

The Development of Immanent Ends in Professor Bocheński's »Towards the Philosophy of the Industrial Enterprise«

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In this paper, I comment on Professor Bocheński's article *Towards Philosophy of the Industrial Enterprise* and its important final chapter on "Dynamic Analysis." Methodologically, Bocheński's article is interesting because he applies a teleological paradigm to business ethics. He discusses ends and goals. The main problem is what is the main, immanent end of an industrial enterprise? Bocheński answers, production. I agree that this is what industrial enterprise does and must do to survive, but in what sense can we call production an end and a goal? I dwell deeper into this and try to find the developmental principle that

explains in what sense production cannot only be a fact but also an immanent goal. I then identify and describe this principle in terms of invention, innovation, and design. Any industrial enterprise must subscribe to such a developmental principle if it hopes to survive; and the result is a good product, which is the desired end.

Key words: Józef M. Bocheński, industrial enterprise, goals and ends of industrial enterprise, immanent ends, entelechy, good product

Introduction: The Primacy of Production

My aim in this paper is to present a critical and constructive account of Section Four ("Dynamic Analysis") of Professor Józef M. Bocheński's interesting article *Towards the Philosophy of Industrial Enterprise*, originally written in the 1980s and commissioned by a "large Swiss company." [Bocheński 1987 (in translation):

<Introduction>¹] His article is analytical but also metaphysical because he speaks of “immanent goals” and teleological problems such as achieving human goals and their implied values. His early philosophical position is clearly expressed in his *Contemporary European Philosophy* (1956), which opposes logical positivism and favors Scholasticism². Yet, he says he is an analytical philosopher.³ In this paper, I take a broadly praxiological standpoint concerning the question of the goals and purposes of entrepreneurial activities⁴.

Bocheński says the immanent, or essential, goal of an industrial enterprise is production [Bocheński 1987 (in translation): 4.3]. He recognizes the need to make a profit and he also refers to the workers’ interests, that is, their wages and, to use an expression he suggests, their “happiness.” But overall, he avoids such controversial political issues and potential sources of social conflict in terms of capital and labor. He is a strong anti-Marxist anyway so this is to be expected⁵. In his chapter called “Dynamic Analysis,” he intends to clarify the basic questions. In this context he introduces something like the Aristotelian notion of entelechy: “[...] industrial enterprise is a freely created human artifact. This appears to exclude it from having any autonomous regularity [in the original:

¹ I quote the text indicating the sections of the original article [Bocheński 1987].

² As young doctoral student at the University of Turku in 1972, in my very first lecture series, I used Bocheński’s *The Methods of Contemporary Thought* (1968). At the same time, I read his *Contemporary European Philosophy* (1956).

³ I owe this information to the anonymous referee of this paper. I grateful to the referee for many fundamental challenges to my argument, and I apologize that I have not been able to discuss them here in full. That would have meant changing my argument too much or extending it considerably. I have corrected my obvious errors, of course. The referee argues that my “critique of the proposed main immanent aim of an industrial enterprise, i.e., production, seems to be rather supplement than revision.” I want to both clarify and supplement Bocheński’s theory, especially by paying attention its teleological deep structure. Or my reading is ironic in Richard Rorty’s sense: I redescribe Bocheński’s logical analysis by using a full-blown teleological language, at the same time saying that it is implicit in the text; see Rorty 1989 (Part 2.1: “Private Irony and Liberal Hope”).

⁴ See e.g.: Gasparski, Pszczółowski, 1983; Makowski 2017.

⁵ See: Bocheński 1956: Chapt. II.7.

*Eigengezetslichkeit*⁶ independent of the human will” [Bocheński 1987 (in translation): 4.3]. Bocheński rejects this objection, as we will see. He also writes: “For example: a hydraulic press is constructed entirely freely, nonetheless, once made, it has its own autonomy: it can only press and only within certain limits.” [4.3]

He indeed discusses immanent goals as, what I also call here, entelechies. If you have a process that has an immanent goal, we may indeed call these goals entelechies. This is a controversial conceptual choice, I agree, but therefore I call Bocheński’s approach teleological and metaphysical. As *Dictionary.com* defines it, entelechy is, “[i]n the philosophy of Aristotle, the actualization of the potential form or function of a substance.” As Aristotle says in his *De Anima*, the first entelechy of an eye is seeing, in other words, an eye actualizes itself in seeing.⁷ Seeing is the immanent goal of an eye, and a seeing eye is the actual eye. This is an objective and dynamic relation that works independently of human thought and its intentions: it has nothing to do with what I want or try to see. An eye is an organ of seeing whatever we think about it.

