

Chaos Theory and the Neoliberal English-Based Dimension of the Polish Higher Education Reforms 2018/2019

Anna Odrowąż-Coates

<https://orcid.org/0000-0002-2112-8711>

The Maria Grzegorzewska University, Poland
acoates@aps.edu.pl

Abstract

This article draws on chaos theory to critically analyse the recent higher education reforms that have been taking place in Poland. The argument launched in this article aims to show that the reforms are based primarily on neoliberal foundations and to expose the linguistic dominance of the English language in neoliberal settings. The English language appears to be a strong tool of neoliberal power, used to empower or to marginalise local academics. The divisive power of English exploited by reformists creates a growing fissure between age cohorts, disciplines and academics representing diverse social backgrounds. The tension and uncertainty brought about by the reforms have increased the anxiety and competition between scholars, undermining solidarity and compromising joint agency. The long-term results of entering the neoliberal “rat race”, which is strongly reliant on English language skills, are yet unknown.

Keywords: language and power; sociolinguistics; chaos theory; neoliberalism; critical pedagogy; higher education reform

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Introduction

This article concerns the ongoing changes to higher education in Poland, which commenced in 2015 and are constantly amended, updated and non-ending. The most controversies were raised as a result of reforms brought in by the current government, which represents the political majority held in the Polish parliament by the Law and Justice party (commonly known as PiS). The government is considered to be right-wing oriented, with radical socialist ideas. The recent education reforms have caused controversy among the country's intellectual elites and have completely destabilised streams of funding for universities and the recruitment of students. University rectors, lecturers, teachers, parents and students were taken by surprise with sudden and rapid changes, leaving people confused and uncertain about the future of higher education in Poland and about the personal and professional situation of the higher education community. This pertains particularly to the changing modes of evaluation of universities and their staff that often refer to past periods, during which knowledge production was measured under very different regulations—a situation where someone's past publications were worth 100 points on one day and the next day they do not even qualify to be considered and receive 0 points is quite common. Requirements for PhDs and post-doctoral professorship have been updated several times in the last five years, changing the criteria for academic advancement to place more importance on writing in English and accessing funding from abroad. Up until recently, Poland supported free access to higher education for everyone and the number of people with higher education degrees was quite remarkable (GUS 2019) and internationally praised. Therefore, some consider the changes in funding and the narrowing of the acceptance rate to be a step backwards (Kwiek 2014; Pilch 2017–18; Śliwerski 2018) and others look for the ultimate reasons behind these unsettling reforms (Maria Mendel and Tomasz Szkudlarek cited in Odrowąż-Coates 2018b; Piłat 2018). In this article, a critical analysis of the changes and the government's rhetoric is presented to unveil the English language-centric core of the reforms. Finally, the Polish higher education reforms are framed within an overarching concept of “chaos theory in education”, as one of many possible theoretical groundings for the observed phenomenon.

The conceptualisation embraces a number of previously developed chaos theory applications to various educational contexts, searching for novel ways to apply them to higher education in Poland. A discussion on chaos theory and its application in the analysed case is followed by conclusions based on reflection about the future of Polish higher education and the ongoing linguistic shift towards the English language that meets a neoliberal expectation (Odrowąż-Coates 2018a).

The discussion is imbedded in critical pedagogy, understood as the responsibility of intellectuals (cf. Giroux 2019). According to Giroux (2019, 82), critical pedagogy is about “understanding how the power works within particular historical, social and cultural contexts in order to engage and, when necessary, to change such contexts”. By refuting the objectivity of knowledge and asserting the partiality of all forms of

pedagogical authority, critical pedagogy initiates an enquiry into the relationship between the form and content of various pedagogical sites and the authority they legitimate in securing particular cultural practices (Giroux 2019, 83). This stance carries potentiality for anarchy. Anarchy, by definition, underpins the theoretical concept of chaos, as chaos reflects the disestablishment of order. Giroux calls on academics to resurrect a language of resistance and possibility against the forces of corporate power and global capitalism, especially against the corporatisation of universities. What is more, Giroux proposes seeking militant utopianism in this quest (cf. Giroux 2019, 267). Giroux's call seems most appropriate to find fertile ground in the context of Polish higher education reforms.

