THE ECONOMIC AGENT AND THE FEEDBACK LOOP

Edward J. O'Boyle, PhD
Mayo Research Institute
www.mayoresearch.org
edoboyle737@gmail.com

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Conventional economics teaches that the economic agent is an individual being with no social dimension, no interaction with others, no one to learn from, and therefore no feedback loop to take account of the agent's development over her lifetime. With personalist economics the feedback loop is present at all times.

Our extended essay begins with an examination of the cyclic way of thinking about economic affairs, proceeds to the evolutionary way, and taking into account the feedback loop concludes with a comparison of the *homo economicus* of conventional economics and the *person of action* of personalist economics.

In the following we draw heavily from the author's own publications in order to show how his thinking about economy agency has developed with the passage of time.

CYCLIC WAY OF THINKING[1].

As with other disciplines such as history which "repeats itself," economics is constructed on a cyclic model that applies circular descriptions and explanations to economic events. Consider the following examples from economics past and present: (1) characterizing the market as a system that clears shortages and surpluses, automatically returning to a state of micro-economic equilibrium; (2) employing automatic stabilizers to restore macro-economic equilibrium; (3) describing macroeconomic affairs in terms of the business cycle with its repeating pattern of expansion, contraction, peak, and trough; (4) promoting the natural-rate hypothesis which claims that unemployment invariably returns to its normal or natural rate regardless of the rate of inflation.

In the cyclic model events are construed as identical and inevitable, and therefore predictable. Reality is closed in and brought under control; though assertive, thinking remains in a primitive

[1] This section and the one that follows on the evolutionary way of thinking are much shorter versions of the author's own chapter in O'Boyle 2011.

mold. Thus, the widespread use of econometrics in mainstream[2] economic analysis. Using cyclic reasoning, and given the data required to operationalize their econometric models, mainstream economists are comfortable in asserting that changes in economic affairs can be predicted. What they do not fully appreciate is that one other requirement -- a central premise of their way of thinking about economic affairs -- must be firmly in place. Specifically and notwithstanding any changes taking place in economic affairs over time, *homo economicus* is an *utterly rational, never-changing human individual.* Without this rationality and constancy about human individuals as economic agents, and the automaticity which is characteristic of market economies, the cyclic model disintegrates for lack of predictability.

Walter Ong beckons us to set aside cyclic thinking for evolutionary thinking because "one can make use of the circle model only as a result of a careful selection of details and the calculated elimination of others." Consider these five examples of "careful selection" and "calculated elimination": (1) imputing values for unobserved or unobservable variables; (2) assuming that dependent and independent variables are normally distributed in the population; (3) taking for granted that measurement error is randomly distributed; (4) presuming that in linear programming two of the lines bounding a region of basic feasible solutions do not intersect at the same corner point; (5) using budget constraints which ignore kinks, discontinuities, gaps, and nonconvexities.

EVOLUTIONARY WAY OF THINKING

Charles Darwin's theory of evolution with its twin emphasis on adaptation of living organisms to the environment and natural selection has had a powerful influence on modes of thought well beyond the precincts of biology. Ong proposes two arguments in support of the evolutionary model. First, "the discovery of evolution has undermined cyclic views even more than would appear at first blush. In the universe as we know it, there exists no real model or analogue for cyclicism -- that is the identical and inevitable repetition of an event or two (much less at an infinite number of) points in time." Second, *the birth of man in the cosmos is striking evidence against cyclicism* if further evidence is really needed. For *here we have the cosmic processes terminating not in repetition but in its antithesis, the utterly unrepeatable and unique human person."* (emphasis added).

By extension, Ong is arguing and we certainly concur that there is no way to posit a *never*-changing *homo economicus* without essentially casting aside "the central corporate discovery of all mankind" and without effectively cloning all economic agents from a single cell taken from a hyper-rational abstract human being. At the very heart of economic affairs is found the economic agent who is not cyclic but evolutionary, adapting in a Darwinian sense to the economic environment, and changing in a personalist sense simply by acting as an economic agent.

[2] Throughout we use mainstream and conventional interchangeably.

There are several significant examples of evolutionary thinking *outside* mainstream economics. The evolutionary thinking of Thorstein Veblen, John Commons, Wesley Mitchell, and Clarence Ayres formed the intellectual foundations of the Association for Evolutionary Economics. Other examples that demonstrate evolutionary thinking in economics are worthy of note. Deriving its inspiration from Joseph Schumpeter, the *Journal of Evolutionary Economics* also presents economic affairs in terms of an evolutionary process. Evolution is one of four ideas which are foundational to institutional theory. The other three are culture, cultural relativity, and instrumental valuing. Evolutionary economics replaces the maximization and equilibrium assumptions of mainstream economics with "uncertainty and imperfect information, routines, heuristic search processes and optimizing behavior, and nonequilibria."

Analogizing economics to biology, Herman Daly argued that matter-energy are *degraded* through the economic process in the same way that matter-energy are *degraded* through the metabolic process. In both the biological order and the economic order the purpose is the same: the maintenance and enjoyment of life. In his extended analogy, Daly examines the life process which he regards as the ultimate subject matter of economics and biology under two aspects: steady-state and evolutionary. Unlike cyclic thinking, Daly's thinking is linear. He visualizes the flow of matter-energy in economic affairs as "one-way, non-circular, and irreversible."

