

Innovative Human Action

ÁLVARO TURRIAGO-HOYOS¹ 

Universidad de Los Libertadores, Bogotá, Colombia

ULF THOENE² 

Universidad de La Sabana, Chía, Colombia

JOSE E. GOMEZ-GONZALEZ³ 

Lehman College, City University of New York

SURENDRA ARJOON⁴

University of the West Indies in Jamaica

Abstract

Innovation encompasses the introduction of novel concepts, products, services, and methodologies designed for the betterment of humanity, often with the anticipation of yielding economic advantages. It is the driving force behind transformative shifts, notably within the technological realm. The societal ramifications of innovation stem from the intentional execution of inventive human endeavours. In the contemporary landscape, the vanguard of innovation is inhabited by a novel socioeconomic entity recognized as the knowledge worker. Within this scope, the present research endeavours to construct a comprehensive framework elucidating the progression of innovation from conceptualization to practical application. The study posits that the genesis of innovative endeavours resides within individual consciousness, subsequently translating into tangible actions spanning immediate surroundings, markets, and organizational landscapes. The overarching aim remains the enhancement of societal well-being and the holistic prosperity of individuals, encompassing both material and spiritual dimensions. This article forges epistemological connections between anthropology, theology, and economics. This scholarly nexus is made feasible by situating oneself within theological domains that scrutinize human conduct, specifically moral theology and theological anthropology, while simultaneously drawing upon the profound reservoir of insights encapsulated within economic theory.

Keywords: innovative human action, knowledge worker, innovation, technological change, economic theory, moral theology, theological anthropology.

Acción Humana Innovadora

Resumen

¹ Professor of Economics, Universidad de Los Libertadores, Bogotá, Colombia.

² Associate Professor, Escuela Internacional de Ciencias Económicas y Administrativas, Universidad de La Sabana, Chía, Colombia.

³ Associate Professor in the Department of Finance, Information Systems and Economics, City University of New York – Lehman College, Bronx, NY, 10463, USA. Corresponding author. Email: jose.gomezgonzalez@lehman.cuny.edu

⁴ Professor of Business and Professional Ethics in the Department of Management Studies at the University of the West Indies in Jamaica.

*La innovación abarca la introducción de conceptos, productos, servicios y metodologías novedosos diseñados para el mejoramiento de la humanidad, a menudo con la expectativa de generar ventajas económicas. Es la fuerza impulsora detrás de cambios transformadores, especialmente en el ámbito tecnológico. Las repercusiones sociales de la innovación derivan de la ejecución intencionada de esfuerzos creativos humanos. En el panorama contemporáneo, la vanguardia de la innovación está constituida por una nueva entidad socioeconómica conocida como el *trabajador del conocimiento*. En este contexto, la presente investigación se propone construir un marco integral que explique la progresión de la innovación desde su conceptualización hasta su aplicación práctica. El estudio sostiene que el origen de los esfuerzos innovadores reside en la conciencia individual, traduciéndose posteriormente en acciones tangibles que impactan el entorno inmediato, los mercados y las organizaciones. El objetivo general sigue siendo la mejora del bienestar social y la prosperidad holística de las personas, abarcando tanto las dimensiones materiales como las espirituales. Este artículo establece conexiones epistemológicas entre la antropología, la teología y la economía. Este nexo académico es posible al situarse dentro de dominios teológicos que examinan la conducta humana, específicamente la teología moral y la antropología teológica, mientras se aprovechan las profundidades de los conocimientos de la teoría económica.*

Palabras clave: *acción humana innovadora, trabajador del conocimiento, innovación, cambio tecnológico, teoría económica, teología moral, antropología teológica.*

Introduction

The forces of innovation intrinsically propel technological evolution. As posited by Schumpeter (1912, 1942) and underscored by the OECD (2005), innovation embodies the creation of novel concepts, products, services, and methodologies intended for the betterment of humanity, with the ancillary expectation of yielding economic gains. The pivotal figure orchestrating innovation is a contemporary archetype, the erudite practitioner equipped with entrepreneurial acumen, termed the knowledge worker, as articulated by Drucker (1985) and Machlup (1962). A new social class has emerged, which Drucker refers to as knowledge workers (Kelloway & Barling, 2000), whose principal function is generating operative knowledge and technological innovation. This distinct economic agent, animated by the imperative of augmenting corporate profitability, catalyzes innovation by conceiving and commercializing inventive solutions or incorporating them into producing other commodities. Central to its role is the continuous acquisition of knowledge tailored towards pragmatic problem-solving, while the ensuing operational insights are tradable commodities upheld by legal frameworks about intellectual property rights (Turriago et al., 2016).

The ramifications of innovation reverberate through knowledge workers' human actions. Manifestly contingent upon motivation, geared towards tangible profit-driven outcomes, attuned to contemporary technological feasibility, and laden with the existential purpose of

advancing applicable transformations, the discourse navigates a rich tapestry of interdisciplinary inquiry encompassing Theology, Anthropology, and Economics. This discourse presents a reflective exploration that unveils the epistemic intersections between Theology and Economic Theory, delineating theoretical junctures reminiscent of the Social Doctrine of the Catholic Church (SDC). The evolutionary trajectory of economics, a factual science, is intrinsically anchored in the human action of knowledge workers. A nuanced investigation into human action finds its analytical and conceptual yield through an ethical prism, inviting an evaluation of the moral underpinning of human endeavours. This prism interweaves economic efficiency, productivity, and profitability into the ethical fabric of human conduct, aligning the pragmatic outcomes with overarching values.

