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## SCIENCE UNDER PRESSURE: PROBLEMATIC BEHAVIORS AND SOCIAL HARMS

*CIENCIA BAJO PRESIÓN:  
COMPORTAMIENTOS INADECUADOS Y DAÑOS SOCIALES*

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### ABSTRACT

*This paper suggests the use of the Social Harm Approach (Hillyard, Pantazis, Tobs & Gordon, 2004) to problematic behaviours occurring in scientific research and higher education. By analysing data collected through interviews with scholars, it is possible to state that fabrication, falsification and plagiarism are the most criticized deviant behaviours in science. It is less common for actors to consider other problematic behaviours arising from pressure (to publish, to obtain grants) that they may feel, and which originate at the heart of the organizations devoted to science. Or problematic behaviours created in the intersection of universities, corporations and/or the state (ex. commissioned research). Also, the interviewees did not have a coherent view of the rules governing science and higher education. Thus, considering the scattering of (individual and organizational) problematic behaviours and rules governing them, a new approach will be put forward, one by which processes of scientific production and dissemination must be considered according to the social harms (financial, economic, physical) that they may cause.*

**Key words:** social harms, scientific research, higher education institutions

### RESUMEN

*En este artículo se sugiere el uso del Enfoque del Daño Social (Hillyard, Pantazis, Tombs & Gordon, 2004) al estudio del comportamiento inadecuado que acontece en la investigación científica y los estudios superiores. Mediante el análisis de datos obtenidos a través de entrevistas con académicos se puede afirmar que la fabricación, falsificación y plagio son los comportamientos incorrectos más criticados en las Ciencias. Por el contrario para los mismos sujetos es menos común considerar otros comportamientos no adecuados que pueden surgir fruto de la presión que sufren (para publicar, obtener financiación,...) y que se originan en el núcleo de las organizaciones dedicadas a la Ciencia; o conductas impropias surgidas en la intersección entre universidades, corporaciones y/o el Estado (por ejemplo, investigación comisionada). Al mismo tiempo, los entrevistados no presentan una visión coherente sobre las reglas que gobiernan la Ciencia y la educación superior. De esta forma, considerando la variedad de comportamientos inadecuados (tanto individuales como colectivos) y las reglas que los gobiernan, se presenta un nuevo enfoque; un enfoque en el que los procesos de producción y diseminación científica deben considerarse de acuerdo con los daños sociales (financieros, económicos, físicos) que podrían causar.*

**Palabras clave:** daño social, investigación científica, instituciones de educación superior

## **1. Introduction**

Scientific publications, like this one, have one direct goal, one main audience and a very important consequence for its author(s). The goal of a scientific paper is to disseminate or to communicate scientific outputs from previous research conducted by an academic or group of academics. The main audience is composed by other academics or scholars, peers, who will read, evaluate, criticize and eventually build on it to produce more science. Certainly, the readership of scientific papers is not limited to academics; they can also be read by the lay public, or the media, but, apart from mainstream scientific journals like *Nature* or *Science*, hardly any scientific publications will ever be analysed by other than scientists from the same or neighbouring scientific field. Lastly, when publishing, the academic or group of academics have in mind a very important and direct consequence: recognition from peers. This recognition, when received, will help build a career, get invitations (to publish elsewhere, to present at conferences) and eventually to get assistants and funding that will improve future research and allow for the search for more recognition.

In this paper, I assume that the readers are mainly peers who are interested in the output of the research conveyed via this standard apparatus, the scientific paper, with its intrinsic formal requirements and rules. I also assume that, at some moment in their career, my peers have, with varying degrees of intensity, curiosity or concern, come into contact with what is usually called scientific misconduct or fraud. The audience of this paper would have heard about or witnessed the consequences of some form of deviant behaviour in scientific

research and teaching in higher education. I assume, likewise, that my peers, now reading this paper and eventually reflecting on what has been said so far, have somewhat clear ideas or presumptions of what is right and wrong while conducting and teaching science, of what is ethical and unethical, of what is allowed and what is forbidden when conducting empirical research, writing about it and teaching it to younger colleagues.

