the observed recurrences. This is the whole tale of science, *that* and nothing more.[6]

Prior to Descartes, however, science breathed a different air, as evident in the works of St. Albert the Great:

> Mathematical abstraction, for Albert, necessarily eliminated from consideration the four types of natural causation; what it retains is a shadow reflecting something of the formal cause. The shadow, or quantitative image, such as figure, measure, number and velocity, which is utilized in a mathematical approach is therefore not an "explanation" why events take place, but measured data which can be accounted for in terms of geometrical figures and determined proportions. [7]

St. Thomas Aquinas compared the contribution of mathematics to natural science with the use of metaphysics in a legal case, or poetry in theology, stating that the explanation of natural phenomena through mathematical principles is an explanation through a "remote cause."[8]

In his *The Quantum Enigma: Finding the Hidden Key,* Wolfgang Smith has undertaken a valuable and long-awaited effort of revitalizing the traditional picture of reality by reuniting the quantitative properties of things with their corporeal natures.[9] According to Smith's suggestive nomenclature, every "corporeal

[6] A. N. Whitehead, *Adventures of Ideas* (New York: The Free Press, 1967), 115.

[7] J. A. Weisheipl, *The Development of Physical Theory in the Middle Ages* (Ann Arbor, Mich.: University of Michigan Press, 1971), 60.

[8] I *Post. Anal.*, lect. 25, n. 6.

[9] W. Smith, *The Quantum Enigma: Finding the Hidden Key* (Peru, Ill.: Sugden, 1995). For a review of this work from a Thomistic viewpoint, see William A. Wallace, "Thomism and the Quantum Enigma," 61 (1997): 4.55-67.

object" is associated with a "physical object" from which it derives all of its quantitative attributes. This accords to a remarkable degree with St. Thomas Aquinas in his commentary on Boethius's *De Trinitate,* where he identifies a physical object with the intelligible matter that is the proper object of mathematical analysis.[10] With this as a background, it is not difficult to understand why reductionist Cartesian epistemology focused on intelligible matter alone, leaving the corporeality of sensible matter blurred and indistinct.

The purpose of this paper is neither to demonstrate the metaphysical adequacy of quantum mechanics nor to reject it as the wishful thinking of mathematical formalists. Quantum giants such as Planck, Schrodinger, and de Broglie were truly brilliant, and the results of their labors have been well confirmed by experiment. No one to this day, however, has seen a wave function or a molecular orbital. Whether someone will in the future is too uncertain for speculation. What can be done now is to offer a hypothetical assessment of the epistemological worth of quantum mechanics, so that when a scientist starts "peeling off" the orbitals from a molecule of sucrose with micro-tweezers even philosophers can sit back and enjoy their afternoon tea. The tools of this task seem to be at hand. In particular, the alternative interpretation of quantum mechanics proposed by David Bohm could help quantum physicists to recognize the four fundamental Aristotelian causes and to demonstrate the validity of their discipline as a *Thomisticscientia media.* Ultimately it may then be possible to harvest the insights of this and other recent physical theories within a coherent philosophical framework rooted in the Christian tradition of the West.

I. CORPOREALI1Y KILLS THE CAT

The importance and uniqueness of Smith's approach to quantum mechanics warrants our reverting to some fundamental conclusions of his *The Quantum Enigma* that relate to the

[10] *In Boet. de Trin.,* q. 5, a. 3.

problem of measurement. In particular, looking at his proposed mechanism of measurement will help us to sort out certain metaphysical quandaries that inevitably result when quantum mechanics is interpreted solely in terms of probabilities.

To observe any physical process, Smith argues, one must use an appropriate measuring device, be it a ruler or a spectrometer, so that the measurement always terminates in a corporeal entity. Accordingly, the measurement entails the actualization of a numerical value that resides potentially in a physical object, otherwise known as intelligible matter.[11] Thus the measurement may be understood as a "transition from the physical to the corporeal domain." Such a transition cannot be explained by classical post-Cartesian mathematical physics, for the simple reason that this physics does not acknowledge the existence of any corporeal reality that is capable of actualizing a measurement. To remedy this, Smith offers his own interpretation of quantum mechanics.

In quantum theory one considers a single particle that can simultaneously occupy two independent states, A and B, described by wave functions ψ_A and ψ_B respectively. The resulting combined state of such a particle is expressed by a linear combination of the two wave functions with appropriate coefficients:

According to the commonly accepted Copenhagen interpretation, these coefficients stand for the probability of finding the particle in state A or state B. The obvious difficulty is that while the above equation postulates the possibility of a concomitant presence of the particle in both states, the act of measurement always yields a single value. In other words, something that initially exists as composite undergoes a transformation to a noncomplex entity.

Smith understands this to be possible because of the transition from a physical object to a corporeal object. One may grant that the problem posed by quantum theory is ontological as well as

[11] See Smith, "From Schrodinger's Cat to Thomistic Ontology," 53.

physical, but one wonders how Thomistic the ontology may be. When opposing a "physical object" to a "corporeal object," one instantly feels an uneasiness with Smith's bifurcating a single being into separate objects or separate ontologies. Metaphorically, Smith's physical object can be likened to a subsistent multidimensional matrix of all possible quanta associated with each existent, permeating it in some quasi-mystical way. In reality, however, the physical and corporeal "objects" are but composites of the single being signified by the Thomistic dictum *materia signata quantitate.* Therefore, Smith's proposal of a double ontology does not eliminate Cartesian bifurcation, although the inaccessibility of the corporeal nature imposed by Descartes no longer constitutes a major epistemological obstacle.

The key explanation of the "metaphysics" of measurement, however, relies solely on the theoretical process of quantum state vector collapse which Smith illustrates with the paradox of Schrodinger's cat:

> The disintegration of a radioactive nucleus triggers the execution of the now-famous cat. According to quantum theory, the unobserved nucleus is in a superposition state, which is to say that its state vector is a linear combination of state vectors corresponding to the disintegrated and undisintegrated states [see above equation: states A and B respectively]. The superposition, moreover, is transmitted by virtue of the experimental set-up to the cat which is consequently in a corresponding superposition state, i.e., dead or alive. It remains, however, in this curious condition until an act of observation collapses its state vel.'tor and reduces it to one or the other classical states [either A or B].12

Smith concludes that

> What is special about the measurement is the fact that it realizes an ontological transition from the physical to the corporeal domain. . . . Schrodinger evolution operates within the physical domain whereas projection has to do with a transit out of the physical and into the corporeal. [13]

[12] Ibid., 52.

[13] Ibid., 57.

In light of St. Thomas's position on the relation between the mathematical and natural orders and the corresponding modes of scientific demonstration, one might here raise an objection that goes to the very foundations of quantum mechanics. This theory is derived *a priori* from mathematical speculation. [14] Mathematics, devoid of any immediate relation to sensible matter, is operative only in the domain of quantity, whereas physical science studies the natures of really existing bodies in which sensible matter is a primary component. From a Thomistic point of view, however, Smith's transition from the physical or quantum mechanical order to the corporeal, seen as a result of the collapse of the quantum state vector during the process of measurement, appears to be problematical. Consider, for example, the measurement of temperature or weight. It is obvious that such a measurement involves an action of an object being measured on a measuring device. Thus thermal energy is transferred to a thermometer, or gravitational energy is passed onto a scale, to obtain the respe'-'tive temperature or the weight of a body. The process of measurement therefore involves accidents on both sides of the experiment, with the action of a measured object and the passion of an analytical instrument forming a single motion. It is clear that a transition from a mathematical domain of a priori, postulated, accident-less, intelligiblematter in quantum mechanics to the sensible domain of a measuring device lacks the necessary elements to constitute a motion in the Thomistic sense.

Addressing the issue of motion and measurement in his commentary on Boethius's *De Trinitate,* St. Thomas Aquinas states that:

> It does not belong to the mathematician to treat of motion. Therefore inasmuch as the principles of quantity are applied to motion, the natural scientist treats of the division and continuity of motion. And the measurements

[14] The formulation of quantum mechanics. and particularly Schrodinger's equation, has undoubtedly revolutionized modern physics. Although preceded by many experimental results, such as the discovery of black body radiation, the photoelectric effect, and the discrete emission spectra of the hydrogen atom, quantum mechanics itself has largely been derived from abstract mathematical premises. In this respect one might regard it as a product of dialectical reasoning.

of motions are studied in the intermediate sciences *[scientiaemediae]* between mathematics and natural sciences: for instance in the science of the moved sphere and in astronomy. [15]

Unfortunately, the speculative and dialectical approach of quantum mechanics precludes it from achieving the status of a *scientia media.* As St. Thomas states: "in the mode of consideration [of *scientiaemediae]* that which is physical is, as it were, material, whereas that which is mathematical is, as it were, formal." [16] In the Copenhagen interpretation of quantum mechanics, the material on which it focuses are abstract functions and probabilities. Thus the use of quantum theory to explain the mechanism of measurement on sensible objects seems, strictly speaking, to be impossible.

II. BOHM PLAYS CLASSICAL

While the classical physicist may feel comfortable in characterizing the macroscopic world, he has always been restrained in attributing full reality to molecules, atoms, and elementary particles. It is indeed too difficult to investigate singly the great number of particles that an appreciable quantity of gas contains (22.3 liters of gas contains 6.02×10^{23} particles). The inability to discern every individual entity in such an ensemble has thus pushed physicists to resort to statistical methods that retrieve at least some information through the computation of average values for the entire ensemble. This amounts to an acknowledgment of the weakness of scientific method in the microscopic world.

The indeterminacy such a method involves is not thereby inscribed into the nature of an individual particle. Yet quantum mechanics as presented by the Copenhagenists seems purposely to penetrate into the single particle realm by imposing on it Heisenberg's uncertainty principle. According to this principle one cannot at the same time determine precisely the velocity and

15 *In Boet. de Trin.,* q. 5, a. 3, ad 5.

16 Ibid., ad 6.

the position of an elementary particle. When velocity is known accurately the position is indeterminate, and vice versa. Nature, however, is governed by laws that express its tendency toward a fixed end under a given set of conditions, indicating that finality is the ultimate reason for determinism in its motions. By negating any fundamental law governing the velocity or position of a particle, one denies the innermost reality that sets it on the way to a particular end, thereby negating the particle's finality. That was the position held by Heisenberg when he advocated indeterminism as an inherent property of matter. He was contradicted by later quantum physicists such as Einstein, Schrodinger, and de Broglie, who shifted indeterminism into the subjective realm by associating it with a radical incompatibility between the observer and the thing observed.[17]

Regardless of this diversity of opinion, quantum mechanics as a theory in itself remained insensitive to finality. The commonly accepted interpretation of quantum mechanics is based on a stochastic model in which a particle is described by a wave function that gives the probability of its being found in a certain area of space. For almost a century now, this probability function has been used to foster the belief that chance and chaos reign supreme in the universe. Fortunately, however, an alternative interpretation was formulated by David Bohm in 1951. This view has been suppressed and virtually eliminated from the scientific world. Only recently have a few voices begun to explore its profound consequences.[18] The major difference of this view from the Copenhagen approach is the restoration of determinism at the molecular level. This shifts the indeterminism of the Heisenberg principle from the ontological to the epistemic realm, exactly where it had been located in classical mechanics.

In other words, one can describe Bohm's theory as a classical version of quantum mechanics. Particles assume precisely defined

[17] L. j. Elders, *The Metaphysics of Being of St. Thomas Aquinas in a Historical Perspective* (New York-Cologne-Leiden: E. J. Brill, 1993), 278. Reference is made to the original publication by L. DeBroglie, *Nouvelles perspectives en microphysique*, 226.

[18] D. Z. Albert, "Bohm's Alternative to Quantum Mechanics," *Scientific American* 270 (May 1994): 58.

loci in space and are no longer delocalized. Wave functions are no longer enigmatic expressions of probabilities, but are treated like really existing force fields that determine the trajectories of particles and thus exercise efficient causality. As formal solutions of the Schrodinger equation, the laws governing the time dependence of these functions are fully deterministic. Based on the total world's wave function and particle distribution at a given time, one should thus be able to predict, with certainty, the wave function and particle distribution at any later time. Any resulting error will occur not because of an inherent determinism in the laws of particle motion, but because of imperfections in the computational method. Clearly, then, Bohm's interpretation of quantum mechanics offers a deterministic alternative to the Copenhagen approach.

When one analyzes Bohm's interpretation more carefully, it becomes clear that in these conditions quantum mechanics functions as a *scientia media.* According to the explanation provided above, force fields are material-physical *suppositiones,* while the theoretically derived geometrical contours of the solutions of Schrodinger's equation are the mathematical-formal representations of those fields. This implies that by using strictly mathematical procedures quantum mechanics is capable of providing *propterquid* demonstrations of phenomena occurring in nature. St. Thomas himself defends this procedure at the beginning of his commentary on Aristotle's *De caelo.*[19] William Wallace comments on this passage as follows:

> A mathematical physics-to use the modern term-was for [St. Thomas] a very real possibility, even if he had but the most rudimentary knowledge of how it could one day achieve the results we now associate with it.[20]

Today we place great confidence in quantum mechanics. Unfortunately we can only speculate on the correctness of this theory as more and more experimental evidence is accumulated

[19] I *De Caelo,* lect. 3, n. 6.

[20] W. A. Wallace, "A Thomistic Philosophy of Nature," in *From a Realist Point of View: Essays in the Philosophy of Science, 1d* ed. (Lanham, Md.: University Press of America, 1983), 39.

in its favor. Nevertheless, Bohm's interpretation supports its proper mode of demonstration as outlined by St. Thomas. This throws new light on the results the theory has already achieved, such as the theory of chemical reactions.

Ill. QUANTUM ALCHEMY

The interior structure, as well as the resultant physical properties of inanimate substance, are determined by four elementary forces: electromagnetic force (chemical reactions), gravitational force (mechanical phenomena), the weak force (radioactive emission), and the strong force (nuclear reactions). No doubt these powers contribute to our understanding of the substantial forms of the inanimate world. To satisfy the Aristotelian hylomorphic theory, however, such a form must also explain why an individual substance is unified within itself and so pertains to a natural kind or species. Wallace observes that "the effect that is sought is to have the form appear as a type of field, coextensive with the substance of which it is the form and energizing the powers that are characteristic of it."[21] Clearly, the form then represents the fundamental unifying principle of a naturally existing object that determines its species, and also encompasses the aforementioned four basic powers.

Chemical reactions that occur as the result of electromagnetic interactions offer a telling example of how a substantial change actualizes a new form with radically distinct physical properties. Thus Wallace describes the formation of sodium chloride in the following way:

> When sodium combines with chlorine to generate sodium chloride, the natural form of sodium, which informs and structures the prime matter in that element, interacts with the natural form of chlorine, which in turn structures and informs the prime matter in chlorine.... A new substantial unity has been achieved, with radically different properties, although something of the previous substances remains in the substrate (PM, prime matter)-present as

[21] W. A. Wallace, *The Modeling of Nature: Philosophy of Science and Philosophy of Nature in Synthesis* (Washington, D.C.: The Catholic University of America Press, 1996), 72.

before and still providing the ontological ground for all the conservation principles that are recognized as such in recent science.[22]

This scenario closely portrays how the formation of chemical compounds is understood in quantum mechanics. In the simplest case of two atoms forming a molecule, the atomic orbitals of the two atoms interact with each other and by mutual overlap form a combined molecular orbital that is entirely unlike the two initial orbitals. Whether or not this resemblance corresponds to a real connection of a form and a quantum orbital hinges precisely on what interpretation of quantum theory one takes. In the Copenhagen approach, based on probabilites, it is difficult to see how atomic orbitals in nature provide the basis for *propterquid* demonstrations of molecular properties. It appears that the probabilistic interpretation of quantum theory never leaves the realm of dialectics and thus is incapable of providing a demonstrative account of natural phenomena. Within Bohm's framework, on the other hand, atomic and molecular orbitals are placed directly in nature, representing there the fundamental forces that account for the physical properties of substances and their mutual interactions. Quantum mechanics then regains its demonstrative power as a *scientia media,* situated as it is in a stable, deterministic environment of wave functions, freed from the probabilistic limitations imposed by Niels Bohr and the Copenhagen school. In such conditions, the Schrodinger equation likewise escapes from the contradiction between its inherent determinism and the stochastic character of wave functions understood as hypothetical probabilistic densities.

IV. MATHEMATICAL METAPHYSICS

David Bohm is noted not only for his novel interpretation of quantum mechanics but also, if not mostly, for his theory of implicate orders and undivided wholeness. He devoted a number of lengthy publications to explicating these ideas, but the limited scope of this paper permits only a brief introduction to their

zz Ibid., *57.*

philosophical implications. Apart from the above highlights of Bohm's quantum speculations, there remains one peculiarity that opens up a vast field for his discussion of implicate orders-the "quantum potential." Bohm postulates the existence of this potential in addition to the conventional physical forces assumed in the standard quantum approach.[23] The function of the quantum potential is best understood on the analogy of a ship guided by radar. David Pratt explains this function in a suggestive way:

> The radar carries information from all around and guides the ship by giving form to the movement produced by the much greater but unformed power of its engines.... The quantum potential pervades all space and provides direct connections between quantum systems.[24]

According to Bohm, any entity, structure, or event in an environment perceptible to humans can be viewed as a particular "subtotality," that is, as the unfolding of a deeper implicate order belonging to higher dimensions of reality. As revolutionary as this may sound, Bohm's interpretation of quantum theory admits of the existence of an immaterial world that may even exceed human nature in its intelligence and actuality. Such a mere "admission," of course, does not provide a scientific demonstration, but at least it prompts one to point out some resemblances between Bohm's approach and a doctrine that holds for a fundamental metaphysical composition not only of human beings but of the entire universe.

A first feature to be noted is the "universality" of the implicate order: in its extent it penetrates every single aspect of reality in the spatial and temporal domains. Thus it appears as an ordering by a higher intelligence, one that has mastery over all lines of causality controlling events in the most remote regions of space and time. However, to be able to exercise such a powerful function this intelligence must be radically distinct from the things

[23] D. Bohm, "A Suggested Interpretation of the Quantum Theory in Terms of 'Hidden Variables,'" *Physical Review* 85 (1952): 166.

[24] D. Pratt, "David Bohm and the Implicate Order," *Sunrise* 42 (February/March 1993).

it manages, lest it actualize its own powers and so violate the principle of contradiction. To substantiate the existence of such an intelligence experimentally, Bohm suggests that one consider that quantum mechanics, unlike classical physics, assumes that observables cannot change continuously but only according to precisely defined values. This entails the formation of a discrete spectrum in which a transition from one value to another is accomplished by gradually increasing or decreasing values through quantum steps. The immediate consequence is the following:

> Thus, if all actions are in the form of discrete quanta, the interactions between different entities (e.g., electrons) constitute a single structure of invisible links, so that the entire universe has to *be* thought of as an unbroken whole. In this whole, each element that we can abstract in thought shows basic properties (wave or particle, etc.) that depend on its overall environment, in a way that is much more reminiscent of how organs constituting living beings are related, than it is of how parts of a machine interact. [25]

Bohm's hypothesis of the universal connectedness represented by the quantum potential finds its confirmation in an experimental verification [26] of Bell's theorem. [27] This was inspired by the famous Einstein-Podolsky-Rosen or EPR argument for quantum incompleteness. [28] The theorem postulates the possibility of communication between sub-microscopic particles such as photons, separated at large distances, at speeds significantly greater than that of light. Such communication contradicts a premise of the theory of special relativity, according to which no physical signal can be propagated in the universe at superluminous speed. The EPR argument for incompleteness arose precisely from the inability of scientists to account for this literally instantaneous communication under the assumption of

[25] D. Bohm, *Wholeness and the Implicate Order* (London, Boston, and Henley: Routledge and Kegan Paul, 1980), 175.

[26] D. Bouwmeester et al., *Nature* (11 December 1997): 575. This experimental procedure, also called "quantum teleportation," was performed by physicists at the University of Innsbruck, Anton Zeilinger and Dik Bouwmeester.

[27] J. S. Bell, *Physics* 1 (1964): 195.

[28] A. Einstein, N. Rosen, and B. Podolsky, *Physical Review* 47 (1935): 777.

locality, namely, that there is always a limiting speed to the propagation of physical influences.

Does this constitute scientific proof for the existence of God? Certainly not. But at least it does not dispose of God in materialist-reductionist fashion, for here the question of the possible existence of some form of transcendent influence or intelligence is left open. Furthermore, Bohm's concept of implicate order correlates well with a number of other Thomistic theses. For example, any order implies the necessity of relations and, in turn, requires a complex of beings, for if all were absolutely simple, no differences could be established to form detectable relations. Whereas other physical theories such as group theory may admit of particular orders such as symmetries, Bohm's views seem to tolerate any order or composition in general, suggesting that it is not inconsistent with the most fundamental Thomistic composition of essence and existence in all creatures.

One cannot, to be sure, conclude that Bohm's quantum potential correlates essentially with all of being, but its universality need not disqualify it from functioning as a surrogate transcendental in which all things participate in an analogical way. Moreover, Bohm postulates that the quantum potential is not an ultimate intelligence, but rather is organized by a more perfect super-implicate order. Finally, he admits the possibility of an infinite series of such potentials constituting a hierarchy of generative orders with increasing perfection and causal power, as he characterizes them.

As is evident from the example of a ship guided by radar, Bohm's implicate orders continually "look after" their objects, thus operating as most intimate "maintainers" of their courses at every instant in time. In Thomistic terminology, they represent *per se* or essential causes of their effects and so cannot proceed to infinity.[29] A reconciliation of Bohm's theory with St. Thomas on this particular point would terminate the series of implicate orders in one that is the first and most perfect cause of all others,

[29] *STh* I, q. 46, a. 3.

functioning in some ways as a surrogate *ipsum esse subsistens*. It would appear that Bohm's theory of implicate orders is not inconsistent with St. Thomas's ordering of all causes to a Primary Cause who is Himself uncaused and is the ultimate explanation of the entire universe. Again, this is not a mathematical proof of the existence of God. But it surely may be seen as a physical theory that is compatible with, and sees no inconsistency in, the existence of immaterial entities.

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AQUINAS ON INTELLIGENT EXTRA-TERRESTRIAL LIFE

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Both as a philosopher and as a theologian, Aquinas took an interest in the question of whether there are intelligent material beings other than humans in the universe. As a philosopher he sought to understand the order of the universe, which entails ascertaining what beings are in the universe. As a theologian he sought knowledge of created beings insofar as it leads to a greater understanding, admiration, and love of the creator, and also insofar as it frees one from superstitious beliefs that pose an obstacle to faith in God.[1]

Although Aquinas was unable to approach the question of the existence of intelligent extra-terrestrial life from the scientific perspective of our day, he does raise some generally overlooked philosophical questions regarding such beings. His theological reflections are helpful for addressing the popular claim that the discovery of intelligent extraterrestrial life would spell the end of Christianity. Aquinas's position is that it is possible that ETs[2] of a certain sort exist, but improbable that they do. I will consider first Aquinas's philosophical positions on the possibility of ET life, then his theological views thereon, and dose with his arguments regarding the probability of ET life.

[1] Cf. *Summa contra Gentiles*, ed. C. Pera, 0.P., et al. (Turin: Marietti, 1961), II, cc. land 3.

[2] Henceforth ET will be used as an adjective in place of "intelligent extra-terrestrial" and will also be used as a noun to name beings of this sort.

I. THE POSSIBILITY OF ET LIFE

When people today think of extra-terrestrial life they generally imagine another earth-like planet inhabited by beings with odd-looking faces who are brainier than ourselves. Aquinas never considers ETs as inhabitants of another earth-like planet. This is because he thinks that there cannot be a more than one world like ours.[3] His views on the material composition of the universe further restrict what he considers possible as far as ET life is concerned. He thinks that celestial bodies are made of a single incorruptible element, while the earth is the only place where corruptible elements are found. Thus, his only candidate for ETs is the celestial bodies themselves, which some philosophers thought might be animate. He does, however, consider the possibility of the existence of beings other than humans that are composed of the earthly elements. Though he would necessarily imagine them as dwelling on the earth, we may take his arguments as applicable to the possibility of their existence on another planet.

The arguments against an intellectual substance being united to a *single* element are straightforward:

> If some intellectual substance is united to one of the simple bodies [corruptible elements] as form, either this being will have intellect alone or it will have other powers such as those which pertain to the sensitive or nutritive part as is the case in man. If, however, it has intellect alone, it would be vain for it to be united to the body. For every form of a body has some proper operation through the body. The intellect however does not have some operation belonging to the body except according as it moves the body.... The motions of the elements are from natural movers, namely, from the things which generate them, and they do not move themselves; whence there is no need as far as their motion is concerned for them to be animate. If on the other hand the intellet."tUa substance which is supposed to be united to an element or part of it has other parts of the soul [in addition to intellect], it will be necessary to find in a simple body a diversity of organs; which is incompatible with the

[3] Cf. *In Libros Aristotelis De Caelo et Mundo,* Leonine ed. (Rome: Society for the Propagation of the Faith, 1886), I, c. 9, lect. 19. Cf. also *Summa Theologiae* I, q. 47, a. 3.

body's simplicity. Therefore, an intellectual substance cannot be united as form to some element or part thereof.[4]

The argument against the possibility that there exists another body composed of many elements is less convincing:

For if it [an intellectual substance] were united to another body, either it would be united to a mixed body or to a simple body. It cannot however be united to a mixed body, because it is necessary that that body be of the most balanced make-up according to its genus among the other mixed bodies, since we see that mixed bodies have nobler forms to the extent that they arrive at a more temperate mixture; and thus that body which has the most noble form, as an intellectual substance, would have to be of the most temperate mixture, if it is a mixed body; whence we even see that softness of flesh and goodness of touch which demonstrate balance of constitution are signs of a good intellect. The most balanced constitution is the constitution of the human body. It is necessary, therefore, that if an intellectual substance is united to some mixed body, it be of the same nature as the human body. The form of this being would be of the same nature as the human soul, if it be an intellectual substance. There would not therefore be a difference according to species between this animal and man.'