This is the most distinctive idea in Bocheński article, namely, the proposition that the true goal of an industrial enterprise is not dependent on human thought; on the contrary, it is a systemic and dynamic teleological process towards an immanent goal. If the human mind establishes the goal, it would be external to the process. In this sense, it would not be autonomous. It follows that we cannot alter the goal without changing the identity of the goal – this is the essential characteristic of an internal goal. External goals

⁶ This term does not translate easily into English. For instance, to say that a hydraulic press is autonomous stretches the limits of the term autonomy rather too much. The machinist can change or stop its work as she likes. *Eigengezetslichkeit* only entails that when the press works, it only presses – but this is not autonomy. The point is that a press is a press and not another thing. In Finnish we have *omalakinen* or *omalakisensa* that says a process has its own type of regularity that it always follows and remains the same.

⁷ Aristotle, *De anima* 418a. We also can say vision is the first grade of actuality of the eye. See: <http://www.finedictionary.com/entelechy.html>

we can change; for instance, suppose we shoot arrows, we can freely choose and change the goals. They are our goals and as such external to the process itself.

Once we have and use such a human creation as an industrial enterprise, we also possess a set of goals that we cannot alter without destroying the enterprise itself. Perhaps we can say that production is an emergent property of the human creation we call industrial enterprise, and as such, it exists independently of human thought and linguistic manipulation. Or, to use more modern language, production supervenes on the totality of the industrial process. Bocheński asks in this context an interesting question: who is the actual producer? Is it the worker or the factory? He answers: "No element is productive on its own. Therefore, not any single element but the industrial enterprise as a whole is the real producer" [Bocheński 1987 (in translation): 3.3]. This is a holistic view that entails the idea that production is an emergent quality that supervenes on the totality of these conditions

Bocheński talks about immanent and transcendent goals. Once we have created an industrial enterprise, we also have started a dynamic process we cannot control, in the sense that we must, anyhow, produce goods [4.3]. But as one can remark, not every type of goods works. A wrong type of production will kill the enterprise. Try to produce ugly and unfashionable ladies' shoes without going bankrupt. Therefore, Bocheński oversimplifies when he calls production the ultimate immanent goal or the final entelechy. The enterprise must produce innovative and marketable goods, goods that somebody wants so much that he or she is willing to part with hard-earned money. An immanent goal must be somehow self-sustainable and related to growth. I call production the first entelechy and self-sustainability the second, unlike Bocheński. I will develop this line of argument in what follows.

The Teleological World of Systems and Their Goals

First, Bocheński recognizes two false starts:

“There is no lack of attempts to define the goal. If we ask any managing director of a Swiss or German industrial company what he or she considers to be the goal of the enterprise, their answer is in most cases as clear as it is categorical: an enterprise’s goal is the highest possible dividend for the shareholders. On the other hand, there is a large body of literature in which a contrary argument is put forward just as clearly and categorically: the true goal of the enterprise is the happiness of workers.” [Bocheński 1987 (in translation): 4.1 (my highlighting)]

The second goal is like a distorted echo from a vulgar version of Marxism. Bocheński does not take it seriously, and he is quite right. The first goal mentioned above is what any lecturer on business ethics will hear when he or she asks a question concerning the goals of a business enterprise. It is a standard truism, a mere platitude, and Bocheński is of course right when he dismisses the idea. The key question is, to my mind, is what is meant by the word “possible” in “the highest possible dividend for the shareholders.” Once you start thinking of this question, you will be baffled: illegal narcotics production and trafficking together with an extortion racket and prostitution ring are far superior sources of income and produce the highest possible dividend for shareholders – but this only shows that we cannot possibly mean this by “possible.” Unprofitable companies do not survive, but that is all we can say about this issue.

To make a profit in the long run, may, or may not, be necessary, but when we consider a state- or commune-owned enterprises, Bocheński mentions them [3.2], we notice that maximal profit need not be on their agenda. Those enterprises need not make a profit even in the long run, if their reason for existence is social and not strictly business bound.⁸ One may call such an idea non-sustainable

⁸ University presses in USA are “non-profit organizations” that produce excellent books and survive well in the long run.

but at the state and community levels that may not matter, supposing strong political and social motives support the arrangement. Against this, one may remark that a non-profitable production fails to indicate the existence of an industrial enterprise; on the contrary, it is just work and a system of labor. I conclude: an industrial enterprise must produce and it should show a profit, but it need not aim at profitability. Perhaps we can say, an industrial enterprise must aim at self-sustainable production, which is to say it stands as if on its own legs. Production is the first immanent goal, and its sustainability the second but still immanent goal. Taken together, they entail good business.

Bocheński mentions growth as a secondary immanent goal of an enterprise. This is so, of course, as the rule seems to be: you grow or die. But such a rule is just an approximation. We have many examples of enterprises that do not grow but still are successful now and self-sustainable in the long run, but I admit this is an exception. Moreover, one may argue that no zero-growth may exist – it a fictional idea – because an enterprise that does not grow declines. This is to say, it must grow in the long run. Why does not Bocheński mention monopoly as the goal of any given industrial enterprise after it grows large enough? From a systemic perspective, this looks like an immanent goal and hints at the existence of one additional type of goal: in this case a hidden but essential immanent goal in the life of the system of enterprises. Every single enterprise aims at production, but at the systemic level they aim at monopolizing their field of production; as they say: the winner takes it all.