The Socio-Political Context of Polish Higher Education¹

The Polish education system, including higher education, has been undergoing constant changes and reforms since the fall of communism in 1989. After the fall of the Iron Curtain, the education system was adjusted to bring it in line with European Union standards, with a three-stage education system: elementary, lower and upper secondary. This was introduced in 1999 and was followed by a three-stage higher education programme (introduced in 2005) consisting of three years for a bachelor's degree, two years for a master's degree and further years for doctoral studies. The PISA (the OECD's Programme for International Student Assessment) results for 15-year-old Polish secondary school pupils improved significantly between 2000, when Poland scored below the EU average, and 2015, when Poland was ranked as one of the leading countries. From 8 August 2011, a ministerial regulation by the Ministry of Science and Higher Education redefined the scientific and artistic disciplines and the following areas of sciences were distinguished: humanities and social sciences, technical sciences, science, natural science, medical sciences, agriculture, forestry, veterinary sciences and art. The justification for such division was its application when awarding scientific titles and degrees. This division was recently updated by the reformists, causing chaos and outrage among academics representing disciplines wiped off the discipline map (particularly representatives of ethnology, ethnography, and anthropology, which were excluded). Others, for example those representing theology, secured a new discipline. The Bologna Process enabled Poland to enter the exchange of EU students and academic staff, and facilitated the transfer of ECTS points. Learning outcomes, uniformed by the Bologna Process, led to ensuring that all EU university graduates are capable of thinking critically and display characteristics of reflexive practitioners. The process resulted in over five million European students taking part in the Erasmus international exchange programme since its beginning (EC 2019). The Erasmus exchange relies on English as a medium of communication. This was not enough for the Minister of Science and Higher Education, Jarosław Gowin, representative of the dominant party Law and

¹ See the comprehensive report on the Polish education system by Eurydice (Kolanowska 2018).

Justice, who in order to modernise the organisation of Polish universities (first established in 1364) introduced further reforms. He voiced a concern that increased access to higher education compromises its quality. Access to higher education has increased from 9.8% in 1990 to 50% in recent years (GUS 2019),² indicating a positive shift in societal development and an increase in education level achieved by the Polish population. However, the situation is one of continuous change with no apparent long-term vision and politically tainted moving goalposts.

Moreover, the increasing dominance of the English language within the Polish education system leads to a certain linguistic shift that gives English a leading position among foreign languages. This provides a new tool of social division between age cohorts and people with different levels of education. English has gained the status of a second language in the country and a certain distinction can be observed between those who use it as their second language and those who do not (cf. Odrowąż-Coates 2017a; 2018; 2019). Polish openness towards the mainstreaming of English has a relatively short history. As previously mentioned, it comes from the backlash of the compulsory study of the Russian language in the Polish education system until the fall of communism (1989) and from entering the Bologna Process, which aims at uniformity and therefore transferability of education systems in Europe. This may seem like a positive idea until one notices that the principles of free academic thought are suppressed by increasing demands for external funding. Pursuing grant applications, which are often written in English, and the commercialised outcomes of research are an embodiment of a neoliberal model of science that academics locally and globally are expected to embrace. This neoliberal model is heavily dependent on English (Odrowąż-Coates 2017). English bestows soft power on entities through the hub of global neoliberalism (cf. Odrowąż-Coates 2019). This soft power is based on the appealing principle of participation in the global dialogue. The evidence that the dialogue cannot be equal comes from Kachru (1985) and Pennycook (2006), who developed three moulds of the influence of English: a norm-providing inner circle of native speakers (ENL), a norm-developing outer circle of speakers of English as a second language (ESL), and a norm-dependent expanding circle, where English remains a foreign language taught only in school (EFL).