Methodologically, the inquiry undertakes an Aristotelian-Thomistic humanistic (theological) stance. Rooted in St. Thomas Aquinas' cogitations, the foundational axioms of self-knowledge and the comprehension of commonalities (De Veritate, q. ten a. eight co. quoted by García-Muñoz, 2012: 138) frame the anthropological contemplation within the purview of social sciences. This ontological journey commences with introspection, segueing fluidly into the extrospective understanding of the socio-economic milieu, accentuating the requisite dialectic between self-awareness and external engagement.

The analytical exposition is elaborated through a tripartite configuration. The inaugural segment unravels the intricate constitution and maturation of innovative human action within the cognitive confines of individuals. Subsequently, the discourse pivots to assess the reverberations of this specialized endeavour upon the immediate socioeconomic milieu, aligning the scope with the contours delineated by economic theory. The third segment advances a theological vantage point, where knowledge workers' human action is extrapolated from its transcendental essence, purpose, and ethical trajectory. This culminating section harmoniously integrates the Augustinian paragon of the City of God and the City of Man, accentuating the sanctity of human existence and its eudaimonic aspiration towards happiness.

Agere sequitur esse

This part of the article aims to describe or analyze the structure of human action according to an Aristotelian-Thomistic paradigm. The Latin sentence that begins this part of this article (*agere sequitur esse* - acting follows being) is a Thomistic ontological principle, complementary to what has already been said above, which allows us to establish that action follows being, that is, that first there is being and then comes action. In other words, as it is convenient for this analysis, innovation (knowledge workers' human action) arises from within human beings and is deployed on the outside (nature). The focus of this section will be on knowledge workers' human action. The question to be answered is: How is human action configured and further developed within the human being? The question deals with the Aristotelian-Thomistic perspectives on how humans learn and assimilate knowledge before acting.

First, concerning human action and anthropology, the argument is based on the anthropological Aristotelian hylemorphic theory in which the human person is composed of body and soul, which is a unitary anthropology in which each person is soul-spirit incarnated in a concrete history, which implies the existence of an environment or vital context (a realistic posture *par excellence*) which defines and invokes the relationship among people, the environment, and God, involving how knowledge is achieved within human beings (Ozolins, 2021). For this purpose, the teachings of gnoseology of St. Thomas Aquinas are followed, presenting “a metaphysical realism, in which being measures knowledge, and an anthropological realism, according to which the human intellect reaches the truth of real things” (Llano, 1991: 22). Following Aristotelian empiricism, Aquinas considers that all knowledge must start with a reflection that begins with the sensible experience that presupposes the existence of a real world. Humans experience what is known from the outside using sense experience. This sense of knowledge is developed in the internal sense of the creative imagination manifested in creativity or invention (*inventio*) and by discipline (*disciplina*) by the intellect (*intellectus*), which provides understanding employing critical thinking, and then applied to the outside (García-Muñoz, 2012: 148). This process of creative-critical thinking in knowledge acquisition has been largely ignored in literature.

Three dimensions of knowledge can be identified: (1) sensible, which comes from the sensible qualities of things obtained through the external senses (hearing, sight, taste, touch, smell); (2) instinctive, which uses the

sensible knowledge which is filtered to the internal senses (common sense, imagination, cognition, and memory), and (3) intelligible which is the product of the intellect. In St. Thomas Aquinas' model, the higher or incorporeal powers are understanding (theoretical and practical) and will. The lower or corporeal powers are: (1) the powers of vegetative life: generative (sexuality), augmentative (growth), and nutritive (nourishment). (2) The powers of sensitive life: external senses (the five senses), internal senses (common sense, estimative sense, and memory), the sensitive appetite (sensitive desires and instincts), and the locomotive faculty. Concerning the first level of knowledge, the stimuli of the environment impress the sensory organs, producing what Aquinas calls impressed sensible species registered in the imagination, causing images or impressed sensible species. The second level of knowledge provides the data that initiates the process of abstraction (acts of composition and division, affirmations, and negations) communicated in the third level of knowledge. It incorporates understanding (theoretical and practical) through an interaction of the intellect (concepts and judgment) and will (intention and decision). We can conclude that knowing is a faculty possessed by people of a rational nature, which is reached through the learning process outlined above (García-Jara & Pineda, 2021).

This gnoseological learning process is the basis of human internal action that involves two faculties: the corporeal (material) and the incorporeal (spiritual). The corporeal faculties comprise the sensitive and vegetative life. The sensitive life comprises the external and internal senses, the sensitive or emotional appetites, and the locomotive faculty. The vegetative life comprises the generative, augmentative, and nutritive life. The incorporeal faculties define the intellectual life (intellect and will).

We now provide a rationale for what leads to understanding and acquiring knowledge. In this regard, St. Thomas introduces the intellectual appetite of the will. The will by itself does not tend towards good things, for it only tends towards what the intellect proposes to it as convenient. It is explicit how the will depends on the understanding; therefore, it is possible to educate it, just as it is possible to educate the body and reasoning. Since the will has this active disposition, education must prioritize it, for the will can enable kind actions that pursue truth. Educating intellect and will is essential, illustrating two aspects of education. The first deals with the will and is referred to as *educere*, which helps us become self-learners by drawing out or actualizing what is already

potentially inside of us geared towards acquiring the good. The second deals with the will and is referred to as *educare*, which involves instruction and memorization geared towards acquiring truth.