Bocheński says any enterprise is like an organism, and hence it is a system with its own peculiar dynamics. One may add: all enterprises, as organic systems, form and create a system of systems that also has its life, essence, and own dynamics. And the goal that is inherent or immanent within it, the second-order system of systems, is the rather mysterious idea of a cartel first, and then a monopoly; after which one controls the market and can fix the prices and tinker with quality and innovation. The market mechanism con-

tains a deadly fault that must be supervised and controlled from above by legislative means, independently of any input from the entrepreneurial world. They swear in the name of free enterprise, and at the same time endeavor to destroy it by using cartels and monopolistic projects. The state control mechanism must rein in all attempts towards cartels.

In some sense Bocheński's systems approach is limited. It dismisses the idea of potentially self-destructive immanent goals. This resembles the perils of democracy, which is a fragile organizational ideal that is vulnerable to democratic rejection of democracy, or the suicide of freedom. Dictatorial rule and authoritarian regimes look tempting to many citizens who find democracy in too many ways hostile, unpredictable, and potentially too permissive: too many suspicious ideas are voiced, all of which one can prevent by nominating a conservative dictator. Or the other way round: the country is too conservative; a radical dictator appeals to us for that very reason; think of V. I. Lenin. Many systems are inherently unstable, and this applies to democracy as well as free markets. They are not automatically self-sustainable. We need externally implemented rules to control their suicidal tendencies.⁹

We can unite these two ideas: a corporatist system may fulfill both dreams at the same time, namely, anti-democracy and rejection of the free market. A dictator organizes the country according to interest groups called corporate groups: administration, labor unions, armed forces, police, business, and industrial production, and so on. In this way, some enterprises are granted a monopoly and full freedom within their field of work and production, all in the name of a meticulously organized productive life. The result is not democracy but corporate groups who enjoy a monopoly of power and production within their particular sectors. Such a system may or may not be sustainable in the long run; normally it is not.

⁹ We have laws against monopolies but democracy is different: how to protect it against populism and related ideologies? On populism, see: Müller 2017.

The best way to illustrate the idea of a system of systems is of course modern technology. Technology means first individual tools, then isolated machines, and constellations of machines, interconnected constellations of machines, a system of such constellations, and finally a system of systems. Modern technology is a totality or singularity as it leaves nothing outside of itself. Let me explain by referring to Martin Heidegger's classic paper "The Question Concerning Technology" [1993], which was originally published in German in 1954 (therefore it discusses an outdated view on technology). According to Heidegger, technology is a horizon of "machines that wait," that is, a perspective on manufactured entities that stand waiting to be used. In this sense technology is a resource. Airplanes on civil airfield tarmac are engines of transportation ready to be used, to fulfill their function as a resource.

This may sound convincing, I think, yet it does not consider and understand that idea of a system and a system of systems that is modern technology.¹⁰ These airplanes are not isolated engines of flight in the same sense as ancient farmers' homemade plows on a field are isolated tools of farm work. The planes are connected via the air traffic control tower, and all those towers are interconnected via radio. The planes depend on a fuel supply and its complex technology, they need service and repair technology, and each of these technologies depends on other technologies, and so on. Heidegger is right, technology is a horizon and a frame of resource usability, and all those engines wait to be used and utilized. They are there ready when we need them, but that is not all. We can distinguish here between ontology and practice, or form and function; I mean an existing system and the use of its various components. Both are necessary to create a meaningful technological reality. Technological systems aim at growing and dominating the world in the sense of defining all aspects of social and productive life in technological

¹⁰ Bocheński discusses complex systems of subsystems, but not second and higher order systems of systems [2.3].

terms. For instance, intelligence is soon artificial intelligence, traffic is motor traffic, and information is bits.

Bocheński writes, “The industrial enterprise is essentially a mechanical system in that, like a machine, it does not act on itself but on other things for which it works” [Bocheński 1987 (in translation): 4.5; my highlighting]. This idea may seem to conflict with the following, especially if we stress the word “essentially”¹¹:

“At the same time, however, the industrial enterprise behaves in way that is strikingly similar to a living organism. First, it tries to survive. Second, it usually tends to grow and indeed, unlike organisms, sometimes without limits. Finally, as a rule, it strives for the greatest possible efficiency, in other words – rationality.” [4.5; my highlighting].

What does it mean to say that living organisms are rational? And many organisms grow without limits, for instance, mosses and bacterial growths. The main problem is obvious, mechanism or organism, but perhaps Bocheński means that an industrial enterprise possesses both features, always depending on how you want to see it. In this paper, I approach industrial enterprise as a developing organism while Bocheński may treat it as a mechanism, or more like a mechanism. A shoe factory that just cranks out shoes looks more like a mechanism or machine than an organism; yet, the shoes are carefully developed and well-designed, which no machine can achieve.