I assume, too – and in this respect I take full responsibility if my final assumption is wrong – that my peers, whose patience I've been exhausting in this long introduction, have just a vague idea of other papers about deviance in scientific research and higher education teaching. They might be aware of some cases highly explored by the media, like the Schön affair in the USA or, more recently, the Stapel affair in the Netherlands; they might even be aware that control agencies, like the Office of Research Integrity (ORI) in the USA, have found little evidence of widespread practices of scientific misconduct and plagiarism – and that these behaviors seem infrequent. But, if those now reading this article take a few minutes to think about it, they might conclude that there is no systematic research into deviant behaviour in science. Obviously, most of us will be aware of R.K. Merton's work on the rules of science (to which I will return very soon), or Foucault's (2008) knowledge-power relationships and regimes of truth, or even eventually Latour's scientific artefacts (Latour & Woolgar, 1988). But, in the end, my peers will conclude that, while knowing what deviance in science is or should be, there are virtually no research into problematic behaviors committed by academics (or scholars) in the course of their occupation, namely while conducting scientific research and disseminating the corresponding scientific knowledge.

Taking this into account, in this paper<sup>1</sup> I show how these problematic behaviors have hardly been autonomous research topics in disciplines like sociology or criminology. I will then go on to show how they are perceived differently by the scholars interviewed, who unanimously tend to heavily criticize behaviors considered to be problematic, such as plagiarism or forging of data, while on the other hand having very different views about behaviors stemming from the pressure to publish or to secure funding. Additionally, this paper shows how these dubious behaviors (criticized by some but not by all of those interviewed) are originated at the heart of the organizations devoted to science or at the intersection of Higher Education Institutions (HEI), corporations and/or the state, and are connected to more or less explicit rules and guidelines on what is science in contemporary societies.

The interviews conducted also revealed that academics do not share the same perceptions about the rules and social control mechanisms surrounding scientific research and higher education teaching. Moreover, they showed that the outcome of most of the situations considered to be deviant or problematic is open ended because it clearly depends on the negotiation of meanings, power relations and organizational ends.

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<sup>1</sup> This is a preliminary analysis of part of the data collected for my ongoing PhD research on Criminology. I would like to acknowledge the importance of previous discussions with supervisors and several colleagues on this topic.

This paper therefore proposes that social harms stemming from scientific investigation and higher education teaching be subject to analysis and questioning as a means to overcome doubts and dubious perceptions on what is problematic or deviant in science. This means opening the scope and going beyond individual or group behaviors in order to consider the role of HEI in Europe and its connection to markets, corporations and states.

## **2. What is considered to be problematic in science?**

Authors that have been concerned or that have studied problematic behaviors in science tend to offer different and varied definitions of what should be the subject of inquiry and what its causes are. Let us briefly review some of these accounts to conclude that this variety may be hindering systematic and in-depth research.

Bridgstock (1982) defines deviant behaviors in science as “the presentation of scientific results which have either been modified (‘data massage’), or obtained from a ‘rigged’ experiment, or, in some cases, the presentation of ‘results’ that are completely imaginary” (Bridgstock, 1982, p. 364). Bechtel and Pearson (1990) define scientific deviance as “the practice of fraud (faking scientific experiments and data) in conducting or publishing results of research” (Bechtel & Pearson, 1990, p. 668). They also state that there may be other deviant behaviors worthy of study, such as plagiarism, abuse of position or power, deception, crimes against nature or misuse of research money.

Ben-Yehuda (1986) defines deviance in science as “those acts committed consciously, deliberately and intentionally by scientists, which are strictly forbidden by the scientific ethos, i.e., falsifying data, fraud, etc.” (Ben-Yehuda, 1986, p. 15), and argues that it should not be mistaken with simple honest mistakes. Claxton (2007) also stresses the intent to deceive as being the element that helps in identifying misconduct.

On the prevalence and features of behaviors such as plagiarism and forging of data, research is somehow scattered or rests upon methods producing limited knowledge<sup>2</sup>. A recent meta-analysis by Fanelli (2009) found that an average of 1.97% of scientists admitted to having fabricated, falsified or modified data or results at least once, that “scientists admitted more frequently to having ‘modified research results’ to improve the outcome than to have reported results they ‘knew to be untrue’ ” (Fanelli, 2009, p. E5738). Fang (2013), by analyzing retractions from scientific journals, conclude that 67.4% of those retractions were caused by cases of misconduct, and only 21.3% due to simple errors.

