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**SOCIALLY NECESSARY  
IMPACT/TIME: NOTES ON THE  
ACCELERATION OF ACADEMIC  
LABOR, METRICS AND THE  
TRANSNATIONAL ASSOCIATION  
OF CAPITALS**

**Abstract:** *This article constitutes a contribution to the critique of the political economy of contemporary higher education. First, it begins with a presentation of the Marxist approach to acceleration and measure. Second, it presents the academic law of value as a socially necessary impact/time. Third, it conceptualizes a figure of capital that operates in the contemporary global higher education system (“transnational association of capitals”). Fourth, it describes the conditions of operation of merchant capital within higher education and explores the close links of global university rankings, metadata providers, and the academic publishing industry. As a fifth and final point, the analysis turns to Central Eastern Europe and the case study of Poland to demonstrate that, to function properly, the academic law of value needs to be imposed by political means, that is, through policy reforms that establish and legitimize the sets of parameters and criteria for the evaluation of academic labor. In conclusion, the argument suggests that the domination of merchant capital over academic labor, resulting in the latter’s ongoing and uncontrolled acceleration, cannot be overcome without addressing not so much the issue of private property but, first and foremost, the politically and socially defined metrics.*

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**Sociálně nezbytný impakt/čas:  
poznámky o zrychlení akademické  
práce, metrikách a transnárodních  
asociacích kapitálů**

**Abstrakt:** *Studie představuje příspěvek ke kritice politické ekonomie současného vyššího vzdělávání. V prvé řadě předkládá analýza marxistický pohled na zrychlení a měření; za druhé, konceptualizuje zákon akademické hodnoty jakožto společensky nezbytný impakt/čas. Za třetí, studie analyzuje charakter kapitálu, který operuje v současném systému globální akademie (“transnacionální asociace kapitálů”). Za čtvrté, studie popisuje podmínky fungování kupeckého kapitálu v akademii a zkoumá úzké propojení globálních žebříčků univerzit, poskytovatelů metadat a akademického publikačního průmyslu. Pátý a poslední bod se zaměřuje na středovýchodní Evropu, především na Polsko. Tímto předkládaná analýza dokládá, že proto, aby zákon akademické hodnoty fungoval, musí být zaveden politickými prostředky. To znamená skrze reformu politik, které ustavují a legitimizují soubor parametrů a kritérií pro hodnocení akademické práce. V závěru studie tvrdí, že dominance kupeckého kapitálu nad akademickou prací nemůže být překonána bez toho, aniž bychom se zaměřili především na politicky a sociálně definované metriky, spíše na otázku soukromého majetku.*

**Klíčová slova:** *globální žebříčky univerzit; Marx; akademická práce; metriky; zrychlení*

## Introduction

Control over and improving the effectiveness of academic labor are two long-term objectives in academia. As early as in 1910, Morris Llewellyn Cooke, Fredrick Taylor's disciple, wrote in his report on academic and industrial efficiency for the Carnegie Foundation that

the first university which will try conscientiously to obtain all the help which it is possible for it to obtain from the commercial and industrial world in a broad effort to increase its effectiveness will make a very strong plea to men of means who have money which they are willing to devote to educational purposes.<sup>1</sup>

Cooke was investigating Physics departments to establish whether the application of Taylor's methods of scientific management – that is, the strict division of labor and the reduction of time invested in discrete activities, including the most minute ones – hold any potential for raising productivity in teaching, research and laboratory work at American universities. His research was representative of efforts to move academic institutions out of the crisis caused both by their overall financial decline and their lack of credibility where the general public was concerned. A scientific strategy to raise productivity was seen as a route to the pockets of “men of means” who could possibly help universities stand back on their feet. Cooke proposed an industrial measure of effectiveness based on direct labor time. A Taylorist approach, however, was not the sole option.

The late 19th century witnessed the birth of methods of measurement of productivity developed in, and for, the autonomous field of science. In parallel with Cooke's efforts, psychologists such as James McKeen Cattell or B. G. Miner, from the late 19th century onwards, were addressing the issue of academic productivity from a markedly different angle. By counting references, articles or the numbers of “brilliant minds” employed by universities, they were comparing academic institutions or scholars, or preparing and developing rankings or indexes that would corroborate the scientific identity and contribute to the prosperity of Psychology as an academic discipline.<sup>2</sup>

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<sup>1</sup> Morris L. COOKE, *Academic and Industrial Efficiency. A Report to the Carnegie Foundation for the Advancement of Teaching*. New York: Carnegie Foundation for the Advancement of Teaching 1910, p. 8.

<sup>2</sup> Benoît GODIN, “On the Origins of Bibliometrics.” *Scientometrics*, vol. 68, 2006, no. 1, p. 109–133.

This happened long before the first papers were written by Alfred Lotka, Derek John de Solla Price or by the founding father of the “impact factor” indicator, Eugene Garfield; it also happened well before the emergence of global rankings of universities.<sup>3</sup> It was, however, these developments that set the stage for today’s widely adopted evaluation procedures that foster competition between individuals and among institutions in higher education.

The capability to set measure is a sign of sovereignty. To be able to measure equals to be able to control, as well as to shape and direct a given reality. As David Beer, following Foucault, recently indicated, “measurement has the dual role of both capturing and setting standards, it records and produces. As things are rendered measurable, so too are norms then more readily established.”<sup>4</sup> Measurement is therefore both a source and a ground for power. First, it allows to calculate, and when the calculation is done its result could be easily used as a norm, a yardstick, for the measured reality. Commensurate entities get more and more obliged to stick with the norm, to fulfill it. Measure could serve thus as the vehicle of an empty and homogenous, linear progress. The more emphasis is placed on measurement the higher the tempo of fulfilling the norm gets.

The history of successful and failed attempts to measure academic labor gives us a starting lesson on academia’s current predicament. The rather crude procedures proposed by Cooke were quickly rejected as they proved inefficient in the complex sphere of intellectual production with its strong attachment to autonomy. The university is not a factory<sup>5</sup>, and thus Taylorism, principally concerned with reducing the time span of each activity, cannot constitute a route to raising its productivity. Rather than the Taylorist organization of the workplace which dominated the best part of the 20th century, today it is bibliometrics that constitute a main reference point in addressing the increasing acceleration of academic labor and the higher education context.

The relationship between metrics, acceleration and academic labor lies at the core of the theoretical endeavor presented here. The article is intended as a contribution to the critique of the political economy of contemporary higher education. Through its notes form, which permits the opening of different “windows” on the issue of metrics on the global, national/local levels

<sup>3</sup> Benoît GODIN, “From Eugenics to Scientometrics: Galton, Cattell, and Men of Science.” *Social Studies of Science*, vol. 37, 2007, no. 5, p. 691–728.

<sup>4</sup> David BEER, *Metrics Power*. Basingstoke: Palgrave MacMillan 2016, p. 45.

<sup>5</sup> Gerald RAUNIG, *Factories of Knowledge, Industries of Creativity*. Los Angeles: Semiotext(e) 2013.

of academia, the analysis aims at a conceptualization of the academic law of value. The latter is seen as a mechanism responsible for regulating the tempo and the speed of academic labor in a higher education system subsumed under capital. The analysis incorporates an examination of the procedures and conditions of measurement where academic labor effectiveness is concerned. It first opens with a presentation of the Marxist approach, which informs the analysis from the outset, to acceleration and measure. Secondly, it turns to the academic law of value as a socially necessary impact/time. Third, it conceptualizes a figure of capital that operates in the contemporary global higher education system: the transnational association of capitals. Here, it is argued that it is the analysis of the merchant capital fraction as part of this transnational association that is crucial for understanding the capitalist acceleration of academic labor in its current realizations. Fourth, the analysis considers the conditions of operation of merchant capital in higher education and explores the close ties of global university rankings, metadata providers, and the academic publishing industry. As a fifth and final point, the argument turns to the context of recent higher education transformations in the countries of Central Eastern Europe with Poland as the main case study, in an effort to demonstrate that, to function properly, the academic law of value must be imposed by political means. This is witnessed in the waves of reforms through which the sets of parameters and criteria for the evaluation of academic labor are established (and frequently adapted and re-established). The article concludes with the proposition that the grip of merchant capital over academic labor – and thus the latter's ongoing and uncontrolled acceleration – cannot be overcome without addressing, first and foremost, the political and social use of metrics, considered here of greater importance to the issue of private property. In contending that capital may be able to resign from the private property form whereas it could never afford to give up its control of labor through measure, the final remarks advocate the development and adoption of new sets of metrics around a different axis: the common. Such a move is proposed as a transitional stage towards the full liberation of academic labor – a liberation that would require the fostering of a social individual within and beyond the academia.