In this passage Aquinas seems to ignore the possible existence of beings with a rational soul who have better or additional external or internal senses. If they did exist, would they belong to the same species as we do?

Aquinas is actually addressing the question of whether there could be a rational being with better or additional senses when he speaks of the need for human beings to possess a body that has the most balanced mixture of elements. To understand Aquinas's position here one must realize that although he thought that there was no best possible world, he did hold that the things in this world were as good as they possibly could be given the overall constitution of the world.[6] The human body was thus as well

[4] *ScG* II, c. 90.

-'Ibid.

[6] Cf. *Summa Theologiae*, ed. lnstituti Studiorum Medievalium Ottaviensis (Ottawa: Commissio Piana, 1953), I, q. 25, a. 6, ad 3: "the universe cannot be better, supposing these things, on account of the most fitting order attributed to them by God, in whom the good of the universe consists. If some one of them would be better, it would corrupt the proportion

disposed as it could be for the rational soul and its operations given the constraints of the elements available in the world. Thus, in response to the objection that "since man is the most noble animal, the human body ought to be disposed in the optimal manner as to those things which are proper to animals, namely, sense and motion, "[7] Aquinas says that

> touch, which is the foundation of the other senses, is more perfect in man than in any other animal; and it is for this reason that it was necessary that man have the most balanced complexion among all the animals. Also man surpasses all the other animals a5 to the interior sense powers.... From which it happens by necessity that as to some of the exterior senses man falls short of some other animals. For example, man has the worst sense of smell among all the animals. For it was necessary that man have the biggest brain in proportion to his body among all the animals so that the operations of the interior sense powers in him which are necessary for the operation of the intellect would be more readily exercised.... The magnitude of the brain on account of its moistness is an impediment to smell which requires dryness.[8]

The rest of Aquinas's response is to the effect that any inferiority in the human body is an unavoidable side-effect of something needed to insure the good functioning of the internal senses and the "perfect equality of complexion" required for a good sense of touch. [9] One gathers from this that Aquinas thought that there was one perfect balance of elements and arrangement of organs in a human body (albeit varying within a certain range), [10] and that the

of order; just as if one chord was more than duly stretched, it would destroy the melody of the cithara. Nevertheless God could make other things, or add other things to the things already made; and thus there would be a better universe."

[7] *STh* I, q. 91, a. 3, obj. 1.

[8] Ibid., ad 1.

[9] Aquinas insists in many places on the importance of "perfecta complexionis aequalitate" which insures that humans have the best sense of touch. Cf. *Quaestio Disputatade Anima* in *QuaestionesDisputatae,*vol. 2, ed. P. Bazzi et al. (Turin: Marietti, 1965), a. 8: "Whether the Rational Soul Ought to be United to Such a Body of the Sort That the Human Body Is."

[10] Aquinas is not ignorant that there is a certain range in human composition. Cf. *Scriptum super Sententiis* (Paris: Lethielleux, 1956) II, d. 15, q. 2, a. 1: "For when some make-up *[complexio]* is assigned to some genus, this is not according to some indivisible grade, but with a certain latitude; so what is found beyond certain limits no longer preserves the make-up belonging to that genus. But there is much diversity between those limits.... Nevertheless there is some level of heat or cold that the human make-up cannot withstand."

presence of any other organs or even better organs would be incompatible with the balance that is needed for two or three things that humans need in order to be human, namely, a good sense of touch, a good memory and imagination,[11] and perhaps upright posture.[12]

The modern scientific evidence for the evolution of life forms provides reason to believe that there could be more than one body plan for a rational being. The evolutionary process itself is a kind of material constraint that Aquinas was not aware of. The "making over," so to speak, involved in producing a new life form from its could account for certain imperfections in the human body, just as the need for good imagination has as a necessary undesirable side effect that areas of the brain devoted to other functions in animals have to be reduced in humans. The question is, then, would an intelligent being with a variation of the human body plan be a human being? Aquinas is not really able to consider this as a possibility. However, his minimal criteria for what constitutes a human being gives us some idea of what he might have said had he been aware of the evidence for evolution:

> But finger, foot, and hand, and other parts of this sort are outside an understanding of "man," whence the essential notion of man does not depend on them and man can be understood without them. For whether it has feet or not, so long as there is affirmed a conjunct of rational soul and body mixed from the elements with the proper blending that such a form requires, it will be a man.[13]

This text maintains that there are some components of humans that are not essential to our nature and thus do not enter into the definition of "human," whereas there are others that cannot be dispensed with. A human being could exist without hands or feet, but could not exist without a mixed body that has the proper mixture of elements that a rational soul as form requires, namely, that which is requisite for an excellent sense of touch. As

[11] *Q.* D. *de Anima,* a. 8.

[12] Cf. *STh* I, q. 91, a. 3, ad 3.

[13] *In Librum Boethii de Trinitate,* ed. Decker (Leiden: E.J. Brill, 1959), q. *5,* a. 3.

mentioned above Aquinas also regards a large brain as a necessary component of human beings. He also names bones, which are needed for upright posture. [14] We are still left wondering whether Aquinas would rank a being that fit the above criteria and that was endowed with an extra sense or bigger brain than ours in the same species as us or only in the same genus. [15]

Up to now I have considered whether it is possible for another human-type body to exist. However, what determines the species of a thing is its form, which in the case of living things is the soul. It remains to be considered whether there is something about the human soul that prevents it from existing as more than one species. On this point it is helpful to see why separated substances and the human soul are not put in the same species:

> Further, any thing whatsoever has its proper being according to the *ratio* of its species; for of those things of which there is a diverse *ratio* of being, there are diverse species. The being, however, of the human soul and of the separated substance are not of one *ratio;* for a body is not able to share in the being of a separated substances as it can share in the being of a human soul according to which it is united to the body as form to matter. The human soul therefore differs in species from separated substances.... Moreover, the species of a thing is perceived from the proper operation of it; for operation demonstrates power *[virtutem],* which indicates the essence. The proper operation, however, of separated substances and the intellectual soul is to understand; however, the mode of understanding of separated substances and of the soul is totally other; for the soul understands by taking from the phantasms, which is not the case of separated substances, which do not have bodily organs in which the phantasms must necessarily be. Therefore, the human soul and separated substances are not of one species. [16]

Both our hypothetical ETs and humans would have a rational soul that is the form of the body and that knows by abstracting concepts from sense experience.

[14] Cf. *STh* III, q. 5, a. 2: "Carnes et ossa in hominis definitione poni oportet."

'-' I do not intend here systematically to address the question of how a species is determined according to Aquinas. This is a difficult task which demands separate treatment, and so I will continue to skirt the issue as I exanline the question of the possibility of another species of human-type life.

[16] *ScG* II, c. 94. Cf. II *Sent.,* d. 3, q. 1, a. 6: "Utrum angelus et anima differant specie."

The multiplicity of angelic forms suggests that there might also be a multiplicity of human forms.[17] Yet, according to Aquinas:

that there is only one species of rational animal, while there exist many species of irrational animal, arises from the fact that the rational animal is constituted from this that corporeal nature reaches the highest thing it can attain to, [namely], the nature of spiritual substance which [in turn] attains its lowest [grade]. There is only one highest grade, as well as lowest grade, of one nature.[18]

This argument does not address the possibility that there could be a group of human-type beings more capable of understanding than another, due to better senses. In fact, Aquinas even seems to think that there is room for doubt on the point because after he says that "There is only one highest grade, as well as lowest grade, of one nature" he ends by saying "although it could be said that there were many species of rational animal, if one would posit that the celestial bodies were animate."[19]

[17] Cf. *STh* I, q. 50, a. 4, obj. 2: "More and less does not cause a diversification of species. But angels do not appear to differ from one another except according to more and less, namely, according as one is more simple than another, and is of more perspicacious intellect. Therefore, angels do not differ in species." Ibid., ad 2: "More and less, according as it is caused from the intensification and remission of one form does not cause a diversification of species. But more and less according as they are caused from forms of diverse grades do thus cause a diversification of species; for example, if we say that fire is more perfect than air. And in this manner angels are diversified according to more and less."

[18] *Quaestio Disputata de Spiritualibus Creaturis*, in *Quaestiones Disputatae*, vol. 2, ed. P. Bazzi et al. (furin: Marietti, 1965), a. 8, ad 10. Cf. *De Ente et Essentia*, c. 5: "if the nature of the possible intellect would be unknown, we could not discover the multitude in separated substances. There is, therefore, a distinction of each separated substance from the others according to the grade of potency and act; so that the superior intelligence, the nearer it is to being first, has more act and less potency, and so with the others; and this [series] comes to an end in the human soul which holds the last grade in intellectual substances. Whence its intellectual potential stands to intelligible forms as prime matter (which holds the last grade in sensible being) to sensible forms ... and therefore the Philosopher compares it to a blank slate on which nothing is depicted."

[19] *De Spir. Creat.*, a. 8, ad 10. This last statement, despite being couched in hypothetical terms, is somewhat odd since Aquinas holds that celestial bodies are simple, and thus would not have sense organs as animals must have. Cf. D. *Q. de Anima*, a. 8, ad 12: "the body of man could not be a simple body, neither a heavenly body on account of the passibility of organic senses, and above all the sense of touch; nor a simple elementary body: because in an element there are contraries in act. It is necessary, however, that the human body be brought

When Aquinas, in the *Summa contra Gentiles* (ScG II, c. 90), apparently excludes the possibility that several species of human beings could exist, his concern is to refute the erroneous views that demons are physical animals made of bronze and that the elements are animate, and that angels and demons by nature had bodies. If he was presented with an intelligent individual that had a sixth sense and an exceptional memory would he say that it was the same species or that it and we were only generically the same?[20] I do not see any room to say that he would deny that the beings in question are human, at least in the generic sense, given that they have the requisite sensitive body and an intelligence which starts off *tabula rasa* and arrives at ideas starting from sense experience.

Aquinas's other candidate for an ET is an animated celestial body. His views on this subject might seem of merely historical interest given that we know that the stars and planets are not composed of a fifth incorruptible element. However, it is useful to see how Aquinas reasons when faced with a possible addition to the chain of being.

Aquinas thinks that the most plausible view concerning the movement of the heavenly bodies is that it is caused by lower ranking separated substances that are not united to those bodies

to a middle [state]." Cf. *ScG* II, c. 70. One cannot get around this by saying that movement is also an animal characteristic because while it is true that only animals move locally, not all animals do so, whereas all sense; sensing is thus the defining characteristic of animals. A further problem is that not only would such a being not be an animal, it would not be rational either, in the strict sense, since reason is distinguished from pure intelligence by its dependency on sense experience.

[20] The capacity to interbreed is important for modern science in determining species. To my knowledge Aquinas says very little about reproduction in relation to species. He determines that men and women do not belong to different species on the grounds that male semen could not produce both sexes if they were not of the same species. It does not however follow from this that if a human cannot reproduce with an alien that the two are not of the same species. Aquinas was aware that the mule is an offspring of a horse and an ass. However, this does not help much in determining whether there could be another species of humans, because Aquinas regards horse and ass as two species to start with, and he does not provide us with the criteria whereby he determined this.

as their forms.[21] However, he does seriously entertain the possibility that these separated substances are united to the heavenly body as their forms.[22] In the *Disputed Question on Spiritual Creatures,* after giving one argument pro and another a con, he asserts that "The opinion on each side has the *ratio* of probability."[23] Though in that disputed question he finds the argument for a negative conclusion more compelling, in the *Disputed Question on the Soul,* after extensive discussion, he says in the response to an objection:

> If, however, it [the separated substance] only possesses intellect [and not sense] it is nevertheless united to the body as form not for the sake of intellectual operation, but for the sake of the execution of its active power.[24]

It is somewhat surprising that Aquinas entertains as possible that an intellectual substance be united to a celestial body, since this does not seem consistent with his position that the difference between the human form or soul and angelic forms is that the latter does not have the ability to share its being with a body.[25] Perhaps Aquinas thinks that human souls may not be the only

[11] Cf. *De Spir. Creat.,* a. 1, ad 6: "It ought to be said further that it is contrary to the incorruptibility of the heavenly bodies that they be animate as are lower bodies which are rendered vegetative and sensitive through the soul. It is therefore to be denied that celestial bodies are animate in the same manner in which these lower bodies are animated. It is nevertheless not to be denied that heavenly bodies are animate, if what is understood by animation is nothing other than the union of mover to mobile."

[22] Cf. *Quaestiones Disputatae de Veritate,* in *Quaestiones Disputatae,* vol. 1, ed. Raymundi M. Spiazzi, O.P. (furin: Marietti, 1964), q. 5, a. 9, ad 14: "Or it can be said that the soul is the perfection of the human body both as form and as mover; the heavenly body which is perfect does not require another spiritual substance which will perfect it as form, but which will perfect it as motor only.... Although some held that the movers of the orbs were joined to them as their forms; which is left in doubt by Augustine.... Damascene, however, says the contrary."

[23] *De Spir. Creat.,* a. 1, ad 6

[14] D. *Q. de Anima,* a. 8, ad 3.

[25] Cf. *ScG* II, c. 94, cited above. Cf. also D. *Q. de Anima,* a. 3: "belonging to the notion of the human soul is that it is unitable to a human body, since it does not have in itself the complete species; but what makes up the whole of the species is in the composite itself. Whence that the soul be unitable to this body or that body multiplies it according to number, not, however, according to species."

separated substances that can be united to a body after all, for in another place he says:

> This thing able to be perfected that is the human body corresponds to the soul, [whereas] to an angel either no body corresponds or that of another species such as a bronze body as Augustine ... seems to say.[26]

On the supposition that the heavenly bodies are animate, Aquinas never envisages them as an *intermediary* between humans and angels. We have already seen that he seems open to ranking them with humans, but more often he maintains that "if the celestial bodies are animate, their souls belong to the society of the angels."[27] The reasons for classifying them in this manner is that they lack a sensitive body and they have an angelic mode of understanding.

What can we conclude from Aquinas's hesitancy and at least apparent inconsistency on the issues concerning animated celestial bodies? The fact that his preferred authorities (Aristotle and St. Augustine) do not adopt the position that he thinks is most plausible alerts him to the difficulty of determining the answer. He recognizes that the arguments given on both sides contain probability. Unable to come up with evidence sufficient to allow him to decide the question with certitude, he remains open to the possibility that the opposite position to his own might be true.

[26] II *Sent.*, d. 3, q. 1, a. 6 ("Utrum angelus et anima differant specie"). The passage reads: "Praeterea, eidem formae vel perfectioni respondet idem perfectibile. Sed anima et angelus sunt quaedam formae, prout communiter omnes substantias a materia separatas formas dicimus, quorum formae materiales sunt imagines, ut Boethius dicit .•.• Cum ergo animae respondeat hoc perfectibile quod est corpus humanum, angelo vero vel nullius vel alterius speciei, ut corpus aereum, secundum quod Augustinus ... videtur dicere, vel etiam corpus caeleste sec. opinionem Avicennae.... et quorumdam philosophorum; videtur quod anima et angelus non sunt unius speciei."

[27] *Q.* D. *de Anima,* a. 8 ad 5. The objection states "that if they are animate, in eternal beatitude there would be not only angels and men, but also a certain middle nature." Cf. *De Spir. Creat.,* q. 1, a. 6, "Whether a spiritual substance is united to a heavenly body": "[sed contra 3:] The heavenly society of the blessed consists of angels and souls. But the soul of the heavens, if the heavens are animate, would be eontained under neither group. Therefore, there would be some rational creatures which could not be sharers in beatitude; which seems to be unfitting. ... [ad sed contra 3:] If the heavenly bodies are animate, the spirits governing them are to be counted in the society of the angels."

Aquinas also takes care to avoid speaking in such as manner as would prejudice divine wisdom. As a philosopher he maintains that the works of nature manifest intelligence while themselves lacking it, and as a Christian believing in divine Providence he is even more firmly convinced that natural things are not junk.[28] Thus, although the existence of ensouled heavenly bodies appear to him as unlikely because they do not fill an obvious gap in the hierarchy of beings in the universe, he still sees a need to postulate some goodness that would be proper to them, in case they do exist. We see this in the passage quoted above from the *Disputed Questions on the Soul,* where he says that such a being would be "united to the body as form not for the sake of intellectual operation, but for the sake of the execution of its active power, according to which it is able to attain to likeness to God as to causality, by [causing] the motion of the heavens."

II. THEOLOGICAL CONCERNS

Aquinas does not see the existence of ETs as posing difficulties to the faith. While his treatment is unfortunately limited by what he considers as possible ETs (namely, animated heavenly bodies), he does make some generally applicable points.

For Aquinas, the fact that Scripture does not mention some being is not a reason to conclude that it does not exist. When addressing the question of whether incorporeal substances are united to celestial bodies as forms, he notes that:

> Augustine leaves [this] in doubt and so does Origen. Which nevertheless seems to be rejected by many moderns for the reason that since the number of the blessed according to divine Scripture is made up from human beings and angels alone, those spiritual substances cannot be counted among human souls nor among angels, who are incorporeal. [29]

[18] Aquinas does exclude some combinations as absolutely impossible, for example, an animate body made only of air.

[19] *Quaestiones Disputatae de Potentia,* in *Quaestiones Disputatae,* vol. 2, ed. P. Bazzi et al. (furin: Marietti, 1965), q. 6, a. 6.

Aquinas himself is not persuaded by the moderns' line of reasoning, and he concludes by noting that Augustine also leaves in doubt whether beings of this sort might not also be numbered among the blessed.[30]

In another passage Aquinas even goes so far as to say that it is of no matter to the faith to make a pronouncement on the existence of animated celestial bodies:

> According to what Aristotle says, it is the case that it is necessary to posit an intellect united to the body as form. According to the opinion of Aristotle it is therefore the case that the heavens are composed from an intellectual soul and a body.... It will be necessary to say then that the intellect according to its substance is united to the heavenly body as form.... What is being said, however, about the animation of the heavens we do not say as asserting it according to the teaching of the faith, to which it is of no concern at all *[nihil pertinet]* whether this matter is said to be thus or otherwise; whence Augustine (Enchird. c. 58): "Nor am I certain whether the sun and moon and other stars belong to the same society, namely, that of the angels; the brightness of the bodies notwithstanding, they do not appear to have sense or intelligence."[31]

One reason why Aquinas does not think the ET existence is of concern for the faith is that the faith and Sacred Scripture are ordered to our salvation, and not to instructing us in cosmology or science in general. It is for this reason that Scripture sometimes omits mention of certain things, as happens, for example, in the Book of Genesis in regard to the creation of the angels:

> Augustine says ... that "the angels were not left out in the first creation of things, but are signified by the name 'heaven,' or even 'lights.'" Therefore, however, either they were left out, or they were signified by the names of corporeal things because Moses habitually spoke to uneducated people who were not yet able to grasp [things of an] incorporeal nature; and thus if it had been expressed to them that there were things above all corporeal nature, it

[10] It is somewhat ironic that Aquinas uses the absence of any statement to the contrary to conclude that there is no more than one world. The only theological statement he makes concerning the question regards a passage from John: "The world was made through him." Aquinas's comment: "Uohn] names the world in a singular way, as if there were only one world that existed" (*STh* I, q. 47, a. 3, sc).

[11] *ScG* II, c. 70.

would have been for them an occasion of idolatry, to which they were prone, and from which Moses chiefly intended to called them back.[32]

Knowledge of extraterrestrials is of no more concern for the faith than knowledge about animated celestial bodies is. It belongs to science and not to faith to catalogue the different beings in the material universe. Moreover, just as untimely knowledge concerning angels was apt to pose an obstacle to the faith of early uneducated believers, this could also be the case with ETs, on the supposition that they exist.

Of course, it does pertains to the theologian to defend the teachings of the faith. The specific manner in which Aquinas envisages ETs does not suggest any conflict with Scripture since that sort of ET would be ranked with the angels.[33] The existence of ETs as people today typically envisage them, however, does raise questions. For example, if ETs are generically human, how is one to understand 1 Corinthians 15:22-23: "Death came through one man and in the same way the resurrection of the dead has come through one man. Just as all men die in Adam, so all men will be brought to life in Christ"?[34] If Aquinas had recognized the possibility of ETs as we envisage them, he would have seen it as the theologian's duty to treat these questions.

He makes at least two applicable observations. Following Scripture, he insists that all humans have Christ as their head:

> Moreover, the one who is not harmed by sin, is not in need of redemption. If therefore there would be someone who was not born in original sin, aside from Christ, there would be someone who was not in need of the redemption accomplished by Christ; and thus Christ would not be the head of all men,

[32] *Sfh* I, q. 61, a. 1, obj. 1 and ad 1. Cf. *De SubstantiisSeparatis,* c. 17.

[33] Cf. *Q.* D. *de Anima,* a. 8 ad 5; cited above with *De Spir. Creat.,* a. 1, ad 6.

[34] To my mind the most problematic text is Colossians 1:15-20: "As he is the Beginning, he was first to be born from the dead, so that he should be first in every way; because God wanted all perfection to be found in him and all things to be reconciled through him and for him, everything in heaven and everything on earth when he made peace by his death on the cross." This could be explained by saying that fallen ETs were redeemed through Christ's death on earth. Another alternative is that they never fell.

which is not fitting according to the faith. Therefore, neither ought one to hold that someone can be born without original sin.[31]

The question remains as to what, if any, problem this position would pose were generically human ETs to be discovered.

The argument that Aquinas gives for the possibility of other Incarnations is another contribution that he makes to the theological ET debate:

On Whether One Divine Person is Able to Assume Two Human Natures: That which is able [to do something] in one case and not in another has its power limited to one. The power of a divine person is, however, infinite, and it ought not be said that a divine person had assumed one human nature is such a manner that another could not be assumed to its personhood, for that is impossible, because an uncreated thing cannot be comprehended by a created thing. It is manifest therefore that whether we consider the divine person according to power, which is the principle of the union, or according to its personhood which is the term of the union, it must be said that the divine person besides a human nature which it has assumed, is able to assume another numerically different human nature.[36]

Thus far I have considered Aquinas's arguments regarding ET life chiefly with an eye to its possibility. Now I would like briefly to examine a few arguments Aquinas gives in other contexts to the extent they can be applied to the question of the probability of ET life.

[35] II *Sent.,* d. 31, q. 1, a. 2. Cf. *ScG* IV, c. 83: "Furthermore, if after the resurrection there will be generation of human beings, either those who are generated will be later corrupted, or they will be incorruptible and immortal. If, however, they will be incorruptible and immortal, a number of unsuitable consequences follow. First, it will be necessary to hold that those men are born without original sin, since the necessity of dying is a punishment consequent upon original sin; which is contrary to what the Apostle says in Romans, 5:12, that 'through one man sin was transmitted to all men, and through sin, death.' Whence it would follow that not all were in need of the redemption which is from Christ, if some were born without original sin and without the necessity of dying; and thus Christ will not be the head of all men; which is contrary to the view of the Apostle who says in I Corinthians 15:22 that 'as all died in Adam, so too all are made alive in Christ.'"

[36] *STh* III, q. 3, a. 7. Cf. ibid., ad 2: "The assumed nature, however, as to something stands in the manner of a vestment, granted that there is not a likeness on all points, as was said above. And therefore if a divine person would assume two human natures, on account of the unity of the supposit, one would speak of 'one man having two human natures.'"

An argument for the improbability of ET life can be derived from considering the order of the universe:

> The order of the universe includes in itself both the conservation of the diverse things instituted by God, and the motion of them; because according to these a twofold order is found in things, namely, according as one thing is better than another, and according as one thing is moved by another. [37]

If there were no interaction between us humans in our world and the ETs in their world the universe would lack one kind of order, though it still would have the order of hierarchy. This sort of universe is less probable than one in which the parts had both kinds of order. However, this argument establishes its conclusion in terms of fittingness rather than necessity.[38]

Another argument for the improbability of ET life is based on a notion that Aquinas uses to argue that this world is the only one, namely, that uniqueness is a desirable characteristic:

> The third objection is as follows: It is better to multiply the best things than those which are less good; but the world is the best thing; therefore it would be better for there to be many worlds, than it is for there to be many animals and many plants. And to this it ought to be said that this itself belongs to the goodness of the world: that it be one; because one has the notion of good: for we see that something is cut off from its proper goodness through division.[39]

[37] *STh* I, q. 103, a. 4, ad 1.

[38] A somewhat similar question is whether the angelic realm and human realm were created at the same time. Aquinas does not want to say that a negative answer to this question is to be regarded as erroneous because certain saints were of that opinion. He himself, however, does not think that it is correct for the reason that "if, however, the angels would have been created separately, they would seem to be totally alien from the order of corporeal creatures, as if constituting of themselves another universe" *(De Pot.,* q. 3, a. 18).

[39] I *De Caelo,* c. 9, lect. 19. This argument is already found in Plato's *Timaeus,* and perhaps Aquinas took it from there: "To the end that this world may be like the complete and living Creature in respect of its uniqueness, for that reason its maker did not make two worlds nor yet an indefinite number, but the Heaven has come to be and is and shall be hereafter one and unique" (Plato, *Timaeus* 31a, b in *The Collected Dialogues of Plato,* ed. Edith Hamilton and Huntington Cairns [New York: Pantheon Books, 1961]).