Now, when we combine industrial enterprise and technology, and indeed both are closely interconnected and interdependent

¹¹ The meaning and application of the distinction between organic and mechanical system is a difficult here. The referee writes: “Yet an enterprise is a mechanical system only in terms of its action target (i.e. a process that runs in accordance with its ‘entelechy’). At the same time, an enterprise – due to the unifying element of the system, i.e., the entrepreneur – influences its operation, intensifying it, delaying it, changing the given limits or ceasing. Therefore it is an organic system as well.” It is true that a shoe-factory works by cranking out various kinds of shoes as if mechanically. But mechanical is only metaphor, as we can see when we focus on the value the factory produces. I do not think it is the entrepreneur who makes the system organic but the various valuational goals that the factory serves.

global systems, they also combine their intrinsic goals: production and growth. Perhaps I may suggest that this is the correct place for the idea of growth, mentioned by Bocheński in connection with a productive life. We may also say that technology is the ontology and industrial enterprise the practice of this global system. Here practice entails production by technological means. The basic praxiological rule is something like this: no production without technology, or no function without form, or no practice without ontology. These formulations, and especially the last one, are dependent on some basic praxiological intuitions.¹² Everything that exists has a practical purpose or it is there for a practical purpose.

The Developmental Principle and the Idea of Entelechy

The problem of goals is more difficult than Bocheński's short and terse presentation may suggest. I quote:

“No difficulties should arise in answering the first question [What is the immanent aim?]. Even superficial observation of an industrial enterprise shows that it features an immanent structure that is focused on one goal, viz., production. Thus, production is the main immanent goal of any industrial enterprise.

To demonstrate this with a specific example, consider a shoe factory. It consists of a number of buildings, machines, people, experience, etc. In the factory, all of these are clearly oriented to making footwear. The buildings are designed and erected for this purpose, the machines are mostly shoe-making machines,

¹² Throughout this paper I follow the idea of three E's, as emphasized by Professor Gasparski: Effectiveness, Efficiency, and Ethics. These form the foundation of all good production, see: Airaksinen 2018. About good entrepreneur, see: Gasparski 2010. Bocheński discusses this problem in the end of his article. He writes: “It is often said that there is no »holy entrepreneur« or »holy manager«, but in the light of the foregoing, this is not true. The very structure of the industrial enterprise dictates the ideal of the entrepreneur: a person who selflessly – and, if necessary, in strife_with everyone – serves the enterprise as a whole. History provides well-known examples of great entrepreneurs who acted according to this ideal.” [<Final remarks>] But see: Airaksinen 2017, 2019.

the staff is trained for footwear production, there are also experience, know-how, patents and other elements related to this production. One could say that producing shoes constitutes the whole sense of the shoe factory.” [Bocheński 1987 (in translation): 4.4; my highlighting].

Parenthetically, Bocheński initially calls this and the similar problems “quite difficult questions” [4.3], yet he also says: “No difficulties should arise [...]” here. This has its ironies: what is difficult is easy to handle. Perhaps Bocheński’s deeper intuitions about the relevant goals are not quite in line with his main, explicit idea? I mean, when he says production is the immanent end and goal or entelechy of industrial enterprise, and he knows that this is the first entelechy in an Aristotelian schema, he also should say that lower entelechies exist as well. Bocheński addresses this issue in the following manner:

“[...] in addition to its main goal the industrial enterprise has other immanent goals, viz., those indicated above: survival, growth, and profitability. As for the third question, it should be clear that these secondary goals are logically subordinate to the primary goal [i.e. production] as its necessary conditions” [4.5]

So far so good, I have already discussed these three secondary goals above. However, the ironic aspect of Bocheński’s presentation hints at a possible conundrum here. Perhaps the very concept of production is problematic? In other words, perhaps the first entelechy is not enough. I ask what kind of production entails survival, growth, and profitability.

To clarify this issue, we need to outline some aspects of the metaphysics of teleology; this is because all immanent goals depend on such metaphysics. Now, if we nominate production as the first entelechy or main intrinsic goal and understand it in a teleological manner the goal is the end of a developmental process, not a static end as such. The standard example is an oak tree as the entelechy of an acorn. The acorn is transformed into an oak tree, and thus we understand the tree, metaphorically, as the goal of an

acorn. Another example is eye and seeing, as I have already said. I wonder why Bocheński does not mention this essential dynamism in the chapter that is dedicated to the dynamic aspect of goals. Goals are essentially end-states of developmental processes that release the potential inherent in the starting point. And Bocheński talks about the dynamic aspects of the organic life of industrial enterprise. He is correct in what he says, I do not deny that, but he does not get to the bottom of the issue. I try, however tentatively, to complete his analysis.