### **On the acceleration of academic labor – a Marxist approach**

Academic acceleration is currently getting more and more scholarly attention. Noting the spread of managerialism, marketization, publish-or-perish pressures, constant evaluation, metricization, the development of online

teaching technologies, perpetual individual, local, national and global competition, commensurability, a relentless focus on performativity and so on, academics all over the world appear alarmed and suggest that academia needs to slow down. “In the corporate university”, write Maggie Berg and Barbara Seeber in their *Slow Professor Manifesto*, “power is transferred from faculty to managers, economic justifications dominate, and the familiar “bottom line” eclipses pedagogical and intellectual concerns. Slow Professors advocate deliberation over acceleration.”<sup>6</sup> Arguments that academics should act to restore the space for reflective dialogue<sup>7</sup>, to find slow hours within their daily or weekly agendas,<sup>8</sup> or to start looking through the lenses of *slow* in order to solve the problems that arise in an accelerated academia<sup>9</sup> are used repeatedly. Yet, as Filip Vostal has observed, “such one-dimensional perspectives [...] underestimate the subtle difference between the liberating/convenient features of acceleration and oppressive/involuntary speed-up”.<sup>10</sup> Vostal’s book, *Accelerating Academia*, is full of convincing examples drawn from the reality of contemporary British higher education and suggesting that whereas acceleration may be a source of discontent, it can also be either embraced or strategically played out by academics as an important and complex aspect of academic identity. It is not however my intention to engage here in the debate concerning the assessment of the phenomenon of academic acceleration or acceleration as such. I fully share Vostal’s critical accelerationist (deprived of naïve fascination with speed itself) stance that calls for a temporal autonomy of the academia, one “inclusive of a pace that institutions and their attendant actors would themselves determine: slow when needed and fast when convenient.”<sup>11</sup> Nonetheless it can be safely assumed that such autonomy will not emerge out of some automatic and dialectical movement of (relentless) historical development laws; nor will it be subjected to the free will of higher education actors. Several accounts of the noted academic speed-up mention some external forces or mechanisms

<sup>6</sup> Maggie BERG – Barbara SEEBER, *The Slow Professor: Challenging the Culture of Speed in the Academy*. Toronto: University of Toronto Press 2016, p. x.

<sup>7</sup> Heather MENZIS – Janice NEWSON, “No Time to Think. Academics’ Life in the Globally Wired University.” *Time & Society*, vol. 16, 2007, no. 1, p. 96 (83–98).

<sup>8</sup> Brian TREANOR, *Slow University: A Manifesto* [online]. 2008. Available at: <<http://faculty.lmu.edu/briantreanor/slow-university-a-manifesto/>> [cit. 20.3.2016].

<sup>9</sup> Maggie O’NEILL, “The Slow University: Work, Time and Well-Being.” *Forum: Qualitative Social Research*, vol. 15, 2014, no. 3, art. 14.

<sup>10</sup> Filip VOSTAL, *Accelerating Academia. The Changing Structure of Academic Time*. Basingstoke: Palgrave Macmillan 2016, p. 8.

<sup>11</sup> *Ibid.*, p. 198.

that keep acceleration in constant motion. At the very end of her analysis of the accelerated work pace of post-doctoral researchers in Life Science Ruth Müller posed an important question: “To whose benefits is it that we are racing?”<sup>12</sup> *Cui bono?* This is a question of critical relevance to recent debates on academic acceleration and to which I would like to attempt a preliminary answer in the pages that follow. Yet it is imperative to identify not just who is benefiting from the current academic “race” (a telling expression) but also its very conditions of possibility – what keeps this race in place and in motion.

To address the above questions I will employ a specific theoretical perspective associated with an emergent body of literature that might be described as critical or Marxist higher education research.<sup>13</sup> These analytic efforts are not so much interested in the place and function of higher education in, and for, the capitalist economy (including the one based on knowledge production) but rather in the consequences of the capitalist structuring of the higher education system when this is positioned another sector of production. The Marxian theoretical apparatus allows for the identification and problematization of diverse aspects of higher education through the lens of the Marxian theory of value (or propose to go beyond it) without losing sight of the horizon of alternatives, not only as regards the university subsumed under capital but capitalism more broadly. I want to consider my analysis as part of this stream of investigations, rooted mainly in the framework of Italian post-operaist or autonomist Marxism. The autonomist position, albeit in the context of research at the interface of education and technology, has been recently discussed by Richard Hall as one that “offers mechanisms through which one might challenge, resist and push-back against the marketization of public education, indentured study and the hidden curriculum that asserts the primacy of value-for-money, impact metrics, productivity and efficiency”.<sup>14</sup> A salient aspect of the autonomist stance is its emphasis, different from so many other theories addressing the so-called knowledge-based

<sup>12</sup> Ruth MÜLLER, “Racing for What? Anticipation and Acceleration in the Work and Career Practices of Academic Life Science Postdocs.” *Forum: Qualitative Social Research*, vol. 15, 2014, no. 3, art. 15.

<sup>13</sup> Krystian SZADKOWSKI, “Towards a University as an Institution of the Common: Critical and Marxist Higher Education Research in Context.” *Cadernos CIMEAC*, vol. 5, 2015, no. 1, p. 8–31.

<sup>14</sup> Richard HALL, “The Implications of Autonomist Marxism for Research and Practice in Education and Technology.” *Learning, Media and Technology*, vol. 40, 2015, no. 1, p. 121 (106–122).

economies, on the antagonistic (indeed, class) dimension of production and accumulation based on knowledge. In the emerging sectors of production, living labor (or, as Gigi Roggero<sup>15</sup> would call it, living knowledge) generates surplus autonomously, in the form of the common, and it is more and more artificially captured and expropriated by capital.

Treating higher education as a recently established, antagonistic sector of capitalist production *sensu stricto* assumes that the roots of the acceleration of academic labor (as of any other form of labor) need to be traced back to the involvement of capital. The more capital is involved with/in the sphere of science and higher education, the more metric and measurement systems develop and the more labor conducted within academic institutions, as well as the circulation of the academic labor outputs, accelerate. As David Harvey lucidly remarks: “the need to facilitate speed-up and acceleration of capital circulation in all its phases, shortening the turnover time of capital in production [...] have been imperatives in capital’s history”.<sup>16</sup> The question then is: how and in what conditions capital and academic labor meet within the global higher education system? And how does this meeting affect academic labor as such, as well as the tempo and rhythms of its conduct? I will use acceleration as a “useful diagnostic tool”<sup>17</sup> rather than take it as the object of inquiry itself.

As already said, Marxist analyzes of higher education focus mainly on the consequences of the capitalist structuring of the higher education system as yet another sector of production – a process that takes place through various mechanisms of subsumption of labor under capital.<sup>18</sup> This enables capital to forge a social relationship with the external, sectorial reality of production. In the framework established through this process, capital is transforming and adapting the newly dominated productive realm to the needs of another process: that of its own valorization. The starting point is nearly always capital’s need to absorb a pre-existing production process. Capital is forced to take as its starting point a specific articulation of the

<sup>15</sup> Gigi ROGGERO, *The Production of Living Knowledge: The Crisis of the University and the Transformation of Labor in Europe and North America*. Philadelphia: Temple Press 2011.

<sup>16</sup> David HARVEY, *Seventeen Contradictions and the End of Capitalism*. Oxford: Oxford University Press 2014, p. 99.

<sup>17</sup> Benjamin NOYS, *Malign Velocities: Accelerationism & Capitalism*. Winchester: Zed Books 2014, p. 24.

<sup>18</sup> Krystian SZADKOWSKI, “Towards an Orthodox Marxian Reading of Subsumption(s) of Academic Labour under Capital.” *Workplace: A Journal for Academic Labor*, vol. 28, 2016, forthcoming.

organization of production of the sector it wishes to subsume. For this to happen, capital must take as its point of departure mechanisms that govern the dynamics of the specific sector. Moreover, it must present them as its own processes. The pre-capitalist mode of production of science is one of the most solidly articulated, with its prestige distribution mechanisms, internal rules and hierarchy, communal forms of knowledge dissemination and “communist” ethos. Its basic elements could be described with the use of the tools developed by followers of Pierre Bourdieu and his analysis of fields of practices.<sup>19</sup> However, capital needs to enter and rearticulate these economies of practices each time it wants to subsume certain fractions of labor. This is ultimately why a simple re-application of the industrial measure, with its sole reliance on direct labor time in constant reference to socially necessary labor time, offers little help when the objective is to control and direct academic labor as well as raise its productivity.

### **The law of value and the nature of academic speed-up**

One of the main problems discussed in recent Marxist debates over the issue of expansion of capital to immaterial and biopolitical sectors of production (that is, production of affects, ideas, knowledge, codes, symbols etc.) is whether this process undermines the Marxian labor theory of value, cancelling the “law of value” as a self-regulatory rule of capital and making the whole of Marxist theory obsolete. Some brief clarifications are needed here. On the grounds of the labor theory of value, “a commodity has value only because of the abstract labor that has materialized in it. This is measured by the quantity of the value forming substance that object contains”.<sup>20</sup> That said, the novelty of Marx’s approach was a construction of a value theory that is based on social forms rather than on direct individual inputs. Its basis is the reference to the law of value – that is, a claim that the value of a given commodity equals to a socially necessary labor time needed for its production. Marx defines the main concept of this law in *Capital* Volume One as follows: “Socially necessary labor time is then the labor time required to produce any use value under the condition of production normal for a given society

<sup>19</sup> Pierre BOURDIEU, *The Field of Cultural Production*. New York: Columbia University Press 1993; Richard MÜNCH, *Academic Capitalism: Universities in the Global Struggle for Excellence*. London: Routledge 2014.