A number of authors maintain that the discovery of ET life would prove Christianity is false since it would imply that there were many Adams and many Incarnations. Cf. Thomas Paine, quoted by Michael J. Crowe, in *The Extraterrestrial Life Debate 1750-1900: The Idea of a Plurality of Worlds from Kant to Lowell* (Cambridge: Cambridge University Press, 1988),

One could similarly argue that one human species is enough, since it would reflect God's goodness by being unique.

Another argument against the probability of ETs derives from an argument Aquinas uses to refute the position that there are many worlds, based on a characteristic of intelligent agents. In responding to the objection that "it would be better that there exist many worlds rather than one, because many good things are better than fewer,"[40] Aquinas points out that

> no agent intends a material plurality as an end; because a material multitude does not have a fixed term, but of itself tends to infinity; infinity, however, is contrary to the notion of "end." When it is said, however, that many worlds are better than one, this is said according the material multitude. This sort of better, however, does not belong to the intention of God as agent, because for the same reason it could be said that if he made two, it would be better that there were three; and thus ad infinitum.[41]

God could have populated the universe with any number of reproductively isolated groups of rational animals, but there is no motivation for him to make more than one human race, since simply having more than one for the sake of having more than one is not something an intelligent being would aim at. The weakness of this argument is that it does not exclude God's creating other groups of human beings who would differ by more than the insignificant differences characteristic of the different races. And indeed Thomistic positions on the diversity of being in

163: "From whence, then, could arise the solitary and strange conceit that the Almighty, who had millions of worlds equally dependent on his protection, would quit the care of all the rest and come to die in our world, because, they say, one man and one woman had eaten an apple! And, on the other hand, are we to suppose that every world in the boundless creation had an Eve, and apple, and serpent, and a redeemer? In this case, the person who is irreverently called the Son of God, and sometimes God himself, would have nothing else to do than to travel from world to world, in an endless succession of deaths, with scarcely a momentary interval of life." Of course this in not the only possible scenario, even if ET life existed in great numbers. However, it does accord with Aquinas's claim that uniqueness is a kind of perfection.

[40] *STh* I, q. 47, a. 3, obj. 2.

[41] Ibid., ad 2. Cf. I *De Caelo,* c. 9, lect. 19: "if God would make other worlds, either he would make them like this world or unlike. If they were completely alike, they would exist in vain: which does not belong to his wisdom."

the universe seem to lean in the direction of an affirmative answer to the question of whether ET life is probable. Aquinas maintains that

> God produces things for the sake of communicating his goodness to creatures, and through them to represent his goodness. And because it cannot be adequately represented through one creature, he produces many and diverse creatures, so that what is lacking to one for the purpose of representing divine goodness, is filled up by others; for the goodness which exists simply and uniformly in God, in creatures is multiple and divided. Whence the whole universe more perfectly shares in and represents divine goodness than any other creature whatsoever.[42]

Of these diverse beings which God creates, Aquinas holds that it "certainly agrees with the affluence of divine goodness that those things which are more noble are more abundantly produced in being."[43]

A question remains as to whether the greater abundance of more noble things refers to the number of individuals within a species or to the number of species or types. Aquinas addresses this question when discussing the number of angels:

> The Platonists were saying that to the extent that something is closer to the first principle to that extent it is smaller in multitude; just as to the extent that a number is nearer the unit to that extent it is less in multitude. And this opinion stands up well as to the number of orders: three assist, while six minister.-But Dionysius held ... that the multitude of angels transcends lower bodies in greatness by something immense, so that the higher incorporeal natures transcends all corporeal natures because what is better is more intended by God and more multiplied. And according to this, since those assisting are superior to those ministering, there are more assistants than ministers.[44]

According to these principles, there should be fewer sorts of humans than animals, and more individual humans than animals, but the latter is not the case. Nor if one regards humans as the lowest of separated substances do the principles apply: there

[41] *STh* I, q. 47, a. 1.

[43] *De Pot.,* q. 6, a. 6. Cf. *ScG* II, c. 92 which also says that there should be more of better things, giving as reason that the lower are for the sake of the higher.

[44] *STh* I, q. 112, a. 4, ad 2.

should be more sorts of the lower form, that is, humans, and fewer individual humans than angels, but the former is not the case. Ultimately, Aquinas seems to acknowledge that the numbers of created things are not dictated by necessary rules:

> It does not therefore appear to be universally true that the more imperfect difference of a genus is multiplied in more species. For body is divided into animate and inanimate: nevertheless there appear to be more species of animate bodies than inanimate, especially if the heavenly bodies are animate, and all the stars differ from one another in species. But even in plants and animals there is the greatest diversity of species.... so it is even in the whole universe of things that to the extent that something is superior among beings, to that extent is has a greater formal multitude, which is judged according to the distinction of species: and in this Dionysius' saying is saved: it has less, however, material multitude which is judged according to the distinction of individuals in the same species, in which the saying of the Platonists is saved. That there is, however, only one species of rational animal when there exist many species of irrational animals comes from the fact that rational animal is constituted from corporeal nature attaining its highest grade and spiritual substances attaining its lowest grade. The supreme grade, however, of a nature, and also the lowest grade, is only one: although it could be said there were many species of rational animal, if one held that the celestial bodies were animate. [45]

Aquinas notes that there are more species of animals than species of elements. It is not dear whether he ever also noticed that there are more species of insects than species of cats or of boars. This fact, and the preceding observation of the comparative numbers of animals and elements make it plain that there are no absolute rules concerning the numbers of the different sorts of beings. In any case, it is apparent, especially from the last sentence in the passage above, that Aquinas is proceeding inductively in order to establish what, if any, principles are operative here, rather than deriving these principles deductively. The principles he arrives at are not then of such a certain character as to exclude the possibility that there exist more than one species of human being. And Aquinas is open to this possibility, as one can see from the last sentence in the quotation. If God indeed does create more

[45] *De Spir. Creat.*, a. 8 ad 10.

of the higher sorts of beings, this could serve as the basis of a very weak argument in favor of the probability of ET life.

III. SUMMARY

Aquinas calls to our attention that one sort of ET that could exist is a separated intelligence joined to body as its mover. He himself thinks that there are intelligences of this sort that move the heavenly bodies. As for the other sort of ET which would consist of a separated substance united to a body as its form, Aquinas argues that it is extremely unlikely that a pure intelligence be united to a body as its form, since the pure intelligence in no way profits from its union to the body. However, an intellectual substance of the rational sort is suitably united to a body since an intelligence of this sort can only acquire its ideas through sense experience.

Aquinas points out that the sort of body the composite being must have is specified to some extent by the requirements of the intellectual substance that is united to it. The body cannot be a simple body such as air or iron, because sense organs require a balance of elements, and indeed, a most subtle blend of elements; otherwise the being will lack a good sense of touch and well-functioning internal senses that provide reason with the starting points it needs for forming ideas. Aquinas further points out that rational beings need not have fingers, hands, and feet as humans do; he holds that even humans would still be human without them.

Aquinas does not favor the idea that other human-type beings exist because he thinks that the human soul represents the very lowest type of intelligence, whereas the human body represents the very highest material body. However, he does remain open to the possibility.

From a theological standpoint, Aquinas explains that there is no reason for concern here because it is not the task of Scripture to classify the beings in the universe. Yet he explicitly denies that it is probable that other human-type bodies exist, for the reason noted above. There are two other probable arguments that can be

drawn from Aquinas, one against and one in favor of the existence of other human-like creatures. On the one hand, the human species would reflect God's goodness in a special way by being unique, while, on the other hand, it is befitting to God's goodness that he create more of better creatures. Aquinas leans in the direction of the former view, but realizes that the latter could in fact be the case. By doing so, he gives us an example of the circumspection that this matter demands.

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ST. THOMAS AQUINAS THROUGH THE ANALYTIC LOOKING-GLASS

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John Finnis-alongside his collaborator, and, in certain respects, doctrinal progenitor Germain Grisez-is known for propounding a philosophic account of the natural law. 1therto his views have developed only in loose relation to the teaching of St. Thomas Aquinas. As Finnis notes, since 1965 "Grisez's major writings have not claimed to be interpretations of Aquinas" so that St. Thomas's work has served merely as "the point of departure for a free-standing philosophical treatment of ethical theory" upon which Grisez and Finnis have "collaborated extensively." [1]

Finnis's latest *work-Aquinas: Moral, Political, and Legal Theory-marks* a departure from this "freestanding" theoretic work, and offers an interpretation of St. Thomas's natural law doctrine congenial to the new natural law theory. Having earlier argued for his moral, legal, and political theory under auspices relatively independent of the teaching of St. Thomas Aquinas, [2] Finnis in his latest work proposes a reconstruction of that teaching. To quote from the very beginning of his book:

> There are some serious flaws in Aquinas' thoughts about human society. A sound critique of them can rest on premisses he himself understood and articulated better, I think, than his philosophical masters Plato and Aristotle,

[1] John Finnis, *Aquinas, Moral, Political, and Legal Theory* (Oxford: Oxford University Press, 1998), viii-ix.

[2] John Finnis, *Natural Law and Natural Right* (Oxford: Clarendon Press, 1980).

and much better than Machiavelli, Hobbes, and the other makers or heirs of the Enlightenment.[3]

It is a matter of fact that Finnis's thesis of the incommensurability of "basic goods" is not of Thomistic provenance. Finnis himself expressly admits that on a variety of issues in political and moral theory he cannot hold St. Thomas's conclusions: to mention prominent illustrations, tyrannicide and capital punishment.[4] But he does not see that the root of his divergence with St. Thomas on these matters proceeds from divergence about the very foundation of Thomas's doctrine of natural law. For example, whereas St. Thomas's teaching on the authority of the state to kill is wholly in accord with his teaching regarding the object and end of the moral act,[5] Finnis holds that Aquinas is guilty of unwittingly approving the "doing of evil that good may come."[6]

Finnis superimposes two sets of presuppositions upon St. Thomas's doctrine of natural law that alter its character. The first set is drawn from contemporary Anglo-American analytic philosophy, and comprises notions not only alien, but contrary, to St. Thomas's teaching. These largely determine the *form* of Finnis's interpretation, and distort St. Thomas's teachings regarding the relation of the speculative and practical intellect; the nature of the first precept of law ("primum princeptis legis"); the unified natural teleology of the moral life (i.e., the morally significant hierarchy of ends); and the analysis of moral object, end, and intention. The second set-which colors the *end* to which the earlier errors conduce-consists in a classically liberal reduction of the nature of the common good and of the role of religion in public life (and a negation of the very public character

[3] Finnis, *Aquinas,* vii.

[4] Ibid., 282-87 (death penalty), 289-91 (tyrannicide).

[5] These conclusions are also consistent with St. Thornas's teaching of an ethically significant natural hierarchy among ends, a substantive common good, and the divine delegation of the state's authority to punish and kill.

[6] Finnis, *Aquinas,* 282.

of revelation), as well as a denial of the practical significance of the theistic root of natural law doctrine.7

As St. Thomas instructs us, a thing acts and moves toward its end by reason of its form. Finnis miscasts both the form and the end of St. Thomas's doctrine of natural law. To show the distorting effect of Finnis's presuppositions upon the teaching of St. Thomas is the purpose of the present essay.[8]

I. THE NATURE OF THE SPECULATIVE AND THE PRACTICAL

About the first practical principles Finnis writes:

> Nor, of course, can the genuine first practical principles be 'speculative' ('theoretical', i.e. non-practical) propositions about what is the case, e.g. about human nature. Some commentators on Aquinas have imagined that they are such propositions, on which a 'practical', i.e. directive, character is conferred by the intervention of some act of will. Such a view not only contradicts Aquinas' conception of the first practical principles as 'founded on' an absolutely first practical principle whose form-the form which makes every

[7] It is not an accident that on all these issues the interpretation offered by Finnis is virtually always not only alien, but actually opposed, to the work of the Dominican commentatorial tradition from the thirteenth century to the present. Neither Capreolous nor Cajetan, not Suso nor Banez, not John of St. Thomas, nor (so far as I know) any of the major commentators from within St. Thomas's own order have understood St. Thomas even temporarily to sever the good from being and the true, denying the speculative root of practical truths; or denied that the natural hierarchy of ends is ethically significant prior to choice; or taught that the first precept of law is not a moral precept; or held that the object of the moral act does not include due matter (although the schematism of Cajetan on self-defense in his commentary on *SI'h* II-II, q. 64, a. 7 does seem anomalously to embrace this sense of the object-and to adopt a univocal account of intention-it is an exception to the tradition's general treatment of the moral object); or maintained that the common good of political community excludes any concern for religious truth and may be subordinated to the merely singular or private good; or held that even imperfect happiness is not theocentric. In due course our consideration of Finnis's misconstruction ofThomas's teaching will manifest why this is so.

[8] Latin footnotes are from the Ottawa edition of the *Summa Theologiae* or from the Leonine edition of the *Summa contra Gentiles;* I have taken the English predominantly either from the translation of the *Summa Theologiae* by the Fathers of the English Dominican Province (New York: Benziger, 1948), or from Anton Pegis's translation of the *Summa contra Gentiles* (Notre Dame: Notre Dame University Press: 1975). The English translation of St. Thomas's *Sententia libri politicorum* is "Commentary on Aristotle's Politics," trans. Ernest Fortin and Peter O'Neill, in *Medieval Political Philosophy: A Sourcebook*, ed. Ralph Lerner (New York: Free Press of Glencoe, 1963).

practical principle and proposition *practical-is* neither indicative nor imperative, but gerundive and directive. It also hopelessly contrad.icts his basic and pervasive understanding of will-that it is response to reasons. Practical intelligence is not slave to the will any more than it is the slave of the passions.

In short, the 'ought' of first practical principles is not deducible from 'is', whether from 'is willed by God' or from 'has been prescribed by me myself. [9]

In his earlier work, too, Finnis held that propositions about the "primary goods" are not derived "from any ... propositions of speculative reason." [10] This is not, however, what St. Thomas has to say about the matter. He does not equate the speculative exclusively with the "theoretical," nor identify some class of propositions in which the primacy of speculative adequation of mind to being is not precisely presupposed in knowledge of the good. He teaches consistently that there are *not* two intellectual powers-one speculative, one practical-and that the difference between the speculative and practical intellect is accidental and hence does not alter the adequation to reality that attends knowledge as such. Thus St. Thomas in the following two quotations from the same article of the *Summa Theologiae* articulates with precision both the nature of and the distinction between the speculative and the practical:

Now, to a thing apprehended by the intellect, it is accidental whether it be directed to operation or not, and according to this the speculative and practical intellects differ. For it is the speculative intellect which directs what it apprehends, not to operation, but to the consideration of truth; while the practical intellect is that which directs what it apprehends to operation. [11]

[9] Finnis, *Aquinas,* 89-90.

[10] Finnis, *Natural Law,* 46.

[11] *STh* I, q. 79, a. 11: "Accidit autem alicui apprehenso per intellectum, quod ordinetur ad opus, vel non ordinetur. Secundum hoc autem differunt intellectus speculativus et practicus. Nam intellectus speculativus est, qui quod apprehendit, non ordinat ad opus, sed ad solam veritatis considerationem: practicus vero intellectus dicitur, qui hoc quod apprehendit, ordinat ad opus."

The object of the practical intellect is good directed to operation, and under the aspect of truth. For the practical intellect knows truth, just as the speculative, but it directs the known truth to operation. [12]

Inasmuch as the practical intellect knows truth "just as the speculative" but is distinct from the speculative only in "directing the known truth to operation," it would appear that the notion of a truth with no speculative content whatsoever is alien to the thought of Aquinas: a contradiction in terms. Moreover, it is exclusively the rational intent to direct the known truth to operation that causes the accident of some knowledge being practical.

Finnis confuses the truth that certain propositions by their nature bear essentially upon action and hence are practical with the distinct character of the knowing that is presupposed by such propositions in order that they may be able to bear upon action. [13] That a certain proposition refer essentially to operation simply concerns the content of the proposition: but that it be able to refer essentially to operation depends on its *adequatio* regarding the nature of the end (and/or of the prudential means) of operation. The speculative may be considered precisively and formally, simply as the knowing of an object apart from any accident of desire it may spark; or, this object may accidentally (from the vantage of speculation) spark desire, and in doing so cause a new and practical engagement with the object. In this practical engagement, the object is sought no longer simply for the sake of knowing it, but as the terminus of desire and

[12] Ibid., ad 2: "ita obiectum intellectus practici est bonum ordinabile ad opus, sub ratione veri. Intellectus enim practicus veritatem cognoscit sicut speculativus; sed veritatem cognitam ordinat ad opus."

[13] Lawrence Dewan, O.P., "St. Thomas, Our Natural Lights, and the Moral Order," *Angelicum* 67 (1990): 283-307. As he puts it: "Can there be any doubt that for St. Thomas the knowledge of the one ('the good') derives from the knowledge of the other ('a being')? St. Thomas teaches, in *ST* 1-2.9.1, that the practical intellect has its priority with respect to the will, as mover of the will, precisely inasmuch as its (the intellect's) vision of 'the good' flows from its vision of 'a being' and 'the true'. The practical intellect views goodness under the aspect of being and truth, sees *what* goodness *is*. If goodness were not being viewed under the aspect of being, it would not be being 'understood' at all."

operation: but at root this practical knowing is speculatively adequated. The precisive sense of the speculative is most formal, because a thing is not properly defined by accidental relations, and it is an accident vis-a-vis any speculative object that it should spark desire. But this is only accidental vis-a-vis the speculative object as such, and not vis-a-vis human nature.

Hence St. Thomas:

> Now the first formal principle is universal "being" and "truth," which is the object of the intellect. And therefore by this kind of motion the intellect moves the will, as presenting its object to it.[14]

In other words, for us to desire a good is already for us to have been speculatively adequated to its truth. Both the speculative and the practical employment of the intelligence require the prior apprehension of the object. This priority of speculative *adequatio* governs intellectual knowledge as such: speculative adequation is not something that can be temporarily left behind, only to be reconnected to later. Moral good is a species of transcendental good, and transcendental good is merely being as appetible. One cannot know it as appetible without knowing it. This is truly a foundational element of St. Thomas's teaching. Finnis's basic goods schema in effect promulgates a category of truth with no speculative content, while at least for St. Thomas Aquinas the apprehension of speculative content-even by the practical intellect-is required by the very nature of knowledge itself. As Thomas argues in the *Summa contra Gentiles*, the first active principle in moral actions is the thing apprehended, followed by the apprehensive power, the will, and the motive force carrying out the command of reason.[15]

Finnis poses the options as though we either are rational with practical reason or else intervene with the will, making the intellect a "slave" to the will. If our knowledge of the good is speculatively adequated by its nature, Finnis suggests that this amounts

[14] *STh* I-II, q. 9, a. 1: "Primum autem principium formate est ens et verum universale, quod est obiectum intellectus. Et ideo isto modo motionis intellectus movet voluntatem, sicut praesentans ei obiectum suum."

[15] *ScG* III, c.10.

to voluntarism. But according to St. Thomas's teaching, what is at stake is the character of intellective motions themselves, and not of the will. The mode of our knowing flows from the end of the knowing itself, and not merely from its extrinsic relation to the will. Command or *imperium* is chiefly an act of the intellect, not of the will.[16]

Whether one intends simply to contemplate the truth-even the truth about practical reason-or instead act upon it is accidental to knowledge as such, while essentially conditioning any particular knowing. According to St. Thomas Aquinas it is this accident that determines whether any given knowing is practical or speculative. When one does intend to act on the basis of one's knowledge this knowledge is speculatively adequated to the good of the true. Such knowledge is practical not because its speculative component is removed, but because the knowing is further ordered to operation. [17]

Finnis also maintains:

> So the epistemic source of the first practical principles is not human nature or a prior, theoretical understanding of human nature (though a theoretical knowledge of the efficacy, as means, of certain choosable conduct is relevant to our knowledge of the first practical principles). Rather, the epistemic relationship is the reverse: any deep understanding of human nature, i.e. of the capacities which will be fulfilled by action which participates in and realizes those goods, those *perfections,* is an understanding which has amongst its sources our primary, undemonstrated but genuine practical knowledge of those goods and purposes.[18]

To the contrary, the epistemic source of the first practical principles will be the actual ordering of human nature as known

[16] STh1-11,q. 17, a. 1: "Command is an act of the reason presupposing, however, an act of the will" ("Dicendum quod imperare est actus rationis, praesupposito tarnen actu voluntatis").

[17] St. Thomas'shelpful fourfold schematization of the sciences into diverse types-sciences of the order of nature, of logic, of moral and social order, and of technique subtending the practical arts-is well noted by Finnis (Finnis, *Aquinas,* 21). But each science as well as knowledge of the order of sciences presupposes that speculative adequation of mind to reality that is the root of truth as such whether the truth in question is speculative or is further ordered to operation.

[18] Finnis, *Aquinas,* 91.

by the intellect, a knowledge that is speculatively adequated as a root condition for its practical reference. As to whether the speculative or the practical is prior, consider what St. Thomas has to say about the true (which is, *simpliciter*, the formal object of knowledge) and the good (which is that which one seeks through directing knowledge to operation) in the following two passages:

> I answer that, Although the good and the true are convertible with being, as to supposition, yet they differ logically. And in this manner the true, speaking absolutely, is prior to good, as appears from two reasons. First, because the true is more closely related to being than is good. For the true regards being itself simply and immediately; while the nature of good follows being in so far as being is in some way perfect; for thus it is desirable. Secondly, it is evident from the fact that knowledge naturally precedes appetite. Hence, since the true regards knowledge, but the good regards the appetite, the true must be prior in idea to the good. [19]

> A thing is prior logically in so far as it is prior to the intellect. Now the intellect apprehends primarily being itself; secondly, it apprehends that it understands being; and thirdly, it apprehends that it desires being. Hence the idea of being is first, that of truth second, and the idea of good third, though good is in things. [20]

In short, being and truth are prior to good, and the practical operation of the intellect presupposes and builds upon the speculative. Hence the lines of St. Thomas:

> Even in us the cause of one and the same effect is knowledge as directing it, whereby the form of the work is conceived, and will as commanding it, since the form as it is in the intellect only is not determined to exist or not to exist in the effect, except by the will. Hence, the speculative intellect has nothing to say to operation. [21]

In other words, the conception of form is as it were "indifferent" to application to operation, and so in and of itself "has nothing

[19] *STh* I, q. 16, a. 4.

[20] Ibid., ad 2: "Dicendum quod secundum hoc est aliquid prius ratione, quod prius cadit in intellectu. Intellectus autem per prius apprehendit ipsum ens; et secundario apprehendit se intelligere ens; et tertio apprehendit se appetere ens. Unde primo est ratio entis, secundo ratio veri, tertio ratio boni, licet bonum sit in rebus."

[21] STh I, q. 19, a. 4, ad 4.

to say to operation." Yet the conception of the form of the work-which in itself "is not determined to exist or not to exist in the effect"-is indeed a cause of the effect. Practical intellect apprehends the truth of the good, ordered to operation, and adds to that speculative adequation of mind to object that defines knowledge as such this accidental ordering to operation and concern for the operable for the sake of operation. Hence the priority of the speculative adequation for knowledge as such, for as St. Thomas writes:

> Now in regard to the means, the rectitude of the reason depends on its conformity with the desire of a due end: nevertheless the very desire of the due end presupposes on the part of reason a right apprehension of the end.[22]

One may concur with Martin Rhonheimer:

> Again, it should be made clear that the practical does not lose its fundamental character of intellectual "light" *(lumen).* It is only that the speculative (or intellective) *apprehensio* is directed to a "seekable" *(appetibile),* to a practical judgment. The original *speculatio* is integrated into the intentional dynamic of seeking *(inclinatio naturalis-intentio-electio)* through the appetitive condition of this kind of *apprehensio:* an *extensio* toward the "doable" *(operabile)* has taken place.[23]

[22] *STh* I-II, q. 19, a. 3, ad 2: "In his autem quae sunt ad finem, rectitudo rationis consistit in conformitate ad appetitum finis debiti. Sed tamen et ipse appetitus finis debiti praesupponit rectam apprehensionem de fine, quae est per rationem."

[23] Martin Rhonheimer, *Natural Law and Practical Reason: A Thomist View of Moral Autonomy* (New York: Fordham University Press, 2000), 28. Rhonheimer writes (p. 26) about the *extensio* of the intellect that it "can in no way be understood as a mere "willing" of the content of theoretical judgments" and that "An entity that has been apprehended by a metaphysical-theoretical act of knowing, need not be (in fact, cannot be) 'willed' in this sense, because it already exists." This is to refer to the speculative precisively (i.e., the speculative object is purely as such indifferent to operation). But-nonprecisively-because the knower does not lose his voluntary, appetitive nature whilst knowing speculatively, the speculative object may accidentally (from the vantage of speculation) spark desire, and hence cause a new engagement of the mind that is distinctively practical, in which one is concerned for the object not as simple object of contemplation but as term of appetite and operation. This is an essential aspect of the *extensio* missed by those who more formally (like Finnis) separate *praxis* and knowledge in a way they consider merely temporary and methodic.