How to tell the story of production as a dynamic teleological process or development towards the emergence of its final and true second entelechy? The key concept here is innovation. This is a problematic notion, although it need not be; the idea is quite simple but too often misunderstood:

“Innovation is, first, the development of an initial, speculative idea and, second, an invention of specific industrial produces, so that they work (i), and are commercially viable (ii)”
[Greenacre *et. al* 2012: XX].

I explain. Schematically everything starts from an idea that may or may not turn into an invention, which can then be developed on two fronts: it must work and it must be commercially viable. Take the airplane, presumably invented by the Wright brothers in Dayton, Ohio, and flown in Kill Devil Hills on the North Carolina coast during the first years of 20th century [Kelly 1983]. Of course, the idea of flight and an effective flying device is ancient, think of the Icarus myth. Many people tried, in vain to make, their ideas of flight workable. In many or even most cases the same type of idea is turned into an invention by several persons at the same time, although only one may get the honor of being the first in the popular lore. It is often said that George Stephenson invented the locomotive and James Watt the steam engine. This is not true because both men developed a working version of machinery that already existed. The invention and innovation of the radio and the role of

Guglielmo Marconi is also interesting [Weightman 1983]. Another relevant example is Nikola Tesla, who was not as original as the popular myth may suggest [Cooper 2018].

The idea of manned flight is rather exceptional because the Wright brothers really and truly succeeded first.¹³ They invented and built the airplane and developed it into an innovation that worked and sold well enough. As it often happened, it was first not at all clear how to use their airplane, or what was its purpose. First, it was just a toy, but already by the Great War it was clear that it is an efficient and effective weapon that all the belligerent nations needed. Note that the key part of innovation is its commercial success. In this sense, the production must be a good one. I have no space here to analyze this issue further but let us be clear about it: any innovation must be fit to be produced by an industrial process and also marketable to the public as something they will learn to need and want.

A shoe factory is a dead entity if it does not innovate, which is to say that their design department must stay creative and busy all the time. In this context, we need to discuss design and innovation as two separate issues; for instance, we may say that after innovation comes design, or design is based on innovation [see: Gasparski 1993]. We must first have a functional and working airplane, an innovation, but then we start designing it, and we can never stop. The airplane as an industrial product changes from day to day, because we want to keep it safer and more fashionable; hence we make it functionally better, but we also make changes just to make the production more interesting. We design our product so that it looks new and fresh all the time and hence we have something new to tell and sell.

I disagree with Bocheński when he says that “producing shoes constitutes the whole sense of the shoe factory” [4.3; my highlighting]. I may exaggerate, but not much, if I say instead: the innovative process and subsequent design of a good shoe as a product

¹³ Even this is controversial today, see the text *Claims to the first powered flight* in Wikipedia, and the pages dedicated to Gustave A. Whitehead (see: “Internet sources” in references).

constitute the whole sense of a shoe factory. For instance, in the USSR they followed Bocheński's idea with disastrous consequences. They simply made shoes that nobody wanted.

The free-market capitalist system forces industrial enterprises to compete against each other, which is the engine of progress, as we know. For this reason, we may say the sense of the system of industrial enterprises is progress, which consists of innovation and successful design. This makes sustainable production possible – nothing else does, not even large subsidies from the state. Innovative and well-designed products are the proper goal that makes the producer a good and successful player of the industrial game – as long as they keep producing it. What good production is like is a complicated topic I cannot address here; think about safety and environmental concerns. And such issues concern not only the finished product but all aspects of the production process as well.

Next, let us continue our exploration of the logic and metaphysics of immanent goals. If we want to follow Bocheński and say production is the first entelechy of industrial enterprise, what are we saying? To answer, we need to identify a class of similar cases and nominate their first entelechies. This is because an industrial enterprise cannot be a unique case or a case without proper analogies within the teleological social universe. We must first find a class of analogous cases and then ask what their immanent goals or first entelechies are. Only then can we understand what we are saying when we focus on production as a goal.

I argue that when we identify the members of this class of analogies, we also try to identify their goals as immanent goals, or entelechies. But we must be able to identify such goals or one immanent goal for each member of the class. If we cannot do so, we have two possible explanations, both of which are equally disastrous: (A) Industrial enterprise is a special case; or (B) the teleological metaphysics does not apply. But A is not true because if we understand industrial enterprise teleologically we already operate in a teleological universe. In terms of B, we should reject Bocheński's talk about

entelechies as empty rhetoric and say his dynamic model is not dynamic in the developmental sense. However, we should not do so because we have already seen that we can handle the dynamic developmental model *à la* Bocheński by introducing the ideas of innovation and design.