<sup>20</sup> Michael NEARY – Glenn RIKOWSKI, “Time and Speed in the Social Universe of Capital.” In: CROW, G. – HEATH, S. (eds.), *Social Conceptions of Time: Structure and Process in Work and Everyday Life*. Basingstoke: Palgrave Macmillan 2002, p. 56 (53–65).

and with the average degree of skill and intensity prevalent in that society.”<sup>21</sup> Consequently, as Mike Neary and Glenn Rikowski have rightly pointed out, “socially necessary labor time becomes the measure of the speed of human activity: the speed of life”.<sup>22</sup> For the same reason, if the socially necessary labor time is constantly reduced by the coercive laws of competition, the pace of labor increases accordingly. This is a capitalist mechanism of all-pervasive acceleration in its purest form. It should be assumed that it expands together with the domination of capital on further realms of production.

Yet, as Hardt and Negri assert,

the critique of political economy, too, including the Marxist tradition, has generally focused on measurement and quantitative methods to understand surplus value and exploitation. Biopolitical products, however, tend to exceed all quantitative measurement and take common forms.<sup>23</sup>

This implies that intellectual production, the basis of the academic endeavor, cannot be effectively measured through the amount of direct labor time spent in production. And this is, and has been, evident when one refers to the realm of higher education. For this reason, those who attempted to develop the measurement procedures for science were urged to go beyond the project of crude Taylorism. The invention of the bibliometrics analysis of scientific production was one of the first “successful” attempts to quantify quality and the social dynamics of a given field of production.<sup>24</sup>

A recent piece by Ruth Müller shed some light on this issue, taking it back to the context of the discussion on academic acceleration. According to Müller, the “*accelerated pace* of academic work refers to an *increase of countable academic output per predefined unit of time*, e.g. per year, such as data produced, articles written [emphasis in original]”.<sup>25</sup> However, she also accurately diagnosed that the mere provision of quantified outputs is not enough to guarantee success in the academic world of global competition.

<sup>21</sup> Karl MARX, *Capital*. Volume 1. London: Penguin 1976, p. 129.

<sup>22</sup> NEARY – RIKOWSKI, “Time and Speed,” p. 57.

<sup>23</sup> Michael HARDT – Antonio NEGRI, *Commonwealth*. Cambridge, MA: Harvard University Press 2011, p. 135.

<sup>24</sup> It is not surprising that the procedures of citation counting created a basic reference for the construction of Google PageRank – the algorithm responsible for valorization of contemporary digital production. See Matteo PASQUINELLI, “Google’s PageRank Algorithm: A Diagram of Cognitive Capitalism and the Rentier of the Common Intellect.” In: BECKER, K. – STALDER, F. (eds.), *Deep Search*. London: Transaction Publishers 2009, p. 152–163.

<sup>25</sup> MÜLLER, “Racing for What?” *n.p.*

What mattered for the post-doctoral researchers she interviewed was not only the generation of more and more volumes of published results in a year but the publication of these results in the “proper” journals (“prestigious” journals with a calculated “impact factor”), an achievement that would allow a post-doctoral researcher to increase their own impact/prestige or, simply, to increase the chances of securing a more or less permanent academic post. This illustrates the specificity of academic production. The measure of academic value is not just socially necessary calculable output per unit of time (e.g. five articles per year), but also “impact per time ratio”. This is how the law of value operates in the sphere of higher education. Academic production is bound to socially necessary impact/time – that is, the time required to produce an use value of a certain impact (a published output that counts within a given national or institutional evaluation procedure) under the conditions of production that are considered “normal” for a given higher education system and with the average degree of skill and intensity prevalent in the working process of that system.

In the section that follows this paper remarks on the global and national mechanisms used for establishing a socially necessary impact/time and the tools of its measurement in the academic field. The emphasis is on tracing the roots of academic acceleration in the process of subsumption of academic labor under what would be defined as a merchant fraction of transnational association of capitals in higher education.

### **The transnational association of capitals and its relation to higher education**

So far I have stressed the role of proper metrics and measurement in control of a given sector of production, connecting it with the required establishment of norms and the continuous pressure inherent in their fulfillment. I also referred to a broad Marxist theoretical framework that sees the ongoing acceleration of academic labor as a symptom of the contemporary restructuring of higher education as a sector of capitalist production. However, unlike the industrial sector, the academic sector is driven by a dynamic of productivity based more on the maximization of prestige/impact rather than on the reduction of the time-span of activities that lead to calculable outputs, making apparent the need for a different set of measurement criteria. This section of the article tries to answer this question: how can the figure of capital be conceptualized in higher education?

In the higher education sector, capital needs to be understood, first and foremost, as what Richard Hall has called the “transnational association of capitals”.<sup>26</sup> As national policies concerning the sector are subjected to powerful influences of transnational organizations, while the world economy is undergoing a process of globalization, capital is being transformed as well. This association entails, and implicates, according to a Marxian schema, three different forms of capital. First, productive capital – that is, capital located directly in a production site within the higher education sector. This includes private for-profit universities, such as the spectacular example of the University of Phoenix,<sup>27</sup> or capital involved in the transnational for-profit activities of public and private not-for-profit universities that open their offshore campuses all over the world.<sup>28</sup> Second, money/finance capital, that is capital invested in financial operations that bring return in the form of interest. Here, we can find, for example, banks offering commercial student loans and thus parasiting on the sector<sup>29</sup> or the financial operations of the actors investing in the market from within the sector, like managers of university endowment funds.<sup>30</sup> Third, merchant capital that may consist of different types of commercial actors providing their services to universities, but which in this article will be understood mainly in relation to the large, international corporations of oligopolistic academic publishers.<sup>31</sup>

The three factions of the transnational association of capitals listed above could be located within the schema of an ideal-type structure of layers of the higher education system as proposed by Simon Marginson (see *Figure 1* below).

<sup>26</sup> Richard HALL, “On the Abolition of Academic Labour: The Relationship between Intellectual Workers and Mass Intellectuality.” *tripleC*, vol. 12, 2014, no. 2, p. 822–837.

<sup>27</sup> David W. BRENNEMAN, “The University of Phoenix: Icon of For-Profit Higher Education.” In: BRENNEMAN, D. W. – PUSSER, B. – TURNER, S. E. (eds.), *Earnings From Learning: The Rise of For-Profit Universities*. New York: SUNY Press 2006, p. 71–92.

<sup>28</sup> Nigel HEALEY – Lucy MICHAEL, “Towards a New Framework for Analyzing Transnational Education.” *Higher Education Policy*, vol. 28, 2015, no. 3, p. 369–391.

<sup>29</sup> Andrew MCGETTIGAN, *The Great University Gamble: Money, Markets and the Future of Higher Education*. London: Pluto Press 2013.

<sup>30</sup> Brendan CANTWELL, “The New Prudent Man: Financial-Academic Capitalism and Inequality in Higher Education.” In: SLAUGHTER, S. – TAYLOR, B. J. (eds.), *Higher Education, Stratification, and Workforce Development: Competitive Advantage in Europe, the US, and Canada*. Dordrecht: Springer 2016, p. 173–192.

<sup>31</sup> Wilhelm PEEKHAUS, “The Enclosure and Alienation of Academic Publishing: Lessons for the Professoriate.” *tripleC*, vol. 10, 2012, no. 2, p. 577–599.

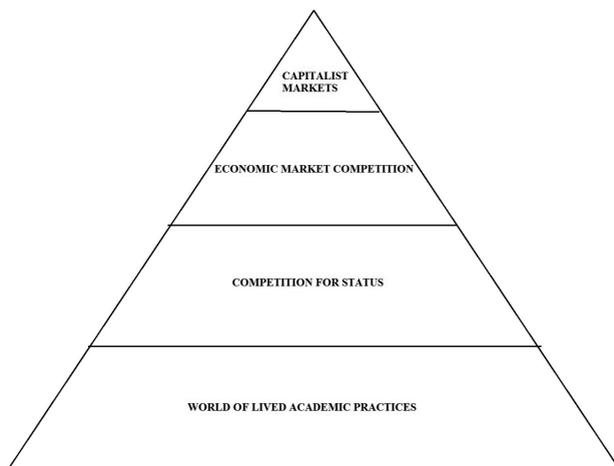


Figure 1: *Ideal-type structure of layers of higher education system.*

Source: Simon MARGINSON, "Competition and Markets in Higher Education: A "Glonacal" Analysis." *Policy Futures in Education*, vol. 2, 2004, no. 2, p. 182 (175–244).

The question that Marginson<sup>32</sup> has been (unsuccessfully, as I argue) trying to answer for years concerns layers or aspects of the reality of higher education that are determinant, in the last instance, in relationship to all others. The activities of productive capital take place at the very top of Marginson's pyramid, where the private for-profit institutions conduct their operations, or where public institutions act on a transnational scale, aiming for revenue generation. Financial capital penetrates all the spheres where access to studies is conditioned by tuition fees and where the private financial institutions provide assistance in the form of loans and student debt. The consequences of the activity of merchant capital (defined here primarily as capital invested in large academic publishing projects) penetrate all the layers of Marginson's ideal-type structure of the higher education system. Merchant capital mediates the regulation of status in science, especially when global rankings of academic institutions attribute prestige primarily on the grounds of publica-

<sup>32</sup> Simon MARGINSON, "The Impossibility of Capitalist Markets in Higher Education." *Journal of Education Policy*, vol. 28, 2013, no. 3, p. 353–370.

tion efficiency of university employees. Commercial activities are a perfect example of for-profit actions of a strictly capitalist character, like making acquisitions and/or the transformation of journals originally created, developed and maintained by members of the academic community. Finally, the activity of merchant capital is of fundamental importance to the everyday experience of research practice, publishing and education. But significantly, standards determined by the need to valorize merchant capital in the sphere of academic publishing change the way and speed of writing and thinking on the most basic level of academic everyday practice and experience. Furthermore, in the actuality of capitalist production in the higher education sector, it is only in the mediation of merchant capital's activities that the other two capital fractions can calculate and legitimize their value (which is based on, or is highly related to, status/prestige).