In the early 1980s Kenneth Boulding argued that Adam Smith, Thomas Malthus, and Alfred Marshall employed the evolutionary model and that it was Leon Walras and his followers who by grounding economics in mathematics subsequently steered it in the direction of the cyclic model. Economic science, in other words, was first a biological science before it was fashioned into a physical science.

HOMO ECONOMICUS[3]

Conventional economists represent the economic agent principally as self-interested, rational in all decision-making, and committed to the objective of maximizing personal net advantage. A few appear comfortable in characterizing the economic agent as something other than truly human. Blinder (2000) refers to the economic agent as a "rational, self-interested calculating *machine*." To Friedman (1947) individual economic agents are "pleasure machines." Knight (1939, 1960), on the other hand, is uncomfortable with perfectly rational economic agents because, he says, they treat others in economic affairs as "slot machines" or "vending machines."

This characterization of *homo economicus* as machine-like eases the burden of demonstrating that economic behavior is predictable. A machine cannot be anything other than what it is. It cannot perform in any way other than the one for which it was designed. It follows that the behavior of a machine-like economic agent is known from the start, is never-changing, and

[3] This section and the one that follows on the *person of action* are much shorter versions of the author's "Orality, Literacy, and Economic Agency" which in early draft form dates from 2013 and is currently available in its latest revised form at ResearchGate O'Boyle.

therefore is entirely predictable. Predictability, in turn, leads to greater conviction and certainty regarding the findings from empirical studies that are grounded in conventional economics.

Never-Changing and Entrenched. The never-changing economic agent in effect is affirmed by critics of conventional economics who by ascribing a feedback loop to their representation of the economic agent identify it as missing in the conventional *homo economicus* (see Soros 2013).[4]

Human capital and social capital do not alter the never-changing characteristic of *homo economicus* because they do not change behavior that remains riveted on maximum personal net advantage. What it does is enhance the capability of *economic man* to find and exploit additional ways to maximize personal net advantage.

How did *homo economicus* become so entrenched in conventional economics? Schumpeter (1945) argues that utilitarianism and its regulatory principle of individual egoism won favor in the 18th century *without* careful scrutiny.

Marshall (1897) expressed great admiration for physical science, pointing to the parallel paths taken by social science and physical science. His comments on that occasion can be taken loosely as support for the never-changing nature of the economic agent as represented by *homo economicus.*

> Physical science is seeking her hidden unity in the forces that govern molecular movement: social science is seeking her unity in the forces of human character.

At the very same meeting Marshall takes a stance that embraces quite the opposite view: the ever-changing nature of the economic agent.

> … the history of such [social reform] experiments throws light on the *dynamics* as well as on the statics of human nature: it tends to show not only what human nature was at any one time, but also *how it has developed* (emphasis added).

Of these two views expressed by Marshall, the one associating social science with physical science has won wide favor in conventional economics thereby reinforcing acceptance of *homo economicus* as never-changing that in turn allows economic analysts to posit economic behavior as predictable and to argue, as with physical science, that research based on conventional economics yields findings about which they are comfortably certain.

Under Attack. Homo economicus also comes under attack from Boulding (1954) who argues that the type of personality that emerges from market behavior and market institutions is devoid of the "richness of full human relationship," and insists that *economic man* is more than the sum of certain minor virtues and vices such as honesty, thriftiness, industriousness, niggardliness,

[4] Without using "feedback loop" John Paul II used the concept in his 1981 encyclical *Laborem Exercens* by calling attention to the two dimensions of work – the objective and the subjective – the effect of work on the things produced and its effect on those who work. Of the two he identified the subjective dimension as more important.

parsimoniousness, and chicanery. He warns against demanding too much from *economic man* on the one hand and living like *economic man* on the other.

> … market behavior and market institutions … frequently lead to the development of a type of personality which mistakes the abstractions of commerce for the realities of existence … There is danger … that people will take economic behavior as the measure of all things and will confine their relationships to those which can be conducted on the level of the commercial abstraction. To do this is to lose almost all richness or purpose in human life.

Following years of criticizing its main tenets, Stiglitz (2002) sharpened his attack on certain core theoretical constructs of conventional economics including "seemingly precise models" which leave out information concerns and claim that involuntary unemployment is impossible under conditions of continuous market clearing and equilibrium and Pareto-efficient markets.

The problem, as Stiglitz makes explicit, is that "the economists' traditional model of the individual is too narrow." He does not point out, however, that the underlying philosophy of individualism is too shallow, nor does he offer a carefully articulated substitute for *homo economicus* or individualism.

Schumpeter (1945) had even further objections to *economic man*.

> … *Entrepreneurs are certainly not economic men in the theoretical sense*. What they really are, how they really work, what it is that conditions their performance and their failures, how they in turn help to shape the conditions under which they work, and, above all, whether any significant generalizations may be made about this, can be gleaned from history alone.

Passivity. The often overlooked characteristic of the machine-like *homo economicus* is passivity as Schumpeter (1945) points out in the following.

> For economic life most obviously is not the *passive* process, consisting in smooth and uniquely determined adaptation to changing data, which it should be according to that [static] schema. If we insist that it is and that the convulsions and revolutions which we actually observe are nothing but "transitional phenomena" and have no influence upon long-run results, we are obliterating problems rather than resolving them.