So, let us see what happens when we examine a set of analogies of the idea of industrial enterprise. How to find this class? We need to pay attention to the secondary goals of the relevant systems as organic organizations: survival, growth, and profitability, or their long-term viability and propensity to deliver, when productivity is its special type. This list may not be the best possible one because its items are not mutually independent, for instance, growth overlaps the necessity of survivability or sustainability, but let us leave the list as it is. I hope one can get the right idea anyway.

My first example is the armed forces (or: the army). The army always is a part of a military-industrial complex, which is business, industry, technology, and politics as a complex network of goals, methods, and means. But what is the primary intrinsic goal of the army? What can we say, on festive occasions, the army is praised because it defends the country and its cherished values, whatever these happen to be? But when Nazi Germany attacked and invaded Poland in 1939, their goal was not to defend the fatherland but to rob more land and find a suitable base for attacking the USSR. Countless wars have been started in such a way; the ancient Roman Empire is of course a solid example. When the USSR attacked Finland in the fall of 1939, the goal of the Finnish army was indeed to defend the country against the invading enemy. These cases are simple and uncontroversial. When we investigate the foreign policy of the USA after the Second World War, the reasons for going to war become ambiguous and controversial. The Vietnam War was waged because of the speculative and controversial Domino Theory: “after Vietnam, more countries will turn to communism, which makes it necessary to stop the process here and now.”

What is the first entelechy of the army? This is a difficult question to answer. It is true, however, that the secondary goals are there, namely: survival, growth, and ability to deliver. The army must make itself sustainable, and this entails the survival of the country – this guarantees its survival. The army must grow to make it viable in the long run: the weapons systems become armies' networks, more and more technologically advanced, innovative, and fantastically expensive, and this influences the field of scientific research and education. Armies are already "too big to fail." New projects to build submarine navies and aircraft carriers make this evident. Nuclear armament is another guarantee of the army's sustainability and survival. Nuclear weapons are also another guarantee, or the ultimate guarantee, that the army can "deliver the goods": they can destroy all the Earth in seconds, which indeed are impressive credentials.

If we argue that the primary goal of an industrial enterprise is production, we can as well argue that the goal, or the first entelechy, of the army, is the application of deadly force. We can then say the army defends our liberties, the free market, and human life, which may sound analogous to the idea that the goal of an industrial enterprise is the maximal happiness and welfare of the workers (an idea that Bocheński quickly and without hesitation dismissed). This would be a mistake: the goal of an industrial enterprise is, first, production, and then, good production. In the same way, the army first uses deadly force, and then deadly force to defend what is good.

As we see, we can find parallels among primary and secondary goals, and on this basis, we put the army and industrial enterprise into the same class, or classify them together. Next, one can say the following: because the army has its self-evident first entelechy, the same can be said of industrial enterprise. Thus, they belong to the same class of organizations and they must share their logic of goals. We can infer from the existence of the primary goal in the case of one organization to an analogous goal in another relevant case.

Let us look at another case, the legal system and the law; bureaucracy would be another possibility, but let us focus on the law. It obviously shares the secondary goals with all the other systems in its class: survival, growth, and ability to deliver. Its survival, or its sustainability, is a fact because we cannot live without it, and it grows when the parliament adds new laws to the legal corpus. Society controls every little detail of social life using its laws, and thus the parliament cranks out more laws and statutes as if they did not know better. The system of law connects to the bureaucracy that is needed to implement the laws and the police that supervise society.

But what is the first entelechy of the law? I suggest it is social co-ordination. Also, the law creates a just, free, and safe society. In the ideal case and utopian society, this indeed may be so. In real life, the law may protect what is solidly established inequality and confirm the relevant patterns of injustice, for instance through racially motivated laws. Think about the laws of the USSR and Nazi Germany, where the Jewish population, gypsies, invalids, and even jazz musicians were murdered quite legally. No legal complaints worked. The parliament may write bad laws, but they are still laws. The law seems to have multiple goals that depend on the current historical and political situation more than on anything else, yet the first entelechy is social co-ordination or the law as a system of rules for action and policymaking. The second entelechy is a just and fair society for all. The law must and will develop in that direction.

What about industrial enterprise? Can we still maintain that it has one, unique entelechy towards which it develops? The answer is in the negative if we think in terms of real facts like production. If we instead think in terms of high ideals and objective values the case will look different. I said above that industrial enterprise contains a developmental and an evolutionary aspect, and then identified innovation as the key dynamic factor. This solution explains the development towards a goal understood in value terms; that is, innovation and design aiming at a good product. Hence, we need to explore the role of ideals and high values when we explain

the typical main goal. To anticipate, production must be a value term in the same way as safety, welfare, liberty, and justice are when they are promoted by different organizations that belong to the same class as industrial enterprise.

For example, think about the army and the law. They may do bad things, murder innocent people, and promote gross inequality. However, we may say they tend to develop towards their ideal forms and realize their second entelechy understood in value terms, such as safety, freedom, and justice. When the army and the law promote such high values, they fulfill their purpose and realize their first entelechy, or they have become what they truly and actually are – as the old saying goes. The full realization of the first entelechy becomes the second entelechy: to produce is the initial, first goal but to produce good product is the second and higher goal.