From what already has been noted above, it should be dear that St. Thomas never entertained the idea that "ought" propositions are "inderivable" from "is" propositions. If one were to define speculative propositions as those which can contain no reason for action, then of course no reason for action could be found in such propositions. But if nature is ordered hierarchically toward certain ends-some of which are more proximate, and others less proximate, to the ultimate end or *finis ultimus-then* knowledge of these natural ends will itself contain implicit reasons for action. One may, it is true, abstract from the teleological ordering of nature in considering nature. But that one may abstract nature from its ordering *in rerum natura* does not establish that nature itself-the "is"-is properly known in entire precision from its "ought" or order to an end.[24] That one may abstract from real evidence does not constitute a reason for denying the existence of such evidence, but only a reason to acknowledge the capacity for abstraction and the need to use it wisely.[25]

Finnis's reduction of practical knowledge to sheer *praxis* lacking speculative roots and *adequatio* implies a failure to grasp just what kind of doctrine the doctrine of the natural law is. For St. Thomas there is never a scintilla of doubt: it is a metaphysical and theological doctrine. What is natural law? St. Thomas's answer: "the natural law is nothing else than the rational creature's participation of the eternal law."[26]

II. THE FIRST PRECEPT OF LAW[27]

Saint Thomas teaches that "This therefore is the first precept of law, that good is to be done and pursued, and evil to be

[24] Granted the difference between "ought" as applied to rose bushes, and "ought" as applied to rational choice, each is identified with reference to the end.

[25] Cf. Henry Veatch, *For an Ontology of Morals: A Critique of Contemporary Ethical Theory* (Evanston, Ill.: Northwestern University Press, 1971); *Two Logics: The Conflict between Classical and Neo-Analytic Philosophy* (Evanston, Ill.: Northwestern University Press, 1969).

[26] *STh* I-II, q. 91, a. 2: "lex naturalis nihil aliud est quam participatio legis aeternae in rationali creatura."

[27] On this subject see Ralph Mclnerny, *Ethica Thomistica* (Washington, D.C.: The Catholic University of America Press, 1982), 52-53.

avoided." [28] Finnis interprets St. Thomas as holding that this precept of the natural law is not a command because of its Latin gerundive form, and holds it to be "directive" but non-commanding. He also maintains that according to St. Thomas the precept is not a moral precept. As he puts it:

> Neither grammatically nor substantively are practical principles indicative (stating what is or will be the case). Nor are they imperative (giving commands or orders). They are directive; the Latin gerundive form *'faciendum* et *prosequendum* et ... *vit.andum'* exactly captures this directiveness to what *'is-to-be-done* ... pursued ... avoided' in the sense, not of 'will be' but of 'ought to be'.
>
> This *ought* is intelligible in a sense which is not *moral.* Even people quite indifferent or hostile to all moral claims can and, if they are intelligent, do recognize and use (albeit defectively) some at least of the first principles of practical reason. The moral sense of 'ought', understood critically, not merely conventionally, is reached-as we shall see (IV.5)-when the absolutely first practical principle is followed through, in its relationship to all the other first principles, with a reasonableness which is unrestricted and undeflected by any subrational factor such as distracting emotion. In that sense, the 'ought' of the first principles is incipiently or 'virtually', but not yet actually, moral in its directiveness or normativity. [29]

St. Thomas, however, clearly teaches that law is both directing and commanding vis-a-vis human acts. He makes no division of the type introduced by Finnis's emphasis upon the mere grammatical form of the Latin sentence. Hence St. Thomas writes:

> I answer that, Just as an assertion is a dictate of reason asserting something, so is a law a dictate of reason, commanding *[praecipiendi]* something . Now it is proper to reason to lead from one thing to another. Wherefore just as, in demonstrative sciences, the reason leads us from certain principles to assent to the conclusion, so it induces us by some means to assent to the precept of the law.
>
> Now the precepts of law are concerned with human acts, in which the law directs, as stated above (Q90, AAl,2; Q91, A4). Again there are three kinds of human acts: for, as stated above (Ql 8, A8), some acts are good generically, viz.

" *STh* I-II, q. 94, a. 2: "Hoc est ergo primum praeceptum legis, quod bonum est faciendum et prosequendum, et malum vitandum."

[29] Finnis, *Aquinas,* 86-87.

acts of virtue; and in respect of these the act of the law is a precept or command *l/Jraeciperevel imperare],*for "the law commands all acts of virtue" (Ethic. v, 1). Some acts are evil generically, viz. acts of vice, and in respect of these the law forbids. Some acts are generically indifferent, and in respect of these the law permits; and all acts that are either not distinctly good or not distinctly bad may be called indifferent. And it is the fear of punishment that law makes use of in order to ensure obedience: in which respect punishment is an effect of law.[30]

That the law may simultaneously direct and command poses no difficulty-it authorititatively directs/commands us as to what is to be done, and what is to be avoided. Were St. Thomas keen to make Finnis's point, why would he then use *imperare*to render his meaning later in the article together with *praecipere?*If the first precept of the natural law does not command it cannot-by the teaching of St. Thomas-even be included within the genus of natural law precepts, much less be the most basic and first such precept. *Preceptum*and *lex* are key terms. A precept is a command of the intellect, and law is a reason and rule of action; the natural law is a rule of action received from God.[31] Law is a rule and measure of acts, whereby one "is induced to act or is restrained from acting"[32]

Finnis has earlier, in his freestanding work, evinced his dislike for denominating the natural law as "law." As he put it then, he wished to avoid the term because "'Natural law' . . . is only analogically law" and to use it only "in relation to past thinkers who used the term." Of these thinkers however, Finnis maintained that "These past thinkers, however, could, without loss of meaning, have spoken instead of 'natural right', 'intrinsic morality', 'natural reason, or right reason, in action, etc."[33]

In connection with this earlier discussion, he cites Mortimer Adler's view that natural law is law only by an analogy of attribution. That is, because natural law provides moral guidance in shaping positive law, Adler held that it is "law-like"-which

Jo *STh* I-II, q. 92, a. 2.

JI *ScG* I, c. 114.

32 *STh* I-II, q. 90, a. 1.

JJ Finnis, *Natural Law,* 280-81.

implies that it is not strictly speaking law at all, just as medicine (which provides aid to health) is not, properly speaking, healthy in the Aristotelian *pros hen* equivocation. In this earlier reference to Adler Finnis indicates that the Adlerian account is "not in every respect beyond cavil." But the character of Adler's teaching in the essay cited, together with Finnis's aversion to the language of natural *law,* runs contrary to that emphasis upon which St. Thomas everywhere insists when it is a question of definition: namely, that natural law is true law. Natural law is not said to be law merely by *pros hen* equivocation or extrinsic analogy of attribution. Although analogy is deployed, it is of that type in which one affirms that the natural law promulgated by God is more truly law than is the human positive law (whose weakness and inefficacy makes it pale by comparison), just as wisdom is more truly said of God than of man.[34]

As the genuine and foundational first precept of the natural law, this precept must be an *imperium,* that is, an interior act of reason commanding or forbidding the will. As St. Thomas defines these terms, it is impossible for law or precept to be "premoral," for every law in the wide sense, even a prohibition, is a precept ("large accipiendo praeceptum, universaliter lex praeceptum dicitur")[35] and Thomas uses the terms "command" and "precept" interchangeably. For Thomas the precepts of the natural law both direct and command. Hence the first precept of the law-which is indeed the basis for all the *others-cannot* be premoral.

Acts are specified by their objects. A command to do and pursue that which falls within the genus of the good because it is a good, and to avoid the evil because it is evil, cannot be itself nonmoral or premoral. How can a direction/command to do something and avoid something else be outside the genus of

.1· I am indebted here to Russell Hittinger's foundational essay "Natural Law as Law," *American Journal of Jurisprudence* 39 (1994): 1-32. Hittinger's earlier, much controverted book is a masterful *locus classicus* for systematic criticism of the new natural law theory, especially regarding the role and import of speculative truth, unified teleology, and religion for natural law. See Russell Hittinger, *A Critique of the New Natural Law Theory* (Notre Dame: University of Notre Dame Press, 1989).

31 *STh* I-II, q. 92, a. 2, ad 1.

morality?[36] If the root of all practical precepts is itself premoral, then all other precepts, which are predicated upon it and specify it, cannot be moral: "All other precepts of the natural law are based upon this: so that whatever the practical reason naturally apprehends as man's good (or evil) belongs to the precepts of the natural law as something to be done or avoided."[37] The root of the genus of moral acts is neither nonmoral nor premoral, but moral. The first precept of law is first in an order.

Finnis argues that "the moral sense of 'ought' ... is reached . . . when the absolutely first practical principle is followed through ... undeflected by any subrational factor." But does not the first precept of law command as well as direct us to do and pursue the good-not the merely apparent good, note, but the good-and to avoid evil (again, not merely apparent evil, but evil)? Is it not precisely because of the moral nature of the first precept that we are obligated to follow through "undeflected by any subrational factor" in discerning, doing, and pursuing that which is good, and avoiding that which is evil? The particular good we do or seek specifies a natural teleological ordering; it is a specification of a root tendency whose articulation is found in developed virtues. Just as "rational" is in no way animal apart from the genus "animal," so no practical act is good apart from the root tendency to the good. If the root tendency is not moral, then the precepts based upon it cannot be moral.

In a note, Finnis directs us to the putative acknowledgement of St. Thomas that "sinful operations of practical reason are attributed ... to one's grasp (but misuse) of the first principles of practical reason."[38] Yet the actual objection answered by St. Thomas in that response is the objection that "Therefore, just as the activity of practical reason which is virtuous is ascribed to

[16] Even technical directives--for example, "in surgery, saw the bone *thus"*-are only abstracted from moral significance which nonetheless pertains to every concrete instance of their instantiation (when it will be good or not good to saw the bone at all, or to seek to saw it *thus).*

[37] *STh* I-II, q. 94, a. 2.

[38] See Finnis, *Aquinas,* 87 n. 124, citing *De Verit.,* q. 16, a. 2, ad 6.

synderesis, so the activity of reason which is sinful is also attributed to it." St. Thomas forthrightly *denies* this proposition:

> Just as in speculative matters, although a mistaken reason starts from principles, it does not derive its falsity from first principles, but from wrong use of the principles, so the same thing also happens in practical matters. Therefore, the conclusion does not follow.[39]

In short, to note that perversion of a precept is possible does not establish that this precept is not one of the moral order nor in any way lacking in normativity, any more than a violation of the principle of contradiction in specious reasoning places in doubt the ontological/logical normativity of that principle. Hence also St. Thomas's reference in the main body of his response to the "unwavering integrity" of synderesis, "so that that permanent principle will resist all evil and assent to all good" and his line that "This is synderesis, whose task it is to warn against evil and incline to good." Hence also in his response to the first objection-that regarding synderesis we sometimes "see this fall down"-he answers that: "it does not say that synderesis simply falls headlong, but that conscience does, which applies the general judgment of synderesis to particular matters." In other words, the clear sense of St. Thomas's teaching is that a moral guide is derailed by extrinsic factors, rather than that it is itself *not* precisely such a moral guide, which, as it is true of the *habitus* of moral light, must be even more true of that absolutely first precept of the natural law that good is to be done and pursued, and evil avoided.

III. TELEOLOGICALLY PRECEPTIVE ORDER

Those who have followed the development of the freestanding theory of Finnis and Grisez will be aware of their teaching that human ends are incommensurable, that is to say, that prior to choice they are not naturally ordered in any morally significant

[39] *De Verit.*, q. 16, a. 2, ad 6.

way.[40] In his book Finnis nowhere expressly and in so many words affirms that this doctrine is held by St. Thomas. It is favored by the analytic school, and the epistemic and ontological conditions for this doctrine are quite different from those to be found within St. Thomas's teaching. Nonetheless, Finnis does (1) omit reference to the essential hierarchy of human ends as this is taught by St. Thomas, and (2) assert that the ordering of human ends and natural law precepts to which St. Thomas expressly refers in question 94 of the *Prima Secundae* is merely a "metaphysical stratification."[41] Taken in accordance with his earlier insistence that knowledge of the natural law is originatively and purely practical-in the sense of lacking from the start any grasp of being-this implies that the natural hierarchy of ends is practically insignificant.

In Finnis's discussion of imperfect beatitude, where one might expect to find reference to unified teleology, imperfect beatitude is instead defined in terms of the directiveness of all the practical principles/goods taken together-absent any reference to natural hierarchy.[42] But whether in this dispensation of providence (where the final end is supernatural beatitude) or in a hypothetical dispensation of pure nature St. Thomas deems it impossible for ends to be equally "basic": it is of the nature of "end" that ends be ordered to the *finis ultimus.*[43] Referring to St. Thomas's clear teaching that imperfect beatitude consists primarily in contemplation and secondarily in practical reasonableness[44] Finnis still somehow concludes that in St. Thomas's ethics "contemplation has an uncertain role."[45] Having earlier

[40] Cf. Finnis, *Natural Law,* 92-95.

[41] Finnis, *Aquinas,* 81.

[42] Ibid., 106-7. For example, "Reason, then, seeks a more complete--<me may say integral-directiveness, the directiveness not of each first practical principle taken on its own but of all taken together" (106).

[43] Cf. *STh* I-II, q. 1, a. 6, as well as below in the text.

[44] Finnis, *Aquinas,* 109: "He quite often says that incomplete fulfilment consists not only in the just-mentioned 'working of practical intelligence bringing its order into human actions and emotions', but also, and 'primarily and principally', in contemplation-to which the life of practical reasonableness and virtue is 'secondary'."

[45] Ibid.

shorn practical agency of its contemplative root in the speculative life, Finnis must regard the contemplation of the order of ends either as merely ambiguous and impractical, or as assuming the specter of a practical fallacy (insofar as one insists that the natural order of ends bears natural ethical import for practical agency).

For St. Thomas the ordering of natural law precepts vis-a-vis the ultimate end comprises the formal *ratio* of the good life, and is neither ethically insignificant nor practically useless. Before turning expressly to Thomas's account of the ordering of natural law ends and precepts, it helps to recollect what he has written earlier in the *Prima Secundae:*

> I answer that, Man must, of necessity, desire all, whatsoever he desires, for the last end. This is evident for two reasons. First, because whatever man desires, he desires it under the aspect of good. And if he desire it, not as his perfect good, which is the last end, he must, of necessity, desire it as tending to the perfect good, because the beginning of anything is always ordained to its completion; as is clearly the case in effects both of nature and of art. Wherefore every beginning of perfection is ordained to complete perfection which is achieved through the last end. Secondly, because the last end stands in the same relation in moving the appetite, as the first mover in other movements. Now it is clear that secondary moving causes do not move save inasmuch as they are moved by the first mover. Therefore secondary objects of the appetite do not move the appetite, except as ordained to the first object of the appetite, which is the last end.[46]

These words make clear St. Thomas's teaching that all ends are only ends at all inasmuch as they are ordered to the ultimate end. All ends are "co-ordered" and "measured" in relation to the final end, and some are by nature more proximate to the end than are others. Knowledge of the order of ends is prior to right appetite, and prior to prudential consideration of the limits of circumstances and means. Within St. Thomas's teaching this datum-that some ends are more noble, more to be sought after, than are others-cannot fail to be of ethical significance prior to choice, precisely as indicating the *ratio* or structure of the good life. St. Thomas's point directly impacts practical rectitude, since such rectitude presupposes rectitude of the intellect with respect to the

[46] *STh* I-II, q. 1, a. 6.

end sought: no end would be in the least desirable save on some supposition of its further ordering toward the ultimate end.

St. Thomas also teaches that ends cannot be equivalently "final." There can be but one *finis ultimus.* The idea of several "basic" human ends that are not naturally ordered in a morally significant manner prior to individual choice is contrary to Aquinas's teleological account of the universe. For these goods, as equally ends and hence equally finalities for man, would constitute plural final ends, which St. Thomas expressly holds to be impossible. As St. Thomas puts it: "It is impossible for one man's will to be directed at the same time to diverse things, as last ends."[47] One notes that St. Thomas is speaking here, as Cajetan might say, "most formally"-what is impossible is that the human will as such be simultaneously and formally ordered toward diverse final ends. The same thing that makes goods to be goods makes them to be in an order vis-a-vis the ultimate end. One cannot reconcile the schema of a list of ethically incommensurable goods with St. Thomas's teleological doctrine that the order of precepts follows the order of ends.[48]

Finnis's freestanding theory articulated in his earlier work *Natural Law and Natural Right* expressly argues that basic ends or goods of the natural law are morally "incommensurable" or incomparable prior to choice.[49] Finnis argues that:

> As it happens, Aquinas's threefold ordering quite properly plays no part in his practical (ethical) elaboration of the significance and consequences of the primary precepts of natural law: for example, the 'first-order' good of life may not, in his view, be deliberately attacked even in order to preserve the 'third-

[47] *STh* I-II, q. 1.6.

[48] Cf. Benedict Ashley, "What is the End of the Human Person? The Vision of God and Integral Human Fulfillment," in *Moral Truth and Moral Tradition,* ed. Luke Gormally (Dublin: Four Courts Press, 1994), 68-96.

[49] E.g., Finnis, *Natural Law,* 120: "To choose an act which in itself simply (or primarily) damages a basic good is thereby to engage oneself willy-nilly (but directly) in an act of opposition to an incommensurable value (an aspect of human personality) which one treats as if it were an object of measurable worth that could be outweighed by commensurable objects of greater (or cumulatively greater) worth." In this earlier work, Finnis admits that St. Thomas's work is "saturated with the interrelated notions, 'end' and 'good'" (46), but the incommensurability thesis prevents this acknowledgment from taking any formal role in his account of St. Thomas's teaching.

order' good of friendship with God. In ethical reflection the threefold order should be set aside as an irrelevant schematization.[50]

This argument seems to reduce precept to negative precept. In fact, the superiority of divine communion to bodily integrity, loving God and neighbor more than self, and so on, are not negative but positive precepts, and flow from the order of natural ends. The fact that I ought set higher ethical store by the end of divine fellowship than by the end of "play" is a matter of the positive ordering of man to God even at the natural level. For Thomas there is no doubt that it is natural to man to love God more than self.[51]

Finnis is also incorrect in denying that Thomas is willing to draw negative inferences from this positive ordering of man according to a hierarchy of ends vis-a-vis God. For example, according to St. Thomas civic friendship in political society is so noble a good that a judge rightly prefers the common good of such society to the life of a malefactor when justly sentencing such a person to death. The common good is higher, objectively more noble, more proximate to the *finis ultimus*, than is the individual good. As St. Thomas puts it, the judge rightly imposes capital punishment in certain cases "out of the love of charity, by reason of which he prefers the public good to the life of the individual."[52] What is here at stake is an ethically decisive principle. The point is not primarily the nature of the punishment, but rather the view that one "prefers the public good to the life of the individual." This view is also stated by St. Thomas as a principle: "The common good takes precedence of the private good, if it be of the same genus."[53] This is clearly a

[50] Finnis, *Natural Law,* 94-95.

[51] *STh* I, q. 60, a. 1: "because every creature in regard to its entire being naturally belongs to God, it follows that from natural love angel and man alike love God before themselves and with a greater love" ("quia omnis creatura naturaliter secundum id quod est, Dei est; sequitur quod naturali dilectione etiam angelus et homo plus et principalius diligat Deum quam seipsum").

[52] *STh* II-II, q. 25, a. 5, ad 2: "Et tamen hoc facit iudex non ex odio eorum, sed ex caritatis amore, quo bonum publicum praefertur vitae singularis personae."

[53] *nsrh* II-II, q. 152, a. 4, ad 3: "ad tertium dicendum quod bonum commune potius est bono privato si sit ejusdem generis."

matter of teleological ordering of goods: by nature the common good, as the more universal perfection of each individual, takes precedence of the merely private good. [54]

Finnis in his latest book does not expressly ascribe the doctrine of ethical incommensurability of basic goods to St. Thomas. But his interpretation does omit the wider teleological context that defines and saturates St. Thomas's natural law doctrine, referring only to the isolated teleology associated with each individual "basic" good, or to all together as a naturally unordered *plenum*. This omission clearly results in part from his analytic presupposition that an "ought" cannot be "derived" from an "is." Natural teleological ordering of the person is consigned to the category-nonexistent in the work of St. Thomas-of necessarily impractical speculative truth. Yet any truth may in some way be pertinent to operation. And for St. Thomas the hierarchy of ends is preeminently pertinent to human deliberation, choice, and action as well as to contemplation.

For St. Thomas the natural hierarchy of human ends is fecund with reasons for action. Apart from this hierarchy no end can be constituted as such, for it is only the relation to the ultimate end that renders any end to be desirable. Naturally speaking, the nobler ends are simply more appetible-for instance, for St. Thomas a just man by nature loves God more than he loves his own life.[55] So, for St. Thomas, apart from this hierarchy and relation thereto a rational creature can have no reason for action. If all ends are either equally proximate or simply incomparable in terms of natural proximity to the ultimate end, it follows that there cannot be a rational preference for pursuing one rather than

[54] In Finnis, *Aquinas*, 276, Finnis cites St. Thomas's argument that the criminal, having offended against human dignity, descends to the level of the beasts, but takes this far too literally rather than for what it is: a quasi-Scriptural characterization and a gloss on Aristotle. See, e.g., *STh* 11-11, q. 64, a. 2, ad 3: "This is expressed in Ps. 48:21: 'Man, when he was in honor, did not understand; he hath been compared to senseless beasts, and made like to them,' and Prov. 11:29: 'The fool shall serve the wise.' Hence, although it be evil in itself to kill a man so long as he preserve his dignity, yet it may be good to kill a man who has sinned, even as it is to kill a beast. For a bad man is worse than a beast, and is more harmful, as the Philosopher states (Polit. i, 1 and Ethic. vii, 6)."

[55] *STh* I, q. 60, a. 1.

another. Without such a preference, how then can one prefer one act to another *hie et nunc* in the light of the judgment of contingent circumstances by prudence? Clearly one may need to detour on the way to one's end owing to circumstance. But if one cannot measure greater or lesser proximity to the end, there will be no way to determine whether one's detour is reasonable or the contrary, whether all things being given one's act moves one toward the *finis ultimus* or not. This is to say that for St. Thomas the essential hierarchy of natural ends is morally significant prior to any subjective choice. Logically, this means that rectification of the intellect about this hierarchy of ends is a *necessary* condition for morally good action. It is not a *sufficient* condition because a prudential judgment of *variable means* is requisite to the judgment how best here and now to move toward the end.

Lacking the *finis ultimus,* for Thomas human action would be either unceasing or uninitiable. Ends are only ends in relation to the ultimate end, and without an end no reason either for determinate action or for the cessation of action is assignable.[56] Since reason, prudence, and rectified appetite direct one to the end rather than mere chance or random passion, an *ordinal* and *teleological* commensuration of natural ends vis-a-vis the final end appears necessary. Only God is the absolute good, and hence it is God who in promulgating the order of ends in creation is the source of obligation. Nor does this constitute any species of voluntarism. The order of ends proceeds from the divine will only as conformed to the divine truth, and so this order is properly said to participate the wisdom and good of its transcendent divine principle.

St. Thomas is everywhere clear: for example, "Now the first principle in practical matters, which are the object of the practical reason, is the last end: and the last end of human life is bliss or happiness."[57] For St. Thomas we are naturally bound to seek happiness-"the desire of the ultimate end is not among those

s• *ScG* III, c. 2.

[57] STh1-11,q. 90, a. 2: "Primum autem principium in operativis, quorum est ratio practica, est finis ultimus. Est autem ultimus finis humanae vitae felicitas vel beatitudo, ut supra habitum est." Expressions of this sort abound.

actions of which we are masters."[58] The need for speculative light to discern that in which our happiness truly lies accounts for the nature of the entire first section of the *Prima Secundae.* Unlike Finnis's account of "integral human fulfillment,"[59] St. Thomas's account identifies ethically significant *order* amongst natural ends (including "basic" ones) prior to choice.

Finnis's inattention to this point results in an account of St. Thomas's moral philosophy that does not consider how the teleological implications of the natural law-and its root tendency expressed in the very first precept of law-are rendered effective in virtue. Instead Finnis seeks deontological directives: exceptionless entailments of basic goods none of which is objectively more proximate to the ultimate end than any other. The natural desirability of these goods is treated as separated from any ordering of these goods to the ultimate end.

On Finnis's account the following inspiring words of St. Thomas from the *Summa contra Gentiles* become unintelligible: "Among all human pursuits, the pursuit of wisdom is more perfect, more noble, more useful, and more full of joy."[60] As St. Thomas explains further on, "It is more noble because through this pursuit man especially approaches to a likeness to God Who 'made all things in wisdom' (Ps 103:24)."[61] For St. Thomas natural law is nothing other than a rational participation in the eternal law,[62] and the eternal law is the wisdom of God as plan of governance for creation. So it is not strange that the contemplation of the order of things should enable us to approach "to a likeness to God Who 'made all things in wisdom.'" But on St. Thomas's account it would be very strange for there to be no

[58] *STh* I, q. 82, a. 1, ad 3: "Unde appetitus ultimi finis non est de his quorum domini **sumus."**

[59] Finnis, *Aquinas,* 105 n. 4; 124-25. There is no reference to the ethical significance of the essential hierarchy of ends prior to choice. "Integral human fulfillment" seemingly refers to a list of goods and implied invariant obligations not to act directly against any of them, together with the directive that one pursue these goods howsoever one pleases but "integrally" (without acting directly against any). This is simply not St. Thomas's teaching.

[60] *ScG* I, c. 2.

[61] Ibid.

[62] *STh* I-II, q. 91, a. 2.

natural *ratio* of the good life as an ordered whole, and for the good life to be merely a collection of incommensurable parts welded together solely through raw subjectivity.

