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## Exploitation, Regulation and Ideology in Online Education: Towards a Theory of Exploitation through Reproduction in Informational Capitalism

Mariano Zukerfeld

*Westminster Institute of Advanced Studies, University of Westminster.  
London, UK. [marianozukerfeld@e-tcs.org](mailto:marianozukerfeld@e-tcs.org)*

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# Exploitation, Regulation and Ideology in Online Education: Towards a theory of exploitation through reproduction in informational capitalism

Mariano Zukerfeld

*Westminster Institute of Advanced Studies, University of Westminster.  
London, UK. [marianozukerfeld@e-tcs.org](mailto:marianozukerfeld@e-tcs.org)*

**Abstract:** This article intends to tackle, through a sociological and economic approach, the capitalist *exploitation through reproduction* of academics producing content for online courses in the productive processes of postsecondary formal and non-formal education provided for-profit in academic, corporate or leisure environments. The theoretical approach relies on four concepts: exploitation, regulation, ideology, and education. The empirical approach is based, whenever possible, on comparisons between the UK (and other OECD countries) and Argentina (and other Latin American countries). Secondary sources include stats from governments agencies and company reports, whereas primary sources are twin short surveys (in English and Spanish) answered by 129 academics.

**Keywords:** Exploitation, ideology, online education, e-learning, MOOC, Open University, Universidad Siglo 21.

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## 1. Introduction

This research report aims to tackle, with a sociological and economic approach, the capitalist *exploitation through reproduction* of teachers (specifically content producers) in the productive processes of postsecondary formal and non-formal education provided for-profit in academic, corporate or leisure environments.

Some examples of these productive processes include higher (formal) education institutions: universities that ask full time staff to prepare the contents for an online course—filming classes, uploading power point files, etc. But also universities that hire teachers with the sole purpose of preparing online courses. While the former example is more frequent in the UK and other OECD countries, the latter is more likely to occur in Latin America and other regions of the global south.

On the other hand, we focus on productive processes in which e-learning private firms hire teachers in order to prepare contents of courses, and then sell non-formal education commodities—i.e. training courses- to companies or individuals. Certain for-profit companies might deliver the courses for free to some of their clients as a part of their business model—e.g. Coursera. In all of these examples the teachers could be hired online to avoid regulations—e.g. through platforms like Freelancer.

Education across online platforms has been an intensively studied area in the context of informational capitalism, both on a global level (Harasim 1996; Weller 2002; Anderson 2008; Salmon 2013), in Latin America (Silvio 2004; Rama 2006; Torres and Rama 2010), and in the UK (Browne, Jenkins, and Walker 2006). In general, mass expansion and the reduced costs of learning, the potential for social inclusion that it offers, and also the difficulties of effective implementation are discussed.

At the *informal* education level learning through video tutorials, forums, and games have been investigated (Lee and Lehto 2013; Selwyn 2007), while on the other hand for *formal and non-formal education* online learning typically takes the form of MOOCs (Massive Open Online Course) or VLEs (Virtual Learning Environment) (Cooper and Sahami 2013; Hoxby 2014; Borrego et al 2008). The massive expansion of these forms of online education is self-evident. Specifically, in the case of post-secondary formal education for example, in the USA in 2013 27% of the student population studied some or all of their courses via distance-learning. In the case of *private for-profit education*, this percentage reached as high as 59.3% in 2013 (US Department of Education 2016). At a global level in the same year, formal and non-formal private online education providers generated revenues of USD \$56,200 million (Santamans 2014).

However, in this area of for-profit formal and non-formal education the exploitation of teachers, particularly those who produce the class contents, has hardly been studied. In the context of post-secondary education, exploitation takes place both in formal education (in which university lecturers are invited or obliged to teach courses online) and in non-formal education which involves teachers contracted as consultants who produce ad hoc courses, typically although not exclusively to meet the demands of their client companies.



In effect, from a materialist perspective in both cases the same thing occurs: capital seeks the translation of knowledges from a subjective bearer (the individuality of the lecturer or the trainer) into a codification as an informational good (texts, videos, software, etc.). This translation has striking economic and legal consequences. On the one hand, what before was provided strictly as a *service* and therefore had to be paid for in every lecture cycle, has now become an *informational good*—a very special type of good of course, one that can be reproduced at close to zero costs, being susceptible to replication without the need to compensate the teacher who wrote the course again. This arises from a fundamental juridical fact: the control of the content is no longer in the hands of the teacher but most of the time passes to the company. This transfer of rights is framed within copyright legislation or, more frequently, specific contracts.

Although in both the traditional face-to-face and online modalities the teachers who create contents receive an economic compensation, in both cases we are presented with potential situations of exploitation, i.e., if the value that those teachers receive is less than they produce. However, for the purposes of this article it is interesting to draw attention to the fact that in each case a different type of exploitation predominates: in the face-to-face modality *exploitation through alienation* (based on the unpaid appropriation of units of labour time) is exercised; while in contrast for the online modality *exploitation through reproduction* takes shape (based on the unpaid codification of knowledge and the direct ownership of those knowledges by the company).

Conceptualizing virtual education through the concept of exploitation through reproduction is politically extremely important for teachers (and the institutions that bring them together) as generally speaking they do not discern with much clarity the nature of the social relationships in which they are embedded, nor how to deal with them legally.

The limitations of the teachers' economic and political analysis might arise from a (tacitly) theoretical issue: they are accustomed to associating value (and in the last instance their income, salaries etc.) with their work *time*. However, in the production of informational goods it is not evident at all that capitalist profits only or mainly depend upon teachers' working hours.

Indeed, in some exploratory interviews—previous to the research project that frames this paper—we repeatedly found situations in which the education companies paid the teacher roughly double what they would earn for an hour's face-to-face class, for developing content (taking into account all the time involved in both cases). The teacher, who assesses their situation in terms of exploitation through alienation, that is, in terms of how much they earn per hour of work, accepts the situation as more or less satisfactory. However, they usually do not consider that their course will be used on repeated occasions and that, probably, the rate of exploitation will be much higher.

Teachers and the unions that represent them, explicitly or implicitly clinging to the relationship between time and value, might fail to perceive that their income does not arise from a service but from the codification and reproduction of the knowledges



in certain bearers. This reproduction of knowledges is framed by intellectual property law, mainly through copyright law and specific contracts. Unfortunately, it is not clear at all that teachers and unions are familiar enough with the basics of copyright law, contracts regarding their knowledge and how to use them in order to protect workers' best interests.

Some of the questions that are tackled in this article are: What is the extension of online education in formal and non-formal education markets? What is the legal framework regarding contents produced for online courses and allowing exploitation through reproduction? What are the representations and ideologies that legitimate the process of exploitation through reproduction among teachers? In this sense, to what extent do teachers/professors/academics evaluate the payment they receive in relation to labor time (present and past) rather than to the knowledge they use or the fees collected by the institution that offer the courses? Do teachers/professors/academics tend to disregard the fact that the contents they produce are going to be used repeatedly? To what extent do teachers/professor/academics distinguish between regulations of a face-to-face class and an online course?

This report is structured as follows. Section 2 presents the Methodology of the research underlying this report. The choice of theoretical tools, empirical sources and geographical scope are discussed. Section 3 develops the theoretical framework that is used in this paper. Concepts of exploitation, and particularly exploitation through reproduction, are presented. The notions of ideology and regulation, necessary to understand the process of exploitation, are discussed as well. Finally, we deal with education literature. Literature is reviewed to underline the lack of a perspective tackling exploitation through reproduction of online teachers, and formal and non-formal education are defined.

Section 4 provides a characterization of for-profit online education and e-learning, drawing on secondary sources. This includes three kinds of productive processes: academic (where a comparison between the UK and Argentina is provided), corporate and MOOCs.

Section 5 deals with regulations regarding who is the owner of the contents produced by teachers. Copyright law, both in industrial and informational capitalism is presented. Then some arguments advanced by legal scholars and some trends regarding ownership are discussed.

Section 6 is based mainly on the quantitative and qualitative results of our twin surveys and is structured around three subsections. The first regards experience in online education and, among those that have prepared at least some material or a course, their representations of remunerations. The second subsection discusses the main variables that content producers take into account to determine how much they expect from their online classes. This refers, to a certain extent, to representations regarding the ultimate source of value of online courses.

The third subsection deals with representations regarding ownership. More specifically, it tackles the relationship between representations of ownership regarding face-



to-face classes *vis a vis* online courses. Each subsection begins with a quantitative approach and then moves on to present some qualitative data. Finally, the conclusions of the research are presented in section 7.

## 2. Methodology

This section presents some methodological considerations regarding theoretical tools, sources and geographical scope.

### 2.1. Theoretical tools

In section 3, four general concepts are discussed in relation to the topic of our research: Regulation, Exploitation, Ideology and Education. Those concepts are unavoidable to understand how *exploitation through reproduction* of teachers (as content producers) takes place in informational capitalism.

Of course, what we call exploitation through reproduction must be framed within a theory of capitalist exploitation, clearly defined and related to other types of capitalist exploitation.

Regulation, on the other hand, refers to the rules (laws and other norms) that capitalism establishes and enforces (mainly through the action of the state) in order to foster capitalist accumulation—i.e. capitalist exploitation and expropriation. The concept of regulation is relevant for this paper because it helps to illustrate how intellectual property norms are linked to the functioning of capitalist totality. More specifically, when copyright law, works for hire doctrine, and specific contracts are discussed—in section 5- they will be framed by this concept of regulation.

In turn, one of the functions of ideology in capitalism is to convince the exploited (and the rest of the society as well) about the convenience and/or the necessity of engaging in relations of exploitation. However, different kinds of exploitation and different stages of capitalism produce different ideologies. In section 7 we will discuss to what extent some discourses and representations about online education can be considered as components of the ideology of informational capitalism. To achieve that goal, we need to clarify our theoretical standpoint regarding the concept of ideology, as the topic is quite a disputed one.

The relationship between education and informational goods is manifold. Here we address two issues. On the one hand the approach from critical education literature and legal studies to online education. On the other, the concepts of formal and non-formal education that we will have recourse to/draw on.

### 2.2. Sources<sup>i</sup>:

This paper draws on the following sources.



### 2.2.1. Secondary sources

#### Academic literature

A research of the academic literature discussing the appropriation by the hiring institutions of the informational goods produced by teachers was conducted both using Google Scholar and in the University of Westminster Library. As a result, I have found that the topic has not been specifically tackled. This research was important to establish the vacancy regarding the topic of this paper. However, there are a few exceptions, that is, some papers that in spite of avoiding concepts like “exploitation” or “capitalism”, offer valuable insights. This literature is discussed in the introduction and referred to mainly in section 5 but also in sections 4 and 6.

#### Webpages of universities and e-learning companies

Webpages of universities and e-learning companies have been investigated to gain knowledge about the business models and networks of some universities. For instance, Universidad Siglo XXI, the biggest Latin American private university, which basically delivers online education, turned out to be part of a network called Ilumno (<http://ilumno.com/es/>) which is controlled by a US firm based on Miami: Whitney International University System Ltd., Inc. Webpages of the universities are also relevant because they tend to hide the names of the teachers that prepared the courses— i.e. to disregard the *moral rights* of the teachers.

#### Union webpages and documents provided therein

Some unions, like AAUP, have produced specific documents trying to tackle ownership of contents developed by faculty. Analyzing the achievements and limitations of these documents that suggest so-called best practices is relevant. In the same vein, the lack of these kinds of documents on the webpages of UCU, SADOP and other unions is a relevant datum.

#### Forums and other webpages

Several forums provided valuable information. For example, in Quora.com, an interesting thread was found. Participants discussed why teachers upload their courses to Coursera despite not getting paid at all. Teachers’ comments collected from this kind of forum are useful to perform the triangulation with primary sources. Instead, Geteducated.com presents employers’ discourse regarding who is expected to own the materials prepared by employees. In turn, Freelancer.com posts job offers for teachers as content producers. A few examples have been used as the data regarding payment, delivery dates, etc. is extremely relevant.



## Stats and reports

Stats regarding tendencies in enrollment, value of e-learning/online education markets and submarkets and geographical comparisons were used. These came from reports such as Online Business School and Docebo and from national higher education statistics offices, HESA and SPU.

## Contracts

Accessing the contracts through which teachers transfer their copyrights to for-profit institutions is a difficult task. However, on the basis of strict confidentiality, access to the contracts of three Argentinian universities has been obtained. A contract between Coursera and the University of Michigan, published by The Chronicle of Higher Education was used as well.

## Legal sources

Copyright law standards of TRIPS Agreement, Argentinian Author's Rights Law, UK Copyright Law. Doctrine on "Works for hire". Benchmark cases.

### 2.2.2. Primary sources

The main *primary* sources of this paper were two short twin surveys in Spanish and English, conducted online through an adapted distribution of LimeSurvey software. This choice has strengths and limitations. The former includes:

- i. The anonymization of the answers—i.e. the respondent does not feel evaluated or judged and their name and reputation are not involved.
- ii. Fast collection of data and processing. As the research and writing of this paper were due to be completed in a two months period, this feature was extremely important.
- iii. Strict comparison between respondents' answers is feasible as the stimuli was/prompts were similar.

Nonetheless, there are several important limitations of these surveys that should be noted.

- i. They are not based on representative samples. Deviations and errors cannot be measured. Therefore, the results cannot be universally generalized. These results are treated with caution, and their aim is to suggest hypotheses, rather than establishing conclusions.
- ii. They were directed at academics. This covers only one of the fields of online education, that of formal education. Further re-



- search may focus on the representations non-formal corporate e-learning representations.
- iii. The standardization and shortness of the survey undermines an in-depth understanding of discourses and representations of the respondents.

Beyond strengths and limitations, it might be worth mentioning some characteristics of the sample and survey questionnaire.

Regarding the sample, it was a self-selected sample of higher education teachers, professors and researchers reached by an email invitation to complete the survey. Respondents to the Spanish survey were mainly from Argentina, but approximately half of the respondents are based in other Latin American countries. In the same vein, most respondents to the English survey are based in the UK, but several of them are based in other European countries and the US.

The questionnaire was composed of 11 structured questions and one open space for additional comments. It was devised to be filled in in an average time of 5 minutes. This was an extremely important *ex ante* requisite because as the survey gets longer, the sample becomes (even more) biased towards the particular group of respondents that are willing to devote considerable amounts of time to answering it. The respondents were asked to express their first thoughts, which is useful to grasp immediate and even unconscious intersubjective representations that shape ideologies.

Regarding the content and form of the questions, the survey had three small sections. The first encompassed the socio-demographic information. The second asked if the respondents had ever prepared an online course or instructional materials for online education. In case the answer was “yes”, they were asked to compare the *remuneration* for this work vis a vis that of face-to-face teaching. Then the main two questions of the survey were displayed. Both were designed in order to grasp representations regarding the main *variables* that explain the respondents’ expected remuneration for preparing contents for online courses. Time, knowledge, profits, prestige, number of republications of the course were the main variables considered. Whereas the first question was directed to the individual respondent preferences (“Suppose you are asked...”), the second pointed to more general opinions. The “other” option was included in order to allow reasons that were not considered among the options given.

The third section was aimed at *comparing* the representations of the respondents regarding ownership of materials prepared for face-to-face classes vs. online classes. The respondents were faced with four options regarding who owns the contents of the classes. In this case several options were intentionally avoided:

“Other:...”, “It depends on...”, “No answer”. Although it could be argued that this decision biases the answers, this is a common technique in different kinds of surveys. Including the avoided options would allow the respondents to choose the “politically correct” answer, which is a worse bias in the case of this particular question. It’s likely that most of them, including those that have strong beliefs on the topic, would



have preferred to take refuge in one of these answers. A common example of this technique is that of opinion polls. Although the traditional scale is supposed to have 3 or 5 options, allowing the respondent to stand in the middle (the comfort zone), it has become a standard technique to use 4 or 6 options, thus preventing the respondents from “escaping” through the neutral, politically correct or comfortable option.

This is not only an abstract theoretical consideration, but rather a way of dealing with what previous research identified as a problem. For instance, Hoyt and Oviatt, regarding their specific survey concerning ownership in online courses, stated under the title of “Study limitations” the following: “One limitation of this study is the imperfect knowledge of administrators. A substantial number of them selected the “Don’t know” option.” (Hoyt and Oviatt 2013, 176). With all due respect to the authors, it might not be the case that administrators lack the knowledge, but rather that they don’t want to share if they can politely avoid that. In another study that also asked about ownership of faculty authored material, Aaron and Roche received high rates of (from my perspective) imprecise, politically correct answers: “co-ownership” (which is not clear at all regarding how the profits would be ultimately shared) and “undecided” accounted for 79% of the answers (Aaron and Roche 201, 326).

To be sure, it is clear that the selected methodology forces (some of) the respondents to express opinions about a topic they would prefer not to. But, this is precisely why it is relevant to track intersubjective and even unconscious representations. The fourth section is the open space for additional comments. It was devised to allow the respondents to express anything that they could not say due to the constraints posed by the options offered. Typically, it was expected that the respondents who felt that they were not allowed to express their views in the last two questions could do it in this open space.

The English survey was sent to WIAS email lists (subscribers interested in Marxism, exploitation and digital technologies to a greater or lesser extent) and to five jiscmail.ac.uk lists. Two of them were selected because their topic was somehow related to online learning. The other three were used as a kind of control group, to try to analyze if the opinions were biased because of the self-consciousness of social scientists (either critical theorists or engaged with online education). This survey was fully answered by 92 respondents. Their average respondent age was 44 years and they have been teaching for 15 years. 49 were women and 43 were men. Regarding their fields, 71 people work in Social sciences/ Business and Law /Arts and Humanities / Education, 14 in Physical sciences/Mathematics, 4 in Engineering and Technology (A4) and 3 in Biological sciences / Medicine, Veterinary medicine, Dentistry and Health. The bias towards social sciences and humanities was expected and sought for. However, the 21 respondents from other fields offer a good counterbalance. 47 of the respondents work within the UK, whereas 12 are based in the US, 5 in Australia and the rest are spread among Canada, Ireland, Spain, Croatia, Italy, New Zealand, France, Netherlands, Finland and Chile.

The Spanish survey was sent to three short mailing lists: one of them includes Latin American academics interested in innovation, learning and digital technologies. The



second is a list from a track in informatics and social relations from a Latin American conference of computer scientists, while the third is a generic list of Conicet (National Scientific and Technical Research Council of Argentina) researchers from different fields that had already answered a previous survey regarding scientific labour. 37 respondents completed the Spanish survey. The average respondent was 44 years old and has been teaching for some 18 years. 17 of them were women and 20 were men. 22 of them work in Social sciences/ Business and Law /Arts and Humanities / Education, 8 in Physical sciences/Mathematics, and 7 in Engineering and Technology. 29 of the respondents were based in Argentina, while the rest were spread over Colombia, Brazil, Uruguay and Peru.

Indeed, for our purposes the samples are comparable, since the respondents share approximately the same sociodemographic characteristics and the sought for bias towards social sciences and humanities and the control by other sciences were obtained.

The number of respondents was low and its representativeness is unknown. Therefore, the results of the surveys must be discussed with caution. They are aimed at suggesting hypotheses, rather than proving them.

The original research plan included some open interviews. However, they were impossible to realize due to different obstacles.<sup>ii</sup>

### 2.3. Geographical scope

The research intended a global perspective where possible, and a focus on Latin America, particularly Argentina, on the one hand, and on the UK -and in some respects other central countries-, on the other.

Latin America offers particularly fertile ground for the study of this phenomenon and to compare it with the central countries. Despite non-formal and informal online education growing rapidly in the region (at rates of 15% annually, much higher than in the central countries which have growth rates at around 5%, vide Santamans, 2014), the exploitation of teachers has not been studied. The fact that several governments in the region are immersed in a shift towards neoliberalism in which the deregulation of education in general and formal private education in particular is stimulated, suggests that for-profit distance education will expand at an even higher rate in the coming years. In Argentina the context of a slowdown in aggregate demand and a resultant rise in unemployment, the much greater number of doctoral degrees granted—as a result of the expansion of scholarships in the last decade- than lectureships or research posts, the reserve army of teachers seems destined to grow. On these firm foundations, exploitation through reproduction in virtual education is blossoming.

The case of the UK is relevant as it enables a comparison with a core country. Moreover, UK higher education system offers at least three relevant features for this research. On the one hand, the fact that most universities are legally framed as charities tends to obscure the fact that they produce educational commodities. On the other hand, the biggest university in the UK, measured by enrollment, is Open Universi-



ty, which is basically an online education provider. Finally, a powerful group of corporate (non-formal) e-learning providers are expanding in the UK (e.g. Learning Light).

Regarding secondary sources, those coming from the US are particularly relevant, as the origins of e-learning, online education, on the one hand, and changes in intellectual property law, on the other, emerged in that country.

The comparison is intended to enlighten which features related to the exploitation through reproduction of teachers are specific to the Argentinian (or peripheral) context countries and which correspond more generally to the condition of the virtual teacher in informational capitalism.

### 3. Theoretical framework: Regulation, Exploitation, Ideology<sup>iii</sup> and Education

#### 3.1. Capitalist Regulation: Framework for capitalist exploitation

Here I will discuss the theory of capitalist exploitation<sup>iv</sup> that frames this article. My argument is based on a cognitive materialist perspective<sup>v</sup>. Under capitalism, each good finds itself subject to a double regulation: on the one hand is a set of institutions that can be roughly congregated around the pole of *Physical Property*. On the other hand is a bundle of diverse regulations magnetized by the expression *Intellectual Property*. Both types of regulation represent the two arms of capitalist machinery and both act simultaneously. Physical property regulates access to physical matter, which entails what is usually called “matter” and energy, while intellectual property regulates access to knowledge matter, which encompasses what is commonly labeled as knowledge, information, culture, communication, etc.

The origin and evolution of capital is defined by three processes: *exploitation, expropriation, and regulation*. Capitalist exploitation stems from purchasing knowledge matter for less than its value. Capitalist expropriation refers to capital paying for physical matter at less than its value. Capitalist regulation consists of the imposition of norms (legally sanctioned or through other means) which enable exploitation and/or expropriation.

Regulation happens outside of capitalist productive processes<sup>vi</sup> and the sphere of exchange, and always entails more or less violently uprooting pre-existing norms, including those which eventually sanction the exchange of equivalences and a particular property form. Thus, even though capital is, in the last instance, nothing more than dead knowledge matter, capitalism as a system also owes its progress to the theft of physical matter by means of the violence of the law.

Of course, regulation, meaning the establishment of the norm across its diverse material bearers, is a *potestas* of power in relation to no-power. Regulation separates the regulators from the regulated and this, usually, signifies oppressors from oppressed.



The process of regulation has two instances, two dialectical moments, which have been described under different names by a wide-ranging literature of political philosophy.<sup>vii</sup> The framework proposed here will be used to elaborate on them.