Think of visual perception: to see is the first entelechy of the eye, to see everything correctly is the second entelechy. In the same way, good production realizes the second entelechy of an industrial enterprise. In the case of the army, the use of deadly force is the first goal and just war is the second. In the case of the law, social co-ordination is the first goal, and the second is a just and fair social order. In this way, the first entelechy develops into the second and higher one, which we call the full realization of the entity in question.

If the army and the law murder people and promote blatant injustices, they fail in their proper roles as the army and the law. At their worst, they become mere parodies of what they should be when they are fully realized in this world of values. They may fail in thousands of ways, which is to say that they are not yet the genuine article, or they do not exemplify their own realized purpose and goal as the first entelechy. When the army and the law function deficiently we are unhappy about them and yet we feel the pressure towards affirming their real and genuine goals, I mean without rejecting them outright.

What about industrial enterprise from such a value-laden and ideal perspective? We can draw an analogy to the law and the army.

An industrial enterprise may create much harm in this world, for instance by using environmentally unviable production methods, making unsafe products, or selling them to consumers in a dishonest manner. Any industrial enterprise must respect the laws of the country and the precepts of business ethics (however difficult that may be when one focuses on maximal profits). Only in this way can it reach its second entelechy.

I argue that the goal that provides an industrial enterprise its true sense of existence is a good production process together with good products. At the same time, this, and only this, justifies its work. Also, this is in line with Bocheński's teleological idea of intrinsic goals as goals towards which a system develops, or its ideal form of existence. Production, as such, may be a goal – a special goal – but it is only the first entelechy or the goal and purpose of an intrinsically teleological process. Only good work and a good product may have the key role of the second entelechy in the logic and life of an industrial enterprise – this is my point.

Think of an industrial enterprise and its ends – let us follow Bocheński and talk about production as an entelechy. When we describe industrial production, we focus on innovation and design that entails the use of positive value terms: innovation results in working a marketable product and design aims at good design, otherwise, it is not design – hence, value terms are built into the idea of industrial enterprise from the beginning. In other words, an industrial enterprise is good, or its proper description logically entails positive value terms. For this reason, and this reason alone, Bocheński's idea of production can be understood, as a goal to be the second entelechy, or a true realization of an initial idea of the end state that is its the first immanent goal and entelechy.

Notice that different industrial enterprises realize this second entelechy to different degrees: some do it well, some not so well. The beauty of this all is that those enterprises that fail to approach their second entelechy will not survive for long: no industrial enterprise that fails to innovate and design can succeed. In this

sense, the very *modus operandi* of industrial enterprise is conducive to the successful realization of their second entelechy, or their true and best immanent goal. Any industrial enterprise realizes itself in its good work that also can be called production, and production is essentially good work. This is to say that system of the industrial enterprise is an intrinsically good system, which is not to say that it is without its problems. Yet, its foundational practical logic is good.

Conclusion: The Gist of My Main Argument

Let me summarize. I compared three great social institutions: army, law, and industrial enterprise. I classified them together because they share a developmental principle and the idea of important goals: to become what they are, they need survival, growth, and the ability to deliver the goods. This list is tentative and schematic and others can be suggested. However, this list is based on Bocheński's ideas and it works well enough for us here, thus I keep it as it is. All three social systems share their values and this constitutes my reason to classify them together. Next, I argue that they are all teleological systems, not mechanical but more like organisms, as Bocheński says. This entails their second entelechy, in the sense that they all have one, common to them. They all have one, or none of them has it, because they all belong to the same class.

Therefore, we must focus on the ideal teleological development towards a higher goal, in each special case towards its second entelechy. It appears that the army defends some true values, such as safety, at least in the ideal case. In reality, it can do many other things too, some of them evil and ethically unjustifiable, always depending on the political climate. The same can be said of the law. Yet it is possible to identify their second entelechy towards which they should grow and develop to realize their true form.

The same can be said about an industrial enterprise that creates waste, pollutes, exploits its workforce, and sells bad products. The point is, when we look at the life of industrial enterprise, we can identify a developmental principle in it, or its potential for self-realization, that leads towards its second entelechy, which is good production in the ideal sense of the term. The key terms here are invention, innovation, and design. They create a path towards the true goal of industrial enterprise. In other words, when the story of industrial enterprise is narrated in all its developmental detail, we can identify in industrial enterprise an immanent tendency towards its second entelechy, that is a good production. This goal is not determined from outside; instead, in the case of industrial enterprise, the developmental tendency towards its second entelechy is internal to it. Industrial enterprise does not only produce, but it also innovates and designs, which means that it develops, and it must develop, towards good production and product that create its true entelechy.