What follows next is the question of the nature of the education process. From St. Thomas' perspective, one educates in and from moral virtue. "Virtuous education manages to contextualize in this way the search for truth, thus allowing one to know how to do the things learned (technical reasoning - *téchne*) and, above all, achieving that what is known is incorporated reflexively (practice - *praxis*). Likewise, virtuous education allows material actions, that is, the creation and materialization of ideas, to be planned in such a way that such action follows the principles and purposes of good, truth, and justice (acting - *poiesis*) and thus achieve that knowledge is directed towards a reflective horizon (prudence - *phrónesis*)" (García-Jara & Pineda, 2021). Thus, understanding permeates the will, but only the will can move the other powers of the rational nature. The will causes the act of understanding. To know is to will because one longs for and desires what one knows. What one wants to know can be discovered in the intellect. It is the good and the just; education must direct the will. In this Aristotelian-Thomistic view of virtue, followed in this paper, both a materialistic pleasure-seeking behaviour called hedonic, and an intrinsic or self-fulfilling behaviour called eudaimonic are incorporated. The role and relationship between intellectual (epistemic) and moral virtues are essential in overcoming the limitations that prevent a person from achieving happiness.

Both Aristotle (1985) and Thomas Aquinas (2006) identified two categories of virtues: intellectual and moral (Arjoon et al., 2018). Intellectual virtues are acquired through education and oriented towards achieving excellence in reasoning and moral truth in action. Moral virtues perfect the will, are developed through practice, and are oriented towards achieving excellence in living a morally good life. The intellect has three virtues that help perfect its speculative or theoretical activities. The first virtue is called *nous* (understanding or intuition), which is the habit of applying the first principles of thought and gives a person the ability to grasp or be aware of self-evident truths without the effort of discursive reasoning. *Nous* is or *synderesis* (often referred to as common sense). The second virtue is called *sophia* (wisdom), the habitual knowledge of grasping fundamental truths and knowledge of things in their ultimate causes. *Sophia* consists of ordering all principles and conclusions into a

body of truth. The third virtue is called episteme (science), which is the habit of possessing truth reflected in the ability to grasp conclusions from evidence in some specialized field of knowledge. Episteme assists in the perfection of practical activities such as techné (art), which is the habitual knowledge of efficiently organising the production of valuable things. These practical activities also include phronesis (prudence or practical wisdom), which is the habit of knowing how to act morally well in concrete situations. Phronesis is reflected in a person's ability to apply reason to judgment through discernment of the telos (an end) of human conduct and to choose the appropriate means to an end.

Moral virtues are habits that operate under the direction of the will and equip a person to act following reason. These virtues are reducible to three: justice, fortitude, and temperance. Justice is the habit of giving to others what is due to them. “All just order in the world is based on this: that man gives man what is his due. On the other hand, everything unjust implies that what belongs to a man is withheld or taken away from him and, once more, not by misfortune, failure of crops, fire, or earthquake, but by man” (Pieper, 1965: 44). Fortitude is the habit of dealing effectively with difficult situations; “fortitude consists in suffering injuries in the battle for the realization of the good, then the brave man must first know what the good is, and he must be brave for the sake of the good” (Pieper, 1965: 122). Temperance is the habit of self-control or discipline over laziness, complacency, and disordered appetites. These three virtues and prudence are known as cardinal virtues.

The interaction between intellect and will is promoted by the interaction of intellectual and moral virtues and is reflected in the psychological decision-making process. Decision-making processes, following the classic description of Cessario (2001), are divided into twelve steps: (1) apprehension which occurs when the intellect recognizes that a given object, not yet possessed, is good for the decision maker, (2) desire which arises if the will sees the object as suitable for the agent, (3) judgment or synderesis which follows when the intellect uses the first principles of practical reasoning to arrive at a general judgment that the given object is convenient for the decision maker, (4) intention which occurs when the intellect uses the first principles of practical reasoning to arrive at a general judgment that the given object is convenient for the decision maker, (5) deliberation which ensues when the intellect seeks to know the means that are necessary to obtain the object and presents the

various means that will lead to its possession, (6) consent which arises when the will gives its acceptance to the use of various means, (7) decision which occurs when the intellect judges the best means in a given circumstance and presents it to the will, (8) choice which occurs when the will gives its consent to the use of the chosen means, (9) mastery which causes the intellect to enumerate the various activities and operations involved in the attainment of the chosen object, (10) application which causes the will to direct other powers to execute the steps towards attainment of the intellectually chosen object, (11) performance which stimulates the intellect to respond to the will's command and, (12) perfection which arises when the will is pleased with the possession of the good.

Turriago et al. (2016) propose a deployment of the intellectual virtues exposed above, which must necessarily be complemented with other virtues, skills, and knowledge so that some fruits appear as an expression of the living of the intellectual virtues. Table 1 below proposes the fruits that result from the unfolding of intellectual virtues.

Table 1
Fruits of Intellectual Virtues

Understanding Wisdom	Wisdom	Science	Art	Prudence
Intellectual humility	Love of knowledge	Open-mindedness	Creativity	Cavillation
Love of small details	Love of learning	Objectivity	Training	Attention
Frugality	Intellectual honesty	Autonomy	Imagination	Incuriosity
Study	Veracity		Curiosity	Righteousness
			Efficiency	Circumspection
			Excellence	Discernment
				Prospective
				Perception
				Tenacity

Source: Turriago et al. 2016: 2.