The first moment of regulation is the *regulation of physical matter*. That is, the domestication or annihilation of bodies and objects through wars, physical violence, destruction, repression, confinement. This is achieved through the mobilization of (physical) technologies such as guns, bombs, prisons, and in many cases drawing on physical human energies (as with conflicts on a large or small scale). Within this moment of physical regulation two manifestations can be distinguished. On the one hand, constituent regulation and, on the other hand, constituted regulation. The former refers to physical regulation imposed on a given territory, against the extant norms in that territory, in order to impose new norms (at the second moment). It is the case of the foundation of any State or similar order. The second manifestation relates to regulation that occurs within an existing normative order. That is, subsequent to constituent regulation, again and again physical regulation appears as a re-assurance of the existing order. This is no longer the inferno of invasion, but of repression and disputes around normative intersubjectivity. Thus, while constituent regulation occurs against norms, constituted regulation takes place within them. Simplifying matters a little, while the former has a military character, the second is an order founded on police force.

The second moment is the *regulation of knowledge*. Here, in general, codified knowledges are produced as information: sheaves of great international treaties, national laws, modest municipal ordinances, or non-state norms. Here as well, there is constituent regulation (for example the constitutions themselves), and constituted regulations (that are concerned with subordinated norms). But, the key is the inoculation of norms into intersubjectivity, particularly although not exclusively through the means of *ideology*.

Of course, the process is not necessarily linear. Cognitive regulation is perpetually shored up by physical regulation, and vice versa. Indeed, it is most usual to find a dialectical interaction between the two moments of regulation.

From a cognitive materialist standpoint, the *State* may be defined as an ensemble of normative intersubjective knowledges capable of successfully performing both moments of regulation and, more precisely *as having a monopoly of production over the normative intersubjective knowledges that are legal in a given territory*. Thus, other crucial properties that define the state in several theories (the monopolies of violence, of collecting taxes, etc.) are rather derived from the basic power of setting the intersubjectively accepted rules. Far from being linear, determined, immediately stabilized phenomena, the two moments of the processes of regulation are open fields in which the success of the regulators is far from predictable with any clarity and, above all, in which there are always contradictions present. The dialectic of both moments seeks to consolidate regulation which is never complete or perfect. Indeed, a similar but opposite dialectic can always be traced for the regulated: the resistance of “matter” and energy (rebellious bodies, limits transgressed) and cognitive resistance (alternative axiologies, norms, and languages for example).



In turn, regulation does not occur just on one level, for example on that of national laws. It also takes shape on the supra-state (international treaties) and sub-national (provincial and municipal regulations levels).

Regulation, then, is a broad concept. Here I will resort mainly to regulation of knowledge in its constituted form, i.e. intellectual property norms and, specifically copyright law, contracts, works for hire doctrine and other juridical means used in informational capitalism to perform exploitation through reproduction.

### 3.2. Exploitation: General concept and three types

Regarding the capitalist exploitation, and particularly that that occurs in informational capitalism there are various approaches that I would like to partially draw on. On the one hand, a Marxian approach (Marx [1867] 1990), but also Hilferding [1910] 1981; Sweezy 1942), from which I maintain the necessity of exploitation, understood as a relationship of free and legal exchange of objectively asymmetrical magnitudes, to all stages of capitalism. On the other hand, there are the Sraffian (Hodgson 1988; Garegnani 1979) and Analytic Marxist approaches (Roemer 1985; Cohen 1979; Elster 1981; Wright 1985). From these I maintain the emphasis on a theory of exploitation that is not necessarily based on Marx's labour theory of value, and also the vocation for systematic analysis. However, this perspective has not incorporated elements which help us to consider the exploitation that occurs in informational capitalism. Similarly, authors from autonomist and cognitive capitalism currents have touched on the subject (Fumagalli 2015; but especially Moulier-Boutang 2011). From these and other authors I take the idea of the divorce between labor time and value production and the integration of intellectual property into the analysis. However, I reject the autonomist philosophical perspective and also that of cognitive capitalism<sup>viii</sup>. Finally, from cultural materialism and associated perspectives (Fuchs 2010; 2012; 2015; Fisher 2012), the main contributions that I appropriate are, on the one hand, the idea that online platforms, in contrast to discourses about freedom and community, operate on the basis of the capitalist exploitation of users (although not only of them), and, on the other hand, the updating of Smythe's (1977; 1981) contribution which conceives of a type of exploitation of audiences through social media sites.

In this context, here I will concisely define capitalist exploitation and its three modalities. I understand capitalist exploitation to be a social relationship that fulfills the following requirements:

1. *Exchanges* inscribed into *productive processes* are generated between at least two classes of actors, *Exploiters (E)*—who receive or translate resources—and *exploited (e)*—who produce or bear them.
2. The exchanges between *E* and *e* are, in economic terms, objectively asymmetrical in relation to the value of the goods and services transacted, in such a way that *E* obtains a surplus-value as regards *e*.<sup>ix</sup> This occurs independently of the subjective representations that these actors hold about said exchanges.<sup>x</sup>



3. The productive processes in question are orientated to the production of *commodities*. Specifically, the *E* actors involved in these processes act (including in relation to the *e* actors) with the principal - if not the exclusive - goal of *making a profit*.
4. The positions of *E* and *e* are also asymmetrical with regards to the perspective that they have about the productive process which they share: while the *E* actors tend to have an over-arching view of the totality of the process, the *e* actors only perceive one or a few fragments of the process.
5. These relationships take place, to a greater or lesser degree, in a *consensual* way and are *not-illegal*: they do not imply any clear, evident or indisputable violation of any current legislation.

Capitalist exploitation adopts three modalities:

a. Exploitation through alienation:

Determined knowledge borne by the *e* actors is objectified during work time in a product which is alienated by the *E* actor. This is the traditional conception of exploitation, with two caveats: the key lies in the knowledge (that is the source of surplus value) objectified in the product and that this modality includes not only what occurs within the productive unit but also the products of the outsourced or autonomous workers.

b. Exploitation through reproduction:

Determined knowledge borne by the *e* actors is codified by the *E* actor, who becomes the owner of this knowledge. The *e* actors, however, continue to possess it in the original matrix. This happens when capital copies knowledge that hadn't been generated for profit, with the goal of making profit and without providing sufficient compensation (for example, the skilled movements and techniques of workers which are copied and translated into a procedure manual under Taylorism, who still possess their knowledge after their dismissal).

c. Exploitation through attention:

Determined knowledge transmitted by the *E* actors is subjectivized towards the *e* actors. This moves in the opposite direction from the other two modalities: especially in an economy in which the scarce resource is attention (Simon 1996), the attention of audiences is taken advantage of without sufficient compensation (Smythe 1977; Fuchs 2010) and is sold to advertising companies (normally in combination with data obtained



through exploitation by reproduction) in order to inject particularized cognitive flows into it.

It is crucial to point out that the three modalities are not mutually exclusive, but rather that two or three of them act (sometimes in consort) in many productive processes simultaneously. As has been mentioned, exploitation implies the existence of a productive process, but not necessarily a labour process.

In this project, I am mainly interested in a typical situation of informational capitalism: that in which exploitation through reproduction (or through attention) replaces (or compensates) the lack of exploitation through alienation. This kind of exploitation goes unnoticed, even for some orthodox Marxists, and therefore requires to be tackled both theoretically and empirically.

What here is defined as exploitation through reproduction emerges from repeatedly having detected anomalies in the traditional concept of exploitation. In effect, in the history of companies, industrial branches and countries which have been successful in the project of capital accumulation, there are forms which cannot be reduced to exploitation through alienation (for which capital critically depends on the mediation of the labour *product* and labour *time*). These companies', branches', and countries' processes of accumulation are fundamentally based on the unpaid copying of knowledges from the most diverse sources, as several studies have documented (Cimoli, Dosi, and Stiglitz 2008; Chang 2009; Drahos and Braithwaite 2002; May and Sell 2006; Johns 2010; Zukerfeld 2010; 2016).

Unlike the unpaid knowledges exploited through alienation, those exploited through reproduction do not need daily replenishing. They become codified in texts, objectified in machines, and even housed in subjectivities regulated by specific contracts, in all cases under the ownership of capital.

While exploitation through alienation requires the relationship between the exploited and the product of their labour as the means by which to gain access to the knowledges carried by the former, for exploitation through reproduction the capture of this knowledge becomes independent of this relationship. For this reason, it is tempting to claim that exploitation through alienation represents the *formal subsumption of knowledge under capital*, while exploitation through reproduction presents us with the *real subsumption of knowledge under capital*.

Exploitation through reproduction can take place within or outside of the labour process, and the knowledges implicated can arise from quite heterogeneous contexts: scientists' subjective knowledges, traditional or popular knowledges, knowledges codified as digital information and, of course, knowledges associated with work skills.

The idea that workers possess knowledges that are not objectified in the labour product but that are equally harvested by businesses without appropriate compensation has been considered at least since Marx, from two angles. The first is connected to



deepening the insights afforded by Marxian concepts related to the organization of the labour process. For example, Coriat (1979), in his analysis of Taylorism, has demonstrated how breaking the monopoly of workers' knowledges has been a decisive task for the establishment of North American industrial capitalism. The other approach is underpinned by the notion of "general intellect" mentioned by Marx in *The Grundrisse*. This is the course taken by Italian autonomism (Lazzaratto and Negri 2001) and the theory of cognitive capitalism (Vercellone 2007; Moulier Boutang 2011). In the present stage of capitalism, it is claimed, workers produce valorizable knowledges throughout the course of their lifetime and that firms appropriate them through the labour relationship. Beyond the literature which engages with Marxism in one way or another, the translation of knowledges carried by individual subjectivities into various forms of objective codification (or other bearers) is one of the central concerns of the *management* approach (e.g. Nonaka and Takeuchi 1995). Of course, generally speaking this literature takes for granted the corporate ownership of knowledge and does not question whether compensations to workers are appropriate or not.

Above and beyond regulation, the key to exploitation through reproduction is always translation. While knowledges are carried by the subjectivity of a worker, the company has only very limited control: it can only gain access to them by means of the contingent labour relationship with their carrier. Thus, translation into bearers that facilitate the ownership of the company is imperative in relation to critical knowledges. The most significant translation is that which involves codification, that is, translation from implicit and explicit subjective knowledges into diverse types of information (the copyrights for which would belong to the company): texts, instruction manuals, videos.

These affect the workers we label "cognitive". Let us imagine a professional musician, for example a pianist, hired by a producer. When she provides a *service* (accompanying a singer in a live performance), for which she receives remuneration, if everything proceeds properly she will be exploited through alienation: the fruits of her labour, and specifically her time, will be the vehicle by which the company obtains a surplus value. In order to exploit her again, her services will be required show after show. But when this musician is contracted to *record*, in other words, so her subjective knowledges are translated into codification as digital information the situation is quite different, and takes the form of exploitation through reproduction: the company can reproduce those objectified knowledges as many times as it chooses, with marginal costs tending to zero, without any additional compensation given to the exploited party, if the company proceeds according to the contract.<sup>xi</sup> This enables the payment for a recording to be set much higher than that paid for a live performance. In effect, exploitation through alienation has once again been transitorily suspended in order to stimulate exploitation through reproduction. This form of exploitation through reproduction of cognitive workers is thriving under informational capitalism. Therefore, we can find it not only in the world of art and entertainment but also in software production and in what concerns us in this article: formal and non-formal education. Of course, the process of transformation from traditional face-



to-face commercial education (which involves the familiar exploitation through alienation) towards “virtual education” is striking although scarcely remarked upon. In the case of the latter, simplifying matters somewhat and concentrating on the example of a teacher who is filmed or who writes content, they are paid only once (just as the session musician) for “virtual classes” which are repeatedly reproduced. In the best-case scenario, the company pays the teacher for their “working time” triple what they would receive for a normal class, but instead of charging 50 students, now payment is collected from 5000. The teacher/professor/ academic/content producer, naturally, might perceive this to be an excellent change—until they become unemployed, sub-employed, precarized, etc.

Exploitation through alienation	Exploitation through re-production	Exploitation through attention
The <b>energies</b> and the <b>knowledges</b> of the exploited are translated by <b>objectification</b> in the <b>product</b> of labour whose ownership is in the hands of the capitalist	The <b>knowledges</b> of the exploited are translated by <b>codification</b> (with a possible transitory passage through subjectivity) (in)to different forms of <b>information</b> whose ownership is in the hands of the capitalist	The knowledges administered by the exploiters, generally digital <b>information</b> , are translated to the <b>subjectivity</b> or <b>intersubjectivity</b> of the exploited
The capitalist obtains labour <b>time</b> (energy + knowledge). This time can be inside or outside the productive unit, but the capitalist appropriates the fruits of the labour time.	The capitalist acquires ownership of certain forms of <b>knowledge</b> (produced over longer or shorter time spans, within or outside of the working day).	The capitalist obtains <b>human attention time</b> in order to inoculate certain <b>knowledges</b> (generally outside of the working day).
The capitalist pays, usually in monetary terms, for the cost of the <b>energies</b> necessary for the reproduction of the worker.	The capitalist pays in monetary or, more commonly, in non-monetary terms (such as recognition knowledge).	The capitalist pays in non-monetary terms (with access to contents or software, whose monetary cost is lower than that of attention).
The commodity (or its intermediary products) that arises from the productive process (a good or service) is alienated and erodes with consumption, meaning that the identical repetition of the productive process requires the subject exploited through alienation again.	The knowledges (subjective or codified as information) are not alienated (they do not erode with use), so the exploited subject they have been extracted from is not generally necessary for the repetition of the same productive process.	The commodity is an accumulation of attention, and is consumed with its productive use. This means that the identical repetition of the productive process requires the subject exploited through attention again.

**Table 1:** The three types of capitalist exploitation. (Zukerfeld 2017, 159)

### 3.3. Ideology

Regulation in general and Exploitation in particular cannot be properly understood in capitalism if ideology is not taken into account. From a cognitive materialist perspective, I call ideology or ideological to the beliefs (more precisely, the axiological knowl-



edges) that fulfill the following three in capitalist societies: 1.) being intimately linked to the development of the dynamic of the (capitalist) totality of each period. Meaning, they must be beliefs and values essential to the harmonious functioning of the productive processes and regulations—helping different forms of capitalist exploitation and expropriation of each period; 2.) being linked to the flows of other types of knowledge (entwined with particular subjects, technologies, information etc.); 3.) existing in a naturalized way, accepted immediately by the intersubjective collectives that bear them.

For example, the idea of “God”, of “reason”, of “property”, the belief that a whole set of symbols which we call “money” is exchangeable for goods and services, the belief that human subjects are bearers of “human rights”, among other ideas inhabited, or inhabit, this intersubjective substratum in some spatio-temporally delimited contexts.

Here ideology closely resembles the sense that Žižek bestows on it. To take a simple example: the relationship between a King and his subjects. The King only has subjects if they intersubjectively believe that the King is the King and that they are his subjects. We are confronted here with a series of beliefs that prop up a determined social order for the very fact of being collectively internalized. The King is King because his subjects do not question the social foundations of his power. This is the nucleus of ideological reality:

““ideological” is a social reality whose very existence implies the non-knowledge of its participants as to its essence.” (Žižek 1989, 15-16)

However, the above quote is insufficiently clear and must be distinguished from the Marxist notion of ideology. For Marx, ideology is “false consciousness” and will vanish when the “truth” is revealed (the role of the revolutionary party or some other source of certainties). In our view, on the contrary, ideology exists *materially* in the intersubjective tapestry: the capitalist totality—or whichever other type—depends on it for its continuation. But above all, ideology is not necessarily false.

“The lesson that must be drawn from this as regards the social sphere is above all that belief, far from being a “personal”, purely mental, state, is always materialized in our actual social activity: belief sustains the fantasy that regulates social activity.” (Žižek 1989, 64)

“An ideology, therefore, is not necessarily “false”: as regards its positive content, it may be “true”, quite precise, given that what really matters is not the affirmed content as such, but the mode in which this content relates to the subjective position supposed by the process of enunciation itself.” (Žižek 1994, 46-47)

There are two points to add to Žižek’s perspective. On the one hand, the point is not so much that ideology can be “true”, but that actually, as pointed out in chapter 2, it



makes no sense to situate it on the truth-falsity axis. The interest lies in how it is articulated with the functioning of the social totality into which it is inscribed. Are the dominant beliefs necessary to sustain a determined distribution of resources, whether they be power, wealth, or other forms of knowledge? In the event that they are, we are confronted by an ideological reality. In contradistinction to a concept of ideology as an “interested lie” (which could be useful in another type of study), here the emphasis is on the axiological intersubjective knowledges that are not *only or necessarily* part of any conscious conspiracy, or emitted by a tightly restricted group that deliberately disseminates them for their own self-interest. Some ideologies may have this origin, while others do not.

This could be clarified by a second remark about Žižek’s position. Ideologies, in the most conspiratorial sense of the term, refer to the level of subjective knowledge, that is, to a set of subjectivities that produces a series of declarative knowledges and attempts to spread them widely by means of their translation into various bearers. By contrast, what interest us here are ideologies as intersubjective beliefs only, when they have reached intersubjectivity, whether or not they stem from there.

There are a lot of ideological beliefs surrounding teachers’ exploitation. However, here we will deal mainly with one of them. Indeed, a notable aspect of exploitation through reproduction lies in the ideological role of payment by the hour. The idea of labour *time* as the equivalent and source of wealth, brandished by approaches developed during industrial capitalism, naturally leads to demands for increases to the workers’ “hourly” pay. However, as we will discuss below, in the case of exploitation through reproduction, the repertoire of demands appropriate to exploitation through alienation might lead to a defeat for labour. Trade unionists, steeped in the traditions of industrial capitalism, are generally experts at negotiating break times, leisure time, overtime etc., but are unequipped to deal with the regulation of the knowledge carried by workers.

That is, relating payment and other compensations to measurable units of time and asking for raises in the amount paid per unit of time was undoubtedly a progressive approach during industrial capitalism, when exploitation through alienation was the norm. And still is, regarding productive processes where workers produce outputs whose value could be properly measured in time units (like manufactured goods or face-to-face classes—and other services-). However, when it comes to informational goods (i.e. those composed of digital information).

### 3.4. Education

#### 3.4.1. Contributions from critical education and law scholars

What has been said by academics regarding the education aspect of our research? General analyses concerning the relationship between education and cognitive or informational capitalism have been produced during the last few years (e.g. Peters and Bulut 2011; Karpov 2013; Cunningham 2015). Education scholars from critical per-



spectives tackled the tendency towards privatization and commodification that higher education systems have been undergoing since the advent of neoliberalism (Jandrić and Boras 2015; Holmwood 2011; Werry 2002). Academics' and teachers' situation in online environments have been addressed as well (McKenna 2013; Noble 1998). However, the focus regarding the intersection between neoliberalism (or informational capitalism) and academics has been mainly control mechanisms and impacts on subjectivity.

The criticism of the commodification of formal education, of its submission to neoliberal values and the need for critical pedagogies have been lucidly approached (McLaren and Jandric 2014). All of these valuable studies have addressed the topic mainly from a philosophical and theoretical standpoint.

“Critical pedagogy” is a term that describes approaches to education that are based on a critique of capitalism, and come mainly from Marxist and humanist standpoints, ultimately based on the illuminating work of Paulo Freire (1970). Several links between formal education and the capitalist system are underlined in this literature. Regarding our topic, critical pedagogy unearths the reproduction of capitalist values that takes place through education. For instance:

“Education is being used as a vehicle primarily to generate and promote the value of [a] capitalist society.... Schools have become transformed into corporations in themselves, dedicated to engorging students, assimilating them into the culture of consumption, and then vomiting them out--some of the students, of course, will be in a better position to consume (knowledge, material goods, life itself) than others.” (Jaramillo and McLaren 2009, 8-9.)

Specifically, obscuring the relations of exploitation is an important goal of the value inoculation process that takes place in formal education:

“one of the goals of the corporatization of education is to undermine, suppress, and eliminate any political ideology that exposes capitalism's governing dynamics of exploitation.” (Kyrilo and Thirumurthy 2010, 333)

However, the exploitation of teachers is a scarcely discussed topic in this literature, let alone exploitation of contents (Cfr. Darder and Baltodano 2009; Duncan-Andrade and Morrell 2008; Jaramillo and McLaren 2009; McLaren, and Kincheloe 2007).

On the other hand, this literature is typically focused on primary and secondary education, but rarely on higher education.

Beyond pedagogy, there are Marxist approaches to the role of teachers in the reproduction of capitalism. Perhaps the most relevant work in this area is Harris's (1982) *Teacher and classes*. Despite discussing topics such as ideology, classes, productive and unproductive labour, the exploitation of teachers is barely discussed.



However, there are some works discussing specifically the exploitation of higher education teachers, professors and academics mainly around two lines: On the one hand, exploitation enacted by academics taking credit for work done by others (mainly PhD students) (Martin 1986); on the other hand, tenure track exploiting their adjuncts (Birmingham 2017). But his approaches are neither rooted in a systematic theory of exploitation, nor do they define the concept.

In turn, several works have more specifically discussed ownership regarding contents of online courses from a *legal standpoint* -mainly in the US, but also in Spain, China, UK and Australia- (Lang 1998; Caladine 2001; Leslie 2002; Sanders and Richardson 2002; Samuels 2004; Klein 2004; Myktyyn et al. 2005; Latourette 2006; Loggie et al., 2007; Xue 2008; Kranch 2008; Hoyt and Oviatt 2013; Ramón Fernández 2014; Aaron and Roche 2015.). Whereas all of them have debated the legal implications of the translation of teachers' knowledge towards informational goods, some conducted surveys (Hoyt and Oviatt 2013; Aaron and Roche 2015; Sanders and Richardson, 2002; Loggie et al. 2007), reviewed union recommendations and universities' policies (Aaron and Roche, 2015, Loggie et al, 2007; Ramón Fernández, 2014) and/or case law (Klein, 2004; Leslie, 2002). These heterogeneous contributions, however, tend to share a non-critical perspective and, more broadly, are not framed by sociological or economic theories. To be sure, the commodification of learning and the fact that the rapid growth of online education and the shrinking of government funding of tertiary education occurred simultaneously were noticed (Caladine 2001, 134).

Nonetheless, the main limitation of the aforementioned literature concerns the absence of any discussion of *exploitation*. It is not the case that authors conclude that there is no exploitation, but that, to the best of my knowledge, the concept is almost never resorted to <sup>xii</sup>. This is not only a theoretical limitation, but a practical concern as well: regulations required and political action recommended are quite different if the exchanges between academics and companies are perceived as exploitative.

### 3.4.2. Formal and non-formal education

Exploitation through reproduction of education content producers takes place in different forms of education. This report deals with two kinds of education: formal and non-formal. Here we will use the former term to refer to the abilities acquired through university or tertiary institutions. Then, specific knowledge certified by a diploma will be referred to as "titled". Thus, Formal Education refers to "the highly institutionalized education system, chronologically graduated and hierarchically structured, which extends from the first years of primary school to the last years of university" (Coombs y Ahmed 1975, 27); and also, let's add, post-bachelor education.