There are also wider definitions than those just provided. Zuckerman refers to “those deviant acts people commit in their capacity as scientists”, that depart from cognitive, technical or methodological and moral norms which seek to “implement the goal of scientific activity – the extension of certified knowledge about the natural world”

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<sup>2</sup> Such as questionnaires with low response rates or biased answers due to social desirability, or analysis of case files from formal control systems incapable of overcoming dark figures.

(Zuckerman, 1977, p. 87). Those deviant acts include the fabrication of data, plagiarism or the “theft of scientific ideas”. But the author also admits that there may exist “deviations from the etiquette of science” (Zuckerman, 1977, p. 119), which are less serious and give rise to lower peer response, and may include the eponymizing of oneself<sup>3</sup> and the under-acknowledgment of others’ contributions to research (for instance, assistants or collaborators).

Merton (1973) considers that scientists adhere to values of communism, universalism, organized scepticism and disinterestedness. Forging, trimming or cooking data may be caused by the ambiguity or ambivalence felt by scholars caught between apparently contradictory norms and values: those that pressure for originality and priority in research and those that impose intellectual humility: “(...) great concern with the goal of recognition for originality can generate a tendency toward sharp practices just inside the rules of the game or sharper practices far outside” (Merton, 1973, p. 308). Also, other problematic behaviors, such as plagiarism, may arise due to high levels of competition in science. At the same time, an “itch to publish” or the centrality of quantification of publications may give rise to behaviors bordering deviance. He concludes that “[T]he culture of science is (...) pathogenic” (Merton, 1973, p. 323).

Jaffer and Cameron include acts or omissions intentionally committed by “researcher, author, editor, reviewer or publisher” (Jaffer & Cameron, 2006, p. 123), as well as ‘cooking’ and ‘trimming’<sup>4</sup>, misuse of statistical techniques, irresponsible authorship (granted to someone that has not contributed enough or at all to the research), and redundant publication such as ‘salami slicing’ or self-plagiarism. Feigenbaum and Levy assume that biased research should also be subjected to control because “the scientific process offers an amazing variety of creative mechanisms (‘production processes’) by which one can achieve preferred research outcomes” (Feigenbaum & Levy, 1996, p. 264).

Martin (1992) states that attention should be paid to dubious behaviors, including conflict of interests (CoI) or exploring someone else’s work without properly acknowledging it. Claxton assumes that a CoI is “a situation in which an individual or organization has competing primary and secondary interests. (...) An improper CoI occurs when an individual’s or organization’s interests unduly influence judgments concerning professional responsibility” (Claxton, 2007, p. 558).

Thompson (2002) gives a long list of situations and behaviors that should be considered problematic and open to analysis: disrespect for institutional authority; arbitrariness; patronage; nepotism; favoritism; corruption; partisanship; conflict of interests; circumvention to established institutional principles, policies, procedures, and practices; disregard for the truth and the free spirit of inquiry; abusing academic freedom; conducts

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<sup>3</sup> The naming of laws, procedures, effects or methods after the scientist deemed to have discovered it, for instance, Comet Halley – a process that should be carried out by the scientific community and not by the scientist him/herself.

<sup>4</sup> “Cooking refers to retaining and analysing only those results that support the hypothesis being investigated and ignoring data which may weaken the results. Trimming involves smoothing the irregularities in the data to make the results look more convincing for publication” (Jaffer, 2006, p. 123).

not consistent with the formal and informal missions and goals of the university; basing key personnel or related decisions on factors extraneous to the principle of merit; or performing other unsanctioned or prohibited institutional activity (Thompson, 2002, p. 76).

Walters concluded that interviewees react negatively to the “censorship of criminological work from within academia” (Walters, 2003, p. 117), as well as harsh refereeing when applying for funding due to an “ideological agenda”. Presdee and Walters refer to what they consider to be an unacceptable limitation of scientific inquiry due to a trend on “policing of knowledge” (Presdee & Walters, 1998, p. 156) by governments and funding institutions.