To sustain the processes of self-valorization capital needs to impose its control over the entire global system of higher education and not just over single academic institutions. From the post-operaist Marxists perspective, hegemonic form of capital is found to be increasingly located outside the direct production process.<sup>33</sup> At present, this is evident in the global higher education sector where merchant capital dominates producers following its successful instrumentalization of the core aspect of the academic field – that is, the internal mechanisms regulating the distribution of status and prestige. In this way, merchant capital's activities are the main reference points of the “impact” aspect of the academic law of value. For this reason, an analysis of the conditions of operation of the merchant capital fraction as part of a transnational association is crucial for understanding the capitalist acceleration of academic labor.

### **Rankings, metrics and metadata providers: conditions for the control of oligopolistic academic publishers over academic labor**

Having argued that the “transnational association of capital” constitutes a strong, immediate influence on contemporary higher education system, in this and the following section I will now consider both the global/transnational and national conditions for the smooth functioning of the merchant capital fraction and for its contribution to the acceleration of academic labor. I first turn to merchant capital's close relation to the emergence of global university rankings.

<sup>33</sup> ROGGERO, *Production of Living Knowledge*.

Since their very first appearance in 2003, there has been a constant, voluminous stream of writing on global university rankings. Although a thorough review of the existing literature cannot be undertaken here, it must be emphasized that, at present, it is the global rankings of universities that not only universalize the coercive laws of competition but also stimulate and develop the technology of value formation within the system of global production of academic knowledge. Rankings not only create a single centralized circuit that regulates the institutional prestige in higher education but portray it as “the only one possible”.<sup>34</sup> As suggested by Marginson,<sup>35</sup> rankings contribute to the establishment of the two-fold system, including the “ordinal”, responsible for the vertical alignment and evaluation of higher education institutions, and the “cardinal” one, responsible for the “translation of these systems onto mathematicised economy, in which status acts as calculable standard of value, allowing the existence of market prices and status transactions”.<sup>36</sup> In Marginson’s words, “rank ordering settles all questions of value”<sup>37</sup> in higher education. The measure (or metrics set) that rankings use supports the mechanism that enforces and strengthens the subsumption of academic labor under the merchant fraction of the transnational association of capital. The role of global university rankings plays a crucial role in the universalization of metrics in the global academic field. Rankings beating heart lays at their close relationship with the bibliographical indexes used for the generation of metadata collected in commercial databases such as Web of Science of Thomson Reuters<sup>38</sup> or Elsevier’s SCOPUS. The appropriate “value form” for the production of academic knowledge, as well as the prestige/impact component of the academic law of value, needs to be traced back to this relation.

<sup>34</sup> Simon MARGINSON, “University Rankings and the Knowledge Economy.” In: PETERS, M. A. – MARGINSON, S. – MURPHY, P. (eds.), *Creativity and the Global Knowledge Economy*. Frankfurt am Main: Peter Lang 2009, p. 185–216.

<sup>35</sup> MARGINSON, “University Rankings and the Knowledge Economy,” p. 204.

<sup>36</sup> *Ibid.*

<sup>37</sup> MARGINSON, “The Impossibility of Capitalist Markets,” p. 364.

<sup>38</sup> On Monday 11 July 2016 Thomson Reuters Corporation announced it had agreed to sell its intellectual property and science business (that means all the bibliometric services, with Web of Science included) to private-equity funds affiliated with Onex Corporation and Baring Private Equity Asia for 3.55 billion American dollars in cash. This article was drafted long before that, for this reason it refers to factual state from before this sale.

To dominate and control a particular sphere of activities, capital has to establish a system of measuring of labor inputs and outputs.<sup>39</sup> In different areas subsumed under capital, measure is introduced in order to unify the varieties of activities into a single abstraction, to control them, and, most importantly, to distinguish the productive from the unproductive ones. Capitalist production is a high form of abstraction and abstracting.<sup>40</sup> For a sector of material, industrial production, an abstract measure refers to a single unit of homogenous time with a permanent relation to socially necessary labor time as its abstract framework. For the general sphere of immaterial and biopolitical production (academic production included), measure refers to the scale and intensiveness of social relationships as established by the activity in question. For higher education in particular, measure be grasped in terms of prestige/impact/citations – with a constant reference to socially necessary impact/time as defined by a wide set of mechanisms (usually state-controlled and established for each system alone, but alongside the rise of global rankings, also valid in the entire global sphere of higher education). Mediated through the global university rankings criteria Thomson Reuters databases create a template for the measurement of the value of social relations in global academia, at the same time, they are used as a strict point of reference during national and institutional processes of evaluation of higher education systems, institutions and individual academics. This process reveals the twofold nature of contemporary metadata being, at one and the same time, a “source of surplus value and an apparatus of social control”.<sup>41</sup> It brings the two regimes together: the economic and the political. Metadata thus, as Matteo Pasquinelli has rightly observed, becomes the “measure of the value of social relations” and a mechanism of social control.<sup>42</sup>

<sup>39</sup> This process, with reference to British higher education, has been greatly depicted in Massimo DE ANGELIS – David HARVIE, “‘Cognitive Capitalism’ and the Rat-Race: How Capital Measures Immaterial Labour in British Universities.” *Historical Materialism*, vol. 17, 2009, no. 3, p. 3–30.

<sup>40</sup> Matteo PASQUINELLI, “The Labour of Abstraction: Seven Transitional Theses on Marxism and Accelerationism.” *Filip Magazine*, 2014, no. 19. Available at: <<http://fillip.ca/content/the-labour-of-abstraction>> [cit. 25. 3. 2016]

<sup>41</sup> Claudio CELIS, “The Machinic Temporality of Metadata.” *tripleC*, vol. 13, 2015, no. 1, p. 101–111.

<sup>42</sup> Matteo PASQUINELLI, “Italian Operaismo and the Information Machine.” *Theory, Culture & Society*, vol. 32, 2015, no. 3, p. 63–64 (49–68).

Capital is no longer able to organize a top-down cycle of cooperation and to deliver its schemas.<sup>43</sup> In the academic field, capital's efforts have to concentrate on the establishment and universalization of criteria of measurement for global academic labor – that is, on the organization of the processes of *capturing* rather than producing value. This is an immensely complicated task. A system of interconnected mechanisms of global rankings based on bibliometric tools metadata extraction, as seen from the perspective of publishing capital, is a complex instrument devised to enable access to value originally generated elsewhere. We see then that the merchant fraction of capital in higher education gets the opportunity to carry out processes of valorization through its capability to set, and oversee, the conditions for the functioning of the entire global system of institutions. This global system comprises the more important, in terms of productive capacity, “centers” and the less relevant, yet rather important when it comes to consumption, “peripheries”. In this intricate and dynamic arrangement, it is measure that enables social, and socially produced, heterogeneous wealth to appear as “value” in the eyes of the capital. The mechanisms for counting enable heterogeneous social energy to be channeled to the production of what *can* be measured and, ultimately, presented as homogeneous value.

The consequences of massive globalized competition in higher education are felt by everyone in the global sector. The vast majority of rankings focus almost exclusively on the publication performance of staff employed at the assessed institutions (such as in Academic Ranking of World Universities, National Taiwan University Ranking or Centre for Science and Technology Studies Leiden Ranking), while in many other rankings the productivity indicators are at least among the significant criteria (as in Times Higher Education World University Rankings, QS World University Rankings or Webometrics). In most cases, the providers of data that create the basis for the evaluation of these results are private companies, among which the most effective and dominant has been the Thomson Reuters company.<sup>44</sup> However, it is not only important who provides the data for the global comparisons but also who controls the journals from which the data is extracted – that is, who controls the journals that are visible within the database of Web of Science, and especially the two most important journal indexes: Science

<sup>43</sup> Gigi ROGGERO, “Five Theses on the Common.” *Rethinking Marxism*, vol. 22, 2010, no. 3, p. 357–373.

<sup>44</sup> However, with the recent shift (2015–2016) of World Universities Rankings of Times Higher Education to SCOPUS as a main data source we can expect more developments in this field.

Citation Index Expanded (SCI) and Social Science Citation Index (SSCI). The phenomenon in question here – namely, the interconnection between the academic journals publishing market and global rankings approached in relation to the problems of academic labor – has rarely been addressed in the literature. The first of these issues has so far been subject to an analysis drawing on Marx’s concept of alienation,<sup>45</sup> accumulation by dispossession,<sup>46</sup> or the commodification of the commons.<sup>47</sup> In parallel, global rankings are criticized primarily for their methodological shortcomings and arbitrary selection of criteria, for strengthening the hegemony of American and British universities and for reproducing the existing hierarchy between regions and institutions.<sup>48</sup> What has been rarely attempted is an examination of the development of the academic journals indexes composed by a private companies such as Thomson Reuters (SCI, SSCI) that gives the dynamic of the merchant capital fraction (as part of the transnational association) the opportunity to unfold. Here, the alienating copyright form pales in significance when compared to the control over the reproduction of academic status through a universalized complex metrics system. It is the latter that creates the indispensable conditions for the academic publishers’ oligopoly and domination over academic labor.