Following on from this, we understand non-formal education as "every organized activity—systematic, educational, done outside the official system—that facilitates certain types of learning for specific sub-groups of the population, either adults or children" (Coombs y Ahmed 1975, 27).



In this sense, the objectives tend to be more specific and delimited than those of formal education (Trilla 1992). In the specific case of software producers, we are interested in three particular forms of non-formal education: *courses*, *training*, and *certifications*. All of them refer to specific institutionally organized seminars, usually with a strictly private character. The difference is that here we use the term *course* when referring to those forms of instruction that do not offer an especially valuable enabling credential. These are courses that only give the worker the knowledge acquired within them. On the other hand, *certifications* provide a vouching document required by the jobs market. Of course, most certifications include previous courses, but unlike simple courses, here an important part of the outlay required is paid in order to obtain the credential. Finally, we use the term *training (or training courses)* when speaking of a particular type of course: those that are organized by the production unit in which the employee works.

The proposed distinction between formal and non-formal education is related to certain criteria of duration, institutionality and structure. However, we believe it is necessary to add a fourth criterion, legal-administrative, which is the provision of academic titles and the recognition of them by the State (Vázquez 1998). If the formal system tends, by its own nature, towards standardization and uniformity, the non-formal one tends to consider immediate necessities in order to select the most applicable contents. By comparison, it possesses a much larger capacity for a constantly shifting adaptation in used languages and technologies. Consequently, it seems to be highly effective in solving market demands<sup>xiii</sup>.

#### 4. For-profit online education and e-learning<sup>xiv</sup>: Some facts and trend

According to Global Market Inside (2016), the world market value for academic and corporate online education/e-learning<sup>xv</sup> was USD 165 billion in 2015, and was expected to grow to USD 240 billion by 2023. However, it is not clear how this figure was calculated<sup>xvi</sup> or what are the shares of different submarkets.

Ambient Insight, another research firm, offers a much more detailed description, but only for the market segment of “self-paced e-learning”, referring to the learning process where the “learner” sets the speed of the course.<sup>xvii</sup> The firm states that the value of this market was USD 46,674 million in 2016.<sup>xviii</sup> The main component of this market was the packaged products, as the table shows.

Product	Revenues	Share
Packaged content	33063	70.8%
Services	6490	13.9%
Platforms	7121	15.3%
Total	46674	100.0%

**Table 2:** Components of “self-paced e-learning” world market in 2015, USD millions.

Source: Adkins, 2016.



Although the relation between self-paced e-learning market and the whole for-profit e-learning market is not clear, different analyses tend to show the relevance of packaged content in various submarkets (Docebo 2016; Technavio 2016).

This is important because these three components have different relations with capitalist exploitation, and packaged content is actually the most relevant for studying exploitation through reproduction. Indeed, packaged content is the kind of informational good that could help to exercise exploitation through reproduction as the teachers/content producers are paid once and the content is used repeatedly, with close to 0 marginal costs<sup>xix</sup>.

Some of the biggest packaged content providers are: Skillsoft, Lynda.com, Pluralsight, BizLibrary, Open Sesame and Cegos. One of these firms, Lynda.com, was acquired by LinkedIn.com for USD 1.5 billion in 2015 (Docebo 2016).

Revenues come mainly from North America, Asia and Western Europe. Latin America only accounts for 5% of the global market, while the UK is the most important consumer in Europe.

Region	USD millions	Share
North America	23337.4	50%
Latin America	2106	5%
Western Europe	7978.6	17%
Eastern Europe	1024.8	2%
Asia	10936.5	23%
Middle East	683.7	1%
Africa	607.7	1%
Total	46674.7	100%

**Table 3:** Revenues of self-paced e-learning by region (2016)  
Source: Adkins, 2016.

Specifically, the ranking of countries buying e-learning is as follows: US, China, Canada, South Korea, India, Japan, UK, Brazil, Spain, Poland, Russia, France, Mexico.

However, the Latin American market was expected to grow at an impressive 14% CAGR (Global Market Insights 2015).

What kind of organizations buy e-learning? A comparison between the US and China, the two biggest markets, shows interesting results:

Buyer segment	US		China	
	USD millions	Share	USD millions	Share
Consumer	494.1	2%	960	18%
Government	3798.5	18%	774.6	15%
Primary and Secondary Education	4611	22%	1583	30%
Higher Education	5694.7	27%	698.9	13%
Corporations	6251.8	30%	1246.3	24%
Total	20850.1	100%	5262.8	100%

**Table 4:** Revenues of self-paced e-learning in the US and China, by type of buyer  
Source: Adkins, 2016.

Both in the US and China, the corporations are the main client. However, there are two noticeable differences. While the “consumer” market—individuals directly acquiring e-learning—only accounts for 2% of the sales in the US, it represents 18% in China. On the contrary, the share of higher education revenues in the US market more than doubles that of China. This is related to the enormous penetration of for-profit e-learning in the US education system, as we discuss below.

For-profit e-learning and education includes three types of intertwined although distinguishable productive processes: Academic (where for-profit institutions that provide the content are universities), corporate (not universities or other formal education institutions that sell education content and services to other firms and universities) and MOOCs (a particular kind of online company that provides a specific kind of formal and non-formal education).

Of course, there are universities and independent MOOCs that are not-for-profit organizations. However, these modalities are not going to be discussed here, as the focus of this paper is not on education, but on a certain type of capitalist exploitation.

#### 4.1 Academic (formal education)

Online education has been growing steadily in formal post-secondary education during the last few decades and has reached significant shares of students. For example, in the US in 2013, 27% of the student population studied some or all of their courses via distance-learning. Remarkably, in the case of *private for-profit education*, this percentage reached as high as 59.3% in 2013 (US Department of Education 2016).

Thus, despite online education having huge potential for expanding the sphere of digital commons, it seems that the private for-profit sphere is taking the lead.<sup>xx</sup>



### 4.1.1 The UK: Open University

Regarding the UK system, it's worth starting by taking a quick glance at total enrollment in the whole higher education system. Table 5 shows a ranking of the 10 top universities in the UK by number of students enrolled.

HE provider	Total undergraduate students	Total post-graduate students	Total HE students
<b>Total UK</b>	1747855	532975	2280830
<b>Total England</b>	1420960	440385	1861345
<b>Total Scotland</b>	178850	56715	235565
<b>Total Wales</b>	103475	25200	128675
The Open University	119155	7465	126620
<b>Total Northern Ireland</b>	44570	10675	55245
The University of Manchester	27635	12065	39700
University College London	17910	19225	37135
The University of Birmingham	21495	12335	33830
The Manchester Metropolitan University	26835	5650	32485
University of Nottingham	23935	8185	32125
The University of Leeds	23565	8225	31790
Sheffield Hallam University	24705	6775	31485
Cardiff University	21905	8775	30675
The University of Edinburgh	20930	9425	30355

**Table 5:** 10 top UK Higher Education institutions (2015/2016, by type of course)

Source: Prepared by author based on HESA, 2017a.

The top university in terms of the number of students enrolled is the Open University<sup>xxi, xxii</sup>. Its dominance is particularly clear regarding undergraduate students. Most of its students have been enrolled in the England headquarters. However, the figures from Wales and Scotland are not marginal.

HE Provider	Total undergraduate students	Total postgraduate students	Total HE students
The Open University in England	94900	6590	101490
The Open University in Scotland	14195	470	14665
The Open University in Northern Ireland	3590	150	3735
The Open University in Wales	6470	255	6730



<b>Total</b>	<b>119155</b>	<b>7465</b>	<b>126620</b>
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**Table 6:** Open University student enrollment, by office (2015/2016)

Source: Prepared by author based on HESA, 2017b

The Open University is basically a distance education provider that delivers education through the means of informational goods (texts, audiovisual content, etc.) and even traditional textbooks sent by post. However, the Open University is mostly an online education provider. The fact that the number 1 university by enrollment is one that deals primarily with online education should not be surprising. In any case, it should suffice to show that online education is a topic which is already important to the dynamics of the higher education system in the UK.

For the purposes of this paper, the key point is that the Open University education process is mainly based on contents that might be copied with close to 0 marginal costs. And that this might be a fertile ground for exploitation through reproduction. Thousands of copies of the same materials are being used. Moreover, the Open University states proudly that: “Our materials are so good that two thirds of the UK's biggest universities use them too.”<sup>xxiii</sup> However, it is not clear that the content producers receive profits (such as royalties or any other remuneration) from the success of the materials they developed, if they do at all.

Naturally, the figures of staff vs. students show unequivocally the online nature of Open University.

HE Provider	The Open University	The University of Oxford	The University of Cambridge	Total UK
Academic contract-Full time	895	6055	5030	135015
Academic contract-part time	4575	885	795	66365
Total Academic Contract	5470	6945	5825	201380
Total non-academic staff	3305	6095	5220	208750
Total academic atypical staff	1060	2840	125	72015
Total Staff	9835	15880	11170	482145
Students enrolled	126620	24860	19660	2280830
Academic contract full time/Atypical academic staff	0.84	2.13	40.24	1.87
Full-time/Part-time	0.20	6.84	6.33	2.03
Students per Academic Staff	19.39	2.54	3.30	8.34
Students per Total Staff	12.87	1.57	1.76	4.73

**Table 7:** Staff in UK selected universities<sup>xxiv</sup>

(by type of contract, enrolled students, 2014/15)

Source: Prepared by author based on HESA 2017b and HESA 2017a.



Obviously, the ratio of students to total staff is extremely high if compared with average of the UK and even more if compared with elite universities like Oxford and Cambridge.

More importantly, the academics under a full-time contract are only a few when compared with both part-time and atypical academic staff. This is due to the organization of the productive process which includes content producers and tutors both through virtual means and occasional face-to-face meetings. Thus, most of the academics are part-time Associate Lecturers.

How is this reflected in the financial situation of the Open University? A quick glance might suggest that the financial situation of the OA is complex and volatile. The balances of 2013/14 and 2014/15 ended up in the biggest deficits of the whole UK higher education system. However, even Oxford University (ranked number 1 in the Times Higher Education World University ranking) experienced this volatility: the profits plummeted from a surplus of £205 million in 2014/5 (ranking Oxford as number 1 among UK universities in terms of profits) to a deficit of £14.7 million in 2015/16. Even though, in 2015/016 the Open University managed to obtain £58.5 million in profits before taxation, as table 8 shows.

	2013/14	2014/15	2015/16
Total Income	404.2	421.6	475.2
Total Expenditure	421.1	455.6	416.7
Surplus or Deficit (before taxation)	-16.9	-34	58.5

**Table 8:** Financial reports of Open University  
(2014-2016, £ millions).

Source: Prepared by author, based on Open University 2017 and HESA, 2017c.

This financial stress has been attributed to several causes. Firstly, the investment in a new firm and platform for online education: Future Learn.

“In September 2013 a subsidiary of the University, Future Learn Limited, launched the UK’s first massive open online courses in partnerships with twenty-one UK and two overseas universities. FutureLearn now has eighty four partners from across the world, including a number of internationally renowned cultural institutions. The courses are free to users, who may choose to pay for additional services. Out of 5.4 million course registrations with FutureLearn, more than 520,000 learners registered on Open University MOOCs during the year. As with the University’s other extensive open educational resources, the FutureLearn courses are expected to create interest in its core credit bearing curriculum.” (Open University 2017, 34)

It would be interesting to investigate to what extent the contents developed by the teachers for OA are currently or going to be used by this platform and, more precisely,



what kind of remuneration the teachers will receive for the contents they developed, especially in the case that they foster profits.

In any case, Open University is investing aggressively in online education, and decreasing its physical assets. Indeed, and secondly, the governing body of the Open University approved a plan including the closure of 7 regional centres, putting 500 jobs at stake. This decision led to a wave of national and regional strikes.

On the other hand, ongoing changes include a new approach GTP. Whereas it's marketed as "community" based, it is aimed at increasing the ratio of students/teachers, through the means of online learning. Not surprisingly, teachers are not completely happy with this approach and UCU (University Colleges Union) has conducted surveys to explore teachers' opinions. Examples of exploitation through reproduction appear immediately. For instance:

"(the new approach) It has caused me to have to construct 5 new online tutorials... [T]here has been an imposition of the topics to be taught in tutorials. Previously constructed online tutorial material could not be used...." (UCU 2017, 4)

Another source of financial instability relates to state funding. Indeed, the share of State funded income decreased dramatically and conversely, the share of fees increased. Government funding represented approximately 60% of university income in 2010/11 and now is less than 30%. However, this restriction fostered a financial strategy based increasingly on tuition fees, which continue to rise despite the decline of student enrollment figures over the last 5 years<sup>xxv</sup>.

Returning to financial issues, it must be noted that net profits are not sufficient as a measure to understand the relationship between teachers and universities in the UK. Profits are driven by many different sources, and several of them are not related to the contents produced by teachers. Indeed, in the UK a lot of income comes from government funding, investment gains, donations and endowment, research grants (which, for instance, for Oxford University represent the main source of income), etc. Nonetheless, for our purposes the most relevant measure is the ratio between tuition fees (a proxy variable to the money paid in order to access the contents) and numbers of academics. Thus, how much money is raised per individual staff member? This information is not available in HESA reports. However, it can be obtained by turning to the individual financial reports. Table 9 shows a comparison between Open University and Oxford University.

University	Academic Staff Headcount	Full-time Staff equivalent	Tuition fees (£ millions)	Tuition fees per full time equivalent staff (£)
Oxford University	6945	6499	265.7	40,883
Open University	5470	3183	241	75,726

**Table 9:** Staff and Tuition fees in Oxford and Open Universities (2014/15)

Source: Prepared by author based on HESA 2017b; Oxford University 2017 and Open University 2017.



Thus, even in comparison with the most profitable university of the system (in that year), the Open University's teachers represent a much more powerful source of revenue than those of Oxford. Obviously, this difference in revenues is not due to Open University's fees being higher than those of Oxford. On the contrary, Open University tuition fees are much lower. Indeed, the explanation is quite simple: the reproduction of contents generates revenues without the need to increase the number of hours worked by teachers.

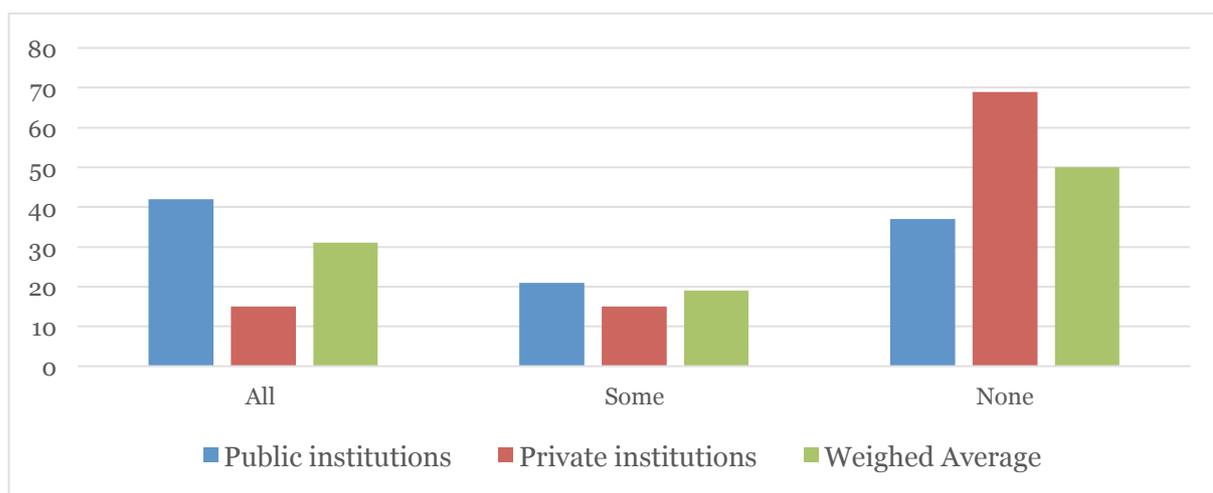
#### 4.1.2 Argentina: Siglo 21 University

There is consensus about the fact that online education in higher education has been growing steadily in Latin America over the last two decades. Nonetheless, robust, reliable and updated information is missing. Anyway, for the exploratory purposes of this article, data collected by a survey conducted by the OECD<sup>xxvi</sup> in Latin American universities will suffice.

According to the OECD (2015), the education model is predominantly face-to-face in 65% of the universities. 16% utilise blended learning, that is, a hybrid model, while 19% are mainly online education providers.

In any event, 74% of the universities already have an e-learning strategy in place and 83% use some type of Learning Management System (e.g. Moodle). Regarding the tension between commodities and commons, 70% of the universities declare that they have a policy to produce Open Education Resources.

In Latin America, not all e-learning programs have been accredited. Interestingly, the degree of accreditation varies as a function of the type of institution, as Figure 1 shows.



**Figure 1:** Share of accredited e-learning programs in Latin America (% by type of university, 2014). Source: OECD, 2015: 75.

Public institutions tend to have, or at least to declare, a much higher share of their programs accredited than private institutions. This lack of accreditation might be

helping processes of exploitation of teachers, although the accreditation does not include any care for the intellectual property rights of the content producers.

77% of the universities managed to have some kind of institutional agreement with other universities, and noticeably 50% did so aiming to produce and share contents. That is, the universities can profit not only from the contents produced by their staff, but also from that prepared by academics at other institutions. Of course, this trend leads to very different political outcomes if it's aimed toward socializing knowledge, that is, increasing the sphere of knowledge commons, or if, conversely, it is a means to increase profits, i.e. a means of capitalist exploitation.

In Argentina, there are public and private higher education systems. The public system is by far the largest. Regarding undergraduates, in 2014 (latest official information available), there were 1,136,864 students enrolled in public higher education, while 403,373 were enrolled in private higher education institutions.

However, enrollment isn't growing at a fast rate in the biggest public universities. The system expanded at a disappointing yearly average of 1.2% during the 2004-2014 decade, despite the creation of 24 new public higher education institutions in the period.

University	Undergraduate students (2014)	Yearly average enrolment increase (% , 2004-2014)
Buenos Aires	315754	-0.65
Córdoba	110990	-0.27
La Plata	107910	1.70
Tecnológica Nacional	81584	3.53
Rosario	77223	0.24
Tucumán	63281	0.00
Nordeste	49417	-0.96
Litoral	45113	3.20
La Matanza	38545	7.12
Lomas de Zamora	34729	-0.33
Total of public higher education	1468072	1.20

**Table 10:** Public Higher Education System in Argentina

Source: SPU, 2017.

On the other hand, the private higher education system has shown a yearly average expansion of 5.46%. Despite several universities managing to maintain high enrollment increases for a decade, the trend is fueled mainly by the success of Siglo 21 University business.



University	Undergraduate students (2014)	Yearly average enrolment increase (% , 2004-2014)
Siglo 21	57267	30.89
Argentina de la Empresa	30496	6.95
Universidad del Salvador	25443	5.53
Católica de Salta	22786	1.54
Abierta Interamericana	20883	2.62
Católica Argentina	18537	0.99
Morón	16187	0.67
Ciencias Empresariales y Sociales	14134	8.92
Belgrano	13427	2.07
Palermo	12987	5.22
Total of private higher education	403373	5.46

**Table 11:** Higher Education System in Argentina  
Source: SPU, 2017.

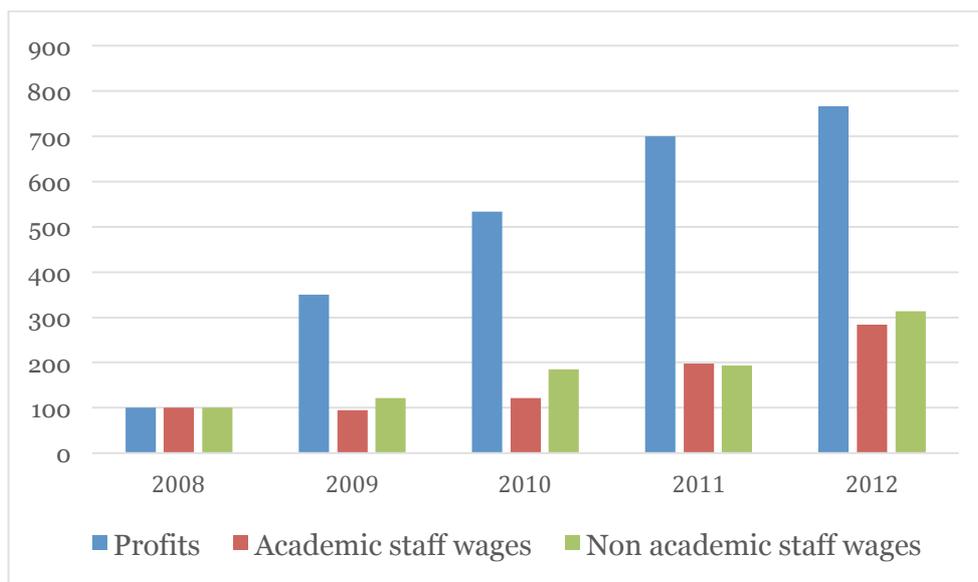
Table 11 provides us with two simple insights. It is clear, on the one hand, that Siglo 21 is the number 1 private university in terms of enrollment figures and, on the other hand, that it has been experiencing a dramatic hike in enrollment on a yearly basis.

One of the pillars of this trend comes with no surprise: Siglo 21 is basically a provider of online education. Thus in 2012 83% of enrolled students and 85% of the revenues came from online education (Coneau 2015).

Unfortunately, regarding financial and labour issues (let alone intellectual property), data is extremely scarce. However, the web page of the University ([www.21.edu.ar](http://www.21.edu.ar)) shows quite impressive data regarding other topics. It claims to have 13,000 graduates, 350 learning centers, distributed across all 23 Argentinian provinces. It offers 70 undergraduate and postgraduate degrees. At least 47 of them are partially or completely online. The press page even mentions that the university has 170 researchers. However, there is no single mention of the contents and, more strikingly, of the teachers. No numbers of academic staff, content developers, etc. There is only one statement saying that Siglo 21 was chosen by “Great place to work” as one of the best places to work in Argentina. And, of course, there are no comments at all regarding financial variables.

Fortunately, there is a document published by the National Commission for University (CONCEAU) in 2015, using data provided by the university in 2012. While far from being perfect, it provides the only information available on both issues.

For instance, between 2008 and 2012, profits (not revenues) skyrocketed to 82.5% CAGR, while wages (and other remunerations) increased at a much lower pace, around the rate of inflation.



**Figure 2:** Profits and wages<sup>xxvii</sup> in Siglo 21 University (2008-2012. 2008=100).  
Source: Prepared by author based on Coneau 2015.

It must be noted that, in contrast with other private universities, in Siglo 21's finance, profits are almost entirely explained by tuition fees (Coneau 2015).