The differences in access to participation in the global academic dialogue are evident. Although the position of English in Poland is shifting from EFL to ESL (cf. Odrowąż-Coates 2019), the ENL dominance in power and in access is reflected in the higher education reforms.

² GUS is the Governmental Main Statistical Office in Poland.

Higher Education and the Use of Chaos Theory

Among basic theories in science, such as the Newtonian law of gravity, quantum mechanics (Max Planck) and Einstein's theory of general relativity, chaos theory emerged in Lorenz's mathematical concepts of dynamic systems, sensitive to initial conditions, where prediction of the future is limited. This theory may be applied to specific conditions of post-modernity and increased uncertainty characteristic of our times (cf. Baranowski 2017). It may also be utilised to frame the uncertainty of the ongoing higher education reforms.

Susan Baker (1995) was one of the first to use chaos theory for the interpretation of educational systems, alongside Cutright (2001), Abrahamson and Freedman (2007), Reigeluth (2004), and finally Akmansoy and Kartal (2014). The relevance of the application of chaos theory to the Polish higher education reforms is inspired by Henry Giroux (2019, 58), who views our times as a period in history characterised by large areas of discontinuity and rupture, accelerated by the widespread use of electronic information (dominated by the English language) that distorts traditional concepts of time, community and history, blurring the boundaries between "image" and reality, and adding to the uncertainty and chaos in people's lives.

If one looks at higher education from an organisational perspective, Thiétart and Forgues (1995) show that organisations are non-linear, dynamic structures with two conflicting, offsetting forces of stability against instability, creating potential chaos. This translates into different outcomes of similar actions during a single life cycle of an organisation. Stacey (1992), Wheatley (1992) and Morgan (1993) also analysed organisations through the lens of chaos theory and found similar findings as described above. Because any school or university can be described as an organisation, their works should not be omitted when analysing the educational context presented in this article. A definition of chaos theory as developed by Gollub and Solomon (1996, 282) asserts that chaotic systems are sensitive to initial conditions, which means that any initial error in planning will expand and multiply beyond possible expectations. This indicates that to be able to predict an outcome, one must be absolutely certain, to the smallest detail, about the initial circumstances. However, this is considered to be unachievable when considering a complex organisation like a country's higher education system. Moreover, the randomness of human factors related to both the diversity of teachers and the diversity of students significantly decreases the likelihood of precisely measuring the initial state and increases the appropriateness of employing chaos theory in educational practice.

Cunningham (2001) questions the validity of any form of educational outcome measurement, since too many uncontrollable factors play a role in students' performance. Education systems are subject to a "butterfly effect", a notion first mentioned by Edward Lorenz, who conceptualised the dynamics of weather prediction, linking it to chaos theory. He gave the example of a butterfly flapping its wings in one

part of the world causing a tsunami in another (cf. Glickman et al. 2001). The same may apply to education, if one agrees with his theory, which claims that small variations in initial conditions lead to large differences in outcomes (Cunningham 2001). Although higher education institutions may be compared to “fractals”, which are smaller copies of the same structure on a scale (Baker 1995, 16, 148; cf. Peitgen, Jürgens, and Saupe 1992), the regular pattern of how they are to be organised and managed does not guarantee exactly the same outcomes (cf. Gleick 1987). Similarities exist between chaos theory in education systems and the concept of the “feedback loop” (cf. Reigeluth 2004), where systems adjust their evolution based on their own feedback. Susan Baker (1995), in her PhD thesis, demonstrated such similarities, simultaneously analysing the interdependence of initial conditions and final outcomes. It is as yet impossible to say with certainty what outcomes can be expected from the ongoing changes in the Polish higher education system that have the potential to cause organisational chaos.