He identified passivity in Walras' economic agent and rejected it out of hand.

> [Walras] would have said … that … economic life is essentially passive and merely adapts itself to the natural and social influences which may be acting on it, so that the theory of the stationary process constitutes really the whole of theoretical economics … *I felt very strongly that this was wrong.*[5]

[5] Quoted in G. Haberler (1951), emphasis added.

Schumpeter is not alone in calling attention to the passivity in *homo economicus*. Haney, for example, asserts that a hedonist of the Austrian School tends to represent the economic agent as having a "*passive* mind, registering sensations *determined from without*, and grinding out calculations according to the laws of reason" (Haney 1949, emphasis added). The passivity of *economic man* represented by conventional economics is reinforced by the invisible hand mechanism wherein by pursuing their own good economic agents (magically) are guided toward the good of all almost as if they were incapable of acting on their own.

Orality and Literacy. *Homo economicus* is passive because this concept of economy agency derived from a time and place -- 17th- 18th century Enlightenment – which was dominated not by the spoken word (orality) but the written word (literacy).

> … the written word cannot defend itself as the natural spoken word can: real speech and thought always exist essentially in a context of give-and-take between real persons. Writing is *passive* …" (Ong 1982)

With the written word the reader utilizes only one of the five human senses -- not hearing, tasting, touching, smelling -- but seeing only (Ong 1982). Primary orality,[6] the spoken word used face-to-face with another human being, potentially uses all five. It has the potential for creating community that is not available through literacy.

The passivity of the common teaching pedagogy influenced importantly by Peter Ramus in the 16th century (Ong 2004), along with the availability of mass-produced books due to the introduction of the printing press, encouraged students in the Enlightenment period to accept the written word as critical to the learning process. The spoken word that finds its expression in the Socratic method of teaching largely is set aside. For students of economics at that time the autonomy of *homo economicus* is akin to their own. Consistent with their own experience as students, *homo economicus* needs no community. Indeed, *economic man* is incapable of forming community. This abstract construct is a caricature of human nature focused relentlessly on the ultimate objective of maximizing personal net advantage. Nothing else matters. There is no real human communication in economic affairs because *every* economic agent corresponds to this construct. Its strict individuality rules out any intersubjectivity.

The Ramist influence persists even today in the form of large lecture classrooms in which only the instructor is actively engaged. Students, by and large, are passive note takers who rarely challenge the instructor or even ask for clarification. Indeed, they are expected to remain passive and are regarded as a nuisance when they do speak up. Notice how in human communication today texting competes with voice messaging.

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[6] Secondary orality is the word spoken not face-to-face but through a construct such as telephone, radio, and television. See Ong 1982, p. 11. Unlike primary orality, tasting, touching, and smelling are missing in secondary orality. Though electronic in terms of transmission, texting is NOT secondary orality. It represents a return to the written word in which the person sending the message and those receiving it avoid face-to-face contact.

The passivity and machine-like characteristics of *homo economicus* are related and necessary. If the economic agent is passive she can be characterized as machine-like. If, on the other hand, the economic agent is dynamic, she must be human, capable of acting and changing. The behavior of an economic agent who is capable of acting and changing is not entirely predictable, thereby complicating economic analysis. *Homo economicus* cannot attain the status of a living, breathing, existential actuality, is capable of *having more* but not of *being more*. Since economic agency is largely unexamined even today, *homo economicus* continues to be accepted because it contributes to the development of economics as a science in which economic behavior is predictable and economic findings are presented with confidence.

There is no feedback loop in the conventional economists' representation of the economic agent because such a loop would affirm the cyclic way of thinking and re-make *homo economicus* into an active and *ever-changing* agent rather than a passive and *never-changing* one. That new representation in turn would remove the predictable behavior of *homo economicus* and the certainty that attaches to economic analysis.

In Exhibit 1 we have attempted for the first time to render *homo economicus* according to the strict representation of conventional economics as an isolated individual with no feedback loop who over time relentlessly pursues personal net advantage. Movement along the vector upward to the right reveals an economic agent who is driven toward the goal of *having more*. *Homo economicus* does not change because there is no subjective dimension in her decision-making process. Movement along the vector downward to the left represents a reversal of fortune, and falling away from the goal of *having more.* The vectors are strictly linear to emphasize that the conventional *homo economicus* is a never-changing economic agent. Passive not active. Linear not cyclic. Absorbed with material success or failure, devoid of any regard for her integral human development.

PERSON OF ACTION

Constructed on Literacy and Orality. The *person of action* is a dynamic economic agent, functioning as a living, breathing, existential actuality in a world of the written word and the spoken word. As Ong 1982 (emphasis added) explains, "… the written world cannot defend itself as the natural spoken word can: real speech and thought always exist essentially in a context of give-and-take between *real persons*." That give-and-take, that primary orality, is so essential to the conduct of economic affairs especially in a market system that even conventional economists recognize it but then in the pursuit of hard-science status for economics contrive *homo economicus* who is passive and who like a machine effectively functions outside the world of the give-and-take of the spoken word.

In this regard, notice how the CNC (computer numerical control) machine is programmed to "read" a set of instructions written in code and complete the tasks specified therein. The machine cannot engage in any real give-and-take with the human operator who with the proper training can read and write those instructions. *Homo economicus* is the equivalent of a CNC machine.