Regarding staff, Siglo 21 had much higher ratios between students, total staff, academic staff and full-time staff than the average of the public system or Buenos Aires University, the biggest of Argentina.

	<b>Total in Public institutions Argentina (2013)</b>	<b>UBA (2013)</b>	<b>Siglo 21 (2012)</b>
Undergraduate and graduate Students	1546497	344131	44159
Full-time Academic staff	20677	2190	45
Part-time staff	111145	21571	514
Total academic staff	131822	23761	559
Non-academic staff	52223	13752	320
Total staff	184045	37513	879
Students/full-time staff	74.8	157.13	981.3
Students/academic staff	11.7	14.5	79
Students/total staff	8.4	9.17	50.2

**Table 12:** Students enrolled and Staff by higher education institution (Argentina, selected institutions)

Source: Prepared by author based on Coneau, 2015; SPU, 2014.

Regarding full-time and part-time contracts, information is not clear—mainly because the data provided by the university was framed to suggest higher numbers of academic full-time staff. Indeed, according to Coneau (2015, 66) academic full time staff in 2012 could be estimated as 8.1% of the total academic staff (this is the data be

used in the table), but a stricter criterion would imply that only 2% of the academic staff would count as full time staff (Coneau 2015, 67).

This situation is not an exception, but an increasing tendency. According to Coneau, the ratio of students per teacher has increased five times between 2003 and 2012. Is not unusual for each teacher to oversee 250 students on a course. In turn, full time academic staff (if measured correctly) has diminished 5.6% as a share of total academic staff in 2012 from 2003 (Coneau 2015, 67).

In any case, the limited evidence we have collected suggests that the contractual situation of academics might be quite precarious. According to Coneau, in 2012 at least 40% of total staff had fixed-term contracts; 27% of all the contracts finish each semester—being renewed or not. (Coneau 2015, 33)

Of course, from our perspective this situation of precarization is closely related to the material bearer of education and, particularly, to the role of academics as content producers.

In this vein, despite the fact that Coneau's report does not tackle the issue of intellectual property and contents, an important comment is introduced:

“The institution intends that *the teacher present in the classroom is the same who produces the content for the distance learning modality and carries out the virtual tutorial for the course*. Likewise, this teacher is normally responsible for designing exams for the course for System Q, and the validation of those designed by other teachers on the course or same specialization.” (Coneau 2015, 65; emphasis added)

Indeed, academics are pushed to translate the contents of their face-to-face classes into informational goods. This is precisely the point of exploitation through reproduction. While as face-to-face teachers they are needed time after time, once the contents as services have been translated into contents as (informational) goods, the firm could go without/can manage without/can dispense with the academic. Certainly, this is related to the low share of full-time academics and open-ended contracts.

Moreover, Siglo 21 is the main node of a Latin American network of universities called Ilumno. According to the company:

“Ilumno serves 13 prestigious higher education institutions in eight Latin American countries. With almost 213,000 students and 12,000 academics and administrative staff, ILUMNO is the most efficient solution for institutions looking to evolve, expand and offer world class services to their students, faculty, administrative personnel and institutional leaders.”<sup>xxviii</sup>

The network is widespread in Latin America. Data to accurately measure the degree of virtualization of the network is lacking. Nonetheless, even if the figures provided by Ilumno are taken at face value, the ratio between students and staff is 18:1 which,



combined with the fact that Ilumno is a platform for online education as well, suggests that education is mainly online.

University	Country	Students
Siglo 21	Argentina	47000
UVA	Brazil	31000
Politécnico Grancolombiano	Colombia	25700
Unijorge	Brazil	23700
Areandina	Colombia	19000
Unifil	Brazil	10000
IPP	Chile	7000
Incade	Paraguay	6500
Universidad del Itsmo	Panamá	5600
Unitec	Colombia	4000
San Marcos	Costa Rica	2500
Uane	México	n/d
Universidad Central	Colombia	n/d
<b>Total</b>		<b>213,000</b>

**Table 13:** Universities of Ilumno Network, by country and students enrolled  
Source: [ilumno.com/en/instituciones](http://ilumno.com/en/instituciones). Accessed: 25/4/2017.

Indeed, Ilumno is not only the name of the network, but also that of the proprietary platform the universities use. More broadly, the company sells a whole business strategy to education capitalists, including PR, marketing, brand management, finding, enrolling and retaining consumers<sup>xxix</sup>. Here the capitalistic nature of the firm is scarcely disguised.

Ilumno is controlled by Whitney International University System Ltd, based in Florida, US. This scheme, through which private education providers are owned by international firms is far from being an exception, according to researcher Claudio Rama (2012, 71-74).

Besides Whitney International, Laureate Education Inc. has a network of 30 institutions. Half of its revenues come from Mexico, Brazil and Chile. In turn, Apollo Global, a subsidiary of Apollo has a global network of institutions that includes: FAEL (provider of post-secondary education in Brazil); IACC (Chile's online professional institute for working adults); UNIACC (arts and communications university in Chile) and ULA (communications, business, and medical university in Mexico)<sup>xxx</sup>. Kroton Educacional is one of the world's largest private education organizations at all levels, face-to-face and online. Its network includes 130 higher education units, with presence in 18 Brazilian states and 83 cities, in addition to the 726 Distance-Learning Graduation Centers<sup>xxxi</sup>.

It is tempting to trace some links between the UK and Argentina. British and Argentinian higher education systems are quite different. Of course, while several British universities are ranked as elite by any measure, that is not the case with Argentinian institutions. While Argentina has a tradition of public free education and



still most of the students are enrolled in public institutions, in the UK almost all the system is public, but students must afford tuition fees, and many universities, despite being formally charities, make profits. Many other differences may be pointed out. However, there is a strong commonality. In each country, among the universities that receive tuition fees, the one which leads the enrollment figures is mainly a provider of online education: Open University and Siglo 21 University, in each case.

This concurrence points towards a trend in informational capitalism. It is not that of general virtualization, but rather the specific combination of virtualization and commodification that is gaining momentum.

To be sure, exploitation through reproduction is only a part of the scheme of for-profit education firms. They have recourse to exploitation through alienation as well. Typically, this is the kind of exploitation that tutors undergo. Tutors provide a service, that is, firms need to hire them each time a course is taught. Thus, their exploitation is ultimately related to labour time: unpaid hours, 24/7 attention, affect<sup>xxxii</sup>, etc. On the other hand, content producers are exploited by the translation of their knowledge to contents objectified as informational goods. They get paid for their time, but they relinquish rights over their knowledge.

Certainly, more research is needed. How do the universities acquire the contents? We know that many of them are developed by academics on open ended contracts. But, what is the share of this kind of content? What is the share of the content developed by academics as “works for hire”? And, moreover, are there contents that are acquired as secondary sources, in other words, not developed by the institution but bought, licensed or available for free? All of these questions point towards further research.

## 4.2 Corporate e-Learning (non-formal education)

The corporate market of “e-learning” or “learning and development” includes all kinds of learning and teaching tools based on digital technologies and the internet provided by firms (rather than universities). The clients might be formal education institutions i.e. Universities) and corporations (non-formal education) that want to inoculate certain knowledges into their workforce.

Technavio, a consultant firm, asserted that the global revenues of this market were USD 18 billion in 2015, and that it was expected to grow to USD 31 billion by 2020.

In 2014, there were 3,000 European firms involved in the e-learning business and 77% of US firms offered some kind of e-learning to their employees, stated Roland Berger Strategy Consultant (2014)

This e-learning corporate market includes three components: services, technologies and content. Content, the component that is particularly relevant for this research, accounted for USD 12 billion in 2015 according Technavio (2016).

Global Market Inside (2016) asserted that the main firms that delivered content were: Apollo Education Group, Adobe systems, Cisco Systems, HealthStream, SAP, Citrix, McGrawHill, Oracle, Aptara, Cornerstone On Demand, Edmodo, NetDi-



mensions, Saba Software, Schoology, Desire2Learn, Skillsoft, SumTotal Systems, Microsoft, Blackboard, Pearson<sup>xxxiii</sup>.

Let us focus on Pearson PLC, a London based corporation with 32,000 (Pearson, 2017<sup>xxxiv</sup>) employees that delivers different kinds and levels of education services and products and claims to be “the world’s largest education company”<sup>xxxv</sup>.

The revenues of Pearson rose to USD 7300 million in 2015, and the net profit was USD1100 million. The rate of profit was much higher in the formal education segment than in that of corporate/non-formal education.

Market	Revenues	Net profits	Rate of profit (%)
Higher formal Education	2652.6	540.9	20.4
Non-formal education	1301.8	68.7	5.3
Other	3349.4	495.1	14.8
Total	7303.8	1104.7	15.1

**Table 14:** Revenues and profits by Pearson PLC, by market (USD millions)  
Source: Prepared by author based on Pearson 2016.

Pearson is, increasingly, an informational capitalist enterprise: in 2015, the provision of informational goods accounted for 65% of its revenues (Pearson 2016, 53).

Thus, for Pearson it is quite clear that securing monopolies over content and other forms of objectified knowledge is extremely important. Thus, some risks related to intellectual property are listed:

“Failure to obtain permissions, or to comply with the terms of permissions, for copyrighted or otherwise protected materials such as photos resulting in potential litigation; risk of authors alleging improper calculations or payments of royalties.” (Pearson 2017, 54)

To deal with these sources of uncertainty, Pearson is evaluating new intellectual property policies.

“Work began in 2016 to evaluate new royalty and business practices. We also began to implement a global three-tier strategy guiding third-party assets (e.g. images, text, rich media) rights acquisition as well as a more stringent rights review and reclearance process.” (Pearson 2017, 54)

Indeed, exploitation through reproduction requires that the rights of “third-party assets” are secured and royalties are lowered to a minimum.

In Latin America and Spain, the biggest company in the education market is Santillana. The revenues of this company were EUR 643 million in 2015, a slight decrease from the EUR 652 million in 2014. However, the profits (actually, the EBITDA) were 167.16 million in 2015, an important increase from 143.3 million in 2014.



The lion's share of the revenues come from Brazil, Spain, Mexico and Argentina. While the income coming from Brazil shows a declining performance mainly because of the economic crisis, Argentina's share experienced an upsurge.

Country	Revenues (2014)	Revenues (2015)	Growth
Brazil	239.5	192.2	-19.7%
Spain	124	148.7	19.7%
Mexico	99.3	101	1.7%
Argentina	24.3	42.6	75.0%

**Table 15:** Santillana Group Revenues (USD millions, selected countries, 2014 and 2015)  
Source: Prepared by author based on Santillana (n/d)

Digital revenues accounted in 2015 for EUR 120 million (Publisher weekly, 2016), that represented a 10% increase from EUR 112 million in 2014. Two learning systems owned by Santillana (Uno and Compartir) reached 813,752 students during 2015, asserts Publisher weekly (2016).

But besides the well-established firms, there are new entrants in this market. Indeed, educational technology start-ups focused on the corporate niche received an estimated USD 2.2 billion in funding during 2016. The funding was concentrated in the US, with China, India and the UK coming in the second, third and fourth places. (Docebo 2016).

Unfortunately, none of these reports give us information regarding the sources of corporate revenues and profits. One of those sources—not the only one, but certainly one that should not be overlooked- is that of exploitation through reproduction of teachers' knowledges. Freelancer.com, a platform for freelance jobs (mainly related to producing informational goods) offers lots of interesting examples of this other side of the coin of firms' success. Take these two job offers:

“Make Educational Videos to Teach English as a Foreign Language: USD 142.

This is a project of creating Educational Videos on Teaching English to Non-native speakers. The course should be designed in such a way that it can teach anybody with some basic English knowledge to speak English fluently within 3-4 months (like a crash course) and can manage their day-to-day conversation.

Ideally, you should be a native English Speaker, have some experience in teaching English to non-native speakers and degree in English language. Rest will be discussed in chat. New Freelancers are welcome to apply. Lowest Bidder will win the job.”

Source: <https://www.freelancer.com/projects/english-us/Make-Educational-Videos-Teach-English/>

“Research Writing USD 36



Course content to be designed for a diploma program for students who want to work in visual and audio related jobs as presenters, assistants and coordinators.

Course Tenure: 3-6 months

-audio and visual media presenters requisite training

- project and case study materials

-modules for each area: technical, theory and practical

-job scope

Require the completed course schedule with index and content within 3 days of accepting offer.”

Source: <https://www.freelancer.com/projects/Content-writing/Research-Writing-13726332/>

In these job offers not only the pay is extremely low, but also the companies pay once for a course that they are going to sell repeatedly. As the potential enrollment gets higher, the benefits of this modality increase. This is why it comes as no surprise that most of these courses are targeted at India and China, i.e. huge educational markets where the close to 0 marginal costs of delivering online courses becomes the basis for particularly profitable businesses. Indeed, this potential of exploitation through reproduction might help to explain the aforementioned blossoming of Indian and Chinese e-learning firms. Additionally, US and UK firms also deliver content for those huge markets.

### 4.3 For-profit MOOCs

MOOC stands for massive open online course. Indeed, the expression refers to structured courses delivered through the Internet, aimed at unlimited participation and free access. The courses include, on the one hand, predesigned contents (such as filmed lectures, texts, problem sets, etc.). On the other hand, contents developed as the course unfolds (participation in forums, comments from teachers, wikis, etc.). Despite the concept having been coined in 2008, 2012 was the turning point for MOOCs, as several major platforms emerged, including Coursera, Udacity and edX. There are many different types of MOOCs. They can deliver education directly to individuals, which is the most well-known option, but they can as well be incorporated by higher education institutions into their productive processes. Many institutions use Coursera's courses as inputs to their face-to-face classes. Finally, corporations can resort to—in some cases specifically tailored- MOOCs to train their workforce. For instance, it has been asserted that Google enrolled 80,000 workers on a HTML5 course offered by Udacity. (Lapowsky 2014)

According to Class Central—a portal specialized in researching MOOCs, in 2016 there were 58 million enrolled students, 23 million of which were new students, i.e. enrolling on a MOOC for the first time.



MOOCs are torn by the tension between commodities and commons that shapes informational capitalism. As the word “open” in their name suggests, the courses are supposed to be open, meaning free access. On the other hand, several platforms were born as or became for-profit firms. To deliver knowledge for free (or in the worst-case scenario at infinitely lower tuition fees than other alternatives) and obtaining profits could seem weird from a perspective anchored in industrial capitalism. However, it is nothing new in informational capitalism: Google, YouTube, Facebook, Twitter and many other companies have developed business models around this kind of environment, relying on exploitation through reproduction and exploitation through attention. Indeed, the main (although sometimes blurred) line that splits MOOCs is between for-profit and non-for profit. Some examples are displayed in table 16.

<b>Platform</b>	<b>Enrolment (millions)</b>	<b>Profit</b>	<b>Certification fee</b>	<b>Partnerships and alliances</b>	<b>Country</b>
Coursera	23	For-profit	Yes	Stanford University, Princeton University, Arizona State University, University of Maryland College Park, University of Illinois at Urbana-Champaign	USA
edX	10	Non-profit	Yes	MIT, Harvard University, Boston University, UC Berkeley, Kyoto University, Australian National University, University of Adelaide, University of Queensland, IIT Bombay, IIM Bangalore, Dartmouth College, Universidad Autonoma de Madrid, Curtin University	USA
XuetangX	6	For-profit	Yes	Tsinghua University and Peking University, Zhejiang University, Nanjing University, University of Science and Technology of China, Shanghai Jiaotong University, Renmin University Of China, Beijing Normal University, China Agricultural University, Hong Kong Polytechnic University and National Tsinghua University	China

FutureLearn	5,3	Non-profit	Yes	University of Birmingham, University of Edinburgh, King's College London, University of Leicester, University of Reading, Open University, Monash University, Trinity College Dublin, Warwick University, University of Bath, University of Southampton	UK
Udacity	4	For-profit	Yes	Georgia Institute of Technology, San Jose State University, Facebook, Google, Salesforce, Cloudera, Nvidia, Autodesk, Cadence	USA

**Table 16:** Top 5 MOOCs in 2016 by enrollment

Source: Prepared by author based on Shah (2016) , webpages of each MOOC and Wikipedia.

Noticeably, even those theoretically not-for-profit platforms charge fees for their certifications. So, the business model is quite similar. Informational goods are delivered for free, but the recognition (Zuckerfeld 2017, chapter 3), that is, an intersubjective knowledge that marks the possession of certain skills by the learner, is not free. Incidentally, it is important to point out that the other meaning of “open”, which is the most important for free and open source software, and more broadly to the “open knowledge” movements i.e. the possibility of modifying and redistributing derivative works, is generally not allowed by any of the MOOC providers.

But although charging a fee for each course certificate might be the main way in which MOOC providers generate revenues it is by no means the only one for most of the companies. Table 17 shows different examples.

Company	Monetization strategy
edX	Certification
Coursera	Certification, Specialization, Secure assessments, Employee recruitment, Applicant screening, Human tutoring or assignment marking
UDACITY	Certification, Nanodegrees, Employers paying to recruit talented students, Students' résumés/CVs and job match services, Sponsored high-tech skills courses

**Table 17:** Monetization strategies of MOOCs.

Source: Wikipedia, MOOCs.

Indeed, although MOOCs have been widely used to deliver free access content to millions of “learners”, the capitalist nature of several platforms is becoming more and



more clear as time goes by. A report by Docebo (2016) mentioned several trends in this regard, that can be summed up as follow:

1. No more Free Certificates. There was a time when most of the certificates were free. Now, as a part of the business model, certificates are increasingly being sold.
2. MOOC firms are creating their own credentials. Beyond certifying individual courses (and charging for that), MOOC platforms devised their own “degrees” (a charge for this certification as well): Udacity’s Nanodegrees and Coursera’s Specializations.
3. Big funding: in 2015, Coursera raised USD 61,1 million and Udacity USD 105 million in venture Capital. Investment came from universities, as the example of Open University investing £13 million in its subsidiary Future Learn shows.

How much are MOOCs charging for their certifications? For instance, in 2015 Udacity was charging USD 200 a month, for Nanodegree programs. If the student completed the program in less than a year, half of the money was refunded. Thanks to this policy, Udacity was the first MOOC firm that became profitable.

Coursera’s courses have different prices. There are Verification (certification of individual courses) and Specialization fees (certification of a group of courses). However, the median, that is the most frequent price, is USD 49. In 2015 there were some 700 courses that offered these paid options.

EdX, in spite of being presented as not-for-profit, offers a very similar scheme, with four different types of certificate: Verified, Professional Education, Credit, and XSeries. Professional Education, interestingly, has similar pricing system to Coursera’s courses: USD 49 is the median—although some could cost as much as USD 949. On the other hand, these Professional Education courses are not free access. It is not only the certification which is paid for (as in Coursera and Udacity), but access to the course altogether is behind the paywall. (Shah 2016b)

In the UK, as mentioned above, FutureLearn is the main MOOC and has 5.3 million registered users, 12 million course enrollments, 2.3 million of which were added in 2016. According to Class Central, it currently has around 480 unique courses, 225 of which were added in 2016. Its most popular course is Understanding IELTS from the British Council, and it has received 1.4 million enrolments.

Despite being formally a charity, Future Learn has developed a fee scheme as well. On the one hand, FutureLearn has a flat price for each certificate: £34. (Shah, 2015). On the other hand, the platform launched *Programs*, a new paid credential (similar to Coursera’s specializations, or Udacity’s Nanodegrees). FutureLearn launched 18 programs in 2016 and 200,000 people enrolled. Finally, FutureLearn, partnering with Deakin University in Australia, launched postgraduate degrees.

“Not all courses included within FutureLearn’s degrees will be free. Each degree will consist of around 80 two week courses, out of which up to 16 will be free. Tuition fees for the Master’s degree will range from



A\$30,000 to \$40,000 (£18,000 to £24,000), while the graduate certificate and the diploma will each cost A\$13,140.” (Shah 2016b)

From 2015 onwards, MOOCs have experienced a dramatic upsurge in Latin America:

“Since September’s launch, Coursera has experienced rapid growth in Latin America, which has become the company’s fastest growing region, with Colombia and Mexico representing almost half the region’s users. For instance, in a single week earlier this year, registrations from Mexico exceeded those from all of the United States, Coursera’s largest market. Meanwhile, a partnership launched in Chile in April 2015 has led to a 100 percent increase in registrations there. Argentina, with high internet connectivity and higher-than-average educational attainment, is a further frontier that Coursera is setting its sights on.” (Guaqueta 2016)

According to Docebo (2016) Mexico and Brazil are in the top ten of countries that use MOOCs the most. And, beyond resorting to Coursera and Udacity, Brazil has its own MOOC: Veduca, a local MOOC which offers more than 800 free online courses in 21 knowledge areas and has 500,000 registered users<sup>xxxvi</sup>. Veduca charges USD 15.34 (R\$49) for extending certificates<sup>xxxvii</sup>. On the other hand, Mexico’s government, partnering with edX, has launched MexicoX, which is completely free, but does not extend certificates. As of February 2017, MéxicoX had 1,083,072 users<sup>xxxviii</sup>. Both MOOCs seem to target Brazilian and Spanish speaking “learners”.

There are lots of interesting topics to discuss regarding for-profit MOOCs: their achievements regarding inclusiveness, rates of completion of the degrees, articulation with labour markets, pedagogical strategies and so on. However, here we are interested mainly in exploitation through reproduction. Therefore, the questions are: do the teachers prepare original contents? How many students use these contents? How are the content producers compensated for the thousands of reproductions of their classes? The *Chronicle of Higher Education* conducted a survey, responded to by some 100 academics who had prepared at least 1 course for a MOOC. It showed interesting results. 97% of the academics said they prepared original videos. The median number of students enrolled in a MOOC was 33,000, and 1 (one) teaching assistant or tutor helping the professor. Academics spent on average 100 hours on their MOOC before it even started (Kolowich 2013)<sup>xxxix</sup>.

Most of the academics produce contents as a part of their teaching duties, relinquishing their rights to the universities, which license them to the MOOC firms. Others accept producing the contents for free to receive the scarce resource in informational capitalism: attention. We will come back to this topic in section 7. Regarding how much MOOC firms pay the institutions they partner with (not to professors): data is scarce. According to a contract between Coursera and the University of Michigan (2013), the former may pay the latter between 6% and 15% of the revenues received by Coursera from University of Michigan’s developed courses and 20% of the net profits (Coursera and University of Michigan 2012, 28). We will come back to this



topic in section 5. However, content produced by full-time teachers, such as those prepared by the survey's respondents, are owned by the university. Therefore, it is very unlikely that the academics receive a share. The key point relies on the fact that whereas academics are paid a fixed amount of money (in the form of a wage, a work for hire, or no remuneration), the institutions (the MOOC and Universities) arrange payments in accordance with revenues and number of times the course is published as well.

## 5. Regulations: Who owns the course?

*Prima facie*, the controversy regarding who owns academic contents and courseware related to an online course is far from being solved in copyright laws or courts.