Chaos theory does not imply complete randomness, although it does affirm the non-linear dynamics of system interdependencies. It also offers new ways of studying complex, complicated and uncontrollable occurrences in deterministic systems (cf. Kellert 2008, 5–8). Elhadj Zeraouia (2012, 362) discusses the concept of randomness using the Maxwellian theory of elastic collisions that exist in a clockwork universe that allows a level of non-preference in terms of who collides with whom, which leads to random distribution and therefore still a notion of chaos. Lampert (1985) supports the idea that all individuals involved in educational processes have agency and that their own particular agency changes the course of their actions and the collective and individual outcomes, thus representing chaos. The unpredictable decisions made in the classroom by teachers and students and those by ministers and academics may create an ongoing tension and conflict between multiple interests and aims, leading to more and more choices, and complicating the final outcomes. Lampert links the freedom in terms of what to do and what to say in the school environment (cf. university) with the subsequent cause of action, and this has a randomising effect in the distant future. She claims that all participants in education contribute to its uncertainty and chaos, both at school (cf. university) and in a wider context. This wider context should be understood as the social environment of all actors involved in teaching and learning, and their everyday life experiences, adding to chaos and uncertainty, multiplying the options and the potential outcomes (cf. Buchmann and Floden 1993). Moreover, Buchmann and Floden (1993, 221) see chaos as a specific, materialised matter, taking chaos in education for granted, since it is certain that educational uncertainty will exist. They urge educators to remain calm, steady and confident in their decisions, and believe that this is the most appropriate method to address chaos.

An interesting interplay between determinism, predictability and chaos was developed by Greg Hunt (1987). Hunt claimed that absolute predictability and determinism are separate and that predictability is separate from chaos and not possible, even if the initial conditions are perfectly measured. However, when Peter Smith (1998, 58) analysed chaotic dynamic models, he claimed that they can be useful for short-term trajectory

tracking. In his view it is the long-term predictions that are not possible. If this is true, then current higher education reformists should maintain a short-term vision for the changes they make.

Recent Reforms and the Notion of Uncertainty

One of the recent reforms implemented in higher education in Poland is called regulation 2.0 (also known as the Constitution for Science) and aimed at increasing the quality of research and teaching through internationalisation and grant-based funding of higher education institutions. This reform illustrates in what ways unpredictable outcomes go beyond first impressions and indicates in what ways chaos theory might be helpful to understand the changing landscape of higher education in Poland. Among the stated goals of this reform is a desire to bring back the top Polish scientists who have emigrated and to reverse the brain drain from Poland to other countries. The regulation goes on to define the goal of entering the global research investments market by enhancing the position of Polish universities in global rankings and attracting students from other countries to study in Poland. The first impressions of the changes are relatively positive as it seems to be a programme that strives for excellence (Ministry of Science and Higher Education 2019). For example, the limiting of the number of students per full-time tutor to 12, which means that universities become empowered to raise entry requirements as the number of places is now limited. However, the actual implementation rules give some cause for concern and are the embodiment of chaos theory in higher education. Here are just a few: Sudden changes to the length of study programmes for different professions devalue recently obtained qualifications of some graduates, who become unable to continue MA studies in their chosen profession. Having more students than 12 per tutor at higher education institutions means financial penalties. There are no financial provisions to employ more tutors, only the threshold of financial penalties, which must not be breached. The Ministry of Science and Higher Education provides a significant part of universities' financial support, providing funding per student. Therefore, limiting the permissible number of students is in effect a money-saving measure and puts considerable pressure on universities to close the funding gap. In the last decades, the number of private higher education institutions has decreased, since those who have achieved the entry criteria or have successfully passed entry exams have been entitled to free higher education. People capable of studying were empowered to do so. This remarkably inclusive model, with free higher education open to all, has now changed (2019). It looks like the boom of private universities is to return, shifting the costs of studies from the taxpayer to parents and students themselves, increasing the gap between those who can and who cannot afford to study, in line with the neocapitalist vision. This will undoubtedly lead to increased social divisions based on monetary power. We are yet to see students' reaction in line with similar neoliberal practices abroad.