Tromp (2010) focuses his attention on the consequences of academics bringing “unwelcome news” to those that have commissioned research. Those bringing unwelcome news are, thus, considered to be a harmful threat “to the material or idealistic interests of an organization that is politically inopportune, that affects the position or prestige of high placed persons, or that hurts nationalistic, religious or other idealistic feelings” (Tromp, 2010, p. 215). Upon “unwelcome news”, the researcher may be subjected to strong criticism about his/her studies, suffer pressures to be silenced or witness an illegitimate interference with the design or execution of a research project. Byrne also states that “expert social science (...) puts social science at the service of power elites and serves primarily as a cover for the ability of those elites (...) to manipulate the social future for their own good rather than any general good” (Byrne & Callaghan, 2014, p. 258).

In an attempt to find more or less comprehensive explanations about the behaviors and situations just reviewed, some authors think that deviance in science resembles professional deviance (Ben-Yehuda, 1986); others conclude that it is caused by intensive competition in scientific activities (Goodstein, 2010; Merton, 1973; Zuckerman, 1977), because of power and ideology struggles (Martin, 1992; Mulkay, 1976; Presdee & Walters, 1998; Walters, 2003), or because of the existence of subcultures, tribes or loyalty and/or elite networks (Becher & Trowler, 2001; Simon & Eitzen, 1982; Scheff, 1995). Other authors, consider that scientific organizations amplify deviance by accepting routine non-conformity (Hedgecoe, 2014; Vaughan, 1999a; Vaughan, 1999b) or that, in the end, fraudulent and ethical behaviors are strategies for playing the scientific game (Latour & Woolgar, 1988). Finally, some studies recognise the need to go beyond the bad apple theory and take into account several levels for analysis, from the micro-level (behaviors) to the meso- and macro-level, including scientific organizations (Dingwall, 2002; Mumford & Helton, 2002; Vaughan, 1999b, 2007) and professional culture (Reybold, 2002).

The diversity of approaches about problematic behaviors and its causes, the lack of clear definitions and unity about what the subject of research should be allow us to enter this field of inquiry certain that there is still much to be done and explore. This paper, therefore, now presents an ongoing research that tries to tie the micro, the meso- and the macro levels of analysis.

### **3. Attitudes and perceptions of academics about problematic behaviors**

### 3.1. Micro-meso-macro levels

“[T]he social is not merely micro-emergent and any account of it which ignores the reality of what we must call conventionally ‘social structure’ is always going to be incomplete. The attempt to generate accounts of social causality in terms of rules describing agents’ behaviour *and nothing else* fails both in relation to the real character of human agency and in relation to the causal powers of the social itself”<sup>5</sup> – a good advice by Byrne and Callaghan (2014, p. 257) that guides the present research.

Building upon Vaughan’s (Vaughan, 1999a, 1999b, 2007), as well as Becher & Trowler’s (2001) work, among others, the ongoing research attempts to understand perceptions on problematic behaviors (micro-level) committed by academics or scholars in the course of their occupation and because of it. Going a step forward, it tries to make sense of these perceptions and attitudes considering the organizational (meso) level, including the functioning of higher education institutions (HEI)<sup>6</sup>, but also the European (macro) level, where policies on scientific research and higher education are set.

By intersecting these several levels it is assumed that we are dealing with complex and open systems and subsystems that weave relationships with each other. These systems have a memory or history, a structure, but are also prone to change and to adaptation, where probable futures are open-ended and derive from a constellation of complex causes (Byrne & Callaghan, 2014). Individual actors<sup>7</sup> or groups of actors position themselves in relation to these wider systems (HEI or European policies) and try to negotiate the outcome of their actions. At this point, one has to pay attention “(...) to the development of legal forms and restrictions (...) since they set limits on the scope of action” (Byrne & Callaghan, 2014, p. 45).

The freedom, agency, interpretation and world-building capacity of individual actors are contingent and continuously rebuilt inside wider systems. But, in the end, the organizations (where these actors work, ‘play the game’, and which they help build) are also based in that same contingency (Crozier & Friedberg, 1977). One should, then, listen to the academics’ perceptions and attitudes to problematic behaviors envisaging that they are strategies, modes of negotiating interpretations, but also mechanisms of resistance or mechanisms of change. Finally, meanings and actions are born from power (Foucault, 2008), conflict and hierarchic relations that should also be considered.

While it will not be possible in the current paper to give a proper view of each of these elements and their interactions, it will be shown how the academics interviewed have

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<sup>5</sup> Underlined by original authors.