“Strong arguments can be made for granting intellectual property rights for distance education course materials to either the academics who produce them or the institution that employs the academics.” (Kranich, 2008:355)

Beyond the law, arguments advocating for either side deserve to be explored. Taking into account the law and the arguments or not, institutions are implementing concrete policies that deserve to be looked at. Thus, law, arguments and trends in those policies are the three subsections that follow.

### 5.1 Law

To discuss the relation between online courses and copyright we need to address the history of copyright in the first place. We split this history between two stages: industrial and informational capitalism.

#### 5.1.1 Copyright in industrial capitalism: from the individual to “works for hire”

Copyright regulation, as with the rest of capitalist law, underwent dramatic changes in order to aid the process of capital accumulation. Consequently, the fact that copyright law and doctrine is used as a weapon to exploit academics, rather than a barrier to prevent unpaid profiting from their knowledge might be shocking, but hardly surprising.

Indeed, from a materialist perspective, the history of copyright law is mainly the history of capitalists attempting to appropriate of knowledge produced by other subjects. Here we will discuss how, paradoxically, during the 18<sup>th</sup> century the capitalist totality advanced the notion of the individual (as a creative, an owner and inspired social atom) to achieve that goal, and how the first copyright law was enacted in England. Thus, the marriage between publishers' interests and the ideology of the creative-property-owner-individual resulted in the notion of the author. Later, towards the end of 19<sup>th</sup> century, granting copyrights only to individuals became an obstacle to



the process of capital accumulation. Therefore, corporate ownership of literary and artistic works emerged through what is known as the “works for hire” doctrine, eventually incorporated into US law.

The 1709-10 Statute of Anne is usually referred to as the first copyright legislation in history. The legislation prescribed a 14 year monopoly, renewable for a further 14 years, over the printing of works, to authors or those parties who obtained exclusive rights over their works. (May and Sell 2006; Merges, Menell and Lemley 2006; Ginzburg 1990; David 1993; Chartier 1999; Rose 2003).

Although the sanctioning of this legislation could only be achieved by resorting to the image of the helpless individual/author looted by unlicensed publishers, in reality it was passed solely and exclusively due to the backing given to it by the Stationers’ Company, the most powerful publishing corporation of the time, in order to avoid losing control over book printing.<sup>x1</sup> Thus, the author and their rights were born, in legal terms, in the midst of a conflict between rival publishers (of their works) (Chartier 1999, 17). The inclusion of the authors, while maintaining the position of the publishers, can be appreciated from the title given to the legislation: “An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned.” The text of the act allows us to see how the appeal to the authors is indissociable from the abovementioned threat to printers’ businesses.

“Whereas Printers, Booksellers, and other Persons, have of late frequently taken the Liberty of Printing, Reprinting, and Publishing, or causing to be Printed, Reprinted, and Published Books, and other Writings, without the Consent of the Authors or Proprietors of such Books and Writings, to their very great Detriment, and too often to the Ruin of them and their Families: For Preventing therefore such Practices for the future, and for the Encouragement of Learned Men to Compose and Write useful Books” (Statute of Anne, cited in May and Sell 2006, 92)

But copyright, strictly speaking, only took individual ownership into account. Naturally, the individual then relinquished their rights to the publishers, but copyright was conceived with the individual considered as creator. Subsequently the transition from the individual to the company took place supported by the idea of “works for hire”. In legal terms the concept alludes not only to rights related to a specific assignment given to an external author by the company, but above all to the ownership of the works created by the company’s employees. As Catherine Fisk shows, previous to 1860 the standard interpretation of U.S. magistrates was that even those parties who were contracted specifically to produce materials under copyright, retained ownership.

“From the Supreme Court’s widely cited decision in *Wheaton v. Peters* until 1860 (and in some cases beyond), virtually every court that confronted the issue determined that, as a default rule, employees who produced copyrighted work owned the copyright, even if they did so in the scope of their employment.” (Fisk 2003, 67)



Following a period of vicissitudes and uncertainty the doctrine of employer ownership of works for hire became legally established in the U.S. in 1909.

“...and the word “author” shall include an employer in the case of works for hire” (1909 act, cited in Fisk 2003, 66)

From then the notion of author *included* the employer. In other words, the idea of authorship bore two meanings. One, which currents of thought and the needs of capital had delineated around the 18<sup>th</sup> century: the author understood as the original creator, as the genius who stamped their unique and unrepeatable personality on the work. The other meaning of the term author simply designated the purchaser of the labour power productive of codified knowledge. Capital can also claim to be an author. But the movement is completed when the legal concept of authorship loses its relationship with the labour invested in the work and *comes to be defined as a consequence (no longer the cause) of the copyright ownership*.

“On the surface, there is nothing especially noteworthy in the statute’s choice to designate employers as “authors” of works for hire. “Author” is a simply term of art, the operative term for the proprietor of statutory rights.” (Fisk 2003, 5, emphasis added)

The concept of authorship, the offspring of capital, subsumed and superseded the individual subject. The holder of the exclusive rights, by virtue of their existence, has become an “author”, irrespective of their role in the productive process resulting in the knowledges in question.

Thus, from the second half of the 19<sup>th</sup> century until the end of industrial capitalism—and even extending into informational capitalism—the unequivocal tendency has been towards the ownership of rights passing from individuals to companies.

### 5.1.2 Copyright in informational capitalism

It is not only the case that copyright law changed during the passage from industrial towards informational capitalism but rather than changes in intellectual property—and particularly in copyright law- shaped the social relations of production of informational capitalism (Zukerfeld 2010). Nonetheless, for the sake of brevity, here we are going to discuss only the changes specifically related to the topic of this article and to deal only with US law -which established the world standard, though national variations do exist.

#### 5.1.2.1 Copyright Act (1976) and Copyright Term Extension Act (1998)

One of the major changes introduced by Copyright Act of 1976 in the US was that copyrights started to be conceded automatically, i.e. without the need to register the work. Indeed, a work is under copyright protection from the very moment it is created and fixed in a tangible form that is perceptible directly or with the aid of a device (US Copyright Office- FAQ). This means that every work is related to its author and



placed in the private domain from its birth. This is counterintuitive and scarcely known. Neither most of the teachers nor the rest of the people are aware that they are entitled to certain rights from the moment they fix their original expressions of an idea in a tangible medium.

Thus, unless indicated to the contrary, copyright of texts, power point presentations and similar resources developed by an individual are vested in that individual, i.e. academics. On the other hand, the Copyright Act of 1976 updated the notion of works made for hire, in order to support claims made by corporations.

### 5.1.2.2 Works for hire

The current definition of “Works made for hire” can be found in section 101 of USC 17:

“A “work made for hire” is— (1) a work prepared by an employee within the scope of his or her employment; or (2) a work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.” (USC 17, 101, accessed via <http://www4.law.cornell.edu/uscode/17/101.html>)

So there are two modes of work for hire that have been undergoing a process of consolidation. One, that of work done within the aegis of a labour relation which automatically results in ownership vested in the company. The other is that of the work made specifically to order. In this case, for the company to take the ownership it is necessary for the product to fall within one of the nine stipulated categories (one of them expressly includes “instructional material”<sup>xli</sup>) and, decisively, the existence of a written contract between the two parties. This condition does not give rise to difficulties in determining its application: there is either a contract or there isn’t. Even if the contract is unfair, that is to say, even if it configures a situation of unequivocal exploitation, this does not imply any legal ambiguities. This is the case with many universities and private education providers, as a portal aimed at “assisting” online teachers explains:

“Most online colleges require course developers to sign a “work-for-hire” agreement which gives the college the right to own the course. This means you cannot freely take the course and use it to teach elsewhere. The course will belong to the college, not you.” (Geteducated.com 2016)



The first mode, conversely, offers considerable room for ambiguities. Particularly in the case of universities and their relationship with lecturers, the situation is open to debate. For example, Klein points out that:

“Several arguments can be made to support the notion that faculty members should not be considered "employees" under the work-made-for-hire doctrine. Most of these arguments focus on aspects related to the first factor listed in Reid- controlling the manner and means of production. Professors select their own "research goals, procure their own funding, determine their research strategy, and choose the format through which their findings are expressed.” (Klein 2004, 159)

Indeed, in a leading case (*CCNV v. Reid*) the US supreme Court established that controlling the manner and means of production was important in order to determine if the author is an employee under work for hire or not. Following this line of reasoning, contents produced by faculty should not be considered works made for hire.

### 5.1.2.3 International law

The brief legal summary presented up to this point has at least two severe limitations. On the one hand, we have focused exclusively on the US law. Although it is the world standard, other countries, especially those with “civil law” systems, like most Latin American countries, have slightly different regulations. On the other hand, we have referred mainly to the relationship between full-time faculty and higher education institutions. But what happens with part-time teachers? Moreover, what happens beyond universities, i.e. content produced hired by education firms? It is beyond the scope of this paper to deal with either of these. Still, we can introduce a general rule described by WIPO (World Intellectual Property Organization) regarding book publishing industries.

“Copyrighted material created by employees, as part (within the scope) of their employment duties, is usually owned by the employer. When someone creates a work under a contract of service (i.e. when it is part of his job) copyright will belong to the employer, unless the employer and employee have agreed otherwise by means of a contract. It is often thought that when a work is commissioned, the person commissioning it and paying for it owns the copyright. This will depend a great deal on national laws; in most legal regimes the author keeps his copyright when the work is commissioned unless the contract includes an assignment. In some countries, the commissioning of photographs and of portraits are exceptions to this rule.” (WIPO 2008, 15)

This general comment applies to the book publishing industry in general but not to books produced by academics -even though they are full-time staff and books were



written during working hours. Therefore, extrapolating this rule to online content is not straightforward. With these caveats in mind, still some basic ideas might be introduced.

If the original content creator is full-time faculty or a full-time employee in a firm, and there is no contract stipulating otherwise, it is likely that the courts will recognize that contents prepared by her must be owned by the institution or firm.

If the original content is commissioned (e.g. freelancer) or if the author is not a proven employee, the author might keep her copyright, unless a contract specifies the opposite. Certainly, when a firm commissions a work of authorship it is highly unlikely that it would not resort to a contract which vests the copyright in the firm.

## 5.2 Arguments

Interestingly, administrators of universities and other higher education institutions have been accepting that all copyrightable materials produced by academics other than online courses should be owned by faculty members. For instance, in a well-documented and generally nuanced article, Audrey Latourette states:

“Traditionally, colleges and universities have deemed all copyrightable materials that a faculty member authors, which includes books and articles, and course content such as class lectures and class handouts, as the property of the faculty member (...). This tradition of allowing faculty to claim ownership of their work emanated from case law.” (Latourette 2006, 629)

Then, why is a debate going on? On what grounds do for-profit institutions demand ownership of online courses? What is the difference? Here is when the ideological turn enters by framing the debate in a slightly different way:

“The substantial time demands placed upon faculty in creating and main-taining an online course, and potential economic rewards, prompt faculty to seek copyright ownership.” (Latourette 2006, 629)

Thus the idea of *time* spent emerges. However, nothing in copyright law—contrary to patent law- implies that time spent should be an important element regarding the granting of rights. Evidently, creativity is not related to time: some works of art are extremely valuable and receive copyrights despite having been created in a few minutes. Here capitalist regulation contradicts itself, which is not surprising, as we have mentioned above. But the reader could ask how Latourette’s argument is helping a capitalist perspective, as it recognizes that teachers devote “substantial time”. The answer is quite simple: if the institutions that want to hold copyrights paid for the *hours* spent, (or if the academics have full-time contracts), then the academics would have nothing to claim. This, of course, does not take into account that the



course is paid for once, but is going to be used repeatedly. The bottom line is that reducing knowledge to time is an ideological operation. Instead, if the focus is on knowledge, it becomes more difficult to justify the employers' position. As Leslie argued:

“Furthermore, it is impossible for universities to determine how much knowledge the professor had before working at the institution. If the professor creates an on-line course based on his knowledge of constitutional law derived from his experience as a judge or clerk, the university cannot claim that such knowledge was gained while working at the university. Professors should be able to reap the benefits of their labor and knowledge.” (Leslie 2002, 124)

Picking up the thread of Latourette's quote, it is not clear why faculty should *seek* copyright ownership, if that ownership is already supported by the law and customary practice. On the contrary, it looks like the changes and debates are propelled by administrators seeking profits rather than academics asserting rights. Indeed, *the main driver of the disputes regarding copyright ownership is the fact that objectified knowledge authored by academics becomes an informational good, a reproducible commodity that potentially could generate profits for the institutions.* From a cognitive materialist standpoint, is extremely important to underline that the translation of knowledge, from subjective or analogical bearers towards digital information is the material foundation of the debate.

To that end, the rhetoric of investment is invoked to argue against academics' rights.

“Yet in creating course content and particularly courseware for distance education purposes, the efforts of many persons such as programmers and graphic designers are usually implicated. Therefore, the potential exists that several parties may assert ownership claims with respect to the courseware requisite for online endeavors. Moreover, usually online courses require more substantial institutional involvement, including technical help afforded the professor, release time awarded to faculty who develop online courses, institutional funding or gifts directed to the creation of distance education, or contributions of other significant resources to facilitate the development of the course.” (Latourette 2006, 629)

However, it is not clear what “*significant resources*” means<sup>xlii, xliii</sup> or, more precisely, how much they cost. Especially because, although there are several sunk costs, marginal costs tend to be low when producing online courses. Undoubtedly, some numerical examples and clarifications would be useful in order to discuss what the share of the academics' contribution is in the total value of the product. In any event, this could help to explain the share of royalties that academics should receive, but it is unlikely that the calculation would suggest that those royalties should be 0.



The investment made by institutions as the rationale for recognizing capitalists' ownership of informational goods turns out to be much effective in "common law" countries (English influenced, including Asia-Pacific) than in "civil law" countries (continental Europe and most of Latin America). This is clear, for instance, regarding audiovisual industries<sup>xliv</sup>.

Our argument could be extended further by using a very simple analogy: articles in journals and books. Academics are encouraged by their institutions to produce both (Klein 2004, 166). Their productivity is even to some extent measured by the number of publications they produce, and the obligation to publish is sometimes written down in their contracts. And, incidentally, it is possible to argue that universities, at least some of them, provide academics with "significant resources" in the form of inputs for the research processes that fuels papers and books.

However, no university would expect or ask the authors to relinquish their rights over papers or books. Why are online courses so different? Beyond the excuses given by administrators, the explanation is quite simple: most papers and books produced by academics have low -if not zero or even negative<sup>xlv</sup>- economic value. They could exist as commodities, but demand, if any, is quite modest. On the other hand, online courses might be in high demand. As Leslie, Aaron and Roche have put it:

"Today, with the creation of distance education, universities are realizing that the stakes involved with copyright ownership are higher than ever. Online courses create a "potential financial windfall" for the owner of the copyright. They allow universities the ability to offer the same course repeatedly without having to pay a professor to teach the course. Once the course is developed and fixed into a program, the need for a professor is significantly reduced. Such programs pose unique copyright law issues." (Leslie 2002, 120).

"Teaching materials, once primarily individual works of single authorship, become a packaged product of commercial value to the institution. The institution has growing interest in access to teaching material." (Aaron and Roche 2015, 325)

Moreover, what is rarely mentioned is that ownership of courses allows administrators to hire less staff. This, which is the main rationale behind the translation of knowledge from subjective bearer to objective bearer from Taylorism onwards, i.e. from worker to machines, should not be foreseen. Robert Samuels expressed his concern regarding this topic:

"The University of California administration has always insisted that nontenure-track faculty seeking long-term contracts have a particular expertise that is not replaceable by other faculty members and that provides a needed service to the university mission. Because the vast majority of writing teachers in the UC system are nontenured faculty members, this question of provable expertise is essential in protecting the



jobs and status of composition faculty members. However, what happens when someone puts most of her course material on the Web to help standardize writing instruction? Is this person still indispensable? Moreover, is anyone an expert if everyone shares access to the same resources and knowledge?" (Samuels 2004, 67)

Summing up: universities accept that academics are entitled to copyrights related to materials produced for face-to-face classes as well as papers and books. However, administrators of higher education institutions tend to claim ownership regarding online courses. This incongruence has been explained by different reasons. But underneath the ideological discursive surface, the main rationale is that of profits and commodities, which can eventually put at risk the jobs of faculty staff.

It is important to point out that all the arguments and regulations discussed above tend to assume that academics are full-time employees at the institutions that ask them to produce online contents. Although this may be the case for a significant number of universities in Europe and the US, the proportion of part-time and other non-tenure positions is dramatically increasing in those countries. Moreover, in the rest of the world, the former situation is more the exception than the rule.

One way through which ideology expresses itself is by framing discussions. Thus, regarding online teachers, several articles are carriers of capitalist ideology by placing the discussion of ownership around the question of whether teachers can or cannot take their authored courses with them if they move from one university to another (e.g. Latourette 2006, 652; Hoyt and Oviatt, 2015). The Association of American Universities (AAU) recommends that "full-time faculty at one university should not be permitted ... to develop commercially related new media technology of content for another university or for a private company without the home university's approval." (AAU, cited in Latourette 2006, 652). Nonetheless, the ideological pattern still works if the opposite side is taken (that teachers might be allowed to take the contents with them if they move to another university). Indeed, even taking teachers' side in this debate obscures the fundamental truth: what happens to the use of the authored content by the original university?

### **5.3 Trends in ownership of online course content**

Despite the data found being fragmented and partial, to say the least, it is illustrative enough of the current tendencies in ownership of online education materials.

#### **5.3.1 Ownership and royalties**

Sanders and Richardson (2002) conducted a survey among higher education institutions in the Southern Regional Education Board (SREB) in the US. 83 out of 210 institutions responded. When asked about ownership of materials created for use in online learning only 9,4% stated that academics/teachers retained ownership. Consistently, a study carried out by Hoyt and Oviatt (2013, 171) among 297 doctorate



granting universities found that “in only 10% of cases faculty members owned the courses”.

Theoretically, university associations state that paying royalties to faculty is sufficient.

“The AAU's Intellectual Property Task Force recommends that the "long-standing custom" of faculty members' receiving royalties on their work, "whether distributed in print or electronically...should not change. " ”(Klein 2004, 186)

However, a survey conducted by Hoyt and Oviatt (2013, 169) found that only 2,8% of universities paid royalties as a policy, and 5,7% paid to “some colleges, schools or departments”, where the rest did not pay royalties at all. When royalties existed, they were between 5 and 10% of revenues, according to respondent administrators.

In the same vein, Laura Leslie, referring to paying royalties to faculty when the course is repeatedly used stated that: “Unfortunately this is not the common practice. Some institutions actually create corporate entities that hire professors to create courses so that there will be no debate that the work was produced within the scope of the employment” (Leslie 2002, 122).

A survey of the intellectual property policies of public and private Carnegie Doctoral Research-Extensive Universities conducted by Loggie et al found that 64% of private institutions and 43% of public claimed a royalty-free license (Loggie et al. 2007, 115). It is not only that the figures are high but also that institutions oriented towards the market, that is, those more likely to monetize the content produced by teachers, are more likely to neglect to pay royalties to content producers. Moreover, comparing the results of their survey with previous research, Loggie et al (2007, 117) found that the willingness to claim royalty free licenses by universities increased from 14% in 1992 to 23% in 2002 and 50% in 2005 (average of public and private institutions).

### 5.3.2 Contracts

There are at least two kinds of relevant contracts for our purposes. On the one hand, the aforementioned between institutions (universities, firms) and academics/content producers. On the other hand, contracts between the former and third parties, for example MOOC providers.

Accessing both kinds of contracts has proven to be an extremely difficult task. However, some comments may be introduced.

Regarding contracts signed by academics/content producers and institutions commissioning the development of an online course, the concrete contracts we gained access to were all in Argentina and related to social sciences. This was due to relationships of trust and confidence developed with my informants—and the promise of strict anonymity-, that are difficult to extend to other countries and fields.



Three situations were identified. Without claiming exhaustiveness or trying to measure their relative weight, it might be the case that these three kinds of contractual relationships exist in other countries and fields as well.

1. Contracts with a fixed compensation and no specific references to the peculiarities of an online course. In these cases, the contracts are standard service providing contracts (similar to those used when outsourcing repairs). A task is commissioned and a fixed amount of money as compensation is established, but there are no further precisions written down. These contracts emerge from the lack of specific knowledge regarding intellectual property from the university and the teacher. Thus, the university does not have a contract model regarding intellectual property regarding teacher contents and simply uses the standard contract for other outsourced “services”<sup>xlvi</sup>. On the other hand, in this case, the teacher might retain their rights, from a legal standpoint. Therefore, if the university reuses the course or makes a derivative work, the teacher can ask for compensation, i.e. file a lawsuit with a good chance of winning. It is worth noting that this situation is to some extent similar to that in which there is a complete absence of a written contract. Naturally, in that situation the amount and timing of the payment and the expected delivered product are subject to misunderstandings between the parties. Nonetheless, in principle the original author—i.e. the content producer— is still the owner of the contents.

2. Contracts with a fixed compensation and specific references to intellectual property rights. Here, it is highly likely that the content producer transfers all her economic rights to the institution. This tends to be the case with institutions that have developed an intellectual property rights strategy and have specific standard contracts for online courses. If the contract has been appropriately devised, there is no point to the teachers seeking further compensation through legal means, as all rights may be completely relinquished. However, the so called moral rights (e.g. to attach the author’s name to the work) must still be respected by firms, especially in civil law countries—such as the majority of Latin American countries.

3. Contracts with a fixed compensation plus an additional fee each time the course is republished. This is the most appropriate scheme and the only one that may avoid exploitation through alienation. The specific case that has come to our knowledge is that the preparation of the course is remunerated with a value X (the second time the course is used, the author receives some  $3/4 X$  (remember this time there is nothing that she needs to do), the third  $2/4$ , the fourth  $1/4$ , and the fifth time there is no additional remuneration. In this specific case, the course was offered on an annual basis. Despite not being written down in the contract, the oral agreement included the renewal of the course in the sixth year, starting the cycle again.

The other type of contract is that signed by institutions that become owners of courses and third parties—e.g. MOOC providers. Fortunately, *The Chronicle of Higher Education* has spread a contract between Coursera and the University of Michigan. The most relevant issues are addressed in the long following quote.



“Company will pay to University<sup>xlvii</sup> 6-15% of gross revenues received by Company for Courses offered through the Platform. The applicable percentage of the Revenue Share will be set forth on the Course Development Agreement for each Course.