As shown in the two tables below (*Table 1* and *Table 2*), these indexes are dominated by a handful of major academic publishers.<sup>49</sup> In this way, the global race for prestige and institutional status, the main medium of which are nowadays the global rankings of universities, is instrumentalized by merchant capital while the labor of academic staff employed in institutions that participate in this ever accelerating contest is increasingly (as a side effect of competition) subsumed under the interest of major players on the publishing market. The imperative of merchant capital is to secure the constant and growing supply of valuable scholarly manuscripts. The global competition between higher education systems and institutions ensures that at least around 800 of the most productive institutions in the world should

<sup>45</sup> PEEKHAUS, “The Enclosure and Alienation.”

<sup>46</sup> David HARVEY, *The New Imperialism*, Oxford: Oxford University Press 2003.

<sup>47</sup> Ian PIRIE, “The Political Economy of Academic Publishing.” *Historical Materialism*, vol. 17, 2009, no. 3, p. 31–60.

<sup>48</sup> Simon MARGINSON, “Global University Rankings: Some Potentials.” In: KEHM, B. – STENSAKER, B. (eds.), *University Rankings, Diversity, and the New Landscape of Higher Education*. Rotterdam: Sense Publishing 2009, p. 85–96.

<sup>49</sup> In case of SCOPUS this dominance of the few main academic publishers is not so drastically visible. However the ongoing tendency to oligopolization of the field is clear and there is no evidence that it could weakened anyhow.

be interested in seeing their employees generating input for these specific journals. After crossing a certain level of intensity this imperative enforces upon academic labor the typical capitalist logic of “production for production’s sake”, with its well-documented phenomenon of so called “salami-slicing” or selling “least publishable units”.

Publisher	Number of journals included	Market share (%)
Wiley-Blackwell	769	8.90
Elsevier	1417	16.42
Sage	147	1.70
Taylor & Francis	137	1.59
Oxford University Press	121	1.40
Cambridge University Press	89	1.03
Springer	1088	12.60
Total	8632	100
Biggest players	3768	43.65

Table 1: *Composition of Thomson Reuters Science Citation Index Expanded by major academic publishers and the share of the journals they control.*

Source: Thomson Reuters (2014) *Science Citation Index Expanded*.

Publisher	Number of journals included	Market share (%)
Wiley-Blackwell	416	13.32
Elsevier	307	9.83
Sage	323	10.34
Taylor & Francis	457	14.63
Oxford University Press	97	3.11
Cambridge University Press	105	3.36
Springer	227	7.27
Total	3123	100
Biggest players	1932	61.86

Table 2: *Composition of Thomson Reuters Social Science Index by major academic publishers and the share of the journals they control.*

Source: Thomson Reuters (2014) *Social Science Citation Index*

The academic publishing market is estimated to be worth around \$10 bn. dollars annually.<sup>50</sup> Yet the oligopoly exercised by the largest publishers of academic journals can be seen to constitute a threat. Using a database of 45 million documents indexed in the Web of Science over the period 1973–2013, Larivière, Haustein and Mongeon<sup>51</sup> analyzed the share of output published by the largest players on the publishing market (Reed-Elsevier, Wiley-Blackwell, Springer, and Taylor & Francis), showing that in 2013 the five largest players on the market over the past two decades appear to control more than half of all published articles in some areas of scholarship. The ongoing oligopolization, through continuous mergers between the largest players, can gradually lead to the constitution of a monopoly. This process, witnessed across disciplines and identified fields of research, can be observed in *Figure 2* and *Figure 3* below.

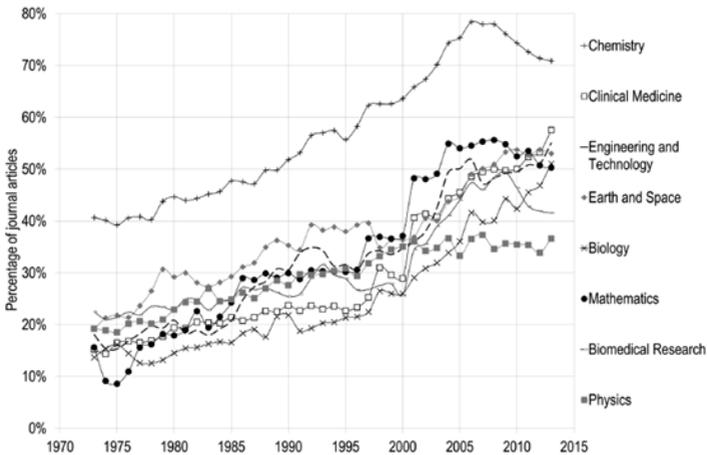


Figure 2: Percentage of papers published by the five major publishers, by discipline in the Natural and Medical Sciences, 1973–2013.

<sup>50</sup> See Mark WARE – Michael MABE, *The STM Report: An Overview of Scientific and Scholarly Journal Publishing*. The Hague: International Association of Scientific, Technical and Medical Publishers 2015. Available at: <[www.stm-assoc.org/2015\\_02\\_20\\_STM\\_Report\\_2015.pdf](http://www.stm-assoc.org/2015_02_20_STM_Report_2015.pdf)> [cit. 15. 8.2016].

<sup>51</sup> Vincent LARIVIÈRE – Stefanie HAUSTEIN – Philippe MONGEON, “The Oligopoly of Academic Publishers in the Digital Era.” *PLOS ONE*, vol. 10, 2015, no. 6, p. 1–15.

Source: Vincent LARIVIÈRE – Stefanie HAUSTEIN – Philippe MONGEON, “The Oligopoly of Academic Publishers in the Digital Era.” PLOS ONE, vol. 10, 2015, no. 6, e0127502.

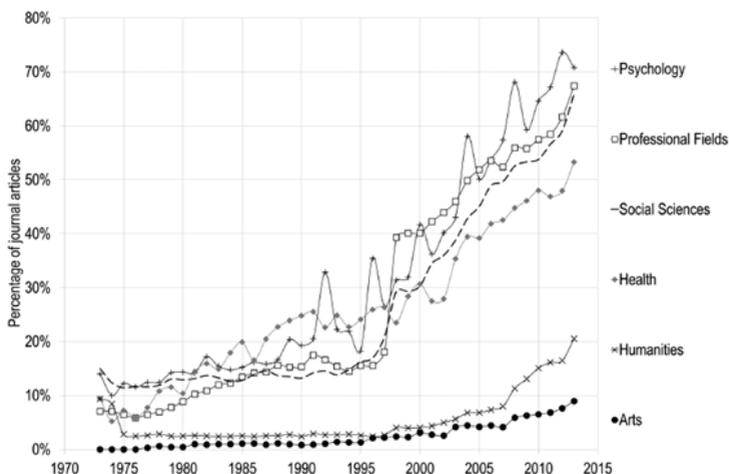


Figure 3: Percentage of papers published by the five major publishers, by discipline in the Social Sciences and Humanities, 1973–2013.

Source: Vincent LARIVIÈRE – Stefanie HAUSTEIN – Philippe MONGEON, “The Oligopoly of Academic Publishers in the Digital Era.” PLOS ONE, vol. 10, 2015, no. 6, e0127502.

The profitability of the academic publishers’ venture can be proven when shifting attention to the amount of operating margins that the biggest publishers are acquiring. That is between 20–30% or even 40%.<sup>52</sup> For

<sup>52</sup> Christian Fuchs and Marisol Sandoval calculated the „rate of profit” ratio on the base of financial data of selected academic publishers for financial year 2012 (for Springer 2011). It was on average 18.2%” Reed-Elsevier 21.7%; Springer 20.2%; Taylor & Francis 24.9%; Wiley-Blackwell 12.4%; Wolters Kluwer 15.2%. See. Christian FUCHS, Marisol SANDOVAL, “The Diamond Model of Open Access Publishing: Why Policy Makers, Scholars, Universities, Libraries, Labour Unions and the Publishing World Need to Take Non-Commercial, Non-Profit Open Access Serious”, *triple C* vol. 13, 2013, no. 2, p. 429 (428–443). Beverungen and colleagues, who quote different data (for 2010 indicating profit margins at the level of 35.7% for

comparison, in the mining industry the same margins hover around 6.5%, the big pharmaceutical companies hardly reach the level of 16%, while the world's largest subcontractor of electronic products, the company Foxconn, in 2012, achieved an operating margin of 0.9%. This profit margin level of the merchant fraction in the transnational association of capitals is possible thanks to the unpaid labor of academics and higher education institutions across the globe. Such unpaid labor includes the free delivery and interpretation to private publishers of the results of publicly funded research, free participation in peer-review processes, "personally covered" proofreading and copyediting costs (especially yet not exclusively as regards academics from the "periphery"), and so on.

At this point, we can thus say that the ongoing and intensifying global competition among higher education institutions is underwritten not only by the constant concentration of resources to a small elite of institutions, but also by a centralization of the academic field and a takeover of the principal status-regulating tools by the oligopoly of academic publishers. Publishing processes, once fully in the hands of the academic community, today contribute to the valorization-drive mechanisms that engender the dramatic speed-up of academic labor. To grasp why most academics appear willing to offer the results of publicly funded research for free to the commercial academic publishers, the nationally organized procedures of evaluation of research need to be put under scrutiny. It is the nation-state's intervention that ensures the political imposition of the academic law of value upon academic labor.