In summary, knowledge is further developed within each human being through learning, training, and the exercise of intellectual virtues, primarily through synderesis. Then follows a rational process comprising

twelve steps, a learning process by itself, which can be taught to the knowledge worker so that innovative human action becomes a reality.

De rerum natura

This second section deals with looking outward and considers the impacts of human action on the immediate socioeconomic environment (*de rerum natura*). In other words, this section evaluates the consequences of innovative action in the socio-economic environment following the principles of economic theory. The interests of the analysis are then oriented to solve the question: What impacts does the deployment or diffusion of innovations, advanced by knowledge workers' innovative human actions, have on the immediate environment? The analysis begins fundamentally from the considerations and perspectives of economic theory. The statements and hypotheses of Joseph Schumpeter (1883-1950) and Peter Drucker (1909-2005) are the cornerstone of the analysis developed here. First, the epistemological underpinning of economic theory is reviewed to seek its links with the teachings of theology. Subsequently, the impacts of innovation in its diffusion process (catching up) are considered. The difference between the sciences of *Theologia* and *Oikonomia* (CCC: 236) consists in that the former deals with the intimate mystery of the Triune God (the hypostasis union, which is summarized in the relations and processions of love between the three Divine Persons). The latter refers to all the revealed works that God employs to communicate his life and existence to us. *Oikonomia* studies divine action, both in all the physical and spiritual creation and in the creation of his opus magnum: the human being. Both sciences, in essence, contemplate the effects of creative action, divine and human. For our consideration, the most important thing to note is the effects of the actions and results. When comparing the concepts of *Oikonomia* and Economy, it can be specified that the former refers to the works of God through which He reveals and communicates His existence. At the same time, as a social science, the latter deals with the set of production and consumption activities in society, not from a divine perspective but as a set of strictly human and earthly activities. Both approaches coincide in the sense that there is an unfolding of actions and works, both divine and human, in the world of material reality.

Beginning with aspects related to Theology, it is essential to consider the nature or environment where human action is called to be applied. First, consider the scope of one of the first commands that God gives to men: “God said: -Let us make man in our image, after our likeness. Let him have dominion over the fish of the sea and the birds of the air, the cattle, all the wild animals, and all the creeping things that move upon the earth” (Genesis 1:26: 49). This section of Genesis reveals an explicit divine mandate to all humankind, the mandate to act with human actions on man's immediate environment. This action, obedience to God's will, also fulfils man's duty, translated into the loving imperative: to dominate the Earth.

In bridging the themes of theology with those of economics, it is necessary to start with Adam Smith, the intellectual father of economics. His work, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Smith, 1776, 2021), is recognized because it structures a rigorous scientific framework for Economic Theory. This work was written within a philosophical era characterized by rationalism and positivism emphasizing measurement. From the title of Smith's book, it can be inferred that this author sought to approach the study of the origin of wealth from a philosophical perspective. A summary of this work shows that the dimensions of production, demand, markets, and specialization of labour occupy a central place. All these concepts are still valid today within the corpus of economic theory. One of Smith's most famous and controversial reflections concerns the motivation of the human action of the economic agents that interact in economic life. The phrase is controversial because it argues that the motivation of the agents interacting in the economy is based on an anti-value criterion of selfishness or self-interest of the producers. “Man almost constantly needs the help of his fellowmen, and it is useless to think that he would attend to them only out of benevolence. We do not address ourselves to their humanity but to their selfishness, and we do not speak to them of our wants, always of their profit. The greater part of these wants for the present are satisfied, like those of other men, by bargain, by exchange, and by purchase” (Smith, 1776, V, iii.). It is important to highlight two aspects of this last quotation. The first is Smith's emphasis that the essence of society's economic activity lies in men's human actions. The second is to recognize that from the beginning, economic theory was founded on reflections of a moral nature.

Economic theory was consolidated over time, starting in England and Scotland, then expanded to Europe and the United States. From the beginning, the theoretical bases of economics rested on an explicit and evident anthropological and moral heritage. With time and given the powerful methodological influence of the Anglo-American approaches that emphasized the measurable and positive, economics became mathematized, with a theoretical result that overlooked the qualitative. This circumstance of deliberate oblivion also covered human entrepreneurial action since the entrepreneur acts with doses of creativity and rationality, variables that are not easy to measure and quantify. In most theoretical models of economic science, with the honourable exception of Schumpeter and some economists of the Austrian School, human entrepreneurial action disappeared (Turriago et al., 2016). In addition to his philosophical environment, it should be noted that Smith was also writing at a time in history when the so-called First Industrial Revolution was taking shape, which, in a simplified way, consisted of necessary technological transformations such as the application of weaving machines to production processes at the end of the 18th century in England. This transformation later began to spread to the rest of the world. It is worth considering that the Industrial Revolution is still presented today as a fantastic ratification of the creative and transformative capacity of the human mind and its influence on humankind's scientific, economic, religious, cultural, and social life.

In searching for a path to guide the scholar on the meaning and scope of human action, research can be informed by the rich vein of the SDC teachings. It is good to start from the authority of the Church, which reflects the patrimony of moral wisdom shared with social and factual sciences such as economics, sociology, and business. For this same reason, it will be seen that the considerations on human action following the SDC are infused with a marked ethical and moral bias. The continuity of the SDC in its statements and teachings regarding the Economy by different Pontiffs, beginning with Leo XIII (1891) with his encyclical *Rerum Novarum* and culminating with Francis' encyclical *Laudato si'* (2015), can be summarized in three central ideas: (1) the economy is part of a more significant moral order, (2) the centre of the economy is the human person, and (3) the common good has priority over individual economic interest.