The final chapter of Finnis's book does reintroduce order and hierarchy in relation to the eternal law-but only as a matter extrinsic to *philosophia moralis* properly speaking. As the title of the first section in this chapter puts it, such matters are "Beyond Practical Reason."[63] But the rational basis for our ethical lives, while transcending practical reason, also interiorly orders it. The natural order of ends is not beyond practical reason in the sense taken by Finnis, namely as definitionally impractical and irrelevant to moral philosophy.

IV. MORAL OBJECT, END, AND INTENTION[64]

The disparity between Finnis's account and that of St. Thomas regarding the nature of moral intention and of the object and end of the human act is evident in relation to their diverse moral analyses of the choice to kill in the cases of self-defense and of tyrannicide. Finnis insists that the good of life is the subject of an exceptionless immunity from all intent to harm or destroy it, most especially on the part of a private citizen.[65] St. Thomas's account is not so simple. For St. Thomas the private citizen may not intend harm or destruction to human life as an end after the fashion of an executioner. But he does not consider it wrong for the private citizen to choose to kill, and to include homicide within the object of his act, if this is objectively proportioned to

[63] Finnis, *Aquinas*, 294. Finnis notes that "practical reasoning presupposes some non-practical, first-order awareness of possibilities" (ibid., 295). Of course it does, but it presupposes even more an actually right apprehension of the order of ends that is at its root speculatively adequated. In his reduction of the speculative dimension of ethics to "possibility" it would be too much to see the strong Scotistic metaphysical priority upon possibility. Not Scotistic metaphysics, but logicist priorities, dictate the emphasis upon "possibility."

[64] On this subject, see the powerful analysis of Janet Smith, in *Humanae Vitae: A Generation Later* (Washington, *D.C.:* The Catholic University of America Press, 1991), appendix 4, pp. 340-70.

[65] Finnis, *Aquinas*, 278.

the licit end of legitimate self-defense or defense of some other innocent.[66] The disparity between Thomas and. Finnis on this point is that for Thomas deliberate killing is not by itself wrong and so may be included within the moral object of an act. Finnis justifies the use of lethal means not as part of the moral object but solely by reference to the end, a justification that is possible for St. Thomas only insofar as the deliberate use of lethal means is not inherently wrong.

[66] In *STh* II-II, q. 64, a. 7, ad 1, Thomas rejects, along with Augustine, the rightness of killing merely to free oneself from death. This is because such killing is morally unspecified and simply in itself is morally insufficient to justify killing. E.g., one might kill the person ahead of one in line for an experimental treatment of a deadly disease to free oneself from death, or kill agents of the law attacking one for the same reason«yet neither of these acts is justified. Self-preservation is not simply in itself a sufficient ground for deliberate killing (e.g., in *STh* II-II, q. 41, a. 1, ad 3, St. Thomas points out that those who defend themselves against public authority are guilty of strife-clearly the mere idea of self-defense is not a normative one necessarily entailing justice or by itself sufficient to do so). Thomas opposes a private citizen intending to kill qua end, rather than opposing any choice of a private citizen to kill when this alone is proportioned to a just defense. I know of no instance in Thomas's text where he categorically holds that one may never choose a deliberately lethal means when this is proportioned to a just act of defense of the innocent. One needs to read intention as properly and most formally regarding the means in order to generate such a conclusion, yet this flies in the face of Thomas's teaching about intention (e.g., *STh* I-II, q. 13, a. 4: "Just as intention regards the end, so does choice regard the means"). Here my claim would be that Finnis-and for that matter Rhonheimer *(Natural Law and Practical Reason,* 487 n. 20)-embrace and systematize anomalous topical weaknesses in Cajetan's commentary on *STh* II-II, q. 64, a. 7 that ought instead be corrected to conform both to standard understanding of the role of the matter of the act in the moral object, and to the analogical structure of intention. Here Finnis and Rhonheimer each seem to me to miss the point St. Thomas is making. While officers of the law may at times rightly opportunize on a defense to achieve the end of slaying felons who pose no grave threat to them but do to the common good, a private citizen ought never use the occasion of defense to seek the death of the assailant as an end, instead pursuing merely the goal of defense and forfeiting deadly means unless these are required for defense. It also misses the crucial point of *STh* I-II, q. 100, a. 8, ad 3: "The slaying of a man is forbidden in the decalogue, in so far as it bears the character of something undue: for in this sense the precept contains the very essence of justice. Human law cannot make it lawful for a man to be slain unduly. But it is not undue for evil-doers or foes of the common weal to be slain: hence this is not contrary to the precept of the decalogue; and such a killing is no murder as forbidden by that precept, as Augustine observes (De Lib. Arb. i, 4)." Note that this response refers to "lawful slaying" (i.e., not only to execution but to the kind of slaying in justified defense that courts have always accepted as lawful).

In Finnis's view, private killing (or even private harming) is intrinsically evil, something that cannot morally be intended either as means or end. He explains this conclusion as follows:

> It does no more than state the conditions on which one can rationally affirm that there are some kinds of acts (identifiable without using moral qualifications such as 'unjust', 'careless', 'excessively damaging') which must be excluded from one's further deliberations and choices, whatever the circumstances (in omnnem eventum). [67]

If killing must be excluded from one's deliberations whatever the circumstances, then I cannot deliberately choose to use lethal means in self-defense. Finnis nonetheless wishes to defend the acceptability of deliberate use of deadly force in self-defense where no other proportionate means may be found to safeguard the innocent:

> Have I then no right to resist the vicious or insane killer's attack? On the contrary, I can rightly resist the attack, preserving myself (or one or more others) by using whatever means are reasonably necessary for, and part and parcel of, repelling it. I do not lose this right just because I can foresee that these means will probably or even certainly have as their side-effect the assailant's death. For in doing what I do, I need not-and must not-be intending to kill (or indeed harm). I can-and should-be intending and choosing no more than to do what it takes to stop the attack (repellendi iniuriam). That is the object {obiectum; finis} or purpose of my acting; and the effect on my assailant's life is a side-effect, outside the intention {praeter intentionem} or set of intentions from which the action gets its *per se* character as a morally assessable act. [68]

The difference here with St. Thomas is not in Finnis's desire to affirm that deliberate use of lethal force in self-defense may be permissible. The problem arises in regard to his affirmation-quite contrary to St. Thomas's teaching-that life is exceptionlessly immune from every form of action done by a private party with intent to destroy or damage it, and in his reduction of the character of the moral object to "the purpose of my acting."

About objective wrongness, Finnis states:

[67] Finnis, *Aquinas*, 278.

[68] Ibid., 276.

the wrongness is never a matter of the behaviour considered as a physical performance and/or outcome, but is always a matter of the will's orientation to its immediate (if not also its further) object. Synonymous with 'bear on inappropriate matter' is 'are inherently linked with a bad end.'[69]

But if an object is evil only because it is "inherently linked with a bad end" then it would seem that mere circumstantial ordering of bad means to a good end suffices to make bad means good. May something intrinsically wrongful-as Finnis but not Thomas holds deliberate killing to be-be included in the object of one's act so long as this isn't "inherently linked with a bad end"? Finnis writes earlier that:

An act's close-in end is the same thing as its object, and from this it gets its specific type. Its further end(s) does not give it its specific type; but the act's directedness to such end (or ends) is one of its circumstances.[70]

This appears incompatible with the previous citation. Either an object is defined as evil simply by reference to its further ordering to a morally bad purpose, or else it may be evil in its own right even if intended for a good purpose. If further ends do not give the specific type to the object, and an act's directedness to such ends is circumstantial, it makes no sense to say that "Synonymous with 'bear on inappropriate matter' is 'are inherently linked with a bad end.'" If the further end is not definitive of the type of the act, then how can being a side-effect of a good end make an evil means morally acceptable? On such an account intrinsically evil acts will need to be justifiable by reason of *per accidens* circumstantial ordering to some good end. To say that an exceptionlessly wicked thing may be done when it is a side-effect of a good end is to make the moral act wholly a function of directedness to a good end.

St. Thomas teaches that the due matter of one's act-that is, what one's action is about in relation to reason-is the form or object of one's external act. It is "relative to reason" because the character of the act in terms of reason is more than its merely

[69] Ibid., 143 n. 46.
[70] Ibid., 142 n. 43.

physical character, just as pushing someone out of danger is morally characterized by more than the imparting of a certain quantum of force. But the moral object nonetheless includes the physical species of the act, along with any circumstance so significant as to be a "proper accident," changing the nature of the act in relation to reason. A circumstance that changes the relation of what is done to reason is included in the moral object not merely *qua* circumstance, but because relative to reason it is defining (e.g., the circumstance of a neighbor being drunken, angry, and expressing murderous intent alters the reasonability of returning a borrowed firearm to him). The object of the external act is spoken of as matter, or as a means, in relation to the internal act of will that intends the end: for the end of one's act is most formal in relation to it.[71] The end is that for the sake of which the rest of the action is ordered, and so most accounts for the character of an action.[72] A relation and proportion to the end is included in the object of the external act.[73] In other words, what one actually does is in some relation of proportion-or disproportion-to the end. Finnis acknowledges these points[74] only to subvert them by the above-quoted insistence that being a side-effect of a good end is sufficient to make something that is exceptionlessly prohibited to be permissible and morally choiceworthy.

Let us revisit St. Thomas's doctrine about the moral act as expressed in the following passages:

> However, the good or evil the external act has of itself, as being concerned about due matter and due circumstances, is not derived from the will but rather from the reason. Wherefore, if we consider the goodness of the external act insofar as it comes from the ordering and apprehension of the reason it is prior to the goodness of the act of will; but if we consider it in the execution of the act, it is subsequent to the goodness of the will, which is its principle.[75]

[71] *STh* I-II, q. 18, a. 7.

[72] So St. Thomas, *STh* I-II, q. 18, a. 6, quotes Aristotle in observing that "he who steals that he may commit adultery, is strictly speaking, more adulterer than thief."

[73] *STh* I-II, q. 18, a. 4, ad 2.

[74] Cf. Finnis, *Aquinas,* 142-42; or note 43.

[75] *STh* I-II, q. 20, a. 1.

The exterior action is the object of the will, insofar as it is proposed to the will by reason, as a good apprehended and ordained by reason.[76]

We may consider a twofold goodness or malice in the external action: one in respect of due matter and circumstances; the other in respect of the order to the end. And that which is in respect of the order to the end, depends entirely on the will: while that which is in respect of due matter or circumstances, depends on the reason: and on this goodness depends the goodness of the will, in so far as the will tends towards it.[77]

For a thing to be evil, one single defect suffices, whereas, for it to be good simply, it is not enough for it to be good in one point only, it must be good in every respect *[integritas bonitatis]*. If therefore the will be good from its proper object and from its end, it follows that the external action is good. But that the will be good from its intention of the end does not suffice to make the external action good: and if the will be evil either by reason of its intention of the end, or by reason of the act willed, it follows that the external action is evil.[78]

According to St. Thomas, for an act to be good, it must be so both in regard to the end and with respect to its due matter and circumstances. The will must be good on the part *both* of its proper object *and* of the end-not merely of the end. Nor is the object merely a geometric point determined solely by whether the end be morally good or ill, or by whether it is a side-effect with respect to the end. There are for St. Thomas moral objects that one ought never choose. Finnis implies that killing is one of these, but this is not so. We may now revisit the substantive question as to St. Thomas's view of self-defense before turning a second critical gaze upon Finnis's account of object, end, and intention.

It is clear from St. Thomas's teaching in *STh* II-II, q. 64, a. 7 that it is wrong for a private citizen ever to intend to kill as an end (e.g., in the way an executioner kills).[79] For St. Thomas the

[76] Ibid, ad 1: "Dicendum quod actus exterior est obiectum voluntatis, inquantum proponitur voluntati a ratione ut quoddam bonum apprehensum et ordinatum per rationem."

[77] *STh* I-II, q. 20, a. 2.

[78] Ibid.

[79] *STh* II-II, q. 64, a. 7: "as it is unlawful to take a man's life, except for the public authority acting for the common good, as stated above, it is not lawful for a man to intend killing a man in self-defense, except for such as have public authority" ("Sed quia occidere hominem non licet nisi publica auctoritate propter bonum commune, ut ex supradictis patet; illicitum est quod homo intendat occidere hominem ut seipsum defendat, nisi ei qui habet

end is primarily "intended," whereas the object of one's external act is the means as "chosen."[80] Yet because one deliberates regarding means, one does indeed in an analogous sense intend them-they are rationally chosen and hence ought be morally choiceworthy. Hence St. Thomas's teaching is that a private citizen may never intend as an end-like the executioner-to kill, yet he may rightfully and deliberately choose to kill. He may, when it is the only reasonable recourse to defend the innocent, choose/intend the use of a lethal means of self-defense, precisely because there is no exceptionless zone of immunity protecting a "basic good" of life such that harming or killing "must be excluded from one's further deliberations and choices."[81]

The lethal act is about stopping a murderous malefactor by deliberately chosen lethal means. But killing is not the end for the sake of which the action is performed-it is not intended *qua* end. What is sought as the end is to stave off and resist unjust murderous assault by the only proportionate means. It is only accidental vis-a-vis this end of self-defense that here and now there are no effective nonlethal means to deploy. This accidentality does not mean that a private citizen can only kill a murderous felon "by accident." Where the end is that of repelling a murderous assailant by proportionate means, circumstance may determine that the only proportionate means is knowably lethal. But it is chosen not because one seeks the death of the felon as an end, but because this is the only prudently available means to repel the felon's assault. The reason why the tradition has always

publicam auctoritatem").

[80] *STh* 1-11, q. 12, a. 4, ad 3: "Accordingly, in so far as the movement of the will is to the means, as ordained to the end, it is called 'choice'; but insofar as the movement of the will is to the end as acquired by the means, it is called 'intention.' A sign of this is that we can have intention of the end without having determined the means which are the object of choice." See also *STh* 1-11, q. 12, a. 1: "Consequently intention belongs first and principally to that which moves to the end." But note carefully that St. Thomas says "first and principally" and not "exclusively." This is because of the obvious truth he articulates in *STh* 1-11, q. 12, a. 3: "a man intends at the same time, both the proximate and the last end; as the mixing of a medicine and the giving of health." Now "mixing the medicine" is the object of the external act as a kind of end that is intended, but for the sake of the further (and more "formal" or determinative) end of "giving health." Just as "object" is an analogous term, so is "end" as deployed by St. Thomas in his account of the moral act.

[81] Finnis, *Aquinas*, 278.

permitted killing in justified defense, is precisely that, even when the killed assailant is not morally responsible for his conduct, the assailant is still not performatively innocent, not innocent of performing aggressive and endangering acts which some are obligated to resist by proportionate means. Unlike judicial penalty, there is no question of assessing moral responsibility of the assailant prior to mounting a defense, nor of calibrating one's resistance on the basis of the assailant's guilt. The use of lethal force in just self-defense is predicated not on the moral responsibility of the assailant, but on his lack of performative innocence. The datum that this person is, for whatever reason, unjustly endangering others, combined with the calling of someone to protect those endangered, yields the need for defense. It is accidental to defense as such that it require a deliberately lethal act, although this is not accidental to the particular act of defense-as it is accidental to travel as such that one journey by car, although journeying by car is not accidental to a car trip. The cases in question are those in which a lethal means is the only sufficient means of defense and is deliberately chosen as such-not those in which death is a consequence of an act not considered or chosen as a lethal means of defense.

Such killing could never be rightly proportioned to the end were it true that killing by a private citizen as such were, *simpliciter,* evil in the way that, say, wrongful homicide is evil. For one may never appropriately include wrongful homicide either in the object or in the end of one's action. Yet St. Thomas clearly holds that if moderate self-defense entails use of lethal means, these may be used, and one is not obliged to omit them: "Nor is it necessary for salvation that a man omit the act of moderate self-defense in order to avoid killing the other man."[82] For St. Thomas not all direct choice to kill is wrongful homicide, because homicide-as such-need not be a moral evil. That the end is formal with respect to the object of the external act does not imply that something universally repugnant to reason may rightly enter into the deliberate object of the external act. It

[82] *STh* II-II, q. 64, a. 7: "Nee est necessarium ad salutem ut hunc actum moderatae tutelae praetermittat ad evitandam occisionem alterius..."

follows that for St. Thomas the inclusion of homicide in the moral object of one's act is not universally repugnant to reason-that is, it is not always and everywhere wrong.

St. Thomas adduces two reasons pertinent to killing in self-defense.[83] The first is that "this act, since one's intention is to save one's own life, is not unlawful, seeing that it is natural to everything to keep itself in 'being,' as far as possible." For Finnis, as we have seen, such merely natural ordering is of no ethical significance. Second, as noted above, Thomas teaches that one is not for the sake of one's salvation obliged to avoid killing in self-defense because "one is bound to take more care of one's own life than of another's."

To illustrate the difference in the account of the moral object betwixt Thomas and Finnis:

If (counterfactually) St. Thomas had held it to be true that acting against the good of life is evil in itself (which means not even to be intended within the moral object of the external act);

then on this supposition St. Thomas would hold that the private citizen morally ought not deliberately use a lethal means to defend the innocent even when no other feasible means of defense against viciously murderous predators existed.

Saint Thomas does not hold this conclusion, not because his account of the moral object, end, and intention is the same as Finnis's, but because he never held Finnis's antecedent premise.[84]

Finnis treats the moral object-what one is doing relative to reason-as wholly determined by its relation to the intended end. Because the moral object is constituted in relation to reason, he treats the relation of the moral object to reason as though reason

[83] Ibid.: "Actus ergo huiusmodi ex hoc quod intenditur conservatio propriae vitae, non habet rationem illiciti, cum hoc sit cuilibet naturale quod se conserver in esse quantum potest"; and "...plus tenetur homo vitae suae providere quam vitae alienae."

[84] Whether harm or killing is rightful or wrongful is determined for St. Thomas not merely by whether it is part of the moral object of one's act, but by answers to and evaluations of the full complement of inquiries, "Quis? Quid? Ubi? Quibus auxiliis? Cur? Quomodo? Quando?" (i.e., Who? What? Where? By which means? Why? How? When?). The answer to "Why?" by a private citizen is never licitly "because I simply want to cause that person's death."

need not take stock of its real physical nature. This evacuation of due matter from the moral object is a mistake. Although the moral species of an act is not simply caused by its physical/real nature, still the nature of one's act is one of the essential causal elements in determining this species. The moral object has a character of its own whereby it is proportionate or not to the end of the internal act, and this flows from what one does, and the circumstances of what one does, relative to reason. The physical character of what one does is not, by itself, simply dispositive of the moral object: the man who pushes an old lady out of the way of an oncoming motor car, and the man who pushes an old lady *into* the way of an oncoming motor car, are both men who push old ladies around. Nonetheless, the nature of the act is one of the essential causal elements that in relation to reason determine the moral species of the act.[85] The *per se* teleological order of human nature, deemed merely "physicalist" in so many moral theories,

[85] John Finnis, Germain Grisez, and Joseph Boyle persist in this tendency in their essay "'Direct' and 'Indirect': A Reply to Critics of Our Action Theory," *The Thomist 65* (2001): 1-44. The examples they give manifest this basic pattern: intention is construed not as embracing natural limits which necessarily import "plusses" and "minuses" into one's intention, but instead is treated as a purely logical entity. But the raw materials of our action are not pure logical entities, but have a natural character, such that the matter of the act cannot be excluded from the object. They treat the object as though what were embraced were not a real action, with the "plusses and minuses" of real action in the world: they seemingly wish to say that the object is wholly defined by one's logical proposal. Hence in craniotomy "the baby's death is a side effect of changing the dimensions of its skull"; hence when one knowingly blows up an aircraft carrying passengers in order to obtain insurance payment, "the passengers' death, being outside the proposal, is not intended by the bomber"; and so on. Although the moral species is not reducible to the physical species, the physical species is materially included in the object and may affect the moral species. Thus *STh* I-II, q. 20, a. 1, ad 1: "Dicendum quod actus exterior est obiectum voluntatis, inquantum proponitur voluntati aratione ut quoddam bonum apprehensum et ordinatum per rationem." So the object of the will is the exterior act itself under a certain ratio, but nonetheless truly and wholly present. The essential matter of the act, the physical character of what is done, may not be excluded. One must also note that the translation of *praeterintentionem* as "side-effect" changes the meaning of St. Thomas's text. To be outside or beyond or beside intention is not necessarily to be a mere "side-effect" because "Just as intention regards the end, so does choice regard the means" *(STh* 1-11, q. 13, a. 4). And one's deliberately chosen means are not a mere side-effect: only by extension of the proper sense of "intention" are the means spoken of as intended. The general sense of the Catholic tradition has not been to evacuate the essential matter of the act from the moral object.

is an essential element in determining the rectitude of the moral object.

Finnis disregards the speculative foundation and unified teleology that marks St. Thomas's natural law doctrine, and so does not recognize the due matter of the moral object. Whatever the merits of Finnis's freestanding account of moral object, end, and intention, this account is not that of St. Thomas Aquinas. This tension of discrepancy between the anti-teleological, anti-speculative moral universe of Finnis and St. Thomas's synthesis rises to a crescendo in Finnis's construction of St. Thomas's doctrine of the political common good.

V. ST. THOMAS AND THE COMMON GOOD

In the social and political order, the aspect of many being ordered to one for the sake of the common good requires a clear insight into the nature of the common good, its superiority to the individual good, and its relation to other, higher common goods (e.g., the common good of right ordering immanent to the entire universe, or the extrinsic common good of the universe, namely, God, or the common good of the celestial city which is supernatural beatitude).[86] Finnis's presentation of St. Thomas's doctrine runs into two problems here. The first is that Finnis's nominalism is incompatible with right apprehension of any common good as such. The second is the effect of this nominalism in instrumentalizing the political common good[87] and privatizing religion both ontologically and politically. We gain access to the second problem most formally through the first, whereas we gain access to the first problem materially through the second.

[86] See Charles De Koninck's classic account of the common good, *On the Primacy of the Common Good: Against the Personalists*, ed. Ronald P. McArthur, trans. for *The Aquinas Review* 4, no. 1 (1997): 14-71.

[87] Inasmuch as St. Thomas formally teaches that individual human life may be directly and justly acted against in capital punishment, tyrannicide, and war for the sake of the common good of political life, Finnis's reduction of the political common good to mere instrumentality is odd. How can a "nonbasic" political common good be directly superordinate to a "basic" good-unless by "basic" one means "subordinate and lower"?

Finnis rightly cites St. Thomas to the effect that the law does not make prescriptions about the acts of the virtues save insofar as they may be ordered to the common good either immediately (as directly ordered to the common good), or mediately (as pertaining to good order and the upholding of the common good).[88] In this same passage he cites St. Thomas making the point that "there is no virtue the acts of which cannot be prescribed by law."[89] Inasmuch as the natural good of religion falls under the virtue of justice,[90] it should have been clear from the start that the state cannot be justly excluded from concern for the higher spiritual common good. Yet Finnis considers religion an instance of a set of goods "none of which is in itself specifically political, i.e. concerned with the state."[91] If we are following St. Thomas's teaching, the first part of this phrase clearly does not imply the second part: a good that is not specifically political may concern the state, precisely insofar as the state seeks the conditions of peace and justice-which reside in true virtue-and seeks these conditions precisely also as conducing to true virtue.

Finnis argues the following:

> So the civitas could be called 'natural' if participation in it (a) instantiates in itself a basic human good, or (b) is a rationally required component in, or indispensable means to instantiating, one or more basic human goods. Aquinas's opinion, rather clearly, is that it is the latter. At the relevant point in his lists of basic human goods he mentions nothing more specific than living in fellowship {in societate vivere}-something that is done also with parents and children, spouse, friends, and other people in various more or less temporary and specialized groups (of pilgrims, of students, of sailors, of merchants, and so forth). The thought that we cannot live reasonably and well apart from a *civitas* is consistent with the proposition that the common good specific to the *civitas* as such-the public good-is not basic but, rather, instrumental to securing human goods which are basic (including other forms of community or association, especially domestic and religious associations) and

[88] Finnis, *Aquinas,* 225, citing St. Thomas from *STh* I-II, q. 96, a. 3.

[89] Finnis, *Aquinas,* 225.

[90] *STh* II-II, q. 81, a. 2: "Ad tertium dicendum quod de dictamine rationis naturalis est quod homo aliqua faciat ad reverentiam divinam; sed quod haec determinate faciat vel ilia, istud non est de dictamine rationis naturalis, sed de institutione iuris divini vel humani."

[91] Finnis, *Aquinas,* 247.

none of which is in itself specifically political, i.e. concerned with the state. If that proposition needs qualification, the qualification concerns the restoration of justice by the irreparable modes of punishment reserved to the state government. [92]

But St. Thomas very clearly argues that the political common good seeks to cultivate truth and full virtue and charity among men:

> But every law aims at being obeyed by those who are subject to it. Consequently it is evident that the proper effect of law is to lead its subjects to their proper virtue: and since virtue is "that which makes its subject good," it follows that the proper effect of law is to make those to whom it is given, good, either simply or in some particular respect. *For if the intention of the lawgiver is fixed on true good, which is the common good regulated according to Divine justice, it follows that the effect of the law is to make men good simply. If, however, the intention of the lawgiver is fixed on that which is not simply good,* but useful or pleasurable to himself, or in opposition to Divine justice, *then the law does not make men good simply,* but in respect to that particular government. *In this way good is found even in things that are bad of themselves: thus a man is called a good robber,* because he works in a way that is adapted to his end. (Emphasis added) [93]

These words of St. Thomas indicate sufficiently that law must be regulated according to divine justice and ordered to make men good "simply" if the goodness to which the law is ordered is not to be like the goodness of the "good robber." Of course this does not imply that according to St. Thomas the good of the Church is "part" of the political common good. Indeed, it represents a common good higher than the common good of political community. But Finnis misconstrues St. Thomas to teach that the good of religious faith and worship pertain only to "individuals

[92] Ibid.