### **The political imposition of the academic law of value: the Polish national reforms of higher education in context**

More and more national governments wish to see their public universities performing well in the global university rankings. Greatest emphasis is placed on the adaptability of the governed systems to the strict criteria used by the rankings compilers. While global university rankings stimulate com-

Reed Elsevier and 33.9% for Springer) refer also to the well-known illuminating expertise on the nature of academic publishing market by Deutsche Bank: "We believe the publisher adds relatively little value to the publishing process. We are not attempting to dismiss what 7,000 people at REL do for a living. We are simply observing that if the process really were [sic] as complex, costly and value-added as the publishers protest that it is, 40% margins wouldn't be available." See. Armin BEVERUNGEN – Steffen BÖHM – Christopher LAND, "The Poverty of Journal Publishing." *Organization*, vol. 19, 2012, no. 6, p. 931 (929–938).

petition, reproduce the academic and institutional hierarchies, as well as set the value of higher education worldwide, higher education reforms on the national level translate the metrics that feed merchant capital into more localized and manageable evaluation procedures necessary for sustaining (and legitimizing) adequate levels of competition among institutions as well as among individuals. Even if sometimes indirectly, national governments play a key role in enforcing the academic law of value upon academic labor. This section looks at this “national level” by taking as its case study procedures of evaluation of scientific units in Poland<sup>53</sup> and the unintended consequence of the speed-up of individual academic labor. Material presented in this section should not be presumed as empirically exhaustive but as facilitating the broader theoretical undertaking of this study, preoccupied as it is with the role of metrics in the acceleration of academic labor.

Poland can provide a useful case study because of its performance-based research funding system, one grounded in the *ex-post* evaluation of academic outputs. This allows for the observation of precisely the direct relationship between prescribed measures, competition, produced output and the tempo and intensity of academic labor. As with some countries in Europe (e.g. Norway, Denmark, Finland or the Czech Republic), the Polish evaluation system (Comprehensive Review of Scientific Units) relies heavily on the use of bibliometric indicators. Similar to the Czech Republic, and in contrast to evaluation mechanisms in the countries of Western Europe (with the UK’s Research Excellence Framework [REF] constituting the best-known example), the Polish evaluation system involves very limited use of peer review. Rather, it prioritizes a quantitatively favoring of publications in English language and published in the journals from specific databases.<sup>54</sup> This very limited quantitative approach to the measurement of academic quality, while not making Poland an exceptional case, brings forth the important relations between metrics and the acceleration of academic labor. The recent Polish reforms of higher education (2009–2014), through which this system of evaluation has expanded, render visible the crucial role of the state in the subsumption of academic labor under merchant capital.

<sup>53</sup> The full description of the procedures, as well as the critique of its main weaknesses of the system could be found in a forthcoming lengthy study, see. Emanuel KULCZYCKI, “Assessing Publications Through a Bibliometric Indicator: The Case of Comprehensive Evaluation of Scientific Units in Poland.” *Research Evaluation*, forthcoming in 2016.

<sup>54</sup> See Barbara GOOD – Niki VERMEULEN – Brigitte TIEFENTHALER – Erik ARNOLD, “Counting Quality? The Czech Performance-based Research Funding System.” *Research Evaluation*, vol. 24, 2015, no. 2, p. 91–105.

National states, at least in Europe, have governed through numbers since the eighteenth century.<sup>55</sup> But what numbers the state relies upon remains important. If we concur that in contemporary capitalism the university (in its most developed form) is a laboratory for the “infometrics society”,<sup>56</sup> then the Polish neoliberal(ized) university should be understood as a violently experimental space, where the crudest quantitative measures of performance are applied to the heterogeneity of academic living labor. Globally established metrics are imposed on academic labor politically through the sets of national reforms of higher education systems. What is experienced as the acceleration of academic labor is the consequence of operation of imposed academic law of value:<sup>57</sup> establishing and functioning of socially necessary impact/time of academic labor commensurate on a global scale that academic works have comply with.

Two main trends have shaped the present condition of all Polish universities. First, the rapid educational massification witnessed post-1989 across the sector (“the expansion era” of 1990–2005) connected with what Marek Kwiek has described as the de-institutionalization of the university’s research mission and academic rules and habits, as well as a re-orientation towards teaching-intensive institutional strategies. This was implemented in all areas of study that are cheap to run and expand – that is, mainly in the humanities, pedagogical sciences and the fields of study grouped as social science. The second trend is a demographic decline (a “contraction era” experienced since 2005 and predicted to last until 2025) that prevents the strategies of “reinstitutionalization”<sup>58</sup> of the research mission from achieving a lasting effect. In addition, this demographic decline has instigated a turn – supported and encouraged by the Polish Ministry of Science and Higher Education (MoSHE) – towards more research-intensive institutional strategies and a pressure for the internationalization of activities, thus boosting the ongoing process of diversification shaping the inner structure of the system (picking up “winners” suitable for the global race over academic

<sup>55</sup> Nikolas ROSE, “Governing by Numbers: Figuring Out Democracy.” *Accounting, Organization and Society*, vol. 16, 1991, no. 7, p. 673–692.

<sup>56</sup> Paolo DO, “L’università: un laboratorio per la infometrics society?” [online]. 2015. *Return on Academic Research (ROAR)*. Available at: <<http://www.roars.it/online/luniversita-un-laboratorio-per-la-infometricsociety>> [cit. 25. 3.2016]

<sup>57</sup> Massimo DE ANGELIS, “Value(s), Measure(s) and Disciplinary Markets.” *The Commoner*, 2005, no. 10, p. 66–86.

<sup>58</sup> Marek KWIEK, “Changing Higher Education Policies: From Deinstitutionalization to Reinstitutionalization of the Research Mission in Polish Universities.” *Science and Public Policy*, vol. 39, 2012, no. 5, p. 641–654.

prestige). Both these trends remain important in forming the background for the consecration of journals from Thomson Reuters indexes. At the same time, both trends generate obstacles to the successful realization of a more research-intensive higher education system on the national level.

In Poland, the consecration of Thomson Reuters indexes is seen as a means for the “reinstitutionalization” of a research mission in specific parts of academic life and for the ongoing diversification of the system, as well as for the accumulation of competitive advantages for the system as a whole in the global academic race for prestige. The wave of reforms between 2009 and 2014 (a process expected to resume in 2017) saw as one outcome the compilation of three lists of academic journals and the constitution of a “points system” applicable to individual publications. List A, with the journals from SSCI and SCI where publications get from 15 up to 50 points; List C, based on the already defunct European Reference Index for the Humanities – with points between 10 and 25; and List B, Polish journals “without impact factor” and ranked between 1 up to 10, and since December 2015 between 1 and 15. As concerns other publication contexts, academics get 5 points for a book chapter in English (irrespective of its inclusion in a edited volume published by Routledge or by the University of Rzeszów) and 25 points for a monograph/single-authored book. The three academic journal lists, constantly modified and “reinvented” (but with their stable points of reference leading to an SSCI and SCI journals being perceived as the pinnacle of academic achievement), create something like a circulatory system for the organism of Polish higher education. In theory, the assessment applies to academic units that are evaluated every four years on the basis of four criteria – with greater emphasis placed on the criteria attending to published outputs. The last Comprehensive Review of Scientific Units took place in 2013 and encompassed the output of academic units from 2009 to 2012. In practice, the points are used by academic institutions to appraise and compare individuals (from doctoral-candidate level upwards), thus contributing to the boosting of competition, as well as the increase of stress and anxiety.<sup>59</sup>

<sup>59</sup> See Piotr KOWZAN – Małgorzata ZIELIŃSKA – Agnieszka KLEINA-GWIZDAŁA – Magdalena PRUSINOWSKA, “*Nie zostaje mi czasu na pracę naukową?*: Warunki pracy osób ze stopniem doktora, zatrudnionych na polskich uczelniach. Raport NOU. Gdańsk – Bydgoszcz – Warszawa: Nowe Otwarcie Uniwersytetu 2016; Kate BOWLES – Richard HALL, “Re-Engineering Higher Education: The Subsumption of Academic Labour and the Exploitation of Anxiety.” *Workplace: A Journal for Academic Labor*, vol. 28, 2016, forthcoming; Roger BURROWS, “Living with H-index? Metric Assemblages in the Contemporary Academy.”

### TOP 100 Academic employees of University of Gdańsk by MoSHE points (2009–2015)

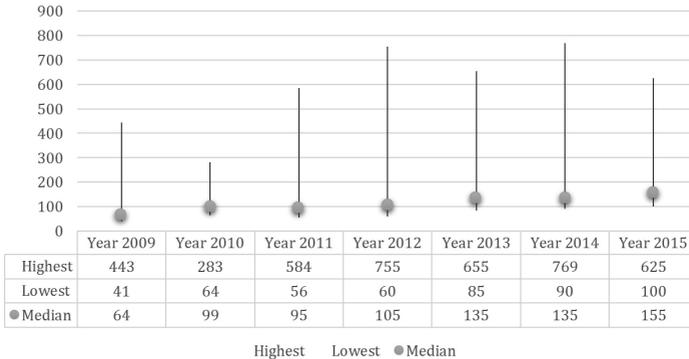


Figure 4: *Ranking of employees of University of Gdańsk. TOP 100 Academic employees (all disciplines) by MoSHE points score (highest, lowest and median scores) (2009–2015).*

Source: Rankingi Uniwersytetu Gdańskiego (2016) <<http://expertus.bg.univ.gda.pl/ranking.html>>

Individual assessment (“staff appraisal”) and the comparison of performance based on points are widespread, and so are the different institutional realizations of comparisons and competition, internal rankings etc. The most telling example comes from University of Gdańsk which publishes an annual open ranking, where everyone employed gets ranked according to different criteria – mainly a “sum of ministerial points” but also an “annual summative impact factor of their publications”. The University of Gdańsk has 1,348 employees that undergo the evaluation/appraisal procedure the results of which are presented in the publicly accessible ranking tool.<sup>60</sup> Figure 4 below presents the changes in annual MoSHE points collected by each of the top 100 most productive academic employees of the University of Gdańsk.