Pope Francis in *Laudato si'* on technological transformation and the transgression of nature. In conclusion, this point is referenced, indicating

that this critique's root is an anthropological paradigm that prioritizes self-interest over solidarity. This phrase refers to Pope Francis' critical reflection in *Laudato si'* regarding the impact of technological progress on the environment and human relationships. He addresses the tendency of modern technological development to treat nature as something to be controlled and exploited rather than something to be respected and cared for. As pointed out in the document, the underlying critique is that this attitude stems from an anthropological framework that values self-interest and individual gain above collective well-being and solidarity. In *Laudato si'*, Pope Francis calls for a more inclusive approach that recognizes the interconnectedness of all creation and promotes a shared responsibility for the environment and each other. In addition, the SDC principles that offer complementary support to economic activity dynamics must be grounded in human dignity, the common good, solidarity, and subsidiarity. What is contained in these teachings is integral humanism, which means that human beings enjoy a transcendent dignity since they were created in God's image and likeness, and they are at the centre of creation. John Paul II clarifies that the SDC is part of Christian anthropology and, therefore, of theology (more precisely, moral theology) since it deals with how humankind behaves in society, the economy, and business (John Paul II 1993, 55).

Pope Benedict XVI argued that the primary variable that explains socio-economic dynamics and economic progress is anthropological and moral since it maintains that without an integral vision of the human being and a moral order to guide the human person, technology, economic growth, and progress can turn against humanity: "it is not enough to progress only from the economic and technological point of view. Development needs, first of all, to be authentic and integral" (Benedict XVI 2009, 23). Integral human development requires economic growth, without which people would not be able to enjoy the prosperity and leisure necessary to attain higher goals. Economic development must be accurate and integral and is, therefore, moral. Development in the Christian sense requires formation in the Faith and evangelization. Christ, the Logos, purifies every person and culture from within and brings it to its actual being (Benedict XVI 2009, 15). The economy needs ethics for its correct functioning because it has to do with human behaviour, which also takes place in an environment of freedom. All economics must be ethical (Benedict XVI 2009, 45).

Benedict XVI restates the Holy Trinity in its social dimension. The three Persons are subsistent relations, one in nature and simultaneously different in their person. Similarly, human personality does not consist of mere individuality but of the communion of relationships that make possible what is genuinely human in us: love, compassion, friendship, and gift. Benedict XVI attributes the capacity to build human relationships also to markets: “If there is reciprocal and widespread trust, the market is the economic institution that allows the encounter between people, as economic agents who use the contract as the norm of their relationships and who exchange consumer goods and services to satisfy their needs and desires” (Benedict XVI, 2009: 35).

In most of Western history, a good part of theology has dealt with the Trinitarian structure of God. God is a substance with Intellect and Will. To answer and delimit this pair of divine functions leads to the question of how God understands, thinks, and loves. The notion of Person in Christian thought was conceived in theological terms, against those who attributed to Christ only one nature and against those who denied his human nature. The magisterium of the Church in the first Council of Nicaea (325 A.D.) held at the time that Christ has a dual nature - one divine and one human - God being a unique and indivisible Person. This teaching was contained in the well-known Athanasian symbol ([325], 2021). One of the first authors to fully develop the notion of the Person in Christian thought was St. Augustine in *De Trinitate*, and subsequently MacIntyre (1984) and (Arjoon et al., 2018). Another approach to the study of God is the contemplation of Creation. St. Augustine, St. Bonaventure, and Hugo de San Victor tried to reach the knowledge of God by observing Creation; for authors such as St. Paul, God is shown and expressed through created entities in the Epistle to the Romans.

God calls man to subdue the world and to dominate the creatures. This exercise of dominion over creation gives man knowledge of everything he does. This knowledge, the fruit of mistakes and successes, accumulates in man's conscience. The object of this learning is man's knowledge, which emerges from all experiences. For Wojtyła (1979), the principal and first source of man's philosophy is his own experience: “The experience of anything situated outside man is always associated with the experience of himself; man does not experience anything outside without experiencing himself in some way” (Wojtyła 1979: 441-446). This idea about the conception of experience suggests phenomenology is an

essential source of Wojtyła's Personalist Philosophy. For phenomenology, everything that presents itself corporeally is an object of experience. In this way, it can also be extrapolated that there are different kinds of experience in different fields, such as aesthetics, morality, or religion. Wojtyła's philosophical anthropology is radically empirical (Merecki, 2007: 14).

Another essential source of Personalism in Wojtyła is the ethics of Max Scheler (1874-1928) in its realist version, not in its subjective version. Scheler's work is dedicated to debating the ethical conception proposed by Immanuel Kant (1724-1804) since his epistemological presuppositions did not allow us to see Ethics as a discipline that begins and starts from experience. Kantian ethics is normative but not empirical, and the essence of Kantian morality lies in the fulfilment of duty. Scheler opposes the normative character of Kantian ethics. Emotions, for example, cannot be within the sphere of norms. No one can be forced to feel. Wojtyła shares Scheler's fundamental postulate that ethics must start and initiate from experience. In short, all experience has a profoundly empirical character, and it is on this experience that ethics, in Wojtyła's personalistic perspective, is based.