The *person of action* is in all actuality the human operator. *Homo economicus* is a concept conceived in literacy. The *person of action* is a concept constructed on literacy and orality.

To reject the passive nature of the economic agent is to confess that *economic man* is an *ever-changing human person* and accept the fact that transforming economics into a hard-science means dealing with the dynamics of economic affairs as articulated by Marshall and Schumpeter (Marshall 1897; Waters 1952).

Danner and Wojtyla on the Human Person. Instructed by Mournier, Danner (2002) identifies the human person as follows.

> The human person as self-knowing … is indeed wholly spirit. But since … a person cannot know without being or be without body, the body is essential … Bodies are the instruments by which persons express themselves and the only way they can act …
> Second … Individuality and sociality are not contradictories but polarities of the same person's continuum… personhood must be distinguished from selfhood … Selfhood is self-regarding and narcissistic; personhood is open to needs and inviting of others.
> Third, personhood … is shared by all. Persons are equal by nature. But they are differentiated and individuated … [implying] a process of continuous change in place and over time.

Danner's rendering of the human person, the *person of action*, is a close match to Wojtyla's as documented by the Rourkes (2005).

> The acting person is … first of all self-[possessed who] … knows that he is the author of his own actions, a center of activity. Second, the person is self-governing … who imposes order on his actions … including … life-orienting decisions. Third, the person in action is self-determining … Fourth … the person transcends his circumstances [is transcendent in action] … only when he is grounded in the truth of moral goodness… Faithful to the demands of each [of these characteristics], the person forms himself into a free and responsible actor.

Human Development. To fit within an economic terminology and framework akin to human capital and social capital, acting virtuously in economic affairs leads to an accumulation of what we call personalist capital. Acting viciously leads to a depletion of personalist capital. The *person of action* develops as a human being by accumulating personalist capital and diminishes as a human being by depleting personalist capital (see Exhibit 2).[7]

The *person of action* is a real person who is focused on the ultimate objective of achieving human perfection by maximizing integral human development. Virtuous action leads toward human perfection. Vicious action leads away from human perfection.

[7] This exhibit, in essentially the same form and details as shown herein, was presented at an invited lecture at the Studium Generale Marcianum, Venice, (O'Boyle 2009).

There is nothing new about the role of virtue in economic affairs. Smith's *Moral Sentiments* is constructed around the virtues of sympathy, generosity, and benevolence. Malthus too speaks approvingly of virtue, specifically the virtues espoused by Christianity.

> Evangelical charity, meekness, piety, and all that class of virtues distinguished particularly by the name of Christian virtues do not seem necessarily to include abilities, yet a soul possessed of those amiable qualities, a soul awakened by these delightful sympathies, seems to hold a higher commerce with the skies than mere acuteness of intellect (Malthus 1959, p. 131).

Conventional economics today accepts the role of virtue and vice in economic affairs in terms of honesty, thriftiness, industriousness, niggardliness, parsimoniousness, and chicanery. However, none of these virtues or any others, for that matter, are incorporated in *homo economicus* because that would transform the economic agent from never-changing to ever-changing, from predictable to unpredictable, and from certainty in economic analysis to uncertainty.

By calling attention to the difference between the fruitful relationship of one human being to another ("I" to "thou") and the sterile relationship between a human being and a machine ("I" to "it"), Ong (1967, emphasis added) helps us understand why "machine-like" is not a proper descriptor of the economic agent.

> To be present to himself, man must find the presence of another or others. Man's life-world is the opposite of the solipsist: it is a world not of presence but of presences. In presences we mature. Each individual *I* finds himself by dealing with a *thou*, and another thou, and another. The presence of other persons fills man's consciousness, as objects cannot. Situated among objects, a person may indeed find them interesting, but he responds only to other persons, other presences, who are not objects.

Contingent Being. As contingent beings economic agents are constituted of an actuating principle that defines them for who/what/whose they are and a limiting principle for who/what/whose they are not (Becker 1961). A contingent being is one who is brought into existence through the action of other human beings (*Stanford Encyclopedia of Philosophy* 2017).

In accordance with the limiting principle, economic agents are not any other living creature such as a camel or cabbage, nor are they any nonliving thing such as a machine. If a human being is regarded as an object, a machine, with only instrumental value, her personhood in a certain sense is denied. Slaves, for instance, are not considered persons because they have been reduced by others to material objects that can be bought, sold, traded, or taken. Boys and girls who are sold into prostitution are not thought of as persons because they have been reduced to sexual objects for strictly commercial purposes. Nevertheless, they still cling to their basic personhood because as long as they are living they can be freed by human action. The slave can be emancipated; the child prostitute can be rescued.

In accordance with the actuating principle, economic agents are persons who are made in the image and likeness of God, and therefore nearly divine. Their sacred dignity is confirmed by John Paul (1995).

> Man is called to a fullness of life which far exceeds the dimensions of his earthly existence, because it consists in sharing the very life of God. The loftiness of this supernatural vocation reveals the greatness and the inestimable value of human life.
> … man and his life appear to us not only as one of the greatest marvels of creation; for God has granted to man a dignity which is near to divine (Ps. 8:5-6).

Humans are fully individual beings and at the very same time fully social beings, neither one being diminished by nor subordinated to the other. They are body and spirit, the one no less than the other. They are creatures whose very nature demands that they be free to act, at times rationally, at other times emotionally. They are self-determining and retain their personhood as long as they live.