- Company will pay University:
  - 6% of gross revenues for a Course with a 3-month Course Lifespan;
  - 9% of gross revenues for a Course with a 12-month Initial Period;
  - 12% of gross revenues for a Course with a 24-month Initial Period;
  - 15% of gross revenues for a Course with a 36-month Initial Period;
    - In addition to the duration of the Course as provided above, for each Course offered under the Coursera Monetization Model, Company will also take into account the number and quality of assessments offered for each such Course in determining the applicable percentage of gross revenues such that the percentages identified above may be adjusted up or down at Company’s reasonable discretion.
    - Upon request by University, Company may, at its sole discretion, provide for a higher percentage of Revenue Share for Courses of short Course Lifespan whose topic is such that a shorter Course Lifespan is warranted.
- In addition, Company will pay University 20% of Gross Profit on the aggregate set of Courses provided by University or Instructors. Calculation of gross profits will account for deduction of all costs specific to University Courses, including, but not limited to, any previous Revenues Share paid to University by Company, costs of captioning and translation of University Courses, hosting and website charges, costs for tutoring and grading, etc. for University Courses. ” (Coursera and University of Michigan 2012, 28)

The share may vary between 6 and 15% of revenues of the course. And there is an additional 20% of gross profits. However, the contract specifies “that the percentages ... may be adjusted up or down at Company’s reasonable discretion”. It would be interesting to know what the concrete shares turned out to be for different courses but unfortunately we lack that information. However, it is quite clear that even in the unlikely event that the university cedes to the content producers a substantial share of the royalties, that share is still going to be modest. Compare with the music recording industry, which cut deals far from ideal to musicians: the share that the musician receives ranges from 12% to 18%.<sup>xlviii</sup> By the way, extending the contract comparison between on the one hand, online education and, on the other, the music, publishing and film industries, would be an interesting challenge for further research.



## 5.4 Summary

Although the legal literature discussed here does not refer to relations of exploitation, several texts suggest that academics should be aware of the risks of lacking knowledge about intellectual property.

“Several articles noticed that academics don’t know enough about intellectual property and that is particularly problematic regarding online education. Faculty are intrigued by the seemingly endless possibilities afforded by the Internet and the potential for enriching class offerings in an innovative fashion. What faculty may not consider are the copyright issues inherent in the online delivery of courses, or even when evincing sensitivity to the copyright implications, may lack the requisite tools to properly address the issues.” (Latourette 2006, 615)

Sanders and Richardson, in a prescient text, drew a clear link between academics producing contents for online education and musicians whose work has been exploited by producers and companies

“Because creators of intellectual property are largely unaware of its worth, many will lose their creative work by signing away their right. The increasing pressure of higher education institutions in the “for-profit” world of the virtual university will create an inflated demand for intellectual property materials. Just as many early “rock” musicians never realized monetary compensation for their creative work, many in the higher education environment will lose their creative work until the courts decide on the technicalities of intellectual property financial considerations.” (Sanders and Richardson 2002, 122)

The quote points clearly to exploitation through reproduction, but two caveats should be introduced. It is not clear that it was only “early” rock musicians. More importantly, it is unlikely that this situation is going to change when “the courts decide on technicalities of intellectual property”. Unfortunately, in capitalism, courts tend to adjust the law to the needs of capital, in each stage of its development.

We concur with Laura Leslie here again:

“When evaluating who should own the copyright to on-line courses, both economic and intellectual theories of copyright favor awarding ownership to the professor who creates the course. (...) Professors should be able to reap the benefits of their labor and knowledge. Allowing professors to retain ownership to their works will further the promotion of learning. The teacher exception to copyright law should be recognized, and a default rule should be installed to automatically vest copyright ownership with professors for their academic works.” (Leslie



2002, 124)

However, it is highly unlikely that the law will recognize teachers' knowledge. Even the quick glance given here to copyright history is enough to understand that it tends to adapt to the needs of capital accumulation, rather than to knowledge producers' rights.

## 6. Academics standpoints: surveys

This section is based mainly on the quantitative and qualitative results of our twin surveys and is structured around three subsections. The first regards experience in online education and, among those that have prepared at least some course or material, their representations of remunerations. The second subsection discusses the main variables that content producers take into account to determine how much they expect from their online classes. This refers, to a certain extent, to representations regarding the ultimate source of value of online courses.

The third subsection deals with representations regarding ownership. More specifically, it tackles the relationship between representations of ownership regarding face-to-face classes *vis a vis* online courses. Each subsection begins with a quantitative approach and then moves on to present some qualitative data.

### 6.1 Experience in online courses and relative remuneration

#### 6.1.1 Quantitative

The surveys asked about previous experience preparing online courses or instructional materials for those courses.

	English		Spanish		Total	
	n	%	n	%	n	%
Yes	57	62%	18	49%	75	58%
No	35	38%	19	51%	54	42%
Total	92	100%	37	100%	129	100%

**Table 18:** Preparation of an online course or instructional materials for online education

Source: Prepared by author.

Combining both surveys, more than half of the respondents had experienced preparing online courses or materials. The English survey respondents were much more likely to have already prepared these courses, which is hardly surprising as online education in English is more widespread than in Spanish.

Regarding remunerations, we asked specifically those that answered "Yes" to the previous question to compare the received remunerations.



It is worth noting that we are not discussing here either actual remunerations or actual comparisons, but rather *representations* of the relationship. That is, a remuneration could be—and usually is—perceived as lower or higher than others due to the interaction of several variables that include but go beyond the objective figures.

	English		Spanish		Total	
	n	%	n	%	n	%
Higher	2	4%	3	17%	5	7%
Equal	23	40%	8	44%	31	41%
Lower	15	26%	7	39%	22	29%
Non-remunerated	17	30%	0	0%	17	23%
Total	57	100%	18	100%	75	100%

**Table 19:** Representations of the average remuneration for prepared online courses/materials in relation to that of face-to-face teaching  
Source: Prepared by author.

Around 40% of respondents considered that the remuneration was “equal” which, of course, does not mean “high” or “low”, but rather a similar level of satisfaction or dissatisfaction between face-to-face and online teaching.

Regarding “higher” remuneration, although in both surveys the figures are lower than “lower”, there are major differences between the surveys. Whereas only 4% of English respondents thought that they received higher remunerations in higher education, 17% of Spanish respondents considered they did. Does that suggest that Spanish-speaking academics get paid better than their English-speaking colleagues for online courses? It is hard to say, but it seems a rather implausible explanation. On the contrary, it is more likely to be the case that for Latin American “higher” means better-off than precarious insertion in face-to-face higher education. In this vein, it must be noted that, for instance, in Buenos Aires University (UBA), 23% of formally recognized teachers were “ad honorem”—meaning they do not receive any income at all<sup>xlix</sup>- (Rikap 2016). The figures are even more dramatic in social sciences and humanities, which are the areas most of our respondents work in.

On the other hand, there is a substantial share of non-remunerated English content producers. This is probably due to their full-time employment duties that include the preparation of on-line courses, without any additional remuneration.

Conversely, none of the Spanish survey respondents said that they produced courses as an unremunerated activity. Certainly, this might be a misrepresentation due to the sample limitations. Otherwise, again the explanation is likely to be related to the university system, particularly in Argentina. So far, full-time professors are not expected to produce online courses. At the same time, online courses tend to be commissioned specifically from content producers/teachers through specific fixed-term contracts, that they would not accept without some kind of remuneration.

### 6.1.2 Qualitative

Some of the respondents used the free spaces to comment on this topic. Most of them tended to criticize the current remunerations for online education

“Well, I think that in general virtual teaching is overvalued by institutions because they consider that through this they reach a larger audience (get more clients) and it portrays a certain image of modernization, but the time and dedication that virtual spaces demand from teachers does not compare with the pay they receive. Generally the pay is the same as for a face-to-face class and time preparing materials is not acknowledged, nor is their publication on the platform or the monitoring of public spaces for the students such as forums. Some private institutions pay for the elaboration of content and the teachers lose their rights over these materials.” (Spanish Survey, ID 8, 48, 25, female, Social sciences and Humanities, Colombia)

“I think it is an important alternative, but for the teacher, based on my own experience, the work is more demanding and the pay is usually worse than for face-to-face work.” (Spanish Survey, ID 2, 50, 22, male, Social sciences and Humanities, Colombia)

Nonetheless, some other respondents explained why they consider that online courses are better paid than face-to-face classes.

“In my case, I find that virtual teaching pays better than face-to-face (the amount is the same), since the latter implies fixed hours, travel time and costs.” (Spanish Survey, ID 34, 40, 12, male, Social sciences and Humanities, Argentina)

This quote is useful to develop our point regarding how representations might vary widely departing from the same objective situation. Imagine a hypothetical situation where teachers are indeed paid the same total amount of money for a face-to-face course and for the translation of the same course to an online version. When asked to compare, several teachers would tend to say that the compensations were equal. Others, like perhaps those quoted above, would tend to underline that the total time spent is much higher in the online class and, therefore, the same payment implies a lesser compensation per hour. On the contrary, this respondent considered that if the amount is similar, then virtual teaching is better paid, because he can manage his time, and there are no—what economists call- transaction costs involved.

However, from our perspective, that did not emerge from the respondents regarding this topic, the online course is probably worse paid because it might be used several times without additional remunerations. This argument will be developed further in the next subsection.



## 6.2 Main variable regarding expected remuneration

Here we will discuss answers to the question: “Suppose you are asked to prepare an online course. The demand comes from an institution that charges the students a tuition fee. What is the main variable that you would take into account to determine your expected remuneration?”

The main tension that structures this question and the categories of responses to it, is that between time and knowledge. Our argument, already mentioned in previous sections, refers to the fact that measuring informational goods in terms of (whatever kind of) time is not enough to avoid exploitation through reproduction. Actually a decent compensation in terms of time—i.e. non-exploitative in terms of exploitation through alienation- might turn out to be exploitative in terms of copied knowledge—i.e. exploitation through reproduction. Thus, for exploitation through reproduction to function smoothly, capitalism needs the aid of some ideological beliefs. We think that relating remuneration—and perhaps ultimately value- to time might fit this ideological need of the exploitative scheme. Therefore, here we will try to analyze if respondents link the remuneration of their possible online courses either with time or knowledge. More specifically, we will try to operationalize different kinds of time and knowledge. The word “knowledge” as used in the analytical layer (that of this article) should not be confused with the word knowledge as used in the layer of surveys (in the common sense of respondents)<sup>1</sup>.

Indeed, there are several kinds of time and knowledge related to remunerations in online education. We provided respondents with two options related to time. On the one hand, the obvious: “Time spent preparing the course/ materials”. On the other hand, and option related to what past labour: “Time spent studying the topic of the course or other topics”. Regarding knowledge, and based on previous research, we operationalized 4 types. The first is “Knowledge of the topic and/or your current prestige/ reputation”. This includes subjective knowledge and recognition (a type of intersubjective knowledge), particularly, being rewarded for the degree of attention conquered and the social capital or networks built. The second option was somehow the opposite, in the sense that it did not refer to the knowledge academics already are in possession of, but rather to the (intersubjective recognition) knowledge they might receive, as a (partial) compensation for their courses: “Increase in your personal prestige / social capital / reputation as a consequence of preparing this course for this institution”. The remaining options were related to the fact that the knowledge academics provide is materially objectified as an informational good, that is, that the course might be copied and delivered repeatedly. Both of them pointed, in different terms, to the profits that the institution is going to make by having recourse to that knowledge. The fifth option reads: “Number of students that are going to enroll on the course and/or the amount of the fees to be collected by the institution in this”. So, this refers to the profits and, only indirectly to the fact that the course might be reproduced. Indeed, this option is broad and could be related to face-to-face classes as well. The sixth and final option was much more specific: “Number of times that the course is going to be offered / published online”, as it referred unequivocally to the



reproducibility of knowledge objectified as informational goods, that is, to the number of uses of the knowledge provided by the academics.<sup>li</sup>

### 6.2.1 Quantitative

We are going to present the results by arranging them into five tables. The first is the most general one, combining answers into two broad variables: time and knowledge. The second offers the actual answers provided by respondents, but only cross-referencing the answers with the language in which the survey was conducted. The other three include different control variables that might help to qualify our results.

Variable	English		Spanish		Total	
	n	%	n	%	n	%
Time	67	73%	24	69%	91	71%
Knowledge	25	27%	11	31%	36	29%
Total	92	100%	35	100%	127	100%

**Table 20:** Main variable taken into account to determine expected remuneration in the hypothetical case of preparing an online course (subtraction of answers time and knowledge, by language of the survey). Source: Prepared by author.

The main result is quite clear. Respondents tend to consider that time is much more important than (what we refer to here as) knowledge. The result is consistent for both surveys. However, the data must be broken down to confirm or refute this general idea.

Variable	English		Spanish		Total	
	n	%	n	%	n	%
Time spent preparing the course/ materials	66	72%	19	51%	85	66%
Number of students that are going to enroll on the course and/or the amount of the fees to be collected by the institution	11	12%	7	19%	18	14%
Knowledge of the topic and/or your current prestige/ reputation	4	4%	4	11%	8	6%
Time spent studying the topic of the course or other topics	1	1%	5	14%	6	5%



Number of times that the course is going to be offered / published online	6	7%	0	0%	6	5%
Increase in your personal prestige / social capital / reputation as a consequence of preparing this course for this institution	4	4%	0	0%	4	3%
No answer <sup>iii</sup>	0	0%	2	5%	2	2%
Total	92	100%	37	100%	129	100%

**Table 21:** Main variable taken into account to determine expected remuneration in the hypothetical case of preparing an online course (survey options, by language of the survey)  
Source: Prepared by author.

Table 21 show that time related to preparing the classes is the most chosen option in both surveys (average 66%), although English survey respondents tended to pick this option significantly more than Spanish ones (72% and 51%, respectively). This is related to the fact that time spent studying as opposed to time spent preparing classes was almost completely disregarded by English survey respondents. Instead, 14% of respondents of Spanish survey chose this option.

Regarding knowledge categories, the option explicitly related to revenues and numbers of students was the most selected one in both cases, slightly more chosen by respondents to the Spanish survey than by English ones (19% and 12%, respectively). Knowledge of the specific topic and academic prestige or reputation accounts for 6% of answers, again being bigger among Spanish survey respondents (11% vs. 4%).

Increase in personal prestige, i.e. gaining attention, is only a marginal choice.

Last but not least, the number of times that the course is going to be offered, that is, the option closely related to replicability of informational goods and exploitation through reproduction, has not been picked at all in the Spanish survey and was only selected by a 7% of English survey respondents.

Thus, these results are consistent with our argument: the most selected option among time is that which favours exploitation through reproduction. On the other hand, the knowledge option that might potentially represent a greater awareness regarding exploitation through reproduction only accounted for a 5% of total respondents.

However, these results may be challenged on several bases. Now we will deal with three potential objections. The first one is related to the fact that the respondents answered about themselves. That is, their individual criteria, and not general rules. It might be the case that some respondents picked an answer regarding their personal, contingent situation, but that they would choose another option as a general rule. To discuss that, we included a question regarding reasons for having picked the previous option, and the answers were written as general, abstract criteria. Three additional features were incorporated. The option “Other” was included here (either to give a free space to elaborate answers, or to include options not considered), in order to compare with the previous question. Indeed, if “other” were ranked above the time option here, it would be dubious to ac-



cept our conclusion. On the other hand, the phrasing of the options was changed to avoid as much as possible immediate associations with the previous answer for the aim of coherence. The main options were synthesized: regarding the three axes: time, knowledge related to repeated use, other knowledge. Thirdly, we added an option not included in the previous question (“Because that is what other colleagues / the union suggest.”). This option was not relevant in previous research, but we decided to introduce it mainly as a means of controlling if the previous option’s selection was represented as being related to the influence of third parties. Again, if this value was high, the results coming out from the previous table would need reconsideration.

Variable	English		Spanish		Total	
	n	%	n	%	n	%
Because payment is related to (present and past) labour time.	59	64%	18	48.6%	77	60%
Other	19	21%	5	13.5%	24	19%
Because the value of the course depends on your knowledge rather than on the time you spent preparing it.	5	5%	10	27.0%	15	11%
Because the institution is going to use the course repeatedly	9	10%	3	8.1%	12	9%
Because that is what other colleagues / the union suggest.	0	0%	1	2.7%	1	1%
Total	92	100%	37	100%	129	100%

**Table 22:** Reasons for prioritizing variables to determine remuneration for preparing an online course. Source: Prepared by author.

According to table 22 time is still by far the most chosen option in both languages, and this figure only decreased 10% from that in the previous table. Interestingly, the option that explicitly represents the view that knowledge is a more important variable than time accounts for 11% that comes from 5% of the English survey respondents and a striking 27% of Spanish survey respondents. This is an important difference. When this 27% (n=10) is analyzed it turns out it is not surprisingly composed of 11% (4) of those that mentioned “knowledge of the topic” as their previous answer and perhaps all of the 14% (5) that picked the “time spent studying..” option. This is relevant, as it corrects to some extent our previous analysis: it must not be assumed automatically that respondents who picked this option as an answer to the previous question prioritize time over knowledge, as we did. However, as only one English re-



spondent picked this option (and he answered “because of value depends on time” later), the changes that this implies are quite modest: the 71% displayed in table 20 might be corrected to 68,5%.

Nonetheless, the new datum provided by this table concerns the 19% of the option “other”. This comes from 13 respondents that had answered “time spent preparing...”, 10 “Number of students...”, and 2 “Increase in your personal prestige...”. However, in these cases, after reading the specific responses in the allotted space, it is not necessary to make any changes to table 20’s results. This is due to the fact that most of these respondents reaffirm (though adding precisions) the answers given by them to the previous question<sup>liii</sup>. In any event, the specific answers given in this open field will be discussed in the next qualitative subsection.

Noticeably, the influence of other colleagues or unions seems to be represented as scarcely relevant regarding this topic.

On the other hand, the idea of the course being used repeatedly only received 9% of the answers, evenly distributed in both surveys. This represents an increase if contrasted with the previous answer. However, this does not change the basic idea: the repeated use by a for-profit institution of an online course tends to be overlooked as an extremely important element in order to calculate the expected remuneration by its authors.

The second potential objection concerns experience. Indeed, we asked the same questions to two kinds of academics: those who had concrete experience preparing online materials and those who had not. We did so assuming that the main driver of representation is ideology, which acts upon all the academics and is resistant to all kinds of experience. Of course, this arises from our theoretical standpoint regarding the concept of ideology, discussed in section 3. However, it might be the case that opinions vary according to experience—and that our assumptions regarding ideology prove wrong. Table 23 allows us to tackle this issue. Indeed, it shows only the answers of experienced respondents.

Main variable	English		Spanish		Total	
	n	%	n	%	n	%
Time spent preparing the course/ materials	43	77%	9	50%	52	70%
Number of students that are going to enroll on the course and/or the amount of the fees to be collected by the institution	7	13%	2	11%	9	12%
Knowledge of the topic and/or your current prestige/ reputation	1	2%	3	17%	4	5%

Time spent studying the topic of the course or other topics	0	0%	3	17%	3	4%
Number of times that the course is going to be offered / published online	3	5%	0	0%	3	4%
Increase in your personal prestige / social capital / reputation as a consequence of preparing this course for this institution	2	4%	0	0%	2	3%
No answer	0	0%	1	5%	1	2%
Total	56	100%	18	100%	74	100%

**Table 23:** Main variable taken into account to determine expected remuneration in the hypothetical case of preparing an online course (only respondents that declare they had prepared online courses or materials). Source: Prepared by author.

Although the absolute figures are much smaller and, therefore, relative measures become fuzzy, the results show no major differences with those displayed in table 21. Time spent is still the preferred option and number of times that the course is offered accounts for a marginal share of the answers.

A third interesting objection that may be raised concerns the different fields in which academics are engaged. Indeed, social scientists are in relative terms more experienced than the other academics in discussing topics similar to those covered by this research. Thus, in table 24 answers from social scientists and other fields are compared.

	English				Spanish				Total			
	Social scientists and humanities		Other fields		Social scientists and humanities		Other fields		Social scientists and humanities		Other fields	
	n	%	n	%	n	%	n	%	n	%	n	%
Time spent preparing the course materials	48	68%	19	90%	12	55%	7	47%	60	65%	26	72%
Number of students that are going to enrol on the course and/or the amount of the fees to be collected by the	10	14%	1	5%	4	18%	3	20%	14	15%	4	11%



institution												
Knowledge of the topic and/or your current prestige/ reputation	4	6%	0	0%	1	4%	3	20%	5	5%	3	8%
Time spent studying the topic of the course or other topics	0	0%	0	0%	4	18%	1	7%	4	4%	1	3%
Number of times that the course is going to be offered / published online	6	8%	0	0%	0	0%	0	0%	6	7%	0	0%
Increase in your personal prestige/ social capital/ reputation as a consequence of preparing this course for this institution	3	4%	1	5%	0	0%	0	0%	3	3%	1	3%
No answer	0	0%	0	0%	1	5%	1	6%	1	1%	1	3%
Total	71	100%	21	100%	22	100%	15	100%	93	100%	36	100%

**Table 24:** Main variable taken into account to determine expected remuneration in the hypothetical case of preparing an online course (by teaching area)

Source: Prepared by author.

The most striking figure of this table is the 90% of English survey respondents that have chosen “Time spent...”. Indeed, this might suggest that non-social scientists could be even more susceptible to relating remuneration to labor time. Conversely, “number of students..” and “number of times...” are much more selected by social scientist respondents to the English survey. The number of respondents is not high enough to accept this hypothesis, but it could be worth exploring it in further research. On the other hand, the 68% of social scientists that selected the option “Time spent..” in the English survey is still much higher than the Spanish average. However, the absolute figures regarding Spanish survey respondents are so low that is not possible to assert any tendency.

### 6.2.2 Qualitative

In this subsection we are going to discuss some quotations from respondents that selected the option “Other” and then wrote in an open space - and in some cases



complement those answers with secondary sources. Hopefully, we will gain understanding of different lines of thought that were triggered by the question regarding the main variable to calculate remunerations. Six of these lines of thought were identified. They can be grouped around two axes.

### 6.2.2.1 Time and knowledge

Here we will present answers that elaborate on topics that were already covered by the options offered. However, respondents picked the option other in order to develop their argument further. For the sake of clarity, we grouped the answers around three axes, to coincide with those mentioned above: time, knowledge as recognition and knowledge as reproducibility.

#### Time

Some of the answers were clearly related to time, but through different arguments and tacit assumptions, for instance, the particular association between time and scarcity.

[It is] “hard to pick just one answer in this or previous qu. But essentially time is what is most precious these days, so that would be one good reason.” (English Survey, ID 101, female, 53, 30, Physical Sciences and Mathematics, UK)

“My time is in scarce supply so I have to charge for it.” (English survey, ID 128, male, 59, 37, Physical Sciences and Math, UK).

This is, certainly, one of the liberal ways of thinking about time. It is not the case that labour time is the main variable because of the teachers efforts, sweat, etc, in other words, the Lockean notion, but rather because time is “precious these days”— ultimately the Marginalist approach. If time was not “scarce”, these teachers would not ask for any additional remuneration. It is quite clear that this kind of reasoning is strictly functional to exploitation through reproduction.