Wojtyła's concept of human action is the window into the person's interiority: through his actions, the person reveals who he is and simultaneously realizes himself. Ethical action involves the whole person, especially everything that constitutes the core of his personality, namely his intellect and his will. All free human activity is moral; its goal is to express love for God and his creatures. Man manifests himself as a person insofar as he is the cause of his actions. Wojtyła brings what is lacking in the metaphysics of St. Thomas. He combines metaphysics with phenomenology (Merecky, 2007). The metaphysical approach to man's experience leads Wojtyła to consider identical characteristics to those of the Aristotelian-Thomistic philosophy (Merecky, 2007).

It is essential to specify that it is one thing to say that every act realizes a power inherent in being and another thing to describe the passage from power to act starting from one's own experience. Where, for Wojtyła, does the normative moment of moral experience originate? This moment arises emotionally when there is an attraction to a value. What is the criterion that regulates the choice of these attractions? Wojtyła's answer, very much his own, is that it is to be found in truth. The analysis of moral experience shows that decisions are made more than from the emotional force of a

suggestive value, which in this case is based on the truth that this value expresses: “The normative power of truth contained in the moral conscience constitutes the key piece of this structure” (Wojtyła, 1979: 1036). Wojtyła shows that the norm is not imposed on the person from the outside but is born within him, which is how moral duty is revealed as an experiential manifestation of the person's dependence on truth. In other words, moral duty is born of the normative force of truth. In this way, moral duty ceases to be an a priori form of Practical Rationality and becomes Material Duty. Wojtyła proposes a conceptual approach, which can be called Material Ethics of Values, which is Normative Ethics. The evidence of our interdisciplinary approach is found within ethics, and the latter considers human action from phenomenology as a gateway to the epistemological encounter between Theology and Economics.

Immanuel Kant's oft-quoted reflection on the importance of anthropology is still valid today and fits and summarizes the paper presented here very well: “The field of philosophy can be summed up in the following questions: What can I know? What should I do? What can I expect? What can I hope for? What is man? Metaphysics, ethics, religion, and anthropology can answer these. Ultimately, these can be assigned to anthropology because the first three problems refer to the fourth” (Kant, I. 2010, 48 / AA IX: 25). Integral human anthropology claims many constituent parts of the human being that, starting from theology, reach *Oikonomia* and end in the social in economics. The approaches to these anthropological conceptions are various, but it is a safe way to follow the teachings of the Church in the SDC. Economics was born as a science that set out to offer an abstract answer to an equally abstract question formulated by thinkers of the eighteenth century, who inquired about the possibility of finding coordination among the interests of various agents through mercantile relations. The aim of economic theory is not to explain, at first, economic reality as it appears but to offer abstractions of a world where a price system would work efficiently and, subsequently, to use these abstractions to represent what happens. This characteristic has allowed the accumulation of knowledge, giving way to the consolidation of scientific communities and the professionalization of economics worldwide. Economists' knowledge corresponds to the theoretical explanation regarding the conditions necessary for individual decisions (people, companies, and institutions) within a financial framework and the transactions of goods and services.

To consider approaches proper to Economic Theory that deals with the study of innovation, it is necessary to state that this analytical work is done mainly from the so-called Economics of Supply, where the study of Technology and Technological Change becomes the conceptual elements of elemental analysis. The studies of supply-side economics fall especially on authors after Schumpeter, who are inspired by many of his hypotheses. The emergence of innovations generates technological changes. For Schumpeter (1912, 1942), innovation is the socioeconomic variable that generates technological change. Almost all definitions of innovation coincide with the fact that it is the introduction of new ideas, products, services, and practices helpful in humankind, applications which, when brought to the markets, allow economic benefits or returns to be obtained. An invention is not an innovation if it does not find a profitable commercial application. It is an invention. The agent in charge of advancing innovations is the entrepreneur, whose increasingly complex activity makes it today a collective and interdisciplinary activity carried out by Research and Development (R&D) teams.

Pérez (2004) coined the term techno-economic paradigm to study the historical changes that the emergence of innovations, with the consequent deployment of new technologies, produced in societies from a macroeconomic perspective, seeking to expose these changes in the social, economic, scientific, legal, and technological reality of societies. This author summarizes that five great successive technological revolutions have taken place since the beginning of the capitalist system for the period of study from 1770 to 2000. Pérez divides this period into stages, each of approximately sixty years, corresponding to the length Nicolái Kondratieff (1892-1938) initially had considered. Kondratieff, the Russian economist who inspired Schumpeter to analyse economic cycles in the capitalist system, observes that the long-wave economic cycle results from technological change and its deployment.

The Kondratieff cycles illustrate pivotal stages of industrial and societal evolution, beginning with the Kondratieff of Early Mechanisation in mid-18th century England. This period marked the integration of the textile, iron, and steel industries, with innovations like the Spinning Jenny and steam-powered weaving machines revolutionising production. Cotton and steel became essential resources, underpinning the growth of factories and urban centres like Manchester. It also saw the rise of a salaried workforce, although significant inequalities remained, with poor wages,

harsh working conditions, and reliance on enslaved labour for cotton imports. Nonetheless, this cycle established the foundation for future technological and economic advancements.

The Era of Steam and Railroads (1829–1873) was characterised by the transformative impact of railways, beginning in Europe and reaching its peak in the United States. Railroads reshaped transportation, facilitated westward expansion, unified economies, and stimulated urban development. Landmark achievements like the Liverpool and Manchester Railway and the Transcontinental Railroad highlighted the era’s transformative power. Technological innovations such as George Stephenson’s “Rocket” locomotive and the Bessemer process enhanced industrial efficiency and growth, solidifying this period as a cornerstone of modernisation and industrialisation. The Age of Heavy Engineering and Electricity (1875–1940), often called the Second Industrial Revolution, introduced electricity into industrial processes, replacing steam power to improve efficiency and productivity. Electrified transport transformed urban life, while advances in steel, chemicals, and pharmaceuticals drove construction, healthcare, and agriculture progress. This period laid the groundwork for technological and industrial development by integrating science with industry.