The instrumental worth argument of conventional economics versus the inestimable worth argument are reconcilable. There is no conflict between the two because in economic affairs such as wage determination the instrumental worth attaches not to the economic agent but to the work performed by that agent. That clear distinction allows us to (a) acknowledge that some tasks are more productive than others and therefore justify different wage rates, and (b) still hold fast to the inestimable worth of the economic agent *per se* and to insist that any rejection of the sacred dignity of all human beings undermines the proposition that everyone is created equal. For, if some are more equal than others, those who are less equal cannot be of inestimable worth.

Human Perfection. Our argument that all economic agents are persons rests on another proposition to the effect that even though some human beings are more fully perfected as persons than others, from the very beginning all are persons by their very nature. A newborn baby is a person though clearly not as fully developed as her parents but will evolve more fully as a person through the growth and development process. No one *becomes* a person. No one can have her personhood taken away. Personhood is not a matter of *becoming* but a matter of *being*. Most fundamentally, the personhood of economic agents is unconditional.

> The challenge of being a person is … by no means the same thing as becoming a person. Persons are persons; the question for them is how to be what they already are. If the problem were how to become a person, it would mean that "personhood" was some sort of definite goal or objective toward which one could work … at …. But this is clearly not the case. We already possess personhood. We are not working toward the goal of becoming persons; we are instead coping constantly with the difficult but fascinating problem of how to *be person*.
> … persons are faced with the constant necessity of making choices and, in doing so, of determining themselves. How to use their freedom of self-determination -- how, in other words, to *be persons* -- is the challenge which continually confronts them (Grisez and Shaw 1974, emphasis in original).

As self-determining creatures, human beings are more nearly perfect as human persons according to their own conduct. As economic agents they are more fully human persons by how they conduct themselves when they engage in work, consumption, and rest.[8] When they act virtuously they enhance themselves as human beings. For example, instructed and guided by the practical virtues of justice, prudence, moderation, and courage, economic agents grow and develop as human persons and often are recognized and admired for their goodness. When, however, they act viciously they diminish themselves as human beings. Instructed and guided by the parallel vices of injustice, foolishness, excess, cowardice, their growth and development is reversed and they often become known publicly for their wickedness.

THE FLAW IN EXHIBIT 2

Even though at the outset we argued that that the proper way of thinking about economic affairs is evolutionary not cyclic, Exhibit 2 employs a cyclic design which implies otherwise. We have used Exhibit 2 on several occasions including most recently in our paper "Personalist Economics: What Is It?" which is accessible on ResearchGate O'Boyle.

The feedback loop is a way of representing what is learned by an economic agent in a social interaction and taken away as in the case of a young man who learns to weld by paying to attend a vocational education program and thereby becomes better able to provide for his family. In personalist economics the feedback loop is an affirmation of the essentially self-centered economic agent who pursues *having more*. It works in terms of the material well-being of the economic agent.

Acting virtuously, on the other hand, involves something that is freely given, not taken, expressing other-centeredness in which there is no expectation of getting anything in return. The virtuous person is admired not for *having more* but for *being more*, for being a better person. The feedback loop is present but this time it works in terms of the character of the economic agent. The one who acts viciously takes without giving in defiance of the usual norms of economic *exchange. She is self-centered in the extreme, such that selfishness replaces self-interest. Having more* is corrupted into *taking more*. The feedback loop is present with the vicious person who quite often joins with others in criminal activity, learning from them and her victims. Without a fundamental character change, the vicious person has a reputation as a bad person whose claim on what belongs to someone else ideally is ruled on and condemned in the justice system.

FINAL COMMENTS

Homo economicus is autonomous, self-interested, rational in all decision-making, and committed to *having more*. The machine-like character of *economic man* has its advantages. As with any

[8] Of late we have taken to use "rest" instead of "leisure" because by defining leisure as time spent not working conventional economics provides no content for any activity that has meaning in terms of economic affairs. For personalist economics, rest means engaging in activities that renew the human body and spirit and are essential to a fuller understanding of the economic agent.

machine, the economic agent is never-changing and therefore entirely predictable producing greater certainty in the findings from empirical research.

Human and social capital do not alter this never-changing characteristic because they do not change machine-like behavior that is riveted on maximizing personal net advantage. Both forms of capital enhance the capability of *homo economicus* to reach out and choose from a wider set of options that offer greater promise of *having more*, in a manner similar to that of a robot which is programmed to perform another task.

Schumpeter was not among those who overlooked one important characteristic of the machine-like *homo economicus:* its passivity. Schumpeter tied his criticism to the profoundly dynamic nature of the entrepreneur who fosters change in products, processes, and the structure of enterprise governance. According to Ong, this passivity derives from the Enlightenment that was dominated not by the spoken word, which is based on face-to-face communication and thereby helps create community, but on the written word where there is no such give-and-take possible between author and reader. There is no give-and-take between the person who writes the code for a CNC machine and the machine itself or for that matter between operator and the machine.

The passivity and machine-like characteristics of *homo economicus* are related and necessary. If the economic agent is passive, she can be characterized as machine-like. If, however, the agent is dynamic, she must be human, capable of acting and changing. The behavior of an economic agent who is capable of acting and changing is not entirely predictable, thereby complicating economic analysis.