Another money-saving measure included in the reforms is a specific algorithm to finance research, which discriminates against the social sciences and humanities. The

Polish government calculates the funding required for different disciplines to carry out scientific tasks in research with a form of absorption costing. This places each discipline on a scale and the position on this scale defines how funding is allocated. In the past, social sciences were placed at value 2, whilst medical and technical science at 3 on a 1–3 scale. In the post-reform model, the 1–3 scale has been replaced with a scale of 1–6, which positions social sciences and humanities at 1 or at best, 1.5. This change translates into a 30–40% drop in the financing of research in these disciplines from the ministerial budget and a considerable degrading of the apparent value of the social sciences and humanities (Nowakowska 2018).

Moreover, Polish universities are grouped into categories A+, A, B+, B and C. Categories B and C are higher education institutions for teaching and not research facilities. B+ indicates that the facility teaches, carries out research and is able to grant PhDs. Facilities in the A and A+ categories focus primarily on research and also grant PhDs and further academic titles for scientific promotion. The reforms change the way in which the categories are classified,³ allocating more significance to articles published in the limited number of journals from a new ministerial list. The publication of books and book chapters has been discouraged by the evaluation paradigm, which devalued this form of scientific expression. Furthermore, in order to accrue points based on book publications, books must be printed only by publishers from yet another ministerial list, which keeps being updated (Ministry of Science and Higher Education 2019b). Both lists were promised to be announced in January 2019, but there was a significant delay. The list of journals was eventually published in July, but it works back in time to cover the whole period of 2019 (Ministry of Science and Higher Education 2019c). The content of the list has also changed multiple times. If academics publish in a journal outside of the list, it is practically worthless in terms of the evaluation under the new regime. Moreover, the list favours publications in English, a criterion which appears to be key to the selection of Polish journals that survived the cuts. Moreover, international journals that publish in English were assigned much higher value, especially in the social sciences. The actual division of journals into disciplines took further time and was carried out by a narrow group of ministerial experts, which means that a considerable amount of scholars have been unsure where to invest their work for the last two years.

The list of Polish journals that are considered for points has been severely limited to 500 for all disciplines. Previously 3080 were in a position to provide points (Ministry of Science and Higher Education 2017). All Polish journals have been given new obligatory standards to which they must adhere, e.g. the Committee on Publication Ethics (COPE). Furthermore, Open Researcher and Contributor ID (ORCID) numbers are assigned to the authors, even if they do not publish in English. Informed compliance with both requires a certain knowledge of English. In 2017, Polish journals were able

³ For the latest laws on evaluation, see Ministry of Science and Higher Education (2019a).

to apply for additional funding to support their international exposure. It was not clear at that time if the successful applicants would be included in the list of 500 Polish journals. To receive financial support, they had to either include writers from abroad, be reviewed by foreign reviewers, have international scientific boards or be published in English, and all had to provide abstracts and titles in English. It was also seen as beneficial to be available as open access and to have a digital object identifier (DOI number). These items rely on English as the lingua franca of international communication and this language shift in Polish higher education circles and in the labour market has been discussed by Odrowąż-Coates (2017; 2018; 2019). The system is becoming more reliant on English and more English-language oriented, positioning the language highly in comparison to others, including the native tongue. This part of the reforms adds to the notion of chaos and creates conflicts between fluent users and those less fluent, thus new power hierarchies emerge based on knowledge of English as a second language.

Moreover, an incredibly complex algorithm was developed to evaluate individual academics and their institutions based on where they publish their research findings. Could it be that the algorithm is meant to confuse the participants, to occupy them with deciphering the unknown and to minimise their agency, enabling further chaos and insipient implementation of neoliberal practices? It places some serious limitations on local scientists and is a clear indication of power (empowerment) and powerlessness, based on a language criterion. The list and information about how it affects the financing algorithm have reduced the value of local, Polish language publications and put greater focus on journals published in the English language, which automatically assigns higher value to publishing in English. The new list of journals that accrue points has focused on those indexed in international databases that favour publications in English: Scopus and Web of Science, Science Citation Index Expanded, Social Sciences Citation Index, Arts and Humanities Citation Index and Emerging Sources Citation Index. The new list has reduced the number of journals indexed by ERIH+ that will accrue points, which reduces academic freedom and linguistic diversity. Moreover, some journals, both Polish and external to Poland, promote policies of only citing literary sources that are available in English. The Scopus indexing database demands that all references are provided in the Latin alphabet, indirectly suggesting either transliteration (which makes the sources unreadable and difficult to find) or translation of the titles of the literature quoted. This is an example of exercising power, linguistic power.