The Age of Oil, the Automobile, and Mass Production ushered in unprecedented technological progress, including the mass production of vaccines, synthetic materials like nylon, and widespread electrification in cities. The automotive industry, epitomised by Henry Ford’s assembly line, revolutionised manufacturing and made cars affordable. This period saw the rise of multinational corporations and monopolies, with Standard Oil and U.S. Steel dominating their sectors. Governments introduced regulations such as the Sherman Antitrust Act to curtail monopolistic practices. Schumpeter described this era as Fiduciary Capitalism, highlighting the growing influence of the financial sector, with banks and stock markets becoming central to economic activity. Known as the Golden Age of Keynesianism, state intervention focused on stimulating aggregate demand, supporting mass consumption, and driving economic growth. Petroleum-based energy-powered transportation and the petrochemical industry fundamentally reshape industrial production and market structures.

The current Kondratieff cycle, described by Pérez (2004) as the Age of Information Technology and Telecommunications, is defined by the

transformative role of Information and Communication Technologies (ICT). Innovations like virtual learning, artificial intelligence, and robotics have redefined human behaviour, work environments, and interpersonal relationships, driving the Fourth Industrial Revolution. This cycle continues to reshape industries and society, reflecting the ongoing progression of technological and economic paradigms.

In that last period, Peter Drucker (1985), an intellectual disciple of Schumpeter, identified an important intangible asset that generates wealth, a resource managed and worked by a new social class called the knowledge workers. Drucker baptized this moment of history as the Knowledge Society, given that the resource of material wealth generation is the operative knowledge (technology). Operative knowledge can be traded given the Internet's communication support, and the advantages provided by legal documents such as patents guarantee the purchase and sale of this crucial intangible resource. Delving more profoundly into the analysis advanced by Peter Drucker, it is good to point out that he calls himself a social ecologist who is a student of the variables and facts that transform society, focusing on changes in society from a multidisciplinary perspective, including the study of principles and values.

Drucker (1985) suggests the existence of two essential stages within capitalism: (1) the managerial economy, where optimization is the guiding principle of administrative dynamics, and (2) the entrepreneurial economy, where entrepreneurial and administrative actions are the ones that guarantee the creation and appearance of innovations (Drucker, 1985). It is within this entrepreneurial economy that management developed and spread. Drucker attributes the emergence of the business economy to management, at least in North America (Drucker, 1985: 15). Drucker calls innovation managers in the knowledge society knowledge workers who demand training and qualification so that their skills enable them to keep up with the demanding competitive conditions in this new society. Self-management (managing oneself) is a demanding and comprehensive self-knowledge requirement. Self-management implies that self-knowledge allows them to identify how they learn by reading, listening, and interacting with others. It also implies absolute clarity in life principles and values, making them aware of the importance of seeking permanent training.

Innovation is considered essential support for the competitiveness of business organizations as it is the force that keeps them in force when competing with others. Behind all the broad review of innovations and

their impact on the social and economic environment is the innovative human action, which, if it had not been present, would not have guaranteed the remarkable material development and improvement of humankind's spiritual and material standard of living.

Regnum Dei Post Sanctus

The question guiding this paper's last part is raising concerns that channel questions about the meaning and scope of innovation: innovation for what? Is the exercise of innovation virtuous? For what and how should innovative human action contribute to human material and spiritual well-being? Using Aristotelian-Thomistic terminology, what is the ultimate end of human life? Again, turning to the privileged mind of St. Thomas, the ultimate end of human life incorporates two aspects: the glory of God and his perfection (*Regnum Dei Post Sanctus*). "*Cum unumquodque appetat suam perfectionem, illud appetit aliquis ut ultimum finem, quod appetit ut bonum perfectum et completivum sui ipsius*" (*Summa Theologica*, I-II, q. 1, a 5, c). The Catechism of the Catholic Church also points out that: "The ultimate end of the whole divine economy is the entrance of creatures into the perfect unity of the Blessed Trinity" (CCC: point 260). The ultimate end of life includes two dimensions: God's glory and man's perfection. Whoever seeks to give glory to God must seek the kingdom of God on earth, that is, to build up the Church. Perfection is the holiness of life; it is to lead a virtuous life in which man embodies intellectual and moral virtues. Innovation because of human actions does not escape from this double requirement.

Innovation must improve the lives of human beings and must be conceived by human actions supported by a rigorous education of virtues. Like any other worker, the knowledge worker must reach the fullness of his personal development by advancing his work with selfless dedication and responsibility, bearing in mind that his production contributes to the Common Good, which requires adhering to elementary norms of justice that frame their social functions as fundamentally oriented towards service. The SDC provides a robust framework for understanding innovation's moral and ethical imperatives. Central to this doctrine is the principle of the person's dignity, rooted in the belief that all human beings are made in the image and likeness of God. This dignity must inform all aspects of human action, including innovation, ensuring that technological and social

advancements respect and enhance the inherent worth of individuals. For innovation to align with this principle, it must be directed not towards exploitation or self-interest but towards empowering individuals and communities, especially the marginalized and vulnerable.