The *person of action* is a dynamic economic agent who functions in a world of the written and the spoken word. The give-and-take that is grounded in the spoken word is so essential to the conduct of economic affairs that even conventional economists recognize it, but then they insist on a *homo economicus* who is conceived in the written word and therefore is passive. The *person of action* is constructed on both the written and the spoken word.

Danner and Wojtyla identify the human person as self-knowing, self-governing, self-determining, unique, equal, foresighted, and transcendent in action.

The *person of action* develops as a human being by acting virtuously and diminishes as a human being by acting viciously. Virtuous action enhances the agent's personalist capital and leads toward human perfection, toward *being more*. Vicious action depletes personalist capital and leads toward human degradation, toward *being less*.

Economic agents are persons because they are living, breathing existential actualities, made in the image and likeness of God, and therefore nearly divine. Quite apart from their value as economic instruments every economic agent has an inherent sacred dignity that cannot be denied. Their sacred dignity is set forth in the Old Testament and confirmed by John Paul II.

There is no conflict between instrumental worth and inestimable worth because in economic affairs such as wage determination instrumental worth attaches not to the economic agent but to the work performed by that agent. That distinction allows us to acknowledge that some tasks are more value-added than others justifying different wage rates, to hold fast to the inestimable worth of the economic agent, and to insist that any rejection of the sacred dignity of all human beings undermines human equality.

As self-determining creatures, economic agents are more nearly perfect as human persons according to their own conduct as they engage in work, consumption, and rest. By *acting virtuously* as guided by the justice, prudence, moderation, and courage, they enhance themselves as human beings and are known for their goodness. By *acting viciously* as driven by injustice, foolishness, excess, and cowardice they diminish themselves as human beings and are known for their wickedness.

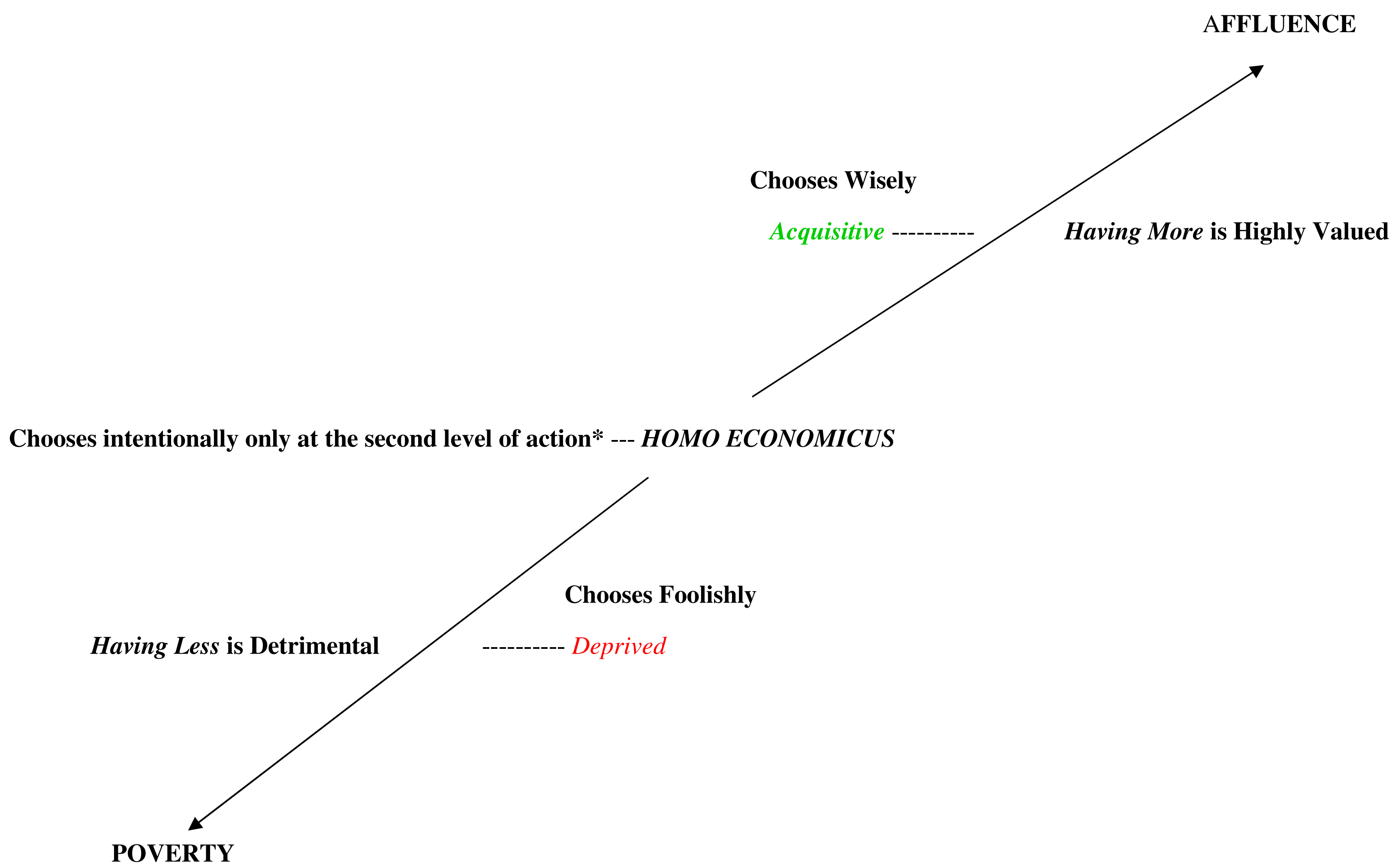
According to conventional economics, *homo economicus* is an individual being with no social dimension, no interaction with others, no one to learn from, and therefore needs no feedback loop to take account of her lifetime development. With personalist economics the feedback loop is present at all times in the *person of action* because she is not just an individual being but a social being as well who in interacting with others learns new skills and acquires talents, new ways of living and working, and uses them for *having more*.