As indicated, the reform brings considerable uncertainty that unhinges actors of all ages and their positions within the education system. Odrowąż-Coates (2019) analyses the possibility of positive outcomes of such uncertainty. Uncertainty forces organisations to create solutions. However, in practice, these solutions rarely eliminate or decrease the level of uncertainty (Boudon 1982, 68), thus increasing social conflicts within organisations. Conflicts in postindustrial societies are caused by unjust divisions of power (Boudon 1982, 69; Dahrendorf 1959), including the disparity in English language acquisition between different age cohorts in academia who are forced to produce more

and more in English. Another example of this English-language domination is that publishing books in English, particularly if published abroad, is regarded much higher than publishing a book in one's own native tongue. As Odrowąż-Coates (2019) reports, "although this is useful for dissemination of knowledge and for global recognition, it devalues publications in one's own language and supports language hierarchy, positioning English at the top of the language ladder in countries aspiring to be present in global scientific discourse".

The aspiration to publish in English may be related to trends observed in most developed and wealthy countries. In a study dedicated to a review of all scientific publications in the social sciences and humanities that were published in English and in a native tongue, carried out by Kulczycki et al. (2018), it was established that in countries with high GDP and HDI such as Denmark, Finland, Flandreau and Norway, over 60% of all publications were published in English, whilst in Poland, it was only 17% (see Table 1).

Table 1: Number and percentage of all social sciences and humanities scientific publications published in 2014, organised by language

Country	English (N)	English (%)	Local language (N)	Local language (%)	Other language (N)	Other (%)	All publications (N)
Czech Republic	3.418	26.4	8.356	64.4	1.192	9.2	12.966
Denmark	3.866	63.4	2.041	33.5	188	3.1	6.095
Finland	5.516	68.3	1.980	24.5	586	7.3	8.082
Belgium	6.406	78.7	1.372	16.9	363	4.5	8.141
Norway	4.554	61.8	2.560	34.7	256	3.5	7.370
Poland	3.285	17.2	14.742	77.2	1.062	5.6	19.089
Slovakia	1.562	25.8	3.321	54.9	1.165	19.3	6.048
Slovenia	2.863	45.9	2.717	43.6	651	10.4	6.231
All	31.470	42.5	37.089	50.1	5.463	7.4	74.022

Source: Kulczycki et al. (2018)

The above table presents a gap between the number of English publications in the social sciences and humanities published in western and northern countries and former communist entities. It shows that Poland is lagging behind its counterparts in the proportion of publications in English. It should be mentioned that Poland is the largest country considered in this table, both in terms of territory and the number of inhabitants, and therefore is a significant player in European academia. The inwards knowledge production (in Polish language) poses the risk of running parallel to global science and not within it. There is also the risk of producing publications that are not at all connected to the Polish society, which means that academics and the public are more and more divided despite sharing a common historical, geographic and political space. Phillipson (2017) notices that English has become a globally recognised language of academic

dialogue (“lingua academica”) and therefore Polish scholars are forced to adjust and comply with its power.

The reforms are ongoing, and their actual implementation is tainted by their unpredictability and constant change. For instance, the requirements for career advancement and retirement age have been adjusted several times in the last five years, in a departure from the original idea to match them with those of other Western countries. Academics report confusion and misinformation on a daily basis, including high levels of uncertainty as reported by Mariusz Baranowski (2017). Universities dedicate time and resources to follow updates that are often postponed or not available within the promised timeframe (Kulczycki and Korytkowski 2018; Kulczycki, Rozkosz, and Drabek 2019). The unpredictability of the direction in which the changes will lead should be analysed in reference to the previously explained butterfly effect, and even if the effect is not visible at present, every action will have certain unpredictable consequences in the future.