REFERENCES

- Airaksinen T. 2017, *Professor Gasparski on Design and Entrepreneurship*, "Zagadnienia Naukoznawstwa" 53: 135–148.
- Airaksinen T. 2017, *The Problem of Effectiveness in Praxiology*, in: W. W. Gasparski (ed.), *Praxiological Essays: Texts and Contexts* (Praxiology: the International Annual of Practical Philosophy and Methodology, 25), New York: Routledge.
- Airaksinen T. 2019, *The Entrepreneur and the Customers: A Quiet Conflict*, "Problemy Zarządzania" 16: 52–67.
- Aristotle, *Περὶ ψυχῆς* (*De anima*) (various translations and editions).
- Bocheński J. I. M. 1956, *Contemporary European Philosophy*, Berkeley: University of California Press.
- Bocheński J. I. M. 1968, *The Methods of Contemporary Thought*, translated from German by P. Caws, New York: Harper (2nd edition).
- Bocheński J. I. M. 1987, *Zur Philosophie der industriellen Unternehmung*. Vortrag gehalten am 18. März 1985 auf Einladung der Bank Hofmann AG im Zunfthaus zur Meisen, Zürich: Bank Hoffmann AG (in the work on this paper the English translation was used, prepared for the publication in "Prakseologia");
- Cooper C. 2018, *The Truth about Tesla*, New York: Race Point.
- Gasparski W. W. 1993, *Design, Science, and Philosophy: The Praxiological Perspective*, in: M. J. de Vries et al. (ed.), *Design Methodology and Relationships with Science*, New York, Springer.

- Gasparski W. W. 2010, *Entrepreneurship from the Praxiology Point of View*, in: W. W. Gasparski, L.V. Ryan, S. Kwiatkowski (eds.), *Entrepreneurship: Values and Responsibility*, (Praxiology: The International Annual of Practical Philosophy and Methodology, 17), New Brunswick (NY): Transaction Publishers: 23–36.
- Gasparski W. W., Pszczołowski T. (eds.) 1983, *Praxiological Studies. Polish contributions to the science of efficient action* ("Theory and Decision Library", 34), Dordrecht: D. Reidel.
- Greenacre P., Gross R., Speirs J. 2012, *Innovation Theory: A Review of the Literature*, Imperial College Centre for Energy Policy and Technology – Working Paper .
- Heidegger M. 1993, *The Question Concerning Technology*, in: M. Heidegger, *Basic Writings*, ed. by D. F. Krell, New York: Harper (1st, German, publication: 1954).
- Kelly F. (1983), *The Wright Brothers*, New York: Bantam.
- Makowski P. T. (2017), *Tadeusz Kotarbinski's Action Theory. Reinterpretive Studies*, Cham–New York: Palgrave Macmillan.
- Müller J.-W. 2017, *What is Populism?*, London: Penguin.
- Rorty R. 1989, *Contingency, Irony, and Solidarity*, Cambridge University Press.
- Weightman G. 1983, *Signor Marconi's Magic Box*, New York: HarperCollins.

Internet sources:

- www.finedictionary.com/entelechy.html/
www.en.wikipedia.org/wiki/Claims_to_the_first_powered_flight/
www.gustave-whitehead.com
www.en.wikipedia.org/wiki/Gustave_Whitehead/

STRESZCZENIE

Rozwój celów immanentnych w »Uwagach filozoficznych o przedsiębiorstwie przemysłowym« autorstwa profesora Bocheńskiego

W artykule komentuję artykuł prof. J. M. Bocheńskiego *Uwagi filozoficzne o przedsiębiorstwie przemysłowym* i jego ważny rozdział końcowy pt. „Analiza dynamiczna”. Metodologicznie artykuł Bocheńskiego jest interesujący, ponieważ stosuje się w nim paradygmat teleologiczny do etyki biznesu. Omówione są w nim cele przedsiębiorstwa. Kluczowe pytanie wiąże się z określeniem głównego immanentnego celu przedsiębiorstwa przemysłowego. Bocheński odpowiada, że jest nim produkcja. Zgadza się, że przedsiębiorstwo przemysłowe produkuje i musi produkować, aby przetrwać. Ale w jakim sensie możemy nazwać produkcję celem? Zgłębiając zagadnienie próbuję znaleźć zasadę rozwoju, która wyjaśnia, w jakim sensie produkcja to nie tylko rzeczywistość przedsiębiorstwa, ale i jego cel immanentny (*finis operis*). Następnie identyfikuję i opisuję tę zasadę w kategoriach wynalazczości, innowacji i projektowania. Każde przedsiębiorstwo przemysłowe musi podporządkować się takiej zasadzie rozwoju, jeśli ma przetrwać — a rezultatem jest dobry produkt, będący pożądanym właściwym celem.

Key words: Józef M. Bocheński, przedsiębiorstwo przemysłowe, cele przedsiębiorstwa, cel immanentny, entelechia, dobry produkt