[91] *STh* I-II, q. 92, a. 1. The Latin here is of the crucial passages: "Si enim intentio ferentis legem tendat in verum bonum, quod est bonum commune secundum iustitiam divinam regulatum, sequitur quod per legem homines fiant boni simpliciter. Si vero intentio legislatoris feratur ad id quod non est bonum simpliciter … tune lex non bonos facit homines simpliciter, sed secundum quid, scilicet in ordine ad tale regimen. Sic autern bonum invenitur etiam in per se malis, sicut aliquis dicitur bonus latro."

in themselves."[94] If this were true, then the spiritual common good of humanity would be a merely private matter to which a quasi-accidental publicity attaches.

Finnis expressly denies that the spiritual common good is truly a common good when, speaking of "the good of religious faith and worship," he writes that "the fact that such individual goods are goods for many people, or for everyone, does not convert them into the good of community."[95] He is right that the issue of one versus many is in one sense accidental. For St. Thomas the distinction between common and particular good is formal and concerns the diffusiveness of the common good, and its status as an end participable by many and irreducible to the particular good. The common good is not merely an abstract designation for an agglomeration of essentially particular, incommunicable, private goods. Moreover, the common good truly is the higher, more universal, more communicable good of the individuals (and also of the "parts" -sometimes lesser common goods, lesser because less diffusive, universal, and communicable by nature) who participate it. Man is teleologically ordered to God through hierarchically ordered, progressively more communicable common goods, terminating in the common good who is God himself, communicated in the beatific vision.

By contrast, there is no very formal account by Finnis of what he means by "common good." He insists that "there are private goods which prevail over public or other common good."[96] Similarly, he cites St. Thomas to the effect that "Neither in one's whole being nor in all one's belongings is one subordinate to the political community."[97] But this is the case simply because man is subject to the political common good only under the formality of

[94] Finnis, *Aquinas*, 226. Finnis cites St. Thomas's account of the mission of those angels who announce mysteries of revelation to individual persons such as the Blessed Virgin Mary as though it described the common good of divine revelation as such. For example, the mystery of the incarnation communicated to Mary in the annunciation is meant by the angel for her personally, while the general import of this communication to the Church is in a sense secondary to the communicating angel's intent. Cf. *ScG* III, c. 80.

[95] Finnis, *Aquinas*, 226.

[96] Ibid., 251-52.

[97] Ibid., 237, quoting from *STh* I-II, q. 21, a. 4, ad 3.

being a citizen, and not simply as "man." Man is ordered to a hierarchy of progressively more communicable and universal common goods as to hierarchically diverse ends. For Finnis, having excised teleology from St. Thomas's natural law teaching, the order of common goods cannot be morally decisive. Consider St. Thomas's teaching from the *Summa contra Gentiles:*

> Furthermore, a particular good is ordered to the common good as to an end; indeed, the being of a part depends on the being of the whole. So, also, the good of a nation is more godlike than the good of one man. Now, the highest good which is God is the common good, since the good of all things taken together depends on Him; and the good whereby each thing is good is its own particular good, and also is the good of the other things that depend on this thing. Therefore, all things are ordered to one good as their end, and that is God.[98]

God is the supreme common good-a common good higher, more communicable, superior in every way, to the common good of political community. A state whose political common good is not further ordered to God claims a superiority over a common good that transcends it. Such a state, by preferring itself as a singular to the higher common good, renders its good no longer to be the genuine good of many, open to the entire universe of good, but something sealed off from goods to which it is really ordered.[99] The import of this truth today extends to the issue of religious freedom, which the Church embraces and promotes precisely as a public debt owed by the state to the common good of humanity as such, to the supreme extrinsic common good of the universe, namely, God, and to God precisely as Founder and

[98] *ScG* III, c. 17.

[99] Need it be said that the fashion in which the political state acknowledges the further ordering of the common good to God is by the nature of the case subject to prudence precisely for the good of the common ordering of society? Hence the teaching of the *Catechism of the Catholic Church,* no. 2109: "The right to religious liberty can of itself be neither unlimited nor limited only by a 'public order' conceived in a positivist or naturalist manner. The 'due limits' which are inherent in it must be determined for each social situation by political prudence, according to the requirements of the common good, and ratified by civil authority in accordance with 'legal principles which are in conformity with the objective moral order.'"

Head of His Church. By the very nature of the political common good, it is further ordered toward nobler common goods. Were the political state to become either hostile or an impediment to these nobler common goods, this would constitute not a distinct type of common good but an evil of disorder vitiating society.

Yet on Finnis's account, rather than being limited from above, by superior common goods, the state appears to be limited only from below, by the private or quasi-private good. He doubtless is correct in saying that for St. Thomas the law of the political community does not reach into the internal forum, or as he puts it that "the law's requirements (though not its legitimate objectives) are exhausted by 'external' compliance." [100] Yetthe limits of political power-such power cannot make one virtuous (as can divine grace), nor can it know one's heart (as does God)-do not alter the natural character of the common good of political society, but only the means available to facilitate it. It is the ordering of the political common good to essentially higher common goods that requires that the state not intrude where its nature, power, and providence do not equip it to venture.

St. Thomas's reasoning is clear: "since every part is ordained to the whole, as imperfect to perfect; and since one man is a part of the perfect community, the law must needs regard properly the relationship to universal happiness." [101] Every part is ordained to the whole as imperfect to perfect, and the law properly regards universal happiness ("felicitatem communem")-not properly or equivalently merely private happiness. Furthermore the individual good and the common good differ formally and not merely quantitatively:

> The common good of the realm and the particular good of the individual differ not only in respect of the *many* and the *few* , but also under a formal aspect. For the aspect of the *common* good differs from the aspect of the *individual* good, even as the aspect of *whole* differs from that of *part.* Wherefore the Philosopher says (POLIT.I. 1) that *they are wrong who maintain that the state and the home and the like differ only as many and few and not specifically.* [102]

[10]°Finnis, *Aquinas,* 234.

[101] *STh* I-II, q. 90, a. 2.

[102] *STh* 11-11, q. 58, a. 7, ad 2.

It is precisely because man is a rational animal that he is capable of participating in progressively more universal common goods which are ordered amongst themselves in relation to the *finis ultimus* of the beatific vision of that very God who is the extrinsic common good of the entire universe and the Founder and Head of the Church. Hence for St. Thomas, "The common good takes precedence of the private good, if it be of the same genus," [103] and Finnis cites him on the point that "Public good prevails over private good." [104] This is owing to the superior ontological density and nobility of the common good vis-a-vis the singular. Responding to the idea that "the law is not only directed to the good of all, but also to the private good of an individual" [105] St. Thomas writes:

> Just as nothing stands firm with regard to the speculative reason except that which is traced back to the first indemonstrable principles, so nothing stands firm with regard to the practical reason, unless it be directed to the last end which is the common good: and whatever stands to reason in this sense, has the nature of a law. [106]

Of the view that one's particular good is the only good one is bound to seek, and that prudence does not extend to the common good, St. Thomas writes that: "Moreover it is contrary to right reason, which judges the common good to be better than the good of the individual." [107]

Right reason judges the common good to be better than the individual good ("quod bonum commune sit melius quam bonum unius"). If the private good as such prevailed over the common

[103] *ITh* 11-11, q. 152, a. 4, ad 3: "ad tertium dicendum quod bonum commune potius est bono privato si sit ejusdem generis."

[104] Finnis, *Aquinas,* 251, citing *ITh* 11-11, q. 117, a. 6.

[101] *STh* 1-11, q. 90, a. 2, ad 3: "Sed ratione consistit non solum quod ordinatur ad bonum commune, set etiam quod ordinatur ad privatum bonum unius."

[166] Ibid.: "Dicendum quod sicut nihil constat firmiter secundum rationem speculativam nisi per resolutionem ad prima principia indemonstrabilia, ita firmiter nihil constat per rationem practicam nisi per ordinationem ad finem, qui est bonum commune. Quod autem hoc modo ratione constat, legis rationem habet."

[107] *STh* 11-11, q. 47, a. 10. The last line reads, "Repugnat etiam rationi rectae, quae hoc iudicat, quod bonum commune sit melius quam bonum unius."

good, the result would be disorder or even tyranny (it is the *ratio* of tyranny that the common good be subjected to the singular good of an individual). That a private good may be better than some common good does not imply that it is better *qua* private good in relation to the common good taken precisely as such.[108]

Finnis repeatedly presents the options regarding the political common good as reducing to two-one in which the state would assume a meddlesome direction of all affairs of individuals, depriving them of any mature governance of their own lives and subjecting them to what one might typify as a "nanny state";[109] the other, one in which the state considers its concern for virtue to be merely an accident of maintaining a minimal public order.[110] Yet these are not sufficient options simply speaking and at the speculative level. Saint Thomas propounds neither an absorption of the person in collectivism nor a nominalist reduction of the common good into a singular good designated abstractly and standing merely for a composite of individual private goods .

One ought not suppose that political life is somehow artificially segregated from the substantive aim of engendering a truly good and virtuous common life. Both the truth that the state's powers do not reach into the internal forum[111] and the very nature of the good itself indicate sufficiently why this concern does not rightfully impede moral maturity, self-possession, and freedom, or evolve into totalitarianism. But this does not remove from the state any concern with direction toward the substantive moral and spiritual ends of common life,

[108] Here, too, see De Koninck, *On the Primacy of the Common Good,* 64.

[109] Finnis makes something of a straw man of the proposition that "state law holds the same place in the state as parental precepts hold in the family" (Finnis,Aquinas, 223), as he likewise does of the proposition that the task of the state is "leading people to the *fullness* of virtue by coercively restraining them from *every* immorality" (231); or as he likewise addresses a straw man in arguing that the common good "does not supersede their responsibility to make good choices and actions on the basis of their own deliberation and judgments" (236). Even the singular good of the part is better off insofar as the common good flourishes; but the common good is not a singular good, and the singular good is further ordered to it rather than the other way around.

[110] See ibid., 222-34.

[111] Finnis rightly cites St. Thomas to this effect (ibid., 24).

or equate with an antinomian banishment of religious truth from public life.

VI. ST. THOMAS'S THEOCENTRISM

For all the reasons set out above, Finnis does serious injustice to the role of God in St. Thomas's doctrine of natural law. As a speculative truth about the ultimate end he has twice ruled it out of practical significance, denying (1) that speculative truths are in any way definitive for practical reason, and (2) that the order of ends in relation to the ultimate end is of any practical import.

Hence St. Thomas's theological and metaphysical definition of the natural law as a rational participation in the eternal law is treated as practically irrelevant. The philosophic teaching that it is God who is the source of genuine moral obligation, and God who governs us through our rational participation in His Law, is held practically insignificant because it is based upon the truth of being. The need to know the truth of the good is excised as irrelevant to knowing the good. Finnis does not allow the idea that by nature the moral life is utterly defined by its teleological order *ad Deum* to upset the peace amongst the "basic" goods.

Furthermore, Finnis's nominalist account of the common good points the way toward his liberal reduction and instrumentalization of the political common good, as well as to the politico-legal, and ontological, privatization of religion. God and divine revelation are only by accident public for Finnis. Hence also his strong aversion to the language of natural *law* and to the moral nature of the first precept of law-language that makes it plain that God quite publicly governs His creation.

CONCLUSION

Saint Thomas's metaphysical and theological doctrine of the natural law, whose very definition is theocentric, is at Finnis's hands converted into a pure praxeology to which God and the order of ends defining the *ratio boni* are made extrinsic and irrelevant. Practical knowledge is held to be achieved without

speculative conformity of mind and reality, lest it be suggested that knowing that something is good requires knowing something. The first principle of law and the root of all other precepts of the natural law is made alien to the whole genus of law, and severed from basic moral teleology. Things said to be intrinsically evil are said to be licitly chosen if only they are side-effects of a good end. Any common good, as such, is confused with the mere abstract designation of an agglomeration of singular goods. Political common good is alleged to be not basic but merely instrumental to "basic goods," although Thomas himself expressly indicates that when in conflict the political common good ought to be preferred to certain of the "basic goods," and that ends are only ends at all insofar as subordinated to God as *finis ultimus.* The common good of revelation is treated as a merely private affair; and the possible pertinence of God to the state is denied on bases which neither St. Thomas Aquinas nor any of the Fathers and Doctors of the Church, nor *Dignitatis humanae* itself, propose.

Finnis's account not only abstracts from but warps St. Thomas's actual teaching, and thoroughly alienates practical reason from the rest of his synthesis. He gives us an Aquinas shorn of his most distinctive teachings, and whose conclusions, when cited, accordingly appear out of place. Finnis's thought is generally well-accoutered in learning, rational distinctions, and arguments. His latest book is not lacking in this regard. But its subject matter finally is not St. Thomas Aquinas at all, nor even natural law within the Catholic tradition. Rather its subject is the new natural law theory, transported to the thirteenth century.[112]

[112] I would like to thank Gregory LaNave, of *The Thomist,* for his editorial help.

BOOK REVIEWS

Spheres of Philosophical Inquiry and the Historiography of Medieval Philosophy. By JOHN INGLIS. Leiden: Brill, 1998. Pp. 324. $99.50 (cloth). ISBN 90-04-10843-2.

In a passage from the *On Sophistical Refutations* that St. Thomas likes to cite, Aristotle indicates that the beginner in a discipline must first accept as true the things his teacher tells him ("oportet addiscentem credere" [cf. *Summa Theologiae,* II-II, q. 2. a. 3]). These "truths" that the learner receives are not necessarily *per se nota,* so at some point the learner, as he progresses in the discipline, will come to understand why these truths are true. Now, although in that passage (165b3) the Philosopher seems to have in mind the first principles of a given discipline, its *dignitates,* one can extend his logic to cover a discipline like the one covered by John Inglis in this marvelous book: the history of medieval philosophy. For a beginning historian, too, accepts as true certain claims about the subject to be investigated, whether the claims are about the documentary hypothesis in the Old Testament, the "dualism" of Descartes, or the conditions that led to the American Revolutionary war ("No taxation without representation"). The problem is that certain claims about a subject, assumed to be true at the outset, can prevent counterclaims from emerging that would paint a decidedly different picture about the subject under consideration. So, if the teacher of medieval philosophy provides its historical narrative in a way that is paradoxically antithetical, or at least indifferent, to the primary concerns of the schoolmen, then his hapless student is likely to receive a twisted view of this subject. The student, turned teacher, will repeat the story to his students. Chain these links together, and you have a skewed tradition of the historiography of medieval philosophy.

The gist of John Inglis's thesis in the book is well-stated in the conclusion: "While significant Medieval Latin thinkers transformed philosophy into theology, philosophers in the modern period would transform medieval theology back into philosophy" (276). His book, however, is not an elaborate essay, replete with benign assertions about how important it is read medieval thought in its context. It is rather a carefully argued case that attempts to pinpoint just where the historiography of medieval philosophy got derailed. And Inglis has proof. The size of his bibliography (28 single-spaced, 11-point, pages) is only a provisional indication of how seriously he makes his case; much of the information provided in the book was garnered, not from published

material, but from archival work that he himself conducted in Europe. The sources of the evidence Inglis provides are not only the texts produced by writers, but also the institutions and the ecclesial politics of the men who produced those texts. Good history requires a range of evidence.

The book has autobiographical origins for Inglis (6-10). As he undertook to study medieval philosophy he first came across the account of Etienne Gilson's *The History of Christian Philosophy in the Middle Ages,* which made three main assertions: (1) the medievals contributed to the standard areas of philosophy and to the harmony between reason and revelation, (2) Aquinas represents the high point of medieval philosophy, and (3) Ockham's criticism of Aquinas's realism and harmony between reason and revelation brings about the dissolution of medieval philosophy. This particular story is well known to students of medieval thought, and, furthermore, it is well known that it diverged from the view earlier offered by Maurice de Wulf, for whom there was much more unity among the medievals than diversity, a "common philosophical patrimony of medieval philosophy" (9). But what struck Inglis was that beneath the obvious differences between Gilson and de Wulf there was a common assumption about the nature of philosophy and of medieval philosophy's relation to philosophy. For both Gilson and de Wulf before him had construed the contribution of medieval philosophy along the lines of how contemporary philosophy understood itself: a heavy, indeed primary, emphasis upon epistemology and an attempt clearly to demarcate intellectual accomplishments attained by reason alone from those that depended upon faith (i.e., the distinction between reason and revelation, with, one worries, the quiet assumption that the latter is "non-rational"). Gilson wrote with his eye on what de Wulf had said before him; was it de Wulf who had authored this understanding of medieval philosophy?

To the claims of many who look to de Wulf as the source of this dominant view of medieval philosophy Inglis offers a corrective, for which he argues in part 1 of his two-part book: two mid-nineteenth-century German historians of philosophy, Joseph Kleutgen (1811-83) and Albert Stocki (1823-95), aspiring to recover a philosophical tradition with the mettle to combat the inherent skepticism and individualism of modern philosophy, authored histories that "mapped" the medievals onto philosophical issues that burned in the mid-nineteenth century. It is true that there were remote antecedents who made a sharp distinction between, say, Aquinas's "philosophy" and his "theology" (e.g., Goudin, Billuart). But the Lutheran Jacob Brucker's *General History of Philosophy,* with its insistence that the "philosophy" of the Middle Ages was not *real* philosophy, because it was imbedded-rather, imprisoned-in medieval theology, provided Catholic writers with incentive to vindicate the thought of the medievals in a way that helped it to address the concerns of Protestants, on the one hand, and the assault of the Enlightenment, on the other. The French Revolution, Mad King Ludwig of Bavaria, G. W. F. Hegel, and the Restoration of the Jesuits and of the Dominicans in France, all weigh in as contributing factors to Kleutgen's and Stockl's narratives. The result of all

this historical effort is a fairly straight line from Kleutgen-St0ckl through de Wulf to Gilson to-after the "expansion of the pantheon of medieval philosophers" (215-34), which returned Scotus and Ockham to the group of genuine medieval philosophers-Norman Kretzmann and Anthony Kenny and their *Cambridge History of Later Medieval Philosophy,* where we now expect and find that treatments of medieval thought are packaged in accord with contemporary canons of philosophy (e.g., articles on "natural morality," "philosophy of mind," "epistemology," and especially on "medieval logic").

Having made his case in part 1 that the historiography of medieval philosophy is thus indebted to the concerns of modern philosophy, Inglis in part 2 attempts a case-study of sorts, and asks what happens when we examine the privileged doctrine of epistemology as the medievals-in this case Thomas-saw it. Taking his bearings from Christian Knudsen's article on epistemology in the *Cambridge History,* Inglis notices that the key text for Knudsen is a text on knowledge from the *Summa contra Gentiles,* where Thomas speaks of "intentio intellecta." However, this text is not from some clearly delineated treatment of human knowledge as such, but from book 4, where Thomas is addressing *intentio intellecta* and the Word of God. In short, the discussion of knowledge in that text is at the service of a clearly theological endeavor. Inglis looks at key "epistemological" texts in Thomas's literary corpus and finds that texts from the *Scriptum super Sententiis,* the *De Veritate,* and above all the so-called "treatise on knowledge" from the *Summa Theologiae,* are clearly discussions at the service of faith. As Inglis puts it regarding the *Summa Theologiae,* "we must admit that there is a theological and moral context to his discussion of the specific powers of the human soul" (247). This in turn leads Inglis to ask in chapter 10 whether the strong distinction we are accustomed to make between reason and revelation is something of a false dichotomy, a dichotomy exemplified by the change over time from the Gilson of *The History of Christian Philosophy in the Middle Ages* to the Gilson of *The Philosopher and the Theologian,* where he notes that the theologies of the Middle Ages were theologies outright, not philosophies. Of course, if Inglis is as successful in making his case as he seems to this reviewer to have been, then we are all returned to that fundamental question that is posed to every student of medieval thought, however it be construed: just what is the relation between the native power of the human mind and what it receives from the Lord of Hosts?

In an environment in which one regularly sees this or that book called a "must read," this book truly stands out as a book that must be read by serious students of medieval thought. It is both a book about the historiography of medieval thought and about us, who study it. In that sense the book is a genuine autobiography of the student of medieval thought who reads it. The steep price-tag will prevent all but the most committed scholars from purchasing it; the rest of us will either have to encourage our libraries to purchase it, or obtain it via interlibrary loan. But the person who reads the book needs to know at the outset that his comfort with what medieval

philosophy is, or was, may well be shaken, and that henceforth he will be suspicious of presentations of this or that medieval philosopher's "theory of" whatever. The result, however, is not simply a destruction of our long-held, common assumptions, but a renewed freedom to investigate the medievals in a way that will let their own distinct voice emerge. And that is to everyone's advantage.

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Agape, Eros, Gender: Towards a Pauline Sexual Ethic. By FRANCIS WATSON. Cambridge: Cambridge University Press, 2000. Pp. x + 268. $59.95 (cloth). ISBN 0-521-66263-X.

Given the polemics and politicization that surround so much of modern biblical interpretation, it is refreshing to see a title that suggests the development of a specific Pauline sexual ethic grounded in the Pauline texts themselves. It is also a hopeful sign that in his book *Apage, Eros, Gender* Francis Watson proffers 1 Corinthians 11:11 as the key to unlocking the proper relationship between man and woman. This verse ("Neither is woman apart from man nor man apart from woman, in the Lord") grounds the whole of Pauline sexual ethics for Watson. It is this "belonging-together" of man and woman effected by Christian agape that makes the Pauline ethic comprehensible. Man and woman must be seen to be "not independent of one another but interdependent" (3). Watson unpacks the implications of this verse and demonstrates that it demands that each sex define itself in terms of the other-never apart from each other-in order to prevent a perverted image of humanity from emerging.

The structure of Watson's book is both intriguing and innovative. He admits that while the Pauline texts concerning sexuality are few and cryptic-as well as being uncomfortable to the modern mind-they are nonetheless "extraordinarily influential" (viii) and need to be understood. He selects three passages-1 Corinthians 11 (the question of the veil); Romans 7:1-6 (desire and sin); and Ephesians 5:22-33 (the Great Mystery)-for their contribution towards understanding the male/female relationship. But he also writes under the express conviction that biblical interpretation must be done in an interdisciplinary manner (vii). For Watson, this means that there must be an engagement with secular literature because it "is directly relevant to the interpretation of the canonical texts" (ix). Thus, the book is composed of three sections each containing two parts: a "theological reading" of a specific Pauline

text preceded by an analysis of a secular work that Watson feels bears upon the Pauline theme in question. Given the emphasis on Christocentricism and the canon of Scripture and his use of 1 Corinthians 11:11 as a hermeneutical key to Pauline ethics, Watson's overall design appears to be very creative and promises to be a fruitful and genuinely scriptural contribution. However, its execution is beset with flaws that prevent this otherwise innovative approach from articulating a genuinely Pauline position.

Three fundamental hermeneutical flaws may be noted. First, at the end of section 1, Watson properly proposes that the text should be allowed "to unfold itself in its own way" (89). He claims that "the appropriate criteria for judging them [the Pauline texts] are available to us only in and through the texts themselves, in their testimony to the reality of the divine agape" (ix). The problem is that for Watson the text is not normative. It becomes dear that his understanding of agape is more consonant with twentieth-century feminist constructs. Any passages that contradict this ideology become suspect and are rejected. He notes that the canon contains "misleading statements" (89) and that one must attend to "an underlying logic that is not always manifest" (ibid.). But it is dear that his own logic does not derive from the Scriptures but is external to them.

Second, Watson states that "to interpret is *to use the texts to think with"* and concludes that the "canonical function (of the texts) … is to *generate* thought, not to restrict it" (viii). But a fundamental task of the canon is to set limits. The canon served to distinguish that which was true and faithful against impostors; the canon becomes that against which one can measure thoughts and teachings to see if they are true or not (cf. 1 Tim 3:16). In this sense, the canon does serve precisely to restrict that which is acceptable discourse within the community.

Third, Watson's "interdisciplinary dialogue" between text and culture (viii) raises the question of which secular literature is relevant and why? Watson's choices include Virginia Woolf and Luce Irigaray; the former advocating a separatist version of feminism while the latter espouses a feminism of difference (and not equality). While these may represent part of the spectrum of secular concerns, they still remain only a part. More disturbing is the fact that Watson presents nothing that counters these feminist writings from authors of other perspectives (e.g., Bly, Blankenhorn, Miller, August). He maintains that there are "many feminisms" (6), some of which could include and some which reject a "belonging-together" of men and women. At the same time, his portrayal of patriarchy is virtually only negative; it is a distorted thought form that "identifies a project of male self-definition, 'apart from woman'" (5). No voice is given to those in modern literature who would argue strenuously against this definition and present an understanding of family-involved patriarchy that is both necessary and positive in content.

The first text studied is 1 Corinthians 11. For Watson, the Pauline veil becomes a paradigm revealing the true nature of the new relationship between man and woman in Christ. While he maintains that "belonging-together does

not exclude difference," (3) he does not appear to allow for any real ontological differences, which he terms "hierarchical and essentialist definitions of maleness and femaleness" (37). He rejects the idea that the male-female relationship is asymmetrical (52, 55). Therefore, he also rejects the traditional understanding of the veil as a visible symbol of the woman being related to man through headship. Instead, and antithetically, he portrays the veil as the sign of the empowerment of women in which she can proclaim the word of God "irrespective of her relation to any other 'head'" (44).