For promotion to higher academic titles, the required standard has shifted several times and is now set in a way that promotes academics capable of publishing in English and able to participate in the global dialogue (Kulczycki 2019). At the time of writing, in order to be eligible to defend a doctoral thesis the requirement for a scientific publication by the candidate has been changed. The publication must now be in a journal that is indexed in Scopus or Web of Science or be a peer-reviewed book, published by a publishing house from the recently revealed ministerial list. The list of publishers on this list is far from comprehensive, which makes it difficult to decide whether to publish abroad to gain international recognition, even if the publisher is not on the list, or at home in a less globally recognised publishing house, but which is present on the list. To be considered for a PhD, a formal official language certificate certifying proficient knowledge of English is necessary, meaning that the previous, internal university qualification is no longer sufficient, and this has been replaced by a qualification that is costly to obtain.

In order to be promoted to Associate or Full Professor, candidates are required to lead an international project, participate in successful international grant applications, be included in international grant recipient teams and gain international experience abroad. The minimum requirement for staff exchange is to secure at least a one-month long placement at a foreign institution. Longer periods are considered more prestigious, which adds a burden to single parents and parents of small children. Candidates must provide a paper highlighting their scientific achievements and discoveries written not only in Polish but also in English. Candidates must also demonstrate a strong publication record in English, with an emphasis on foreign journals with a high Impact Factor (IF). The goalposts are set high and are not matched with appropriate training, organisational culture, past experience or funding. In fact, the funding for universities has been modified in a way that favours the largest universities and penalises smaller players. The single discipline academic institutions, despite the new publication-based

assessments assigned to disciplines, will lose out, since they may be unable to diversify their programmes enough to be considered interdisciplinary and will not meet the new requirements for offering doctoral studies (cf. Kulczycki and Korytkowski 2018).

The government tried to secure support for the reforms among younger academics through a number of measures, especially with the promise of a pay rise. Although those in the lower pay bands received an increase in their salary, middle- and higher-ranking academics were left behind and there is still a considerable pay gap in relation to their Western counterparts even when the costs of living are considered (NUMBEO 2018). Funding for research has been channelled to the largest players and smaller entities have been slowly pushed to either find money for research elsewhere or to become more oriented towards teaching and less towards combining scientific work with teaching practice. In both cases, knowledge of English has become more and more desirable, if not essential. This is driven by the market economy and the interests of global players. Universities are now expected to seek external funding and critics see that willingly or not they become “outsourced R&D [research and development] departments of the biggest corporations. By these means government intends to tighten the relations between universities and businesses” (Piłat 2018). The Polish minister Jarosław Gowin has expressed this desire on many occasions; for example, he stated that the reforms aim to “construct an innovative economy and universities have to provide it with innovative research as well as innovative employees” (Piłat 2018).

Arguments for Discussion

Although this article is based on the Polish socio-political realm and is therefore country specific and incidental, it is not an isolated case. In the North American context, Giroux (2019, 111) writes about “increasing isolation of academics and intellectuals from the world around them, reflecting corporate culture’s power to define pedagogy as a technical and instrumental practice”, which leads to obscuring the fact that culture is indeed a terrain of politics and struggle. For years, Giroux has been one of the icons of a critical approach to neoliberalism and its impact on education. He says, “schools more closely resemble either malls or jails, and teachers, forced to get revenue for their school by adopting market values, increasingly function as circus barkers, hawking everything from hamburgers to pizza parties—that is, when they are not reduced to prepping students to take standardized tests ... Citizenship has increasingly become a function of consumerism” (Giroux 2019, 193). Furthermore, Giroux often writes and talks about an epidemic of forgetfulness and an increasing endorsement of amnesia about historic backgrounds, moral roots and political seeds in many well-established democracies in the world. Giroux highlights, once again, the role of educators in democratic societies and the requirements for them to maintain a critical approach, promote civic literacy and not be used to damage the ideals and values of democracy, but instead to create critical thinkers that provide resistance against the forces that impend democracy (cf. Giroux 2019, 374). The democratically elected decision makers that are shaping higher education in Poland seem to use chaos as a tool to increase their power and control over