<sup>6</sup> Wherever scientific research and higher education teaching exist, when scholars have working contracts (as PhD, assistants, technicians, etc.) with it, such as Universities, research laboratories or departments. Research produced in corporations and governments, where academics have working contracts with these institutions, will not be directly taken into account in the current research.

<sup>7</sup> Which may also be considered as systems.

divergent views of what should be considered problematic in science (micro level). These perceptions should then be considered as generating from meso- and macro-influences, namely the social control and ruling operated in HEI, but also considering European policies recently imposed upon scholars and universities. This is why, from this point forward, not only problematic behaviors will be mentioned, but also problematic situations, as a way of setting aside individual accounts. This will allow us to depart from the 'rotten apple theory' and search for a broader understanding of the subject of inquiry.

### **3.2. Nebulous accounts**

For the present research a semi-structured interview was conducted with twenty-two scholars contacted by using a theoretical sampling method. The aim was to gain access to the micro-level or, more precisely, to individual perceptions of those belonging to a specific group: scholars. For that purpose, the components of the sample inside that same group were diversified (Pires, 2012) – diversification was done by interviewing scholars from different countries, disciplinary fields, and career ranks. Interviewees had current contracts with higher education institutions: nine were working in Portugal, three in the United Kingdom, five in Belgium, four in the Netherlands and one in Switzerland. Purposively, twelve were male and ten were female, researching and teaching in different disciplinary fields: six in criminology, three in sociology, two in pharmaceutical sciences, two in law, two in physics, one in economics, one in urban studies, one in nursing, one in philosophy, one in chemistry, one in communication studies and one in history<sup>8</sup>. Eight of them were full professors, five were associate professors, four were assistant professors, three were junior researchers, one was a senior researcher and one was an assistant lecturer.

Interviewees were asked about their perceptions on the frequency, features, seriousness, causes and consequences of behaviors such as plagiarism, data forging, conflicts of interest or bad teaching practices. Special attention was paid to the fact that the researcher of this study is also a scholar and to the fact that interviewees may be considered to be part of the intellectual elite and, in this case, some caution was exercised, especially in the context of the interview and its dynamics (Mikecz, 2012). Finally, interviewees were not directly asked about their behaviors, but rather if they had heard about scholars forging data, plagiarizing, and other situations.

The data analysis was strongly entrenched in updates to the Grounded Theory (Charmaz, 2000; Laperrière, 2012; Strauss, 1994) and allowed for some insights into the behaviors that scholars considered to be problematic in scientific research and higher education. These behaviors and situations revolved around bad research practices, disrespect for authorship, micropolitics inside HEI and power relationships with outside institutions, especially those commissioning research.

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<sup>8</sup> Five of the interviewees currently conducting researching and teaching in Criminology provided a second disciplinary affiliation: three had come from sociology, one from statistics and one from anthropology.



When asked about bad research practices, not every interviewee had heard of cases of forging and manipulation of data by colleagues or someone in their professional environment. Nonetheless, two of the interviewees witnessed or had to deal with direct cases of forging or inventing data:

“We’ve had people confessing, telling us they invented data for their research or for some kind of academic task” (S18- Full Professor, male, Portugal)

All of the interviewees censured these clear-cut behaviors of forging data, perceiving them as serious and problematic. Nonetheless, somehow, actors seemed to acknowledge the causes for subtler behaviors, like biased interpretations or trimming of the data. Interviewees considered that such situations occurred due to the pressure felt by scholars who are constantly being asked to produce more and in shorter periods of time. Interviewees also mentioned the constant search for funding as something that could give rise to different kinds of detours from methodological standards.

“Why should you, as a researcher, manipulate your data? And we’re back to the main question again! The funding” (S15- Junior researcher, female, Belgium)

Another reason indicated for cooking and trimming data is related to career pressures. Such pressures seem to push academics to produce all the time and to search for recognition – and academics are very aware that this will not be acquired through achieving inconclusive results or failed research: “*failure is not an option*” (S4). Scholars may trim results selecting only those who “sell better” and will be published more easily. Also, interviewees perceived colleagues to bias research results due to ideological, political and/or personal beliefs. Scholars may feel one should not (or cannot) change his/her original theoretical perspective or working hypothesis:

“You don’t really want to just come up with a report that contradicts things that you have said before, for example, or published before” (S8- Associate Professor, male, Netherland)

Infringements to authorship practices were also a focus of concern for those interviewed. Clear-cut plagiarism, considered as taking someone else’s published words and using it as one’s own, was perceived as being somehow frequent and widespread. It may be used both by junior PhD researchers and those in higher ranks of the academy. Interviewees censured it rather clearly, and labeled it a very serious matter: “*something really, completely unethical, you cannot do it*” (S16). Known cases of plagiarism tended to be dealt with by institutionalized social control: “*people have been sacked for major plagiarism in their work*” (S8). This reaction tends to leave a strong stigma on the “offender”, also contaminating his/her colleagues and on the HEI to which they belonged.

According to the interviewees, perceived causes for ‘traditional’ plagiarism were connected to a constant “pressure to publish”, mentioned by several interviewees. The number of publications or the impact factor of journals where one is allowed to publish is perceived as

the main criteria for recognition of one's work and effort. It is also one of the main "objective" criteria<sup>9</sup> when applying for grants or for a better position in the career.

"It's absurd, I can give you examples of people on the faculty of psychology at G. university that are just looking at each other 'how many publications does my colleague has because I want to apply for this scholarship'. It's... like science going crazy!" (S16 - Full Professor, male, Belgium)

In addition to situations where a scholar steals words and ideas from published work by colleagues, some of the interviewees also mentioned and problematized other cases where disrespect for authorship existed. They described situations that seem to fall in more nebulous or gray areas, not gathering consensus about its seriousness. Take, for instance, stealing someone else's unpublished ideas without proper credit or acknowledgment. The same was mentioned about cases of so-called self-plagiarism:

"When the same author or group of authors publish the same results while changing the context (...) it's borderline [behavior]" (S3- Full Professor, male, Belgium)

Some of the interviewees also felt that a senior professor inappropriately using the writing of his/her assistants or students, without acknowledging their work, was not acceptable. This is something very close to another practice usually named as honorary authorship. In honorary authorship, someone is considered author not because of his/her contribution to that specific publication, but because he/she occupies a special position in the hierarchy or exerts some kind of power over the real authors. He/she may be the main researcher of a group, lab director or supervisor and manages to be co-author in something someone else produced. In the case of abusing or exploiting someone else's work, the scholar uses its power and influential position and manages to be the sole author of the work. As one of the interviewees described:

"Professors who are actually... you know, who have staff, pushing them to writing articles for them and then put their name on it and sometimes even not put the name of the one that really did the work" (S13 - Associate Professor, male, Belgium)

A minority of interviewees also criticized those cases of researchers making redundant citations just to maintain a school of thought or to please journals' editors and reviewers, independently of the importance of those references to the paper being drafted.

"That is a practice that is endemic (...) somebody that looks 'ok, did I quote the right people, or do I need more quotations from this particular guy'" (S8 - Associate Professor, male, Netherland)

Apparently, these kinds of behaviors related to authorship practices, from plagiarism of ideas to honorary authorship, are not always considered to be problematic, but turn out to be a strategy for actors reacting to the HEI demand for quantification of publications. That

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<sup>9</sup> We will soon see that there is room, in the academia, for more subjective evaluation of scholars' characteristics.

is why these behaviors are perceived as being frequent and going uncensored by the wider scientific community:

“In my opinion it is the smartest thing to do if you want to become a professor, if you want to get promoted” (S13 - Associate Professor, male, Belgium)

“I know some [scholars] that will try to put their names in any kind of article written by their students and sometimes as the first [author]. And they go and publish all the time” (S8 - Associate Professor, male, Netherland)

Another set of behaviors questioned in the interviews conducted for the current research had to do with relationships between academics and political and economic power – what the literature usually considers to be conflict of interests (CoI). Two of the interviewees mentioned colleagues that had some kind of relation with private companies, thus obtaining personal gains, a situation close to CoI as described by the literature, or “ambivalence”. In this case, scholars have two or more simultaneous roles inside and outside the academia, and are not capable anymore of separating roles, tasks and interests.

But the most frequently cited situations had to do with the symbiotic relationships between political and/or economic power and HEI, and its impact on the scholars’ careers. This symbiosis collapses the frontiers between HEI, governments and companies