For Watson, the basis of any Pauline sexual ethic must be the new community now formed by grace and agape. Jesus becomes the "agent of the new creation" (69) who fundamentally re-creates the male-female relationship. Indeed he "recreates" their sexuality (39)! No longer is eras the determining factor in male-female relationships, but agape. In particular, agape is expressed in the community by what Watson terms "the divine-human dialogue" which takes the form of prophecy and prayer (2). This speech "at the heart of the Christian and ecclesial existence" (76) must be given voice by both men and women in their "belonging-together" and never in isolation from each other. The threat to this dialogue in the assembly is the eroticized glance of the male which deprives the woman of her subjectivity. Hence women are veiled not as a sign of their relative relationship to men but precisely to exclude male eroticism so that agape can reign in the community. Only in this way can woman be heard and this is necessary for an undistorted humanity to be present in the agapaic community. Although he rejects the practice of the veil and Paul's "questionable theological arguments" (54), Watson thinks that it is valuable in that it (badly) expresses a proper attempt in "decentering eros in the name of the agape of the new creation" (71).

To establish his thesis Watson has to prove that the veil had nothing to do with being related to a "head." His thesis is that the veil does not show respect towards the man and God but instead "imposes on him [the man] the humiliation of a blindfold" (41). By this act of humiliation, woman is established in a symmetrical relationship with man by preventing the play of eros in the assembly. Watson's rationale for this is that for Paul and his culture "the female face is an object of ... intense erotic concern ... [and] it must be concealed behind a veil" (52). But he does not consider the fact that if the erotic arousal of men must be avoided for women to be heard, then their whole face and indeed feminine form must be shrouded. Watson, proper to his thesis, believes that the veil covered the face. But historical research supports that the covering "concealed only the hair from view" (22). (This is from C. S. Keener, who would otherwise be quite sympathetic to Watson's argument.)

Watson also assumes that the early church assembly was structured like a modern church where the leading participants are in front, in full view. This may well not have been the case in the house church setting with large crowds. Prayer and prophecy were probably offered from where one stood, as one might find today in a prayer meeting. Being "on display" was probably not an issue.

Watson's hermeneutic is expressly based on what he calls a logic that is not manifest. But the logic of 1 Corinthians 11 is clearly announced and the rationale for its teachings is manifest. While the phrase "because of the angels" is admittedly difficult, it does not appear to be a code word for *male* eroticism. In order to establish male eroticism as the issue of this passage, Watson has to disprove the traditional understanding that the veil was a symbol of the ordered and hierarchical relationship of man to woman.

Watson rejects any sense of hierarchy in nature and indicates that belief in hierarchy "may be sustained by what will later be identified an Arian Christology" (43). He goes further: "hierarchical accounts of being *require* not only relationships of pre-eminence and subordination but also ... blur the absolute distinction between creator and creature" (ibid.). While these assertions are both philosophically and theologically questionable, Watson's own analysis is contradictory. He admits that "head" probably means authority. But if the text says that Christ is the head of every man (male) and man is head of woman, and head implies authority, then these relationships must be in some sense ordered and hierarchical. Would one deny that the headship of Christ is hierarchical? Contrary to the suppositions that drive Watson's analysis, hierarchy does not imply a demeaning of any party in a relationship. Indeed, without any specific sense of differentiation that is real and essentialist, the male-female relationship becomes merely bipolar and will eventually collapse into a false homogeneity. It is precisely because of an ontological differentiation that the proper "belonging-together" of male and female can occur.

Watson's confusion stems from his desire to deny any priority or unique appropriateness to the male in terms of initiative and instead to substantiate that women wielded authority and were initiators in the community. He freely admits that Genesis 2 ("a man leaves his father and mother") construes eros "asymmetrically as the movement of man towards woman" (60). He then claims that "there seems to be no compelling reason for this asymmetry outside the constraints of cultural assumptions" (60).

For Watson, that the male seems to have a lead, a role of initiative, that is uniquely proper to him as man is not acceptable. It would mean that there are traceable elements of hierarchy within creation. Hence, this asymmetrical configuration must be overcome and this is effected in Christ. "In the Lord . . . the pattern of initiative and response is no longer gendered .... Jesus who, as the agent of the new creation, creates anew and does not simply underwrite the gender roles inscribed in the old creation" (69). Thus redemption in Christ "readdresses an imbalance in the old" (79). It would appear that the male-female relationship needed redemption even before the Fall. One might note that Jesus' use of Genesis in Matthew 19 would indicate that he did not seem to have the problems with the first creation that Watson has.

Watson reinterprets redemption as the recreation of gender: "Jesus articulates the possibility and the promise that the long historical process in which adult gendered identity is constructed and fixed may be unraveled and undone, so that identity may be recreated .... Jesus' utterance may be heard

as a threat of castration. . In *particular, Jesus is a threat to masculine gendered identity, the social construct arbitrarily erected on the basis of the inalienable maleness and femaleness given in creation"* (39; emphasis added). Watson then attempts to justify this theme of recreated gender by strange uses of Scripture. He proposes that Jesus actually is announcing this recreation of gender when he says, "Unless you become as children ... ". Here, says Watson, is "the original, repressed threat is to be found" (38) before Jesus regenders mankind. The child here is parabolic and "represents the human whose identity is fluid and malleable, potential rather than actual" (38). In an even more bizarre fashion, he supports his theme of castration by stating that Jesus "himself wields the knife: he has come not to bring peace but a sword" (ibid.) and that he "commands that the bodily member that leads one into sin be cut off" (ibid.).

One has to question seriously if Watson understands the relationship of the first creation to the fall and, even more importantly, the relationship of the Redemption to the first created state. Is what God has created "imbalanced" even though there is no sin? Watson goes so far as to say that "solitary man . . . is 'not good' [and] contrary to the will of the creator" (58). But what is "not good" is *not* man, himself, but his "being alone." There is a fundamental difference between ontological deprivation of good and the need for fulfillment, but Watson fails to make that distinction.

Watson reveals his understanding of eros through his analysis of the veil: "It is a sign that the mythologized, quasi-transcendent authority of eros is excluded from the koinonia of agape, since it intends the possession of the other in the form of bodily union rather than the other's divinely determined well-being. The erotic koinonia of man and woman is-as we might almost say-a parody of the true koinonia of man and woman in the Lord" (78). But God uses this image of the "erotic koinonia" as the very image to depict his relationship first with Israel and then with the Church. Is not C. S. Lewis's approach *(The Four Loves)* of the higher love subsuming the lower ones a better way of understanding the dynamic between eros and agape? In some sense can not agape infuse eros and allow for their proper "belonging-together"?

Watson's rejection of hierarchy and ordered relationships is logically extended to the human-divine relationship. Gradually, he builds up to the point where gender is rendered meaningless: He concludes: "Gender is a creaturely reality; the divine-human relation is not itself gendered. There is no more a feminine other that would constitute God as masculine than there is a masculine other that would constitute God as feminine. The creature does not play a feminine role in relations to a masculine initiative of the creator" (81). He ends up by stating that the gendering of God is sinful, an act "in defiance of the second commandment" (ibid.). He purports to give an example of this through an analysis of Michelangelo's Creation in the Sistine Chapel, which he claims is "expressive of platonizing homoeroticism and misogyny" (ibid.). He goes so far as to say that "the masculinity of the creator has already been established by the homoerotic encounter with Adam, and the creation of woman is the first step downwards towards the Fall" (ibid.).

Surely to express the reality of God in terms of the masculine is not necessarily homoerotic or misogynistic. Nevertheless, Watson unabashedly concludes that "if gender is a purely creaturely reality, then the projection of gender onto divinity is exposed as misogynistic and idolatrous" (82). While one readily admits the limitations of human language, it cannot be totally arbitrary and devoid of all meaning. It is in explicitly sexual and gendered images that God reveals His relationship to Israel. There must be some masculine or feminine meaning resident in the image of the Bridegroom, Bride, Father, etc. to make sense of these revelations. Surely in teaching us to call God Father Jesus is not idolatrous. It is also true that men and women encounter the divine not as neutered "persons" but as men and women. While marriage is a temporal reality, our gendered realities are never said to be obliterated. How can Watson account for the fact that only masculine pronouns are ever used of God in Scripture (Miller, p. 5), unless of course revelation is hopelessly culturally conditioned and flawed? While limitations of language exist, surely this does not evacuate language of all meaning.

The second part of Watson's book is a very valuable critique of the current idealization of sexuality. He fears that a consequence of his thesis (that the veil excludes eros from the agapic belonging-together) might be read as implying a "negative attitude towards sex and the body" (92). To answer this he makes a critique of the modern notion of sex on the basis of Paul, Augustine, and Freud. The modern myth is that sexuality has been freed from all restrictions and inhibitions by Freud who in the modern context has overcome the negativity of Paul and Augustine. In a clever exposition, Watson ironically shows that all three in fact were saying the same thing. "Paul's *epithumia,* Augustine's *concupiscentia* and Freud's *libido* all refer to the same impersonal, quasi-divine power to which human existence is subjected" (91). He shows through reading Freud that Paul and Augustine have a valid critique of today's understanding of sexuality. Modernity is playing false when it "promotes only the joy of sex" but "represses the knowledge of the shame of sex" (98). Paul and Augustine both emphasize the conflict and tension of sexuality within man in terms of "law and spirit"; Freud expresses the same misgiving abut sexuality in psychological terms: 'The ego, desiring to subject itself to the demands of the super-ego, finds itself unable to master the desires that arise out of the id. To be human is to be subject to this intractable conflict" (102). Freud admits that "repression is an inescapable fact of human existence"-a fact that sexual liberators "pass over in silence" (125). Perceptively, Watson concludes, *a la* Freud, that modernity's projection of a repressionless and tension-freed sexuality "is the product of ... a false consciousness. It is the ego's attempt to conceal the conflicts between id and reality by interposing an ideological screen" (127-28).

He uses Romans 7:1-6 to show how the law engenders desire towards sin. However, here again Watson seems to falsely relate eros to agape. He states that "for the sake of *agape, eras* must be subjected to severe restrictions, so as to eliminate not just the erotic act but even the desire for it" (156). But is not eros also part of the goodness of the created order that must be redeemed but

not obliterated? He would be wiser to follow a previous thought in which he states: "In marriage the body of each partner is oriented towards the other .. . in a parable of the relationship of Christ and the Christian that differs fundamentally from the destructive caricature that occurs in porneia" (141).

Interestingly, Watson's analysis leads him to some very profound Catholic insights. He sees that essential to the modern conception of "sex" is contraception. "Sex is natural, but sex needs technology to protect it from nature" (99). Contraception exposes the lie of modernity's pretense about naturalness and ease of sex: "Contraception and abortion together preserve the hegemony of sex" (161).

Watson's final section, which deals with Luce Irigaray and Ephesians 5, suffers from the same problems as his first. Again, because the text is clearly hierarchical and is traditionally understood so, Watson has to mount a campaign to undermine this textual interpretation. The problem seems to be that he cannot understand that differentiated roles and headship can mean anything other than inequality. Ephesians speaks of woman being subject to her husband in everything and juxtaposes Christ and the husband (vv. 22-24). Watson realizes that Ephesians clearly shows a correlation between Christ-church relation and the man-woman relation which can be understood as grounding this asymmetrical relationship "in transcendental ontology" (235), by which he means creation. But for Watson, for a man to function in a differentiated fashion as head automatically creates asymmetry and establishes "gender inequality" (ibid.). Therefore, he attempts to show that this "platonizing reading" of chapter 5 is not required (235).

He portrays Hans Urs von Balthasar's analysis of Ephesians 5 as an example of this faulty type of textual reading, as the "uninhibited gendering of the church" which "gives corresponding prominence to the maleness of Christ, the bridegroom" {236). The result of the Balthasarian approach is that "we find ourselves in a world in gendered relation to a gendered deity. Feminine submission to masculine headship is the basic principle of this relation" (237). One should note that Watson must logically question the primacy of marital imagery in Scripture, and indeed he does so. He asks why agricultural images may not equally be key to the interpretation of reality since they too are used in Scripture {243). He goes so far as to {inaccurately) state that the "Pauline bride-bridegroom notion is in fact found *only* in 2 Cor. 11:2" (148 n. 14).

Faced with the sense of ordered relationships manifest in the text, Watson resorts to his understanding of redemptive agape, a love that "dissolves the sharp outlines of asymmetrical, hierarchical relationships liable to hostility and violence" (245). Since all are called to love, there can therefore be no question of hierarchical ordering. Watson's perceptions are severely hampered by his inability to see headship operative within an agapic relationship. To love does not require one to be regendered and placed in an absolutized symmetrical pattern of relationship. God the Father loves us. This does not destroy any sense of hierarchy in the divine-human encounter but rather rightly restores it.

Interestingly, Watson states that while Christ gives his life up for the Church, the man does not do so for his wife and hence the parallel falls. But

does not a husband give himself up precisely in the exercise of an agapic headship in which he thinks not of himself but his beloved? It is also ironic that Watson, in order to deny any Christological grounding of male headship, severely questions the primacy of nuptial imagery for the relationship of Christ to the Church preferring the neutral body image (243-47). Yet as he closes his work he concluded that Jesus' "disclosure of the original nature of marriage makes it possible for marriage, the relation of man and woman as husband and wife, to bear witness to him in his relation to the church" (256). But it can only bear witness if there is a fundamental correspondence which Paul emphatically enunciates in Ephesians 5:22: the great mystery. Profoundly, and yet contradictory to the logic of this own thesis, Watson states: "Rooted and grounded in the love of Christ for the *ekklesia,* the love of man and woman becomes an acted parable of that love" (257). It is precisely this community of Christ's love for His Body, the Church, in which He is the agapaic Head laying down His life for His Bride, that grounds the human relationship between male and female. Asymmetry is hardly a creaturely construct but rather appears to be an ontological and redemptive given.

Despite its flaws, Watson's work is valuable in that (1) it provides an excellent critique of the modern myth of sex from within the framework of Freudian orthodoxy and (2) opens up a question which could prove to be of extreme theological importance: How does eros relate to agape? This may very well be a genuine key to an authentic Christian sexual ethic. But as Milgrom said about the monumental work of Jacob Neusner on Jewish purity rites, he is owed a debt because he raised the right question but the work is so flawed it has to be redone.

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Does God Suffer? By THOMAS G. WEINANDY, 0.F.M.Cap. Notre Dame: University of Notre Dame Press, 2000. Pp. 320 $22.95 (paper). ISBN 0-268-00890-6.

Not long ago, a person involved in pastoral ministry told me that pastoral concern requires overcoming the old classical attributes of God as omnipotent and omniscient in favor of a new paradigm of God as "fellow sufferer." As Thomas Weinandy makes clear in the first chapter of his new book, my friend is by no means alone in this assessment. Indeed, the twentieth century, with its incredible legacy of bloodshed and atrocity, has witnessed in theology an astonishing turn toward a God whose grief and pain seemingly parallel our own.

This growing consensus marks a remarkable reversal of an almost two-thousand-year-old theological tradition, during which the impassibility of God was almost axiomatic. Not least among the merits of Weinandy's study is his evident sympathy with the concerns that have impelled this development and his willingness to give careful heed and voice to its advocates. Yet at the end of the chapter in which he sets forth their concern and arguments, he summarizes his own position. "I believe a passible God is actually less personal, loving, dynamic and active than an impassible God" (26). The remaining nine chapters of the book mount a cogent, cumulative, intellectually challenging argument in support of his thesis. A dense, if clearly written text, is complemented by extensive, frequently fascinating, footnotes that extend and develop facets of the argument.

Weinandy begins by sketching his understanding of the task of theology. Drawing upon Marcel's well-known distinction between "problem" and "mystery," he sees theology's task as one of discerning the mystery that is lived and celebrated in the Church. This discernment makes use of reason's best resources; but it resists the temptation of a rationalistic reduction. Hence orthodoxy confesses the "both/and" of the union of divinity and humanity in the Incarnation, rather than the more superficial "either/or" represented by docetism or adoptionism. In terms of the present study, the soul-stretching affirmation is that God is both impassible and "utterly passionate in his love, mercy, and compassion" (39).

Weinandy roots his theological reflection in the biblical witness to the mystery of God who acts to create and to redeem. The title of his chapter announces both a topic and a thesis: "Yahweh: The Presence of the Wholly Other." Tracing the Old Testament's recognition that Yahweh is the One God, Savior, Creator, All Holy, Weinandy concludes: "That God is able to be present and active as the Wholly Other, and is present and active only because he is the Wholly Other is ... the primary, central and pivotal mystery of biblical revelation and of the Jewish/Christian faith" (53). Hence all biblical language regarding God's "anger," "grief," "repentance," must always be understood in light of this fundamental and original given. "[Yahweh's] passion can in no way diminish his wholly otherness for it is the wholly otherness of his passion which allows for and confers upon it its true divine significance and singular definition" (59). Indeed, such is the authentic insight of Abraham Heschel, whose teaching about the "pathos" of God, often invoked, is often misunderstood.

The fathers of the Church, in the face of contrary tendencies in their philosophical milieu, maintain the uniqueness of the biblical sense of God as Creator, ontologically distinct from, yet immanent and active in, the created order. Thus, though at times unduly influenced by Platonic thought patterns, they articulate a vision that is fundamentally transformative of classical culture. Their refusal to admit passibility in God, then, does not represent a surrender to the prejudices of that culture, but the preservation of the absolute freedom and utterly generous love of the biblical Creator.

Having established biblical foundations and explored patristic reflection, Weinandy turns to the constructive and systematic development of his theme. He entitles chapter 6, "The Trinity's Loving Act of Creation," and calls it the "heart" of his study. In it he seeks "to give a theological and philosophical account of God which justifies his absolute otherness, and, equally and simultaneously, his intimate loving relationship to the world and human beings" (113-14). Weinandy's guide in this endeavor is Thomas Aquinas and his metaphysical reflection upon God as pure act of existence *(Ipsum esse).* But Weinandy, while stressing his "basic agreement" with Aquinas, admits that he will attempt to "clarify, correct, and even, at times, go beyond what he proposes."

Of particular import is Weinandy's parsing of the subsistent relations, constitutive of the Trinitarian "persons," as "relations fully in act." Thus, he suggests, the terms "Father," "Son," and "Holy Spirit," are "verbs": "the interrelated acts by which all three persons are who they are." Indeed, "the persons themselves are co-inhering acts. This *perichoresis* of the trinitarian act gives an unprecedented dynamism to the persons and their life within the Trinity" (118 and note).

Such insistence effectively underscores the Trinitarian plenitude of God's own life, making the creative and redemptive action of God for us utterly gratuitous. But this same Trinitarian fullness checks any speculative move to attribute passibility to God. The Triune God's impassibility is the very ground and guarantor of his purely agapic relation to creation. The philosophical and theological inquiry does not pretend to render the revealed mystery comprehensible, but to safeguard it and elucidate its true scope.

Chapter 7, "God's Love and Human Suffering," then poses the focal question of the entire study: "Does God suffer?" The response, carefully prepared by what precedes, is a succinct "No!" Indeed, the author affirms his persuasion that "a suffering God is not only philosophically and theologically untenable; the concept is also religiously devastating, for it is at least emotionally disheartening if not actually abhorrent" (158). In the course of the chapter Weinandy mounts a cogent critique of "process thought" in its varied forms. Moreover, he, to my mind, effectively parries the pastoral appeal of God the "fellow sufferer" with his forthright assertion that "what human beings cry out for in their suffering is not a God who suffers, but a God who loves wholly and completely, something a suffering God could not do" (164). Or, in Karl Rahner's blunt declaration: "it does not help me to escape from my mess and mix-up and despair if God is in the same predicament!"

However, though Aquinas is a valued guide, he does not represent the last word. Weinandy remains true to his stated principle that "it would be unjust and irresponsible to write off, in the name of the tradition, the issues raised and answers proffered within contemporary theology" (84). Thus the chapter closes with a serious grappling with the issue of God's passionate love which, if it does not contradict Thomas, nonetheless appears to extend Thomas's thought. Aquinas most often affirms that passions, such as anger, sadness,

mercy, are predicated metaphorically of God. Weinandy, while agreeing that God cannot undergo negative passible states, nonetheless suggests that such passions signify positive facets of God's perfectly actualized love. Indeed, Aquinas himself seems to allow that such dispositions are "subsumed within the reality of God's providential love." Weinandy seeks, then, to draw out this recognition beyond the simply metaphorical and, in company with Maritain, to underscore :the realism of God's compassion and mercy within his perfect love" (166).

The supreme manifestation of God's perfect love for his creation is the Incarnation of the Father's Son. In particular, the suffering and death of the only-Begotten constitutes the God-given atonement for human sin and alienation and opens the way to the new creation in the Spirit that is the resurrection. Restricting suffering to the human reality of the eternal Son and refusing to posit it of his divinity by no means undervalues the suffering. Rather, it locates the drama of redemption precisely where it must effect the needed transformation: in the likeness of our sinful flesh.

I cannot reproduce, at any length, Weinandy's finely textured argument in chapter 9, "The Incarnation-The Impassible Suffers." Suffice it to say that it is a fine achievement. The presentation of the hoary conflict between Nestorius and Cyril, for example, takes on an amazingly contemporary relevance. Weinandy dearly sides with Cyril, to the point of asserting that "to read the Chakedonian Creed except through the eyes of Cyril is to misread it" (198). And the irony of many contemporary efforts to secure the full humanity of Christ (accompanied often by a misconstrual of Cyril) is that they end by compromising that which truly distinguishes his humanity and renders it salvific. For "the awesome significance of the humanity lies precisely in the fact that who this man is, is none other than the eternal Son of God" (199 n. 50). Such was Cyril's unerring insistence.

But Weinandy does not stop with a nuanced exegesis of the tradition. He attempts to draw out creatively its implications. Thus he contends that the fully human existence of the incarnate One entails an authentic human "I." He writes: "In contrast ... to the later tradition, but nonetheless in keeping with Cyril, Chakedon, and Aquinas, I would argue that Jesus does have one 'I,' but it is the human 'I' of the Son" (210).

Congruent with this insight into the full humanity of the Lord is the central place accorded the cross in the drama of salvation. In contrast again to a decided marginalization of the cross in contemporary Christology, Weinandy establishes its centrality, agreeing with von Balthasar that "he who says Incarnation, also says Cross." But the beneficiary of Christ's redemptive sacrifice is not God; it is humankind. It is God who provides both priest and offering. "Through Jesus' death God is not reconciled to us, but we are reconciled to God" (220). Christ takes away our sins by first taking them up and consecrating himself in truth and in love to the Father for the life of the world. Estrangement is thereby transformed in communion. For, when all is

reconciled to God, no barrier remaining, the Holy Spirit is poured forth, the first fruits of the new creation.

Jesus Christ is thus the author of the new salvific order whose animating principle is the; Holy Spirit. Weinandy stresses the *novum* of this new order, the new relationships that bind the risen and ascended Christ and the members of his body. The book's final chapter, "Suffering in the Light of Christ," sets forth a daring Christ mysticism, to the point that Weinandy holds that "Christ is the primary subject of all the acts and the experiences of Christians" (254). Following the logic of this assertion, it comes as no surprise to find Weinandy suggesting that the risen Christ, in some real sense, shares the suffering of his body, while believers "complete" the afflictions of Christ for the sake of his body.

Two implications of Weinandy' s admittedly speculative discernment deserve highlighting. First, he puts forward the thesis that the risen and glorious Christ "is still a man, and thus still possesses the human emotions of joy, compassion and love" (252 n. 18). He admits that this cannot entail the sort of physical and emotional suffering that we continue to experience. Yet his "spiritual instinct" points toward a real affective engagement of the risen Christ with the joys and hopes, the sorrows and afflictions of his brothers and sisters. Second, and following upon this perception, Weinandy wonders whether "as a risen man, Christ's love is not continuing to grow since ... he continues to enact deeds of love on our behalf" (255 n. 24). Indeed, is heaven the everlasting maturing of the mutual love of the first-born and the multitude of brothers and sisters, as together they enjoy the inexhaustible Trinitarian feast of love?

So robust a Christological reading of creation and history is a sign of great promise, *nova millennia ineunte.* It points us in the proper direction towards a renewed pastoral-theological-spiritual synthesis. And if, in this footnote or that, one even glimpses an almost Dante-like poetic intuition, that is, surely, grace!

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The Ground of Union: Deification in Aquinas and Palamas. By AN. WILLIAMS. New York & Oxford: Oxford University Press, 1999. Pp. 222. $49.95 (cloth). ISBN 0-19-512436-7.

AN. Williams offers a new perspective on the problems and possibilities of ecumenical rapprochement between East and West by comparing the thought of St. Gregory Palamas and St. Thomas Aquinas on the question of deification.

As she points out, both Aquinas and Palamas make good candidates to be representatives of their respective theological traditions, for they are representative not only in the sense that they stand in the very first rank of theologians and their theologies reflect basic characteristics generally typical of their traditions, but also in the sense that their theologies are prominent examples of the very tendencies that each tradition most often criticizes in the other. Williams makes the entirely reasonable suggestion that it is time to leave behind the polemics of the past and look to the texts themselves in order to determine to what extent such an opposition is justified.