Another critical aspect of the SDC is the common good, which calls for creating conditions allowing everyone to achieve their full potential. In the context of innovation, this means prioritizing initiatives that address systemic inequalities, enhance social cohesion, and foster collective prosperity. Innovation must not merely seek profit but should be evaluated on its ability to serve broader societal needs, such as reducing poverty, improving access to education and healthcare, and promoting sustainable development. The principle of solidarity, emphasized by Pope Francis in his encyclical *Fratelli Tutti* (2020), underlines the ethical responsibility to act with compassion and empathy, especially towards those in greatest need. Pope Francis frequently critiques a “throwaway culture” prioritising convenience and profit over people and the planet. In his encyclical *Laudato Si'*, he calls for an “integral ecology” that integrates environmental and social justice, urging innovators and policymakers to consider how their actions affect humanity and the natural world. Innovation must reflect solidarity by addressing disparities, fostering inclusivity, and empowering the disempowered.

The principle of subsidiarity further complements this vision by advocating for empowering individuals and communities to take initiative in shaping their futures. This principle stresses that higher levels of authority should intervene only when necessary and always in a way that supports and strengthens local capabilities, which calls for adaptable, scalable, and adaptable innovations designed to respect cultural and local contexts. Lastly, the care for creation, highlighted extensively by Pope Francis, frames innovation as a moral imperative to protect and sustain the environment. Human action, particularly innovation, should not contribute to environmental degradation but promote sustainability. As Pope Francis warns in *Laudato Si'*, unchecked technological progress can lead to a “technocratic paradigm” that exploits resources without regard for future generations. Instead, innovation must harmonize economic and technological progress with ecological stewardship.

In this light, innovation takes on a profound moral dimension, becoming an instrument not just for material advancement but for achieving the holistic development of humanity. As Pagola (2013)

observes, true human perfection is realized in service to others, especially those in the highest need: “What is central in his life is not simply God, but God with his project on human history. He does not speak of God without more but of God and his kingdom of peace, compassion, and justice. He does not call people to do penance before God but to enter his kingdom.” This vision of innovation aligns with the ultimate end of human life, as articulated by St. Thomas Aquinas and reaffirmed by the SDC: the glory of God and the perfection of humanity. It challenges innovators, particularly knowledge workers, to approach their work with a sense of moral responsibility rooted in intellectual and moral virtues and oriented towards building a just, equitable, and sustainable society. Through such innovation, humanity can strive towards the *Regnum Dei Post Sanctus*, a reality where technological progress and spiritual growth converge to reflect the divine will.

Conclusion

Innovative human action is an indispensable anthropological facet that has ushered in profound transformations across the dimensions of societal, economic, cultural, scientific, and technological spheres, reshaping the human experience in multifarious ways. The kaleidoscope of manifestations is intricately intertwined with the far-reaching ramifications arising from the inception and dissemination of these innovations. In economics, these ramifications are elucidated through the prism of spillovers, encompassing both deleterious and constructive consequences. Regrettably, some of these deleterious repercussions have endured, engendering arduous predicaments, as is discernible in the contemporary context of environmental impact, particularly concerning global warming. A substantial fraction of humanity’s predicaments emanates from the erratic diffusion of innovations, an upheaval attributed to a moral deficit wherein individual interests take precedence over collective welfare. This ethical framework has, in turn, elevated self-interest over solidarity and the pursuit of the common good.

The process of innovation and its immediate derivative, technological metamorphosis, are intrinsically impelled to converge towards the stewardship of the “Common Home,” as articulated metaphorically by Pope Francis, signifying a conscientious approach to environmental preservation. Aesthetic principles must interlace with this endeavour,

striving to surmount the grave aftermaths, notably environmental pollution, which has historically ensued from the unsupervised diffusion of innovations, leading humanity into the throes of calamitous outcomes. The culmination of past transgressions can be progressively ameliorated by applying conscientious, innovative human actions tethered to paradigms of social justice and the pursuit of the common good. In consonance with Drucker's insights, the wellspring of innovative human action often resides precisely where inconsistencies persist or where remedial courses of action have yet to be set in motion.

The first inquiry pertains to the configuration and progression of human action within the individual, elucidated through the Aristotelian-Thomistic paradigm. The external senses serve as conduits through which the immediate environment is apprehended, thereby transitioning to the inner sanctum of human cognition, where the process of rational comprehension unfolds. This cognitive voyage culminates in acts of volition, precipitating innovative human actions susceptible to moral valuation, informed by the scaffolding of intellectual and moral virtues. The second inquiry navigates the aftermath of the deployment and diffusion of innovations propelled by innovative human actions, spotlighting their impact on the proximate milieu. Drawing on the theoretical frameworks Schumpeter, Drucker, and Pérez expounded, an original analytical framework rooted in the configuration of techno-economic paradigms is harnessed to unravel the genesis of economic cycles and the transformative shifts in human learning and existence. Additionally, the question of "Innovation for what?" comes to the fore, contemplating the ethical underpinning of innovation and its corollary technology dissemination. This query delves into the virtue of innovation and calls for value judgments on the ethical character of innovative human actions.

In conclusion, contemplating the scope whereby innovative human actions contribute to material and spiritual well-being is paramount. In this pursuit, aligned with pragmatic principles, creativity must be subsumed within the rubric of the common good, catalyzing human advancement and evolution. This trajectory, inextricably linked with the transcendental trio of truth, beauty, and goodness, delineates the trajectory that innovative human action must traverse to enhance the human experience truly.

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