Acting virtuously involves something that is freely given, expressing other-centeredness in which there is no expectation of getting anything in return. The virtuous person is admired for *being more*, for being a better person. The feedback loop is present but this time it works in terms of the character of the economic agent. The person who acts viciously takes without giving in defiance of the usual norms of economic exchange. She is self-centered in the extreme wherein *having more* is corrupted into *taking more*. The feedback loop is present with the vicious person who quite often joins with others in criminal activity, learning from them and her victims.

We used linear vectors in Exhibit 1 and Exhibit 3 for three reasons. First, the vector affirms the evolutionary way of thinking about economic affairs. Second, the vector is a way to visualize human development as an economic agent pursues *having more* which if it does not interfere with *being more* is necessary to ease the burden of unmet personal and family need. Third, in Exhibit 3 the separation into two sections of both the upward-to-the right vector and the downward-to-the-left vector emphasizes the difference between *having more* and *being more* between the economic agent's intermediate objective and her final objective.

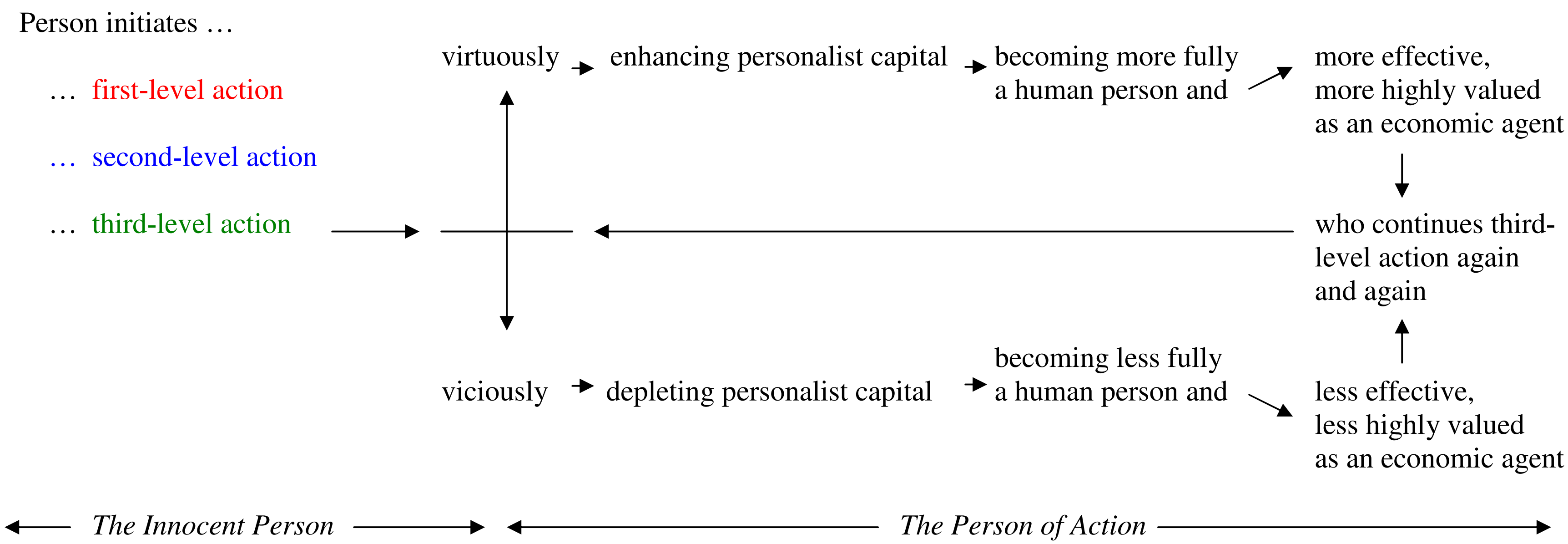
The feedback loop is not used in Exhibit 1 because it is not present in *homo economicus.* It is not visually represented in Exhibit 3. However, the feedback loop is present there but not visible in that it accounts for movement along the vector toward *having more* when the *person of action* acts acquisitively and along the vector that leads toward *being more,* when that person acts virtuously. In like manner, it is present in that it accounts for moving along the vector toward *having less* when the person of action acts foolishly and along the vector that ends in human degradation, in *being less,* when that person acts viciously.