Rather than focus on the usual issues of the *filioque* or papal supremacy, Williams has decided to concentrate on the question of deification. Her choice is based on two factors. First, while not singled out as one of the early sources of dispute between East and West, deification has recently received increasing attention as a central point of divergence between Latin and Orthodox theology. On the one hand, many Orthodox theologians contend that in the Middle Ages Latin theology ceased to make use of the concept of deification, which figured so prominently in the thought of the Fathers. Through an examination of crucial passages in the *Summa Theologiae,* Williams is able to demonstrate that this common perception is inaccurate, at least in the case of Aquinas. On the other hand, the Palamite description of deification in terms of participation in the uncreated energies of God was unacceptable to Latin theologians because of their judgment that the distinction between essence and energies within God compromised the unity and simplicity of God. Williams provides a sympathetic account of Palamas's reasons for the distinction and its role in his theology. From an analysis of the texts, she argues that it is not necessary to conclude that Palamas intended to posit a real as opposed to a nominal distinction between essence and energies in God.

Second, and more important, Williams chooses to focus on the issue of deification because it encompasses many central aspects of Christian theology, whether Eastern or Western. "Because deification entails discussion not only of sanctification and theological anthropology generally, but also the doctrines of God and the Trinity, religious knowledge and theological method, it ultimately touches on almost every major branch of Christian doctrine" (7). On this basis, she maintains that "deification provides an excellent locus for the comparison of Eastern and Western theology" (ibid.).

Along with an introduction and a conclusion, the book consists of four main chapters, two on Aquinas followed by two on Palamas. As she has focused her study on Aquinas and Palamas as representatives of their traditions, Williams likewise limits her investigation to the most representative works of these two theologians: for Aquinas, the *Summa Theologiae;* for Palamas, the *Triads in Defense of the Holy Hesychasts* and *Capita Physica.* These restrictions reflect the fact that the book has been developed out of a Yale dissertation written under the direction of George Lindbeck.

The analysis is in general thoughtful and quite detailed, though the structure of strictly parallel treatments of Aquinas and Palamas is rather limiting, for it

puts off any point-by-point comparisons between the two theologians until the conclusion. Occasionally, there are some surprising lapses in the precision of the language, as when Williams asserts that Aquinas "does not view the friendship of lover and beloved as the joining together of entities that remain ultimately distinct" (77). She corrects herself a few sentences later in the same paragraph by pointing out that between divine and human Aquinas envisages a union of love "that is both genuine and yet preserves distinction." Also, there are some odd phrases whose meaning is obscure, such as the statement that for Aquinas "our consummate felicity consists in God's knowing himself in us" (46).

The narrow focus on certain texts of Aquinas and Palamas is a limitation at certain points. For example, Williams points out that "Aquinas essentially takes for granted this principle: truly to know something is to become like it," observing that he introduces the notion "without any great explanation or justification here" (45). While it would have meant looking beyond the text of the *Summa* itself, some discussion of Aquinas's use of Aristotelian philosophy would have been very helpful here, particularly of Aristotle's conception of the intellect as that which becomes its object, having the capacity to become in some way all things. This would have helped to explain an idea that, as Williams recognizes, figures prominently in Aquinas's understanding of deification, according to which we are assimilated to God in beatitude by the immediate informing of our intellects by the divine essence.

Furthermore, such a discussion would have provided insight into Aquinas's method of employing philosophical ideas in the service of theology. Although he is making use of philosophical ideas here, his conception transcends philosophy. Aquinas's understanding of God as pure *esse* means that there is no possibility of natural knowledge of the divine essence. Beatitude as knowledge of the essence of God can only be supernatural for Aquinas. There is no finite essence of God that could be grasped by a creaturely intellect. To know the divine essence we must somehow become God ourselves. Aquinas acknowledges that he cannot give a complete explanation of how this could be so. When he states that somehow by God's grace the divine essence becomes immediately united to our intellects, he is not providing a philosophical explanation of the beatific vision and the deification it brings, but stating a paradox for philosophy and a mystery belonging to the faith. Apparently because of her tight focus on the text of the *Summa Theologiae,* Williams misses an opportunity not only to reveal more of Aquinas's conception of deification but also to explore his use of philosophy in the service of theology, a major point of contention between Western and Eastern theologians.

The most interesting part of the book is that which will very likely make it controversial for Eastern Christians: the analysis of the distinction between the divine energies and the divine essence as this appears in the writings of Palamas. Williams concludes that the way Palamas uses the distinction does not require it to be interpreted as asserting a real distinction in God. This would acquit Palamas of the oft-repeated charge leveled by Western theologians that

the essence-energies distinction compromises the divine simplicity. Furthermore, Williams argues that Palamas's theology does not depend upon the distinction; rather, it has an auxiliary function. He employs language that had been used in the tradition in support of traditional Orthodox beliefs. He does not propose a new doctrine of God based on the real distinction between the divine essence and the divine energies. Williams contends that "the essence-energies distinction functions only indirectly within the doctrine of God; its primary function is as the codification of Gregory's understanding of theosis" (137-38). She acknowledges that these judgments downplaying the importance of the essence-energies distinction do not accord with those of many modern Orthodox theologians. She replies, however, that it is precisely these modern writers who have given the distinction a status it had not previously enjoyed in the Orthodox tradition. Williams raises the hope that on the essential issues East and West are not as far apart as many assume.

This hope reappears in the conclusion, where Williams compares Aquinas's and Palamas's views on deification in terms of continuity with patristic tradition, theological method, and particular problematic theological loci such as the idea of created grace and the essence-energies distinction. She concludes that there is no fundamental incompatibility between these two views, though they are certainly distinct. "The ground that Aquinas and Palamas share is vast compared to the points at which they diverge, and considered in context, even their divergences do not reveal diametrical opposition" (175). Williams argues that such findings have significant implications for ecumenical dialogue, ending the book on a optimistic note: "If Aquinas and Palamas are in fact representative of their respective traditions, the grounds on which they assert the union of God and humanity should also provide the basis for asserting substantial common ground between Eastern and Western forms of Christianity" (ibid.).

While this study may not be the last word on the matter, it has brought attention to a subject important for all who seek to promote unity among Christians and has approached it in the proper way-by putting aside secondhand generalizations and turning to an examination of the texts. The promising results of Williams's work suggest that further research along these lines would bear rich fruit.

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No Bloodless Myth: A Guide through Ba/thasar's Dramatics. By AIDAN NICHOLS, O.P. Washington, D.C.: The Catholic University of America Press, 2000. Pp. 268. $43.95 (cloth), $23.95 (paper). ISBN 0-8132-0980-3 (cloth), 0-8132-0981-1 (paper).

With this volume, following upon *The Word Has Been Abroad: A Guide through Balthasar's Aesthetics,* Aidan Nichols continues his survey of Hans Urs von Balthasar's trilogy. Without excising any of the details of Balthasar's narrative, Nichols condenses Balthasar's five-volume *Dramatics* to a more manageable 248 pages. Nichols's lively style ensures that the spirit of Balthasar's prose is not lost in the presentation, and the clarity of his work enables the reader to grasp the key steps of Balthasar's argument without being distracted (delightful though such distraction usually is) by the lengthy excursuses that characterize Balthasar's volumes.

Nichols does not here undertake an interpretation of Balthasar's work, beyond the sense in which any condensation must involve an element of interpretation. Instead, he provides a straightforward exposition of Balthasar's narrative. While he will at times add a clarification or direct the reader's attention to particular connections with other sections of the trilogy, he rarely probes beneath what Balthasar's narrative (and footnotes) offer. His tone is expository even when, as is usually the case, his language implies approval of the insights that he is describing. The rare exceptions to this expository, rather than evaluative, stance are uniformly brief, as befits his task. Occasionally he indicates his rejection of criticisms posed against Balthasar's theology, or registers his own criticism. Most frequently, his interjections are aimed at simply acknowledging that a particular theological position taken by Balthasar is controversial: for example, he describes Balthasar's opinion that John 19:26 (where Jesus entrusts his mother to the beloved disciple) records Jesus' utterly hopeless farewell to his mother as "a surprising twist of thought" (173).

Given this (necessary) reticence, the best way to review the book may be to highlight the main themes of the exposition. Balthasar's first volume is devoted to the development of the new genre that Balthasar proposes for theology, "theological dramatics." The underlying concern of the volume is the nature of theology itself. Embarking on Balthasar's dramatics, the reader wants to know what is gained-and what lost-when theology conceives itself as in terms of dramatics. Likewise, how does this new form of theology differ from other modes of theologizing, and how does it arrive at insights that go beyond what is available to these other modes?

Creating a theological dramatics, Balthasar argues, serves to unite the various ways in which contemporary theology has sought to display the meaning of Christian revelation. Balthasar lists nine such contemporary starting-points: event (Barth and Bultmann), salvation-historical, orthopraxy, dialogue, political theology, theology of hope, structuralism, role, and freedom. (The omission of any Thomistic approach is perhaps understandable given the situation of the day, with its emphasis on phenomenological rather than sapiential theology.)

In the first volume, the two main characteristics of theological dramatics become evident. First, "theological dramatics" will be recognizable as such because it will employ concepts drawn from the theater. Nichols writes that "the first requirement in writing *Theo-Drama* was to establish a repertoire of theatrical concepts which would play an analogous part in the composition of a theological dramatics to that of the fund of ontological concepts in the making of the theological aesthetics" (17). The goal is to identify "the key concepts of dramatic theory" and apply them, in an analogous way, to salvation history (ibid.). Theological dramatics transposes theological categories and ways of ordering theological topics into the categories and order provided by theatrical drama, among which Balthasar identifies "the world as a stage," the triads of "author, actor, director" and "presentation, audience, horizon," and the relation of "role" and "identity." Put another way, theological dramatics requires approaching the Bible as a "the libretto of God's saving drama" (7) and interpreting each of the characters-the Trinity, the created order as a whole, Christ, and human beings in Christ-in terms of their dramatic parts within the "divine theatre."

Some examples from later volumes help show how Balthasar applies his theodramatic theory. In the third volume, Jesus's divinity is established in terms of the role that he plays within the drama-a role/mission that (Balthasar argues) only God incarnate could play in the way that Jesus plays it. Likewise, especially in the second and fifth volumes, what "divinity" means is unpacked theodramatically in terms of the role/mission of the Son, revealed most profoundly in the Paschal event, which displays the Trinitarian interaction of "author, actor, director" (Father, Son, Holy Spirit) and the Son's eternal role as the one who is utterly distinct from the Father (abandoned on the Cross) yet completely one with the Father (even in abandonment perfectly fulfilling the Father's will through the Holy Spirit, the bond of Love). Finally, the intelligibility of the world (the created order as a whole) becomes apparent in its dignity as the "stage" for the "divine theatre": as a stage, it must be able to display the action, which is first and foremost a Trinitarian action (into which the human actors are integrated in Christ) (cf. 28). The Trinitarian action reveals the nature of the "world stage" to be a participation in its (ever-greater) Trinitarian archetype. Thus, Balthasar "regards the doctrine of the triune God as a supreme manifestation of the significance of potentiality," since worldly becoming-the existence of the world as stage-reflects the unchanging intra-divine eventfulness ("event-filled movement") manifested in the Trinitarian action in the world, both in creation in the Son and in redemption in the Son (198). Likewise, "Balthasar takes the hierarchical distance which distinguishes the·Trinitarian processions to be the archetype of space" (ibid.). *As* Nichols puts it, "The originating foundation of space is that *Raum/assen,* 'leaving room', whereby the Father as giver bestows freedom on the recipient of his self-gift.... Such 'distance' is in no way contrary to that intimacy which the Trinitarian circumincession requires, for it precisely establishes the singularity of the persons" (198-99).

The second main characteristic of theological dramatics has already been suggested: namely, the metaphysical centrality of action, freedom, and (as befits drama) the category of will. Nichols reminds us that "here as elsewhere in modern Germanophone Catholic thought the emphasis on God as freedom reveals the influence of Schelling" (197). The second volume is almost entirely devoted to the theme of the relationship between God's infinite freedom and the created finite freedom of angels and human beings, and the other volumes take their tone from the drama as sketched in the second volume. Balthasar generally gives preference, among the medievals, to the more voluntarist theology of St. Bonaventure, and yet the way that Balthasar draws out the dramatic theme of freedom goes beyond any Bonaventurean model. Indicating Balthasar's approach to scholastic theology, Nichols states, "It is not enough simply to repeat the dicta of the Scholastics, however true and fair. Our very admiration for the *philosophia perennis* should move us to add to its resources" (191). Balthasar's augmentation of scholastic "dicta" is most significant in his theology of the Cross (volume 4) and Trinity (volume 5).

With regard to the Trinity, Balthasar seeks to identify (aided by Adrienne von Speyr, but motivated by the impulses of his own theodramatic theology) what is required theodramatically to undergird the affirmation that the Trinity is free. Among other affirmations, "Balthasar does not hesitate to speak of the persons as continually re-finding each other, maintaining that, otherwise, the divine Essence could not be absolute freedom. Most daringly of all, he finds in the eternal Love which is God, and more especially in its 'livingness and freedom', the archetype of the finest human love, not least in *das belebende Moment der Uberraschung,* 'the stimulating moment of surprise'" (196). This surprise requires that "prayer" and "faith" be virtues that have their eternal archetype in God, since the divine Persons know eternally in a way that expresses the divine nature as "eternal novelty" (230). By continually (yet eternally, in the divine eventfulness of the Trinitarian relations of self-surrender) revealing new things to each other, the divine Persons inexhaustibly open up "space" for self-surrendering love to operate with the "'exuberance' which belongs so intimately with the nature of God as the *Je-mehr,* the one who is 'always more'" (198).

With regard to the Cross, Balthasar wishes to affirm above all the Son's freedom to surrender himself to the point of truly entering into our sinful state (God bearing anti-God). This freedom cannot stop with *merely* satisfying for sin-this is Balthasar's critique of Aquinas's soteriology-but must extend to the point of the Son's freely undergoing the most profound abandonment by the Father, in order to bear for us, as "the *Stellvertreter,* the substitutionary Representative" (171), the wrath of the Father against sin. Nichols comments that "subjectively the Cross was punishment, though objectively it could never be" (169). By his free self-surrender, the incarnate Son experiences for us an abandonment, characterized by hopelessness, that goes infinitely beyond any creature's sinful assertion of absolute autonomy vis-a-visthe Creator. It follows that "what Jesus underwent can be called indifferently Hell's contrary or Hell's

ultimate intensification" (ibid.). Because his abandonment is in fact the theodramatic expression of the infinitely loving self-surrender (letting-be) that constitutes otherness in God, he embraces all sinners, no matter how profound their experience of alienation, within the drama of Trinitarian love. The divine drama (culminating in the Paschal event) reveals that absolute freedom means absolute self-surrender: "Such poverty is, evidently, God's endless richness" (247).

How does theodramatic theology test the truth of its particular claims? As Nichols remarks, "Like any overall interpretation of the Christian revelation, theodramatics will cast its own light on fundamental theology: it will have a particular way of establishing its own ground, the legitimacy of its appeal to Scripture, to Tradition with its various monuments, and to the magisterium of the Church" (55). For the full scope of theodramatic hermeneutics, we must wait for Balthasar's *Theologik.* However, the basic argument is already present: the truth of the claims made in Balthasar's dramatics can only be tested dramatically. If "the divine drama is the totality which can make sense of my, your, any and every existence" (58), then every aspect of the divine drama will illumine the core drama at the heart of every existence. In Balthasar's view, expressed most clearly at the end of the final volume of the *Theo-Drama,* the drama of every existence centers upon "the primacy of *Hingabe,* self-surrendering self-gift" (242). The doctrines of the Trinity, of the created order, of the Cross, and of life in Christ all turn upon this axis: Christ's "indwelling in us now is as much dependent on the essential 'being for' of the triune persons as was his vicariously substitutionary death on the Cross whereby the divine Triad originally showed its hand. In other words: if the theodramatic appreciation of the Christ-event be rejected, out of the window flies at the same time any possibility of understanding the 'Christian thing' at all, as lived in everyday fashion in the workaday world" (ibid.). The saints and martyrs, those who enter most fully into the glorious darkness of absolute *Hingabe,* are the true witnesses to the existential truth of the Christian drama, as well as to the claims of theodramatic theology.

Nichols's superb introduction to Balthasar's dramatics leads ultimately beyond itself, to the issue of the reception of Balthasar's work. Here two sets of questions-outside the scope of Nichols's project-open up. First, what is the relationship of theodramatic methodology to Balthasar's (highly dramatic) elaboration of Christ's representative substitution and of Trinitarian eventfulness? Does theological dramatics lead necessarily to these dramatic conclusions? Do Balthasar's conclusions square with the scriptural and magisterial data? What philosophical assumptions are incorporated into dramatic theology? Are the checks upon speculation sufficient in dramatic methodology? Second (though intimately related to the first), what is the relationship between theodramatic theology and the various methodologies of the Fathers and Scholastic theologians, which are not accounted for in Balthasar's list of nine methodological options? Does Balthasar's new theological genre complement the earlier ways of understanding the theological task? Or does theological dramatics in a real sense supersede the earlier ways,

as superior? Or, finally, is theological dramatics an inadequate way of expressing the *sacra doctrina?* Nichols's sparkling exposition paves the way for such analysis. One imagines that Nichols himself, with characteristic acuity, will take up this challenge in the future.

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Nature's Destiny: How the Laws of Biology Reveal Purpose in the Universe. By MICHAEL]. DENTON. New York: The Free Press, 1998. Pp. 448 $27.50 ISBN 0684845091.

Michael Denton ambitiously presents us with a scientific version of the thesis that "all things in the material universe exist for man." He intends first to show that the "the cosmos is uniquely fit for life as it exists on earth and for organisms of design and biology very similar to our own species" (xiii). He also intends to examine the more problematic thesis that the laws of nature are fine-tuned to enable life's becoming. From the fitness of the universe for life's being and becoming, he argues in favor of the teleological claim that life and mankind are the goals to which the universe is ordered.

In chapter 1 Denton examines evidence from physics that indicates that if a number of factors in the universe's development had been other than they are, carbon-based life could not exist. For example if the speed of expansion of the universe had been slightly greater or lesser than it was, matter would not have been able to accumulate into galaxies. In chapter 2 he cites the numerous properties that water has which make it ideal as a medium within which life processes can be carried out, and make it part of a hospitable environment for life. He points out, for example, six properties of water that are all means to the end of weathering, a process that is responsible for distributing throughout the hydrosphere the minerals upon which life depends.

Chapter 3 is devoted to showing the fitness of light. Denton points out that the electromagnetic radiation of the sun is restricted to a tiny region of the total electromagnetic spectrum, equivalent to one card in a deck of 10^{25}, and that the very same infinitely minute region is precisely that required for life. In addition both the atmospheric gases and water are opaque to all regions of the spectrum except this same tiny region. Denton concludes: "it is as if a card player had drawn precisely the same card on four occasions from a deck of $10^{2\text{-}\cdots}$ (60).

Chapters 4-10 make a case that the table of elements, the earth, carbon, the gases 0_2 and COz, $HC0_3$, DNA, proteins, metals, and constituents of the cell, such as phospholipids, are fit for sustaining life. Summarizing is not helpful

here, since the case that Denton is making depends on the numerous details that he describes. What Denton is trying to show is that the very matter out of which living things and the environment upon which they depend have properties that fall within a very narrow range of precisely what living things need in order to live. Human artisans do not make the very matter of their artifacts, but may take matter which is already there and prepare it in ways that are appropriate for the artifact they intend to make; for example, an artisan takes clay and bakes it into tiles to give the clay the hardness and lack of porousness that is needed in a floor. Denton is examining the very building blocks of living things and their environment and showing how those things have features that make them especially suited for their roles. He is insistent that it is the number and specificity of properties that matter must have to make life possible that makes or breaks the teleological argument: "If the existence of life had been compatible with a greater range of values for the fundamental constants, or, in other words, if the design of the celestial machine could have been different at least to some degree and yet still have sustained life, then the teleological conclusion would be far weaker. It is the necessity that it be exactly as it is-adjusted to what is in effect near infinite precision in a long train and series of things that makes the teleological conclusion so compelling" (15). Denton is arguing that the universe is like a model kit that has precision parts that can only be put together one way to make one thing. Thus he maintains that life in the cosmos will have the same type of biology as that which is found on earth, and that it "cannot be instantiated in any other exotic chemistry or class of material forms" (xiii).

Is Denton too insistent on finding fine-tuning everywhere? After giving evidence "that there is one environment determined by the laws of nature (the hydrosphere of a planet of the same size and distance from its sun as Earth) that is uniquely and ideally fit for carbon-based life," he goes on to say: "If there had been several other types of environment having some fitness for carbon-based life ... the design hypothesis would have been effectively disproved" (97). Design is more manifest when there is only one way for parts to fit together and produce the result. And Denton certainly amasses a substantial amount of evidence that this sort of design is in fact present. However, design is not excluded by the fact that there are alternate ways of getting the same result. Denton himself notes that "The strategy of using several different means to achieve a particular goal, where each of the individual means is sufficient by itself to achieve the goal, is used in all manner of situations to guarantee that the goal will always be achieved, even if one or more of the means fails" (337). Things that are very precisely designed tend to be more vulnerable to breaking down. Perhaps nature does not put all her eggs in one basket.

In chapter 12 Denton draws our attention to evidence that seems to indicate that the laws of nature seem to be fit for only one unique type of thinking being. In so short a space I cannot evaluate his arguments for this unconventional conclusion. I will simply note a point he makes regarding fire. Without fire and the ability to manipulate fire we would not have science,

since we would be unable to make scientific instruments. The ability to start a fire requires that very specific parameters of the earth obtain, so that it can have the percentage of oxygen in its atmosphere capable of sustaining fire. The ability to make use of fire depends on having a body of a certain size with hands, vision, and a specific muscular capacity.

In part 2, Denton turns to what he regards as a thesis more difficult to defend, namely, that the laws of the universe are fine-tuned not only to sustain life, but also to produce it and give direction to its evolution. He holds "that the origin of carbon-based life is built into the laws of nature and that carbon-based life is therefore inevitable on any planetary surface where conditions permit it" (265).

As for the evolution of life, Denton maintains that it has to be a directed process: "While fully appreciating modern selection theory we nevertheless arrive at an essentially different view of evolution. It appears to be not a series of accidents, the course of which is determined only by the change of environments during earth history and the resulting struggle for existence, which leads to selections within a chaotic material of mutations . . . but is governed by definite laws" (272). He reasons that while isolated random mutations are capable of causing substantial changes in phenotypes, they cannot be a major source of evolutionary novelty because living systems are so intensely integrated their components cannot be changed independently. Change in one component requires simultaneous compensatory changes in other components as well. Some ordering principle must coordinate the requisite suite of changes.

Denton has certainly shown that a number of natural materials are uncannily suited for the production and sustenance of life. I wonder, however, whether he is not overly committed to a determinism, and does not underestimate the role of contingency in life's evolutionary history. He says that life is "a natural phenomenon programmed into nature from the beginning, and fated inevitably to arise and evolve on any suitable planetary environment" (xv). Denton rejects S. J. Gould's view that the apparition of *Homo sapiens* was dependent on a series of contingent events, and that if one replayed life's tape, one would not get the same species the second time around, *Homo sapiens* included. In some places Denton seems favorable to the view that the development of the tree of life is like that of an individual tree, both being directed by natural law and influenced by chance events. Just as no two trees, even cloned trees, are exactly alike due to chance events, so too the tree of life growing on another planet would not be exactly the same. However, just as the genetic program generally dominates chance in the development of the tree, and so too Denton thinks that determinate laws give direction to evolution, chance simply adding variations to a theme.

At the very end Denton seems to reconcile himself to the possibility that we are the only intelligent life form in the universe. While he thinks that there are a lot of planets hospitable to life, he recognizes that we do not know how easily life establishes itself, and how readily it complexifies (on earth it took quite a while). One wonders how Denton is able to escape Gould's conclusion

that human life is just a cosmic accident. I think Denton would respond that the *pathways* to life are *pre-determined* in the original constitution of matter. "There is in the end nothing contingent about the choice of oxidation as the major source of energy for life on earth. Without the energy inherent in the chemistry of oxidation, life would have remained frozen forever at the primitive unicellular stage" (130). He insists that if one set out to create complex life from scratch we would always choose the same materials and "be led via the same chain of mutual adaptations to the same unique solutions" (139). However, I think that Denton would acknowledge that that these pathways actually be taken may be due to contingent as well as to determinate events. These pathways, however, are bound to be taken somewhere eventually.

Denton vacillates as to whether imperfections indicate absence of design. In one place he maintains that: "If life is the result of design, then every component must be perfectly fit for the end it serves. There can be no exceptions. If the genetic code is indeed less that optimum, then the entire teleological worldview collapses" (166). Yet in another place, he admits that the biological design of *Homo sapiens* is not ideal or perfect: "Our design is constrained due to our evolutionary origin. We suffer spinal problems because the spinal column was not designed originally for an upright stance" (260). Denton acknowledges that all material objects are imperfect to some degree. Still, he shows a similar ambivalence in regard to things that are useless. The existence of elements useless to life in the cosmos does not trouble him as he sees them as necessary by-products of a very simple system which allowed for the existence of many elements ideally fit for life (80). But then he takes the extreme position that: "if it were true that the genomes of higher organisms contained vast quantities of junk, then the whole argument of this book would collapse" (290). Perhaps the "junk" DNA does have a function. But if it were some harmless by-product of the evolutionary process, why would the entire teleological account of evolution collapse?

Nature's Destiny, to my mind, is the best of the books that rely upon scientific evidence to argue in favor of the universe's being designed in order to produce life, including intelligent life. The evidence Denton amasses is impressive, and he is aware of the philosophical niceties of the argument, only some of which I have touched on here. I recommend the book highly to all who are interested in anthropic argumentation.

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