*The Sociological Review*, vol. 60, 2012, no. 2, p. 355–372; Rosalind GILL, “Breaking the Silence: The Hidden Injuries of the Neoliberal University.” In: FLOOD, R. – GILL, R. (eds.), *Secrecy and Silence in the Research Process: Feminist Reflections*. London Routledge: 2009, p. 228–244.

<sup>60</sup> See Rankingi Uniwersytetu Gdańskiego [online]. 2016. Available at: <<http://expertus.bg.univ.gda.pl/ranking.html>> [cit. 15.8.2016].

For each year in the period between 2009 and 2015 the highest, the lowest and the median scores achieved by individual academics are presented. The tendency to increase the productivity – that is, to achieve a higher output during the same length of time (year) – is indicated by the fact that the lowest score sees a rise by 91 points in 7 years (that allows to enter the TOP 100) as well as by the median score, which sees a rise of 59 points in 7 years.

Despite the fact that scientometricians and evaluators from around the world advise against the use of a journal’s “impact factor” as a proxy for academic quality when it comes to staff appraisal and hiring academic staff, this malpractice is widespread. *Figure 5* shows the changes in annually calculated summative Impact Factor of their publications by each of the top 100 most productive academic employees of the University of Gdańsk. For each year in the period from 2009 to 2015 the highest, the lowest and the median scores achieved by individual academics are presented. Once again – this time with reference to publishing outputs mainly in the journals of oligopolistic academic publishers – we see a clear rising tendency.

**TOP 100 Academic employees of University of Gdańsk by summaric IF (2009–2015)**

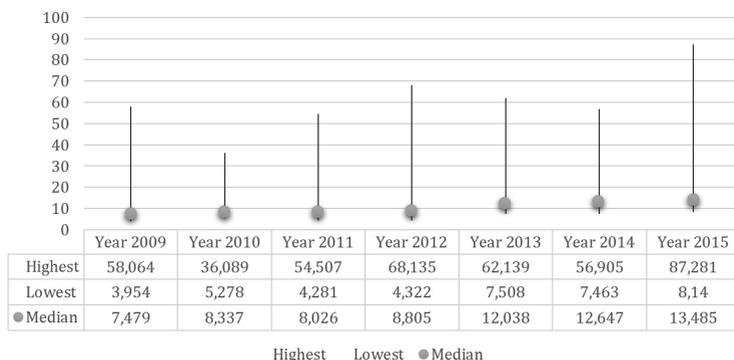


Figure 5: *Ranking of employees of University of Gdańsk. TOP 100 Academic employees (all disciplines) by summaric Impact Factor (highest, lowest and median scores) (2009–2015).*

Source: Rankingi Uniwersytetu Gdańskiego (2016) <<http://expertus.bg.univ.gda.pl/ranking.html>>

The last *Figure 6* constructed from the data of the same source presents the clear growth trend of the share of University of Gdańsk's authors of articles in journals with calculated impact factor.

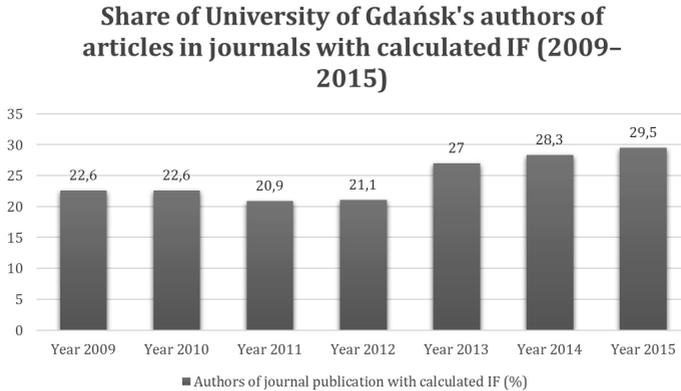


Figure 6: *Share of University of Gdańsk's authors of articles in journals with calculated IF. Percent. (2009–2015).*

Source: Rankingi Uniwersytetu Gdańskiego (2016) <<http://expertus.bg.univ.gda.pl/ranking.html>>

In the seven-year period the general number of such authors has risen from 22.6% of the academic population evaluated to 29.5%. The more emphasis is placed on evaluation through metrics that favor publications in SSCI and SCI journals, the more faculty focuses on delivery of their outputs to this journals.

The University of Gdańsk's ranking is just one instructive example; however, such quantitative internal rankings are widespread across Polish higher education institutions, at university and departmental level alike. Ministerial points and "impact factor" are used to discipline individual academics and to ignite competition among them. But such procedures are *not* openly demanded or imposed by the Polish Ministry of Science and Higher Education; rather, they constitute what might appear as an autonomous institutional response. The points system not only stimulates the competition between academic workers, raise their productivity, and contribute to the shortening of time needed for the completion of a single output, but also facilitates the channeling of academics' productive energy to the "proper"

journals – proper, that is, from the point of view of the merchant capital fraction (that is, journals controlled by oligopolistic academic publishers, as already discussed).

In discussing the British higher education system, Roger Burrows remarked that “there is evidence to suggest that the proportion of outputs published in such “top journal” is a significant “shadow metric” explaining RAE [Research Assessment Exercise] outcomes”.<sup>61</sup> What is the object of evidence-based speculation in the British context becomes a bare and obvious fact in the neoliberalized systems of higher education of Central Europe, where a journal’s “impact factor” creates a template for a system of “points per publications” and a gold standard of productivity.

The success of the merchant capital fraction is highly dependent on its skill to present its own circuits as the only academic circuits of “objective” prestige distribution. In this endeavor, it relies heavily on global university rankings and on nation-states that seek to join the global race for prestige and academic excellence. The more the academic prestige game coincides with the profit project of oligopolistic academic publishers, the more academic “production for production’s sake” accelerates, as the logic of speeding up the capital turnover time takes over. Metadata providers play a decisive role in the process of subordinating academic labor to the interests of academic publishing merchant capital. If the “impact factor” is nowadays a capitalist indicator of socially necessary impact/time for academic labor, the capitalist law of academic value is equally empty, or at least unanchored. It is a politically imposed form, just as the law of value that stabilizes the capitalist economy overall.<sup>62</sup> Moreover, that it is in a constant crisis and unveils its own irrationality on the daily basis. This finally leads us to consider the potential ways out of this increasingly tightening relationship of metrics, acceleration of academic labor and merchant capital.

### **Conclusion: Open Access and communism of capital – beyond metrics?**

This article suggests that we need to look at acceleration, as well as metrics and indicators, not just from the perspective of their internal function within

<sup>61</sup> Roger BURROWS, “Living with H-index?” p. 362. In 2014, the Research Assessment Exercise [RAE] was replaced by the Research Excellence Framework [REF] as the UK’s nationwide academic research review framework, still valid at the time of writing.

<sup>62</sup> Antonio NEGRI, “Twenty Theses on Marx: Interpretation of Class Situation Today.” In: MAKDISI, S. – CASARINO, C. – KARL, R. E. (eds.), *Marxism Beyond Marxism*. New York: Routledge 1996, p. 149–180.

the field of higher education but in considering their usefulness for the self-valorization of capital in this field. To understand academic acceleration we have to grasp the political-economic function of measure and metrics as the foundation of the complex process of capitalist academic production.

Roggero, already cited earlier, offers another valuable insight that can assist in the exposure of a relationship forged between the merchant fraction of the transnational associations of capital, acceleration, metrics and academic labor. He emphasizes that “capitalism might be able to give up property, but never command!”<sup>63</sup> What does it mean? In a situation where more and more academic journals published by major global players are shifting towards the formula of “open access”, the prospect of getting an infinite rent from once explicitly privatized goods gradually disappears. The surplus generated by academic labor must be captured and turned into profit differently.<sup>64</sup>

To illustrate this phenomenon we need a simple example, typical of the methods employed by the oligopolistic academic publishers. On October 20, 2014 the online journal *Nature Communications*<sup>65</sup> that enjoys the reputation of a leading science journal turned completely to open access. Its position within the field of science is indicated by the Thomson Reuters impact factor, amounting to 10,742 for 2014. This impressive result determines that the Polish Ministry of Science and Higher Education allocates 45 points to an article published in the journal. So, what brought about the transition of the journal to the open access format? All articles that were submitted to the editorial office after October 20, 2014 had to be published under a license of Creative Commons 4.0 (CC BY – Attribution 4.0 International). Authors can choose other options of open access (CC BY-NC-ND and CC BY-NC-SA). However, in all cases publication is dependent on the payment of fees for processing the article (so-called, APC – *Article Processing Charge*). APC rates for *Nature Communications* are \$5,200 for authors from the USA, €3,700 for authors from Europe, and £3,150 for authors from the UK and

<sup>63</sup> ROGGERO, “Five Theses on the Common,” p. 360.