On the other hand, time is mentioned as that which is not being specifically paid for.

“The development time is not separately paid (and indeed not acknowledged in timetable calculations, and so one might argue it is not paid at all!), and yet it takes a long time and much creativity.” (English survey, ID 64, male, 55, 26, female, Biological sciences, UK)

Indeed, it is not only that time is the main variable, but also that it is not sufficiently taken into account. The point of this academic seems to be to demand the inclusion of



the preparation of online courses in the timetables. However, this could perfectly happen without putting in question the source of exploitation through reproduction.

Even more interesting are the answers in which the respondents state that they do not expect any additional remuneration. Indeed, some respondents made it clear that, being employees, they do not expect any specific economic compensation for delivering online courses.

“Part of normal activities” (English Survey, ID 62, female, 33,8, Social sciences and Humanities, UK).

“I wouldn't expect any additional money, unless I get promoted.” (English survey, ID 100, male, 50, 6, Physical sciences and Math, UK)

“I found the premise of this survey a little odd. As a salaried employee, I don't think in terms of direct remuneration for things like preparing a course. It's just part of the job that I get paid for.” (ID 89, male, 35, 11, Physical Sciences and Math, UK)

Interestingly, the last respondent does not only think that he does not deserve any additional compensation, but he also found even discussing the topic to be odd.

Neither of the three quotes mentioned time explicitly. Nonetheless, it is quite clear that the rationale for concluding that no additional remuneration is deserved is related to selling labour time to universities on a regular basis and, more importantly, assuming that selling labor time implies that workers must relinquish rights over all knowledge they have produced. This is ideology supporting exploitation through reproduction at its purest<sup>liv</sup>.

The fact that these five out of the six opinions quoted were written by non-social scientists illustrates the quantitative data mentioned above: non-social scientist respondents to the English survey tended to choose “time” as the main variable.

### **Knowledge as Recognition/ Attention**

One of the key features of informational capitalism is attention economy. As some economists discussed, in a world where information is overabundant human attention becomes the scarce resource *par excellence*. Thus receiving flows of attention in the form of recognition, networks, social capital, Facebook likes, citation, etc is increasingly relevant. In the academic realm, the overload of information is particularly apparent. So, scholars are eager to expose their ideas -or at least their names. For example, in a post on Quora about the Coursera business model, a commenter wrote:

“I would offer a course through Coursera (or any open online platform for that matter) for two reasons. One is admirable: the love of teaching. I like to teach, and I think the course I am teaching can help people understand their world just a little bit better. The second is somewhat



selfish: exposure. Let's say I teach a course on Coursera that gets 100 to 200,000 students. This is 200,000 people who know my face and name and (hopefully) see me as an expert on some of the issues I am teaching. So then, if I write a book about this issue, some of those students may buy the book. And really, once you have designed the course, it takes very little effort to actually implement it, and many professors who teach these courses have a cadre of teaching assistants helping them anyway. So, its not that much of a sacrifice for what you are getting back.” (Rob Graham, in Quora, 2013)

More broadly, according to a secondary source, when asked about motivations for deciding to teach a MOOC (in a question with multiple answers allowed), 40,8% pointed to “increase my influence as instructor”, 37,9% “increase my visibility/reputation within my discipline” and 33% increase my visibility/reputation in the media and the general public. (Kolowich 2013).

It is in this vein that a 45-year-old male UK teacher states the following:

“My interests are so niche just thankful that ideas are getting some exposure among the usual online course dross.” (English Survey, ID 2, male, 45,5, Social sciences and Humanities, UK).

Beyond the individual academics looking for some attention, there are institutions trying to gain attention by sharing contents for free, in order to make money later on—as most web-based businesses do. For instance:

“We started to prepare material for Apples University on Itunes, to help recruit for a degree.” (English Survey, ID 100, male, 50,6, Physical sciences, Math, UK).

Indeed, looking for attention is a concern of all academics and institutions. Exploitation through reproduction in informational capitalism takes advantage of this concern that pushes content producers to offer their objectified knowledge for free—or at least for less than its value.

On the other hand, some reservations regarding attention and reputation might be raised, as it might be the case that some respondents believe that their reputation would be damaged by teaching online. For instance:

I actually think this would lead to a decrease in my reputation so if I were to consider it, I would need to be paid a whole lot (even though I know therapeutic pay wouldn't help with the shame and embarrassment that I would feel). (English survey, ID 65, Male, 38, 8, Social Sciences and Humanities, US)



Yet other respondents might be irritated by the very fact that prestige was included as an option:

“Really, I do not understand why you think this would add to a prof's prestige. These courses are prepared by tenured professors who get a full (over \$100,000.00 salary), and then farmed out to course 'facilitators' to 'teach' afterwards, who get 1/2 the salary of teaching an in class lecture. They are being promoted by universities as high-tech wonders, but are really just gouge-festa, exploiting precarity workers even more. IT companies see this as a money-maker, and the university is cutting back in space costs through online teaching. Students know they are great for cheating, so where's the prestige in that. I am shocked by your naivety!” (English Survey, ID 60, female, 55,30, Social sciences and Humanities, Canada).

### **Knowledge related to reproducibility and profits**

There were no respondents focusing unequivocally on the role of knowledge and reproducibility of informational goods in open spaces, which is coherent with the quantitative findings. However, some of them mentioned profits explicitly.

“Because I should receive payment based on the income I generate” (Spanish survey, ID 38, female, 51,23, Social sciences and Humanities, Brazil)

“Because the pay should be in accordance with the work (as well as the profits of whoever hires me) and the number of students is central to that.” (Spanish survey, ID 34, female, 40, 12, Social sciences and Humanities, Argentina)

It is not surprising both of these are respondents to the Spanish survey, where “number of students...” was ranked higher than in the English survey.

#### **6.2.2.2 Other lines of thought**

Here we will deal with some lines of thought that are related to remuneration, but are not reducible to the basic tension between time and knowledge. We have named them Willingness to work, Open knowledge/commons and Critical humanism.

#### **Willingness to work**

Here the respondents linked their expected remuneration to their need to work. The idea that the remuneration expected is related to the needs might seem obvious. And indeed, willingness to work (as economists would put it) is a very relevant variable, although a completely subjective and contingent one—we listed in our answer some



general answers. This line of thought came in to different versions. The first one is that represented by a Latin American academic

“I try to charge as much as possible, but not so much that they decline to give me the work.” (Spanish Survey, ID 11, female, 44, 26, Biological sciences, Argentina)

Here, the priority for the respondent is nothing but obtaining the job. It is quite clear that this academic is not a well-paid full-time employee. On the other hand, there is a European version:

“For me, as for most people, the answer to how much I would charge would be a mixture of the factors and my own personal situation at the time (did I have the spare time, how desperate I was for the money etc).” (English Survey, ID 1, male, 68, 23, social sciences and humanities, UK).

Thus, for some, similar to the former quote, the extreme needs might overpower arguments—i.e. in extreme need, whatever this hypothetical academic thinks about variables for calculating remuneration lacks importance. However, in most situations like that exemplified by the second quote, ideology is playing a key role.

Ultimately, the argument condensed in the latter quotation emerges from neo-classical economics, according to which the price of a certain commodity (labour, in this case) depends on the marginal utility it is going to produce. Remarkably, the ideological maneuver consists of decoupling the value of the course from *objective* measures.

Thus, when economic needs or, more generally, the personal situation (including spare time, willingness to work and so on) are invoked as reasons for engaging in relations of exploitation through reproduction, the role of ideology should not be neglected. Ideology operates here at a deeper level as well: it is assumed that conditions that oblige people to submit themselves to unfair deals cannot be changed. This is the idea that free market capitalism is the only game in town, that there is no alternative to capitalist relationships.

### **Open knowledge/commons**

As in previous research<sup>lv</sup>, some respondents considered it important to introduce comments regarding what they think about the nature of academic knowledge and relating it with the commons, openness and so on.

“I think that knowledge has to be open and shared, and at the same time I value the work that I do for teaching and I think it must be recognized also in economic terms.” (English survey, ID 47, female, 40, 5, Social sciences and Humanities, Italy).



“I believe in open education and in sharing/co-creating knowledge and resources as part of a wider community. Rather than 'no-one' 'owning' information I would rephrase this as 'everyone' - how can knowledge be 'owned'; surely it must be shared, discussed, opened out? I am careful when designing online programmes that I share them using creative commons licences and I am selective of who I work for. Part of my criteria for working online is that information will not be locked away in an institutional community but shared with the wider public - when this is appropriate (obviously students have a say in this too and sometimes course design can be front-facing but with student information kept in a gated community on a VLE).” (English survey, ID 118, 46, 10, female, Social sciences and Humanities, UK).

Certainly, the idea of knowledge as a common, open, public resource is valuable and should be praised from a critical perspective—although other standpoints advocate for this idea as well. However, there are some risks. In some situations, the discourses regarding commons, openness, communities, free access and so on might help to enable exploitation through reproduction by neglecting the need for compensation for those who produce knowledge and, more importantly, for the profits that corporations obtain from this “free knowledge” (Zukerfeld 2014). Google, Facebook, Youtube, among many others, benefit from this kind of rationale. Certainly, the point is not to reject the idea that academic knowledge must reside in the public sphere, but rather to demand that private for-profit companies remunerate knowledge producers sufficiently.

### **Critical humanism**

Some respondents tended to focus on a general criticism of online education, associating it with commodification and capitalism:

“I have heard rantings about the need to change 'the sage on the stage' format of lecture in-class teaching, and this is such bullshit. Teachers are now assessed to the max to ensure very high teaching standards, and these criticisms are unfounded. Large universities like MIT (which benefits from enhancing its techie image) are pouring big money into mooc courses that high-lite their top professors, and computer and Internet providers are making big profits in this process, but this is not the reality for most other universities where online courses are a way to cut costs dramatically, remove contract profs (who are replaced by PhD 'course administrators' at half the cost for each course contract), and reduce overhead costs for space, facilities, administration. Most importantly, however, is that it sends the message that professors are not important to society, that face-to-face relationships are not important, and that undergraduate students and teaching are secondary to the money making interests of research and getting big \$\$\$ research grants for univer-



sities. Yes, online courses are very convenient and can be a quick and dirty way of passing on information when that's all you want. But universities should be places where young adults learn how to participate in and build a community of scholarship, where they learn how to debate - which is essential in a democracy duh, and where they learn the importance of institutions as society-builders, not just corporations judged on their money-making potential. Get it, capitalism?" (English Survey, ID 60, female, 55,30, Social sciences and Humanities, Canada)

This perspective is akin to that of several authors mentioned in section 4. However, regarding the topic of this paper, the general criticism (with which we may concur or not) is not accurate enough. It lacks precision regarding the specific modality of exploitation that education corporations are using. Again, focusing on side criticism might miss the main point of exploitation through reproduction: specific remuneration for reproducible content.

### 6.3 Ownership

This subsection tackles representations regarding who is the owner of online courses, particularly compared with representations regarding face-to-face courses.

#### 6.3.1 Quantitative

Some previous research offers valuable insights. In a study carried out by Aaron and Roche among faculty of a community college, the researchers added a specific question for the respondents that did *not* think that *all* material produced by academics should be owned by them. The question concerned ownership of different kind of materials. Although the number of respondents was extremely low for this particular question (n=19), the results turned out to be suggestive: 79% answered that articles published in peer-reviewed journals might be owned by academics, 37% did so regarding traditional classroom contents and only 16% when it comes to online classes. Why is this last figure much lower than the previous one? Unfortunately, the aforementioned study did not investigate that. However, as it might be argued that (especially for a non-specialist in intellectual property law perspective like that of scholars) the materials are quite similar from a legal perspective, the differences are to some extent explicable by the ideological discourse of capitalist ownership.

Whereas this study asked about who *should be* the owner (that is a prescriptive question), another inquired into representations of *actual ownership* (more akin to our interests).

Thus, when asked if they owned intellectual property rights for content they had produced for their own MOOCs, 73,3% respondents to Chronicle's survey said "Yes", 11,9 stated "No", and 14,9% chose "I don't know" (Kolowich 2013). These results are extremely interesting, especially if the fact that the respondents were full-time academic staff of well-established universities is considered<sup>vi</sup>. Indeed, this



points to a sharp contradiction with the reports of JISC and others as they asserted that universities were the owners of intellectual property produced by employees. Of course, it depends on the specific situation. Moreover, the professors' standpoint might be defended on the grounds of the ownership conferred by copyright law to the individual that fixes the ideas in a tangible medium. However, it is far from being clear that the respondents who said "Yes" did so based on knowledge of copyright law.

Turning to our surveys, we posed two very general, admittedly vague questions in order to catch some representations regarding ownership and, particularly, to compare between online and face-to-face representations. As discussed in the methodological section, the results should be read with caution.

	English				Spanish				Total			
	Face-to-face		Online		Face-to-face		Online		Face-to-face		Online	
	n	%	n	%	n	%	n	%	n	%	n	%
The institution that hired the teacher	29	32%	51	55%	4	11%	18	49%	33	26%	69	53%
The teacher	39	42%	28	31%	15	41%	7	19%	54	42%	35	27%
Nobody	22	24%	12	13%	18	49%	12	32%	40	31%	24	19%
The students enrolled on the course	2	2%	1	1%	0	0%	0	0%	2	2%	1	1%
Total	92	100%	92	100%	37	100%	37	100%	129	100%	129	100%

**Table 25:** Representations regarding ownership of face-to-face classes and online courses  
Source: Prepared by author.

With respect to face-to-face classes, the most selected option was "the teacher" (42%), showing similar results among respondents to both surveys. "Nobody" ranked second adding the results of the surveys (31%). However, the results in both surveys were quite dissimilar. While in the English survey it was picked by 24% of the respondents, it was chosen by 49% of Spanish survey respondents, turning out to be ranked 1st regarding Face-to-face classes among Spanish respondents. A similar difference but in the opposite direction is found regarding "the institution": English survey respondents share is 32% while Spanish survey respondents only accounted for 11%.

Regarding online courses, 53% of respondents answered the abstract question about ownership by choosing "the institution". Figures are quite similar for English (55%) and Spanish (48%) surveys. Second and third ranked options were "the teacher" and "no-



body”, respectively. However, here there were important differences between surveys. Whereas teachers were slightly more selected in the English survey than in the Spanish one (30% vs. 19%), with “nobody” it was the other way around (13% vs. 32%). This should be framed by the fact that Spanish survey respondents tended to pick the option “nobody” much more than English survey respondents regarding face-to-face classes as well.

Regarding the relationship between the two questions (face-to-face vs. online) table 26 presents the results of combining both answers in pairs.

Variable	English		Spanish		Total	
	n	%	n	%	n	%
Same answer	64	70%	23	62%	87	67%
Different answers	28	30%	14	38%	42	33%
Total	92	100%	37	100%	129	100%

**Table 26:** Same and different answers regarding ownership of face-to-face classes and online courses. Source: Prepared by author.

The main outcome is that a large majority of respondents in both surveys (67%) tended to pick the same options regarding face-to-face and online classes. This suggests that for a non-marginal share of academics ownership relating to a service (face-to-face classes) and that related to informational goods (online courses) are similar -that is, that the material bearer upon which knowledge exists is not related with capitalist regulations. However, as discussed in section 5, both ownerships are usually quite different. By the way, this points towards a political course of action for those interested in fighting against exploitation through reproduction: discussing with academics the legal, economic and even ontological consequences of objectifying their classes as informational goods.

Of course, figures from table 27 may be broken down to gain a deeper understanding.

	English		Spanish		Total	
	n	%	n	%	n	%
Institution-institution	28	30%	4	11%	32	25%
Teacher-teacher	23	25%	7	19%	30	23%
Teacher-institution	16	17%	8	22%	24	19%
Nobody-nobody	12	13%	12	32%	24	19%
Nobody-Institution	6	7%	6	16%	12	9%
Students-students	1	1%	0	0%	1	1%
Other combinations	6	7%	0	0%	6	4%
Total	92	100%	37	100%	129	100%

**Table 27:** Combination of answers about ownership in face-to-face classes and online courses. Source: Prepared by author.

The most selected answer in the English survey and in total was “Institution-institution” but there were differences between the surveys: the Spanish survey figures are much lower. This might be attributed to the fact that many Latin American academics lack a full-time contract with their institution and, even if they have one, it does not contain specific provisions regarding intellectual property.

The same idea might explain the figures regarding the “Nobody-nobody” option (ranked fourth overall): Spanish survey respondents tend to choose this option to a greater extent than English respondents. The categories “teacher-teacher and “teacher-institution”, ranked second and third, respectively, show no major differences between respondents to either survey.

### 6.3.2 Qualitative

The last questions were deliberately ambiguous in order to grasp representations, including not only the specific answers but also the expressions of hesitations in the open field. In this regard, four lines of thought appeared that must be mentioned here.

The first one is related to the tension between normative and descriptive answers. The second was based on the idea that ownership “depends” on contracts or other factors and asked for missing precisions in the way our question was formulated. Contrastingly, the third includes the uncertainty of the respondent regarding their own knowledge on the topic or the indeterminacy of the institutions on the topic.

Fourthly, some respondents underlined the differences between face-to-face classes and online courses. Whereas the three former ideas are compatible with the absence of differentiation of ownership between both modalities, the latter is akin to distinguishing both of them.

### Prescriptive vs. descriptive.

Several respondents hesitated to answer referring to how things are (descriptive or legal standpoint) or how they should be (ethical or prescriptive), or assumed directly that the question referred to how things should be according to their ethical perspective. For instance:

“I struggled to answer this – I’ve answered with what I know to be legally true in my context, which is different to what I believe to be ethical or even accurate in an interpersonal sense. In my view, education is the result of encounter and exchange between a range of different actors, and I don’t believe my institution ethically ‘owns’ that – I don’t think anyone ‘owns’ that.” (English survey, ID 80, female, 30, 6, Social sciences and Humanities, Australia)

The perceived tension between how things are and how they should be is suggestive, especially because the question was “Who owns...” not “who should own...”. It would



be ideal to compare the answers to this question with a similar, abstract, decontextualized question regarding not an informational good, but an industrial good, e.g. a car. “Who owns the car?” Imagine the following options: the person that is driving the car, the company where that person works, the manufacturer, nobody”. Although the act of having read the previous paragraphs would prevent the reader from answering freshly and spontaneously, I tend to believe that it is not very likely that respondents would say something like: “from an ethical perspective I think that the workers should own...”.

Thus, both the hesitation regarding intellectual property and the lack of hesitation regarding physical property might be related to the powerful ideological internalization of physical property and the much weaker naturalization of intellectual property. Certainly, this hypothesis deserves to be explored further through the means of specific research.

### **Depending on the contract**

A few respondents used the open space to state that ownership depends on the contracts. For instance:

“This depends on the contract. I have always argued with employers that the content I create should be available as an open educational resource since good quality materials are a good advertisement for the quality of the institution. I have usually succeeded in persuading them, even if only informally.” (English survey, ID 128, male, 60, 17, Physical sciences and math, UK)

“Teaching assistants often deliver F2F materials on behalf of someone else's course. Who 'owns' content in both scenarios depends entirely on the contracts and licensing in place.” (English survey, ID 132, male, 39, 7, Social sciences and Humanities, UK)

Of course, this is an accurate answer. Actually, every question regarding ownership of not only intellectual but physical property as well, depends on contracts. However, when we lack specific information regarding those contracts—which happens most of the time- we tend to make assumptions, based on our fragmentary knowledge, data, experience, and, certainly, ideology<sup>lvii</sup>.

### **Not sure/not clear**

Some respondents pointed to uncertainties derived not from the way the question was formulated but from institutional contexts or their knowledge of the topic.

“I think this is a tricky concept. The resources created by a member of an institution belong to the institution, particularly relating to online re-



sources (videos etc), however how they are used in a live teaching context, the "performance" depends upon the teacher (teachers can replicate teaching activities/methods without infringing, I think?). This is a fuzzy area of intellectual property rights that needs clarifying for me. I don't teach online courses, but I do create online resources for use in supplementation to a physically based course, and this has never been clear." (English survey, ID 126, female, 28, 3, Physical sciences and Math, UK)

"In Italy the procedure is not regulated at all...at the moment most of the online courses are created out of the voluntary work of the teachers" (English survey, ID 97, female, 55, 20, Social Sciences and Humanities, Italy).

From these answers it is clear that at least some institutions need to clarify their policies regarding these resources and, above all, that academics need information to protect their knowledge objectified in informational goods.

### **Differences between face-to-face classes and online courses**

Some of the respondents pointed to the *ontological* differences between an online course and face-to-face classes.

"Once online the IP inherent in design and delivery is surrendered to the Institution and can never be recouped - there is currently no reasonable system that compensates academics for the years of accumulated knowledge and experience that a good online course requires. Face to Face delivery had a level of exclusivity that meant that 'presence' and the ephemeral nature of delivery did not allow the content to be replicated easily." (English survey, ID 27, female, 60, 17, Social sciences and Humanities, UK)

"Teaching ownership is a delicate issue. Not fully sure I have given the right answer, but since face to face teaching is a skill and not a product, there surely remains some 'ownership' with the teacher, even if not legally." (English survey, ID 101, female, 53, 30, Physical sciences and Math, UK)

From the perspective of the analysis of exploitation through reproduction, this line of thought is particularly relevant, as it is anchored in the material existence of different resources, and might unearth the legal differences in ownership between services and informational goods.



## 7. Conclusion

For-profit online education or e-learning is advancing at an uneven, but inexorable pace. Its presence in post-secondary education is already extensive, as we have been able to see by analyzing different market segments and national spheres. Besides the virtues and limitations of these modalities in pedagogical terms, here we are interested in another, much less discussed aspect. Indeed, in this study we have tried to approach the situation of content producers for different modes of online education or e-learning from the perspective of exploitation through reproduction and the regulations and ideology that frame it.

It is important, upon drawing some conclusions, to begin by pointing out that exploitation through reproduction in the case of online education matches that which occurs in numerous other cases. In effect, the history of capitalism is awash with situations in which some actors, in the pursuit of profit, copy knowledges developed or carried by other actors, without providing compensation commensurate with the value that the exploiters obtain. However, exploitation through reproduction in informational capitalism takes on some original features. This stage is partly defined by the dramatic mass expansion of different intellectual property rights over the most diverse variables (Zuckerfeld, in press). However, exploitation through reproduction violates or circumvents what could seem like intellectual property rights belonging to the works' authors. In other words, within a context of the expansion of copyright, it acts to deny that right to some works and owners. To that end, exploitation through reproduction is based on ideological tools which differ from, and are to a certain extent contradictory to, those which work in favour of a defense of property. Here we are not referring to acquisitive individualism, the language of incentives. We are speaking of, in contrast, communities and sharing, free and open knowledge. This occurs in informational capitalism with contents uploaded to YouTube, with some business models based on the unpaid appropriation of Free Software, and numerous other cases for which a discourse in favour of freedom covers up the refusal to pay compensation to producers in any way commensurate with the magnitudes of value they generate.