EXHIBIT 1. THE DECISION-MAKING PROCESS OF *HOMO ECONOMICUS*



***Decision-making is *passive* because Homo Economicus chooses from among the options available the one that promises the greatest personal net advantage. Homo Economicus is *never-changing* in the sense that she pursues personal net advantage relentlessly. No effort is made to change the options available. No possibility that Homo Economicus might venture into third-level action. Thus there is no subjective dimension in decision-making, only the objective dimension. See Exhibit 2 for more on action at the first, second, and third levels.**

EXHIBIT 2. ACTING VIRTUOUSLY OR VICIOUSLY AND PERSONALIST CAPITAL: THE DEVELOPMENT OF THE HUMAN PERSON AS AN ECONOMIC AGENT



In terms of the four cardinal virtues, acting virtuously means *justly, prudently, courageously, moderately.*

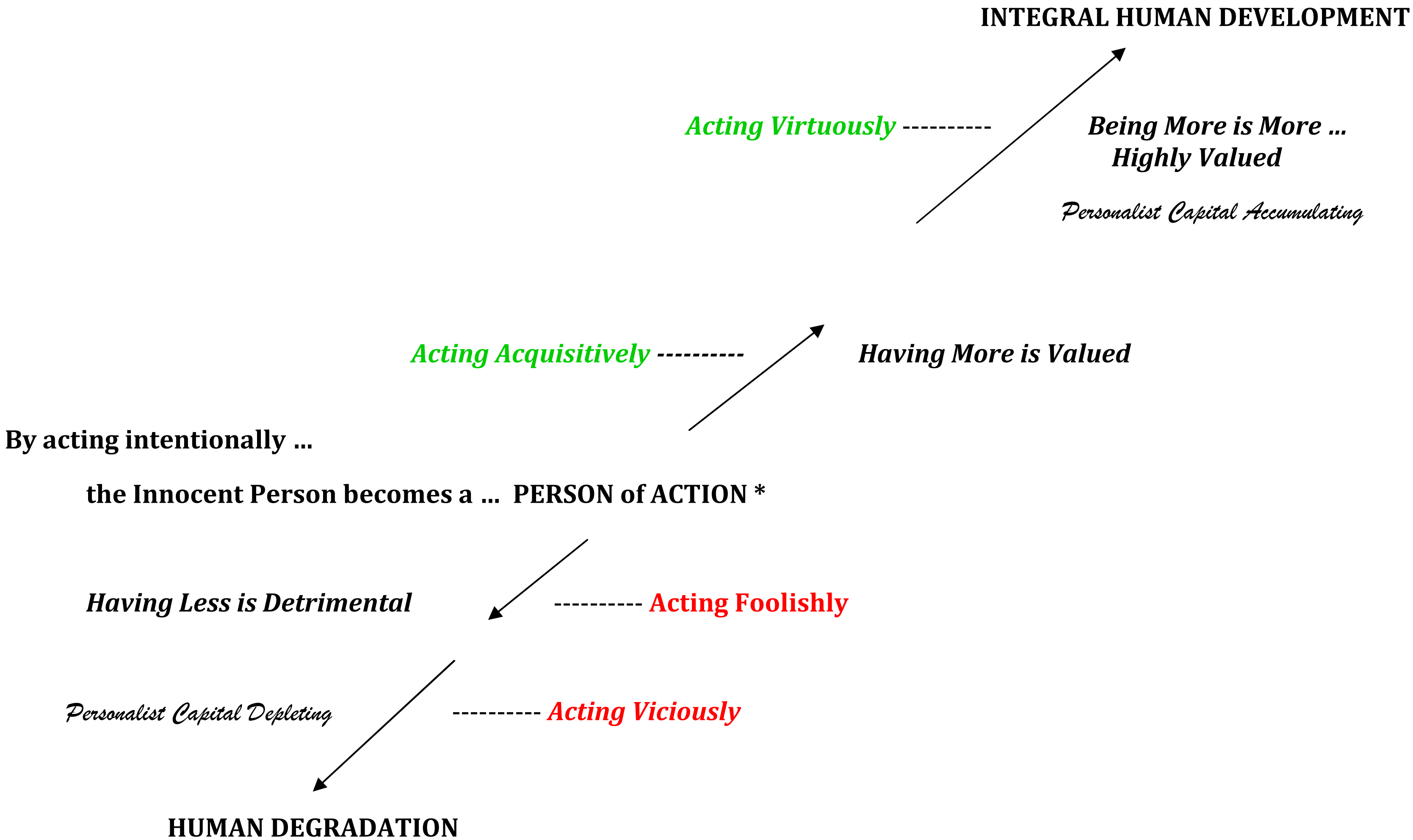
In terms of the four cardinal vices, acting viciously means unjustly, unwisely, cowardlhy, excessively

Third-level action is associated with self-determination; the significance of third-level action is the effect (good or evil) on the person engaged in the action.

First-level action, which is associated with *physical freedom,* is action that leads naturally to a specific outcome provided there is no physical constraint in place.

Second-level action, which is linked to *freedom to do as one pleases*, is action that is undertaken to achieve a specific end.

EXHIBIT 3. THE DECISION-MAKING PROCESS OF THE *PERSON OF ACTION*



*** Acting effectively at the second level results in having more. The feedback loop is present at this level working on the material well-being of the *person of action*. It is present at the third level provided *having more* does not interfere with *being more*. At the third level, the feedback loop is working on her integral development.**
Having more **is an intermediate objective.** ***Being more*** **is the final objective.**
With the feedback loop in place, acting foolishly/viciously leads to *having less/being less*. To human degradation.

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