<sup>64</sup> Great exposure of financial reality and financial flows within this newly emerging regime of APC business is presented in Stuart LAWSON – Jonathan GRAY – Michele MAURI, “Opening the Black Box of Scholarly Communication Funding: A Public Data Infrastructure for Financial Flows in Academic Publishing.” *Open Library of Humanities*, vol. 2, 2016, no. 1, p. 10 (1–35).

<sup>65</sup> One among the approximately 80 magazines of the Nature Publishing Group, owned since May 2015 by Springer Nature, and before the merger by Macmillan Science and Education owned by Holtzbrinck Publishing Group

other countries. The journal publishes an average of about 10 articles per day (although its releases occur every few days). For example, in March 2015 the journal published 322 articles, including more than half of the new open access option. Assuming that the monthly average is 300 published articles, and the rate for their publication enumerated in dollars, each month the journal brings about \$1.5 million of revenue. Although the journal employs 37 editors and 10 technical staff working in three offices (London, New York and Shanghai), only a portion of that money goes into the pocket of the publisher. Under “open access” the journal remains a very lucrative venture. The Editorial Office informs prospective authors that it offers assistance with locating good financing options for APC and with applying for these funds. The case of *Nature Communications* is not an isolated phenomenon. Open access publishing is constantly being expanded, and the (substantial) related expenses for the higher education sector ministries as well as for individual academic institutions are rising rapidly.

The growing business based on APC and BPC (*Book Processing Charge*) suggests that merchant capital can swiftly move from selling products to selling (publishing) services to academic customers. This change does not undermine the crude domination of merchant capital over the academic field. This serious problem is often overlooked in critical analyses of the academic publishing market that usually focus on how the enclosing of the knowledge commons is actualized and on the alienation of academic workers from their labor outputs. When the current form of knowledge ownership is presented as the main opponent, it is easy to assume that projects of a radical expansion of open access may undermine capitalist control. Such proposals, however, remain blind to the dynamics and logic of the academic field in its autonomy, where the “communist” ethos is usually associated with the principle of competition and the struggle for prestige. As we have seen, the capitalist transformation of the conditions prevailing in a given field can promote both. The overwrite of the transnational association of capitals over the mechanisms of prestige distribution (such as rankings or impact indicators) in order to safeguard the processes of valorization allows the development of strategies based on APC and which preserve the appearance of a scientific “communist” ethos. This, however, is a blindspot of many critics of the current academic publishing market, despite their sincere anti-capitalist intentions. The communist demand for the abolition of private ownership of the means of consumption is, in fact, translated fully into capital’s own categories and gets integrated *functionally* into the system. The communist modulation of capitalist production of knowledge is merely one

of many forms of “communism of capital”, which “is capture without organization, block without development, and accumulation without progressive promise”.<sup>66</sup> As Roggero adds, communism of capital “is the capture and transfiguration of the common through rent, where rent is the power of the appropriation of value that is increasingly created by social cooperation without the direct intervention of capital”.<sup>67</sup> In the case of the close weave of global rankings, metadata providers, politically imposed systems of metrics and commercial forms of open-source licenses in academic journals published by major publishers we see this phenomenon in all its glory. Although the formula of relying on APC business strategies is not yet a mainstream on the publishing market, its reach and impact are constantly expanding.

In modern societies and economies, capital’s control over the production of knowledge is imposed by setting up a system of measure. The success of merchant capital, and the whole “transnational association of capitals” has been achieved through the establishment and legitimization of a global measure for comparing scientific results, as well as through the channeling and focus of the productive efforts of academic labor. Roggero explains that “when capital appropriates cooperation that to a large extent takes place without the presence of direct capitalist organization, these two terms assume similar characteristics. Today, rent is the form of capitalist command that captures the autonomous production of living labor. This does not mean that capital is exclusively a parasite: it has to organize this capture.”<sup>68</sup> As we have seen, the main task facing the transnational association of capitals in today’s higher education is precisely to develop and impose (through explicit or implicit means or both) the academic law of value, as well as to organize, to the extent possible, the process of capturing value. It is an immense and intricate task. A system of interconnected global rankings based on metadata-extraction bibliometric tools, from the point of view of capital in the publishing industry, is a complex instrument for capturing value generated elsewhere. The academic law of value, based on socially necessary impact/time are tools of domination maintained politically on a global level, and imposed on academic labor by the national ministries and/or academic institutions. This is why public bodies are starting to appear to faculty as an agent of exploitation, acceleration and oppression. The university-as-factory

<sup>66</sup> Gigi ROGGERO, “The Composition of Living Knowledge: Labor, Capture, and Revolution.” In: KOZŁOWSKI, M. – KURANT, A. – SOWA, J. – SZADKOWSKI, K. – SZREDER, K. (eds.) *Joy Forever: The Political Economy of Social Creativity*. MayFly: London 2014, p. 205 (199–210).

<sup>67</sup> ROGGERO, “Five Theses on the Common,” p. 366.

<sup>68</sup> *Ibid.*, p. 359.

metaphor, born from this experience, prioritizes then merely an epiphenomenon of capital's global domination over academic labor, exercised by the transnational association of capitals in higher education.

In concluding one of his articles, Vostal throws the issue of academic acceleration into the more fruitful ground found between the poles of "slowness" and of a "post-quantified" condition. As he insightfully observes, solutions to the negative consequences of academic speed-up "perhaps lies in tacking the 'obsession with quantity'."<sup>69</sup> He adds: "It seems that the very status quo maintaining quantification and subsequent intensification of academic work-life as "natural" is something that needs to be challenged – individually as well as systemically."<sup>70</sup> However, a horizon of post-quantification hardly means that metrics would disappear instantly and completely from higher education. The ground for temporal autonomy first requires a transition phase of regaining control over conditions of academic labor by the academics themselves.

As Godin has suggested, "like concepts, statistics are not given, but flexible and malleable, according to the aim and program of its user."<sup>71</sup> This introduces the possibility of formulating measures/metrics that would serve the development of the common, that would respond to human needs and the shaping and functioning of a social individual rather than the subsumption of labor under capital. This does not entail the advent of a "post-quantified" condition but rather developing an accelerationist approach that could, through a dialectical movement (both restricting and maintaining the potential of speed and connectedness that metrics provide), form the ground for academia's temporal autonomy.

A number of scholars call for the invention and development of metrics set for measuring global public goods in higher education. Yet they meet with widespread criticism among academics who are oppressed by metric power. In this context, David Beer's very strict approach to metrics is revealing. He claims that they are "the means and mechanisms by which competition can develop and spread across different spheres of society"<sup>72</sup> as well as "the means by which data can be used to ascertain value."<sup>73</sup> If a necessary

<sup>69</sup> Flip VOSTAL, "Speed Kills, Speed Thrills: Constraining and Enabling Accelerations in Academic Work-Life." *Globalisation, Societies and Education*, vol. 13, 2015, no. 3, p. 309 (295–314).

<sup>70</sup> *Ibid.*

<sup>71</sup> Benoit GODIN, "The Value of Science: Changing Conceptions of Scientific Productivity, 1869 to Circa 1970." *Studies of Science*, vol. 48, 2009, no. 4, p. 573 (547–586).

<sup>72</sup> BEER, *Metrics Power*, p. 16–17.

<sup>73</sup> *Ibid.*, p. 10.

connection of metrics and procedures of measuring with valuation and valorization seems legitimate, would fostering competition be an inevitable outcome of measurement and metricization? Value is a form that is filled and shaped historically, imbued with different meanings. The construction of measurement procedures and metrics sets oriented on fostering and rewarding cooperation, solidarity and mutuality in science sounds like not an unthinkable project. Metrics should be seen as mechanisms that allow to dynamically stabilize a given system around specific values. Engaging examples of such efforts can be found in the field of commons-based peer-production economies where the mechanisms of measuring non-market, non-capital, commons-based value are successfully developed.<sup>74</sup> Every attempt to propose here a ready-made solution for such a new common-based metrics set would sound as mere speculation. However, an imagined such project should be certainly oriented towards the promotion of a different set of values that those defining the current system and which emphasize individualized competition and quantitative progressive accumulation. Rather, the aim would be to advance the metrics' potential in fostering connectedness in the name of the common goal of transcending the limits of existing knowledge.

This present analysis expresses a conviction that while resisting the domination of merchant capital over academic labor, academics and the societies their labor is intended (or at least, presumed) to serve need to elaborate new and globally disseminated mechanisms, first, for measuring the common and, second, for making transparent capital's efforts to appropriate the common. Such mechanisms should relate to the process of accumulation, expanding and deepening opportunities for commoning, and a distribution of our collective power to develop research and education that would be free, cooperative and compliant with our needs. However, such measurement procedures, as well as the institutions of the common which would grow thanks to them, remains to be imagined, planned and developed.

<sup>74</sup> Primavera DE FILIPPI – Samer HASSAN, “Measuring Value in the Commons-Based Ecosystem: Bridging the Gap Between the Commons and the Market.” In: LOVINK, G. – TKACZ, N. – DE VRIES, P. (eds.), *The MoneyLab Reader*. Amsterdam: Institute of Network Cultures 2014, p. 74–91.