the academic world. The academic world is more haunted than ever by internal conflicts and a lack of solidarity between colleagues at different organisational levels. The element of chaos and surprise relies on the fact that multiple elements central to the reforms are as yet unknown and “in process”. There are delays and occasional misinformation, which enhance the feelings of uncertainty. The delays are frustrating for academics and misleading with regard to where they should try to publish their research findings. It is now apparent that many leading publishing houses in the global scientific community will have no meaning for Polish writers if they are not on the ministerial list. Assigning journals to disciplines has destroyed the principles of interdisciplinarity, which was advocated by the government at the beginning of the reforms and is still required in some areas, such as running a doctoral school. This gained considerable support from the academics who are now confused and disappointed about what followed. This interdisciplinary promise raised the hopes of many young scholars who believed that they would benefit from the diversity of research outcomes cutting across disciplinary boundaries. In fact, the new policy of strict assignment of journals to disciplines, and therefore scholars to disciplines, creates a limiting ambient with clearly defined disciplinary borders that will have a limiting effect on cooperation not only locally, but more importantly, with international research networks.

To enrich the chaos argument in the Polish higher education context, Abrahamson and Freedman’s theory (2007) may be apt. They use a metaphor to describe chaos in academic circles, jokingly claiming that universities are safe havens for messy desk owners, as messy desks are considered to show creativity and academics are perhaps led to believe that the more one piles on one’s desk, the higher one’s reputation. This chaotic space is however usually systematised into some sort of order, which often disappears when the overwhelming amount of accumulated paper grows beyond what is manageable. This is an apt analogy for chaos in higher education, in reference to the constant change and its bureaucratic manifestation. However, Abrahamson and Freedman aim simply to show that chaotic systems are highly supple, flexible enough to change rapidly, efficient in improvising and able to harmonise with the environment they operate in. These are qualities that neoliberalism feeds on. Can this be an element of hope? Is it possible that the chaos experienced by those involved with higher education in Poland may truly lead to surprisingly positive outcomes? It is impossible to predict the answer at this point in time. From the perspective of critical pedagogy, flexibility is a characteristic tool for the implementation of neoliberalism. In order to be successful, flexible participants in the “game” adapt to market demands, absorbing responsibility from powerful agents that should be held accountable for the chaos they evoked.

Final Remarks

Giroux acknowledges that state intervention in education systems has become a primary concern for critical pedagogues (Giroux 2019, 33). Since 1983, Giroux has continually

questioned whether state intervention in education is subservient to neocapitalism, explaining how the state reproduces relationships between dominant and dominated classes, supported by international solidarity based on class. He claims that schools and universities play a significant role in the political interest of economic elites. He focuses on government funding for educational research programmes that is politically aimed to favour hard sciences and to “further the economic interests of the dominant classes” (Giroux 2019, 37). In this case the dominant classes are the political, decision-making governmental elites responsible for higher education reforms. The critical lens of enquiry draws from chaos theory to frame the current state interventions in the Polish higher education system. In conclusion, the outcomes of the state interventions are as yet unpredictable. Chaos in education may be seen as destructive. Can it also create new opportunities for non-linear, creative thinking, innovative solutions to problems and help to overturn archaic systems of power? It remains to be seen whether the higher education reforms in Poland, depicted as an embodiment of chaos theories, will accelerate Polish education’s rise to a higher level internationally, which is the claimed intention behind the reforms. What is certain is that the reforms embrace a linguistic shift, oriented towards an increased use of the English language, which is empowering for some and disempowering for others, creating new dependencies and disestablishing existing power structures.

Biographical Note

The author of this article is the Chairholder of the UNESCO Janusz Korczak Chair in Social Pedagogy at the Maria Grzegorzewska University in Warsaw, Poland (unescochair@aps.edu.pl).

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