In the case of producers of digital educational content this discourse may or may not be present. But the crucial point is that by means of diverse legal and ideological devices those who produce the classes, who in principle are the owners from the moment in which the work is fixed in a tangible form, end up losing their rights with regards to the reproduction of said works.

Nevertheless, the ideological tools operating here are not exactly the same as in the cases already mentioned (YouTube, Free Software etc.). We would rather draw attention to the role played by the association many education workers make between value and class preparation time in the acceptance of exploitation through reproduction. This association is useful for measuring and struggling against exploitation through alienation: that which occurs in face-to-face classes, delivered as a service that must be produced by repeated recourse to the teachers, as living knowledge. But this becomes insufficient for exploitation through reproduction since it does not take



into account the fact that the contents are repeated as dead knowledge over and over again, either without those workers who originally produced them or, worse still, with them but with productive subjectivities downgraded to roles such as tutors.

Thus, although our fieldwork has been extremely limited it is possible to put forward the hypothesis that the apparently extensive valuation by teachers of adequate compensation for the production of digital content in direct relation to the time taken to prepare that content, represents a significant ideological basis from which online education businesses are able to advance in their exploitation through reproduction of those teachers.

This is the most important and controversial finding of this paper. Associating remuneration with labour time is not only theoretically wrong in this case, but might be a part of the dominant ideology of informational capitalism which, as such, functions helping to achieve exploitation.

However, to combat exploitation through reproduction the first step is to disseminate information related to intellectual property rights, particularly copyright. Although we cannot be too vehement about the level of knowledge teachers have about prevailing regulations, there are elements which suggest that their grounding in such matters is often insufficient to defend their position. That is to say, even within capitalist legality the lack of knowledge about copyright regulations contributes to exploitation through reproduction; so that the task of spreading them, as well as examples of more suitable contracts—such as those which make provisions for payments for reproduction for courses, or similar clauses—seems imperative.

Of course, teachers are far from being an exception and this also applies to other cases of exploitation through reproduction. The spread of intellectual property laws and modes of struggling against capitalist appropriation of knowledge are crucial political tasks in informational capitalism. One step further, within the limited bounds of capitalist society, would be to regulate these activities with specific legislation which would curb profit-seeking unpaid reproduction of knowledges.

The fate of for-profit e-learning companies depends on several forces. Two of them must be mentioned here. One is the extent to which the firms can extract surplus value from the teachers and other content producers.

The other is the degree of sharing of their contents. We have seen that corporate profits are threatened by the advance of the commons. But we also discussed how the digital commons are threatened by business activities. Thus, this field, as many others, is shaped by the dialectical interplay between communalization and commodification.

Of course, it is not necessarily a question of rejecting the digitalization of contents but rather, above all, counteracting their commodification and to fight for them to form part of the collective wealth of the commons.

It is easy to agree with the idea of the educational commons. A much trickier task is to consider what happens to teachers in a scenario in which the bulk of the contents they produce become communal informational goods. It is not possible here to explore the multiple political proposals possible (retraining in research work, the idea of a basic income etc.), but we can point out that in each case, under capitalism,



the eventual trade-off between social inclusion that generates the communalization of knowledge and the loss in terms of salary this could imply for education workers should be analyzed with care.

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## Annex: Online Survey

### Online and face-to-face teaching / WIAS - University of Westminster

Thank you for agreeing taking part in this short anonymous survey about your opinions regarding online teaching. Please answer with the first thing that comes to your mind.

There are 12 questions in this survey

#### How old are you? \*

Please write your answer here:

How long have you been teaching? \*

Please write your answer here:

Number of years teaching in higher education in any field.

**What is your gender? \***

Please choose **only one** of the following:

Female

Male

Other

#### Choose your School/Faculty/College/Department \*

Please choose **only one** of the following:

Social sciences/ Business and Law /Arts and Humanities / Education

Physical sciences, Mathematics



Biological sciences / Medicine, Veterinary medicine, Dentistry and health

Engineering and Technology

**In which country do you teach? \***

Please choose **only one** of the following:

United Kingdom

Other

**2**

**Have you ever prepared an online course or instructional materials for online education?**

\*

Please choose **only one** of the following:

Yes

No

**How would you describe the average remuneration for your online courses/ materials in relation to that of your face-to-face teaching? \***

**Only answer this question if the following conditions are met:**

Answer was 'Yes' at question '6 [online]' ( Have you ever prepared an online course or instructional materials for online education? )

Please choose **only one** of the following:

Higher

Equal

Lower



Non-remunerated

**Suppose you are asked to prepare an online course. The demand comes from an institution that charges the students a tuition fee. What is the main variable that you would take into account to determine your expected remuneration?**

\*

Please choose **only one** of the following:

- Time spent preparing the course/ materials
- Time spent studying the topic of the course or other topics
- Knowledge of the topic and/or your current prestige/ reputation
- Number of students that are going to enroll on the course and/or the amount of the fees to be collected by the institution
- Number of times that the course is going to be offered / published online
- Increase in your personal prestige / social capital / reputation as a consequence of preparing this course for this institution

"Institution" means university, for-profit corporation or any other institution that delivers post secondary formal or non-formal education.

**Why? \***

Please choose **only one** of the following:

- Because payment is related to (present and past) labour time.
- Because the value of the course depends on your knowledge rather than on the time you spent preparing it.
- Because the institution is going to use the course repeatedly
- Because that is what other colleagues / the union suggest.



Other

**3**

**Who is the owner of what is said and written by the teacher in a face-to-face class? \***

Please choose **only one** of the following:

Nobody

The teacher

The institution that hired the teacher

The students enrolled on the course

**Who is the owner of the original content of an online course? \***

Please choose **only one** of the following:

Nobody

The teacher

The institution that hired the teacher

The students enrolled on the course

**Open space for additional comments**

Please write your answer here:

Thank you!

Submit your survey.  
Thank you for completing this survey.

---

<sup>i</sup> The methodology of the research process underpinning this report, and particularly the fieldwork,

<sup>ii</sup> For instance, we made contact with University Siglo 21 through their Facebook webpage on 20<sup>th</sup> April, 2017 and received an answer the same day suggesting that we address our questions to a researcher working with the University. We did so and received an immediate and kind answer from this researcher. However, then we sent some very simple and basic questions, and failed to receive any answers. This is unfortunate, because data regarding University Siglo 21 is scarce. On the other hand, the Argentinian union of private teachers, SADOP, did not respond to our first contact.

<sup>iii</sup> Subsections 3.1, 3.2 and 3.3 are to a great extent based on fragments from chapters 1, 4 and 5 from Zukerfeld, 2017.

<sup>iv</sup> For an in-depth explanation regarding a theory of exploitation see Zukerfeld, 2017, Chapter 5.

<sup>v</sup> Cognitive materialism holds the basic assumption of every materialist philosophy: all and only material objects are real. Now, according to cognitive materialism—and in departure from other emergentist materialisms - matter comes in two forms: Physical Matter (“matter”, energy) and Knowledge Matter. We use “matter” to refer to the set of entities that have a mass and volume; “matter” and energy are the *physical entities*. Knowledge, which only exists in a material bearer, is a non-physical but material entity. *Thus, there is no knowledge as an immaterial entity, only as an emergent property of M/E. This, from the point of view of knowledge, becomes a ‘bearer’.* It is evident that the bearer of any knowledge conditions several of the ontological, economic and legal properties that such knowledge assumes. For example, that the idea of a Wheel becomes knowledge (a material object, real) as an individual mental representation, as a reification in a determinate object, or as a codification in a text (three different bearers), confers very varied possibilities to this knowledge: of, as the case may be, being transmitted widely, being considered useful, or falling into oblivion. (For an in-depth explanation see Zukerfeld, 2017: Chapter 1, 2 and 3).

Cognitive materialism draws on a knowledge theory of value (suggested by authors such as Bell and Jaros). It might be located within a range of objective theories of value and argues that the only entity that creates wealth is knowledge (in its many forms), while physical matter can only be transformed. This implies two divergences from Marx’s labour theory of value. On the one hand, labour (as Bentham pointed out back in 1795) is composed of energy and knowledge. Therefore, in my perspective, it is not labour in general that creates more value than it consumes, but only its cognitive component that possesses this property which permits the existence of surplus value. The worker receives as wages the income that allows her/him to replenish the energy spent at work (the exchange value of labour-power), while the fact that their skills do not wear out with use is what permits the capitalist to appropriate the fruits of this knowledge without paying for them. The use-value of labour-power includes energy and knowledge, but the capitalist only pays for the former. Thus, surplus value in a Marxist sense can be understood as the knowledge that is objectified in the product of the labour process.

<sup>vi</sup> Capitalist exploitation unfolds inside capitalist productive processes, within the norms that govern the production and exchange of commodities. Expropriation happens outside capitalist productive processes, in the sphere of exchange, but against the norms of market.

<sup>vii</sup> Arendt, Castoriadis, Negri, among others.

<sup>viii</sup> In the last, Deleuzian, instance; while my approach follows a perspective based on Hegel’s dialectic.

<sup>ix</sup> Of course, this does not mean that in all cases gauging the magnitude of this asymmetry is easy or even possible. But the difficulty of numerically measuring something does not imply that it is impossible to grasp, or still less, that it does not exist.

<sup>x</sup> Meaning, the fact that the *e* actors consider these relationships to be legitimate or even useful does not prevent this characteristic from being present.

<sup>xi</sup> Even in cases when compensation for performers’ rights (a right “related” to copyright) is legislated, on the rare occasions when it is recognized it is always extremely modest in relation to the value generated.

<sup>xii</sup> The only exception is a sentence by Samuels (2004, 70).

<sup>xiii</sup> Although we will not resort to it, it is worth to complete the landscape mentioning a third kind of education: Informal Education. It’s defined as “...a process which lasts lifelong and in which people acquire and accumulate knowledge, abilities, attitudes and ways of knowing through daily experience



and relation to the environment” (Coombs y Ahmed 1975, 27). The term refers to all forms of technique incorporation, which do not depend on an institutional counterpart. The most important difference regarding formal and non-formal education lies, consequently, in the absence of organization and systematization (Touriñán 1983). It includes everything from strictly autodidactic mechanisms and searches for information through Internet forums, and the teaching that emerges from work experience—sometimes called learning by doing, to peer-to-peer knowledge sharing, etc.

<sup>xiv</sup> Current stats and future trends regarding e-learning are disputed. The fact that the data comes mainly from reports produced by research firms makes it difficult to assess the accuracy of the figures. This is mainly due to two reasons. On the one hand, the direct interest of the firms or firms’ clients result in picturing market trends in a certain way. Releasing reports is just a way of fostering business, not a scientific endeavor. On the other hand, precisely because of this reason, the methodologies used are not clear at all, definitions and operationalizations are lacking, and data is so aggregated that it is difficult to determine to what extent the conclusions presented are sustained by evidence.

<sup>xv</sup> This includes different modalities, among them: rapid online learning, learning management system (LMS), mobile e-learning, podcasts, virtual classroom, application simulation tool, knowledge management system and learning Content Management System.

<sup>xvi</sup> Ronald Berger Strategy Consultants (2014) states that in 2014 the world market value for academic and corporate online education/e-learning was USD 91 billion. These figures are hardly compatible with each other, as no report pointed towards a dramatic year-to-year upsurge in revenues.

<sup>xvii</sup> Unfortunately, the concept is ill defined and the relationship between this segment and the whole e-learning market is not clear at all.

<sup>xviii</sup> This report, contrary to the rest of those mentioned in this section, points towards a mid-term decline in the studied market.

<sup>xix</sup> Platforms, on the other hand, are basically software—i.e. a particular type of informational good. As they may be copied with close to 0 marginal costs, exploitation through reproduction of the software developers might be boosting firms’ profits. However, the analysis of platforms and software developers is beyond the reach and scope of this article. Services, in turn, are directly related to the classic analysis of exploitation, that is, exploitation through alienation, as they are inextricably related to time, and they are not reproducible.

<sup>xx</sup> However, firms’ funded reports claim that the government is impairing their businesses’ ability to thrive. One factor contributing to the weak demand in the US higher education segment is the dramatic decline in enrollment at for-profit colleges caused by draconian policies being implemented by the government (and just on the for-profits). These institutions are under intense scrutiny by the federal government and have actively limited enrollment and shifting their business focus to countries outside the US. (Ambient insight, 16)

<sup>xxi</sup> The Open University has a rich and interesting history starting in 1969. It has a tradition of fostering social inclusion, helping people otherwise excluded from higher education to access it and, more broadly, a socially progressive approach to education. However, in this article we cannot do justice to the Open University’s history and values. Nonetheless, the interested reader can find valuable information available at: <http://www.open.ac.uk/about/main/strategy/facts-and-figures>

<sup>xxii</sup> Two caveats. Students’ enrollment at the Open University could be estimated by different measures. Here is used the most conservative, that is, the one used by HESA. The Open University itself estimates enrollment at some 170000 students. The difference is related to the fact that most of those students are part-time learners so, in order to compare with other universities, HESA might have estimated equivalences to full-time students. On the other hand, in spite of having been the top enrollment university for a long time, figures of enrollment in OU have been declining over the last five or six years.

<sup>xxiii</sup> <http://www.open.ac.uk/courses/what-study-like/learning-resources>

<sup>xxiv</sup> According to HESA “Atypical staff are those members of staff whose contracts involve working arrangements that are not permanent, involve complex employment relationships and/or involve work away from the supervision of the normal work provider.” In turn, “Non-academic staff are defined as



those that do not have an academic employment function. They include managers, non-academic professionals, student welfare workers, secretaries, caretakers and cleaners”. (HESA, 2017d)

<sup>xxv</sup> This decline, in turn, could be attributed to some extent to the competition of/between/from alternative online education platforms.

<sup>xxvi</sup> Although the sample of universities is biased (criteria for including universities in the sample is not clear) and only includes 34 universities, the list of those universities is provided and the results are much more reliable than those produced by consultant firms without any methodological specifications.

<sup>xxvii</sup> Including taxes and social insurance contributions.

<sup>xxviii</sup> See <http://ilumno.com/en/sobre-ilumno>. Unfortunately, there are no scientific sources to check this data. Moreover, the year to which data correspond to is not stated. And even worse, data is inconsistent both *within the same webpage and with more reliable data*. For instance, the page in Spanish says that 21th Century University has 42,000 students, while the English version states that it has 47,000 students. The last available data of SPU (official information of the Ministry of Education of Argentina) asserts that it has some 57,000 students. This could be due to measurements taken in different years, and that is precisely why the lack of a year of reference on the webpage is so problematic. On the other hand, the 5,000 student difference lost in translation strongly suggests that the numbers provided by the firm should be treated with caution.

<sup>xxix</sup> See [ilumno.com/en/content/growth](http://ilumno.com/en/content/growth).

<sup>xxx</sup> See <http://www.apolloglobal.com/>

<sup>xxxi</sup> See <http://www.kroton.com.br/>

<sup>xxxii</sup> This exploitation of affections and attention that takes place regarding the tutors is similar to some extent to that described by Autonomists like Lazzaratto (2006). But the point here is precisely that this concept of exploitation misses the point of exploitation through reproduction -which is easily grasped from a materialist perspective, instead of an idealistic view like that of the Autonomists.

<sup>xxxiii</sup> These firms provide content to the corporate market, but some of them are also service and technology providers, and they sell their commodities to formal education institutions.

<sup>xxxiv</sup> Noticeably, between 2015 and 2016 the firm fired 5,000 employees. (Pearson, 2017)

<sup>xxxv</sup> <https://www.pearson.com/corporate/investors.html>

<sup>xxxvi</sup> Wikipedia’s page states that there are 500,000 registered users in the main text, but in the box placed to the right, assert that there are 800,000. See <https://pt.wikipedia.org/wiki/Veduca>

<sup>xxxvii</sup> See [Veduca.org](http://Veduca.org).

<sup>xxxviii</sup> <https://www.class-central.com/report/mexicox/>

<sup>xxxix</sup> Although this number contrasted with the absence of additional remuneration could suggest the idea of exploitation, it is important to underscore that the key issue regarding exploitation through reproduction does not lie in the number of unpaid hours, but rather in the unpaid copies of objectified knowledge in the case that these copies are delivered for-profit. The exploitation through alienation, that is, the unremunerated activity than can be properly measured by time units, is extremely relevant but it is beyond the aims and scope of this paper.

<sup>xl</sup>In effect, the monopoly enjoyed by the Stationer’s Company ended in 1694, and from then on its members faced strong competition (Merges, Menell and Lemley, 2006:369). Delving a little deeper, it must be said that the cause of the end of interest in maintaining this monopoly lay in the waning of political unrest and, therefore, censorship. In this sense:

“In England during the closing decades of the seventeenth century, the passing of the era of political and religious censorship made it increasingly difficult for the Stationers’ Company to interest the Government in the control of the new printing presses that were springing up throughout the country; when the Licensing Act that had given teeth to its monopoly was allowed to lapse in 1694, the competition intensified as country booksellers openly flouted the doctrine of perpetual copyright which the Company had sought to establish on the evidence of assignments registered in its record books. After 15 years of increasingly chaotic conditions of unregulated



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competition, the London booksellers at last managed to secure new legislation, in the form of the 1709-10 Act of Queen Anne.” (David, 1993: 54).

<sup>xli</sup> Those categories are: (1) a contribution to a collective work, (2) a part of a motion picture or other audiovisual work, (3) a translation, (4) a supplementary work, (5) a compilation, (6) an instructional text, (7) a test, (8) answer material for a test, (9) an atlas. (Section 101 of the Copyright Act)

<sup>xlii</sup> Klein, however, does not assert that academics are not employees under the works for hire doctrine but rather presents different positions and seems inclined to accept that in certain situations scholars might actually be treated as employees under works for hire. (Klein 2004, 161-166)

<sup>xliii</sup> To be sure, Klein (2004, 162) details features included:

“The costs borne by universities to develop distance-education programs encompass four categories: course design, course delivery, faculty development, and student support. Course design includes defining the learning objectives, organizing the material to be covered, assembling resources such as texts and research sources, and designing interactive, graphically rich student assignments. Course delivery and support includes investment in the technological infrastructure, the course-delivery software that makes the course content accessible to students and instructors, and technical support for users. Faculty development encompasses direct costs, such as the use of new technological tools to redesign courses for the Internet; and indirect costs, such as release time and potential adjustments to promotion, salary, and tenure policies. Student support includes access to library materials, plus advising, registration, financial aid, and career counseling.”

However, this is the case with face-to-face courses, other instructional materials and/or papers and books published by faculty. In those cases, nonetheless, universities do not claim ownership.

<sup>xliv</sup> As Lowe and Koskinen-Olsson explain:

“In common law countries, a system where the producer holds all rights to the audiovisual production prevails. This is the case in the United States pursuant to the work-made-for-hire doctrine. In the United Kingdom and Ireland, the producer and the principal director are “authors”. In most countries in the Asia-Pacific region and also in parts of Latin America, such as Chile and Ecuador, the situation is the same. The rationale of this system is the substantial financial investment that the production companies make and the consequent need to have flexibility in marketing the work. Producers maintain all copyright-based rights and are entitled to the profits of the production, subject to their contractual obligations. For example, under US law, the producer is deemed to be the sole “author”. Individual contracts and collective bargaining agreements between creators and performers on the one hand and producers on the other determine what remuneration and in which form is paid to the creative personnel. It can be up-front payments and subsequent percentage shares. These additional payments are called “residuals” in the United States. In other countries, the actual creators are the authors or co-authors of an audiovisual work, meaning that they have separate copyright rights. This system is prevalent in civil law countries, that is, much of continental Europe and parts of Latin America, such as Argentina, Brazil, Mexico and Peru. The actual, creators are determined by national legislation and usually include a combination of director, screenwriter and music composer, but can include other contributors such as directors of photography, editors and costume designers. In these countries, some rights are managed by collective management organizations



(CMOs) which are mandated to administer certain exclusive rights and certain remuneration rights.” (Lowe and Koskinen-Olsson 2014)

<sup>xlv</sup> Indeed, many scholars, at some stage of their careers, tend to pay in order to get their papers published in journals or printed in books. This should be put in the context of the scarcity of human attention that is one of the characteristic features of informational capitalism.

<sup>xlvi</sup> Treating informational goods as services in informational capitalism is a huge and repeated mistake. It is not as usual among capitalist firms as it is within the realm of social sciences. A haircut, a cab ride or a face-to-face class are indeed services: they do not last in time, and property rights cannot be assigned over them. In contrast, informational goods (texts, software and online courses) are indeed goods: they last in time, and intellectual property rights can be assigned over them. For an in-depth discussion, see Zukerfeld, 2013, Chapter 1.

<sup>xlvii</sup> “Company” refers to Coursera, while “University” refers to the University of Michigan.

<sup>xlviii</sup> <http://www.digitalmusicnews.com/2015/07/30/three-contracts-that-every-music-producer-should-know/>

<sup>xlix</sup> The reader might wonder: “why do they teach?”. The main rationale behind ad honorem teaching regards obtaining scholarships: teaching experience is a valuable antecedent to win some points in contests for post-graduate scholarships. At the same time, some years of ad-honorem teaching have become the main avenue by which to access a remunerated position in UBA.

<sup>l</sup> It must be stated that these operationalizations are only proxy variables, that is, practical simplifications. For a discussion of different types of knowledge, see Zukerfeld, 2017.

<sup>li</sup> Respondents were asked to choose only one option, and an “other” option was not provided. Both decisions were related to avoiding politically correct answers (like “all of the above”) that would not have revealed priorities. See Methodology section for more details.

<sup>lii</sup> Due to technical problems, two respondents skipped this question in the Spanish survey.

<sup>liii</sup> Others assert that they do not think they deserve a remuneration while interestingly only 2 respondents to the English survey and 1 to the Spanish one stated that they would choose a new option that combines several of the actual categories.

<sup>liv</sup> On the contrary, there are examples of previous research where time spent is used as an argument for faculty’s ownership of contents. For instance: “The instructor spends many unpaid hours developing the material and should have control of the ownership”. (Respondent, cited in Aaron and Roche 2015, 326)

<sup>lv</sup> For instance: The ownership concept is problematic. There may also be a lot that should be said for the idea of an “academic commons.” These are very difficult issues, obviously. To my mind there are few clear-cut answers. (Respondent, in Aaron and Roche, 328)

<sup>lvi</sup> However, caution might be introduced mainly because the question, as presented in the paper, might be ambiguous—it is not clear enough if it refers to contents developed by academics or to contents from which academics made derivative works.

<sup>lvii</sup> Again, when it comes to physical property, it might be the case that we tend generalize without too much hesitation. Take the example of the car again: it certainly depends on a contract. But, if there is no evidence pointing otherwise, we probably assume that the person driving the car might be the owner. This may be due, to some extent, to the fact that physical property has been internalized much more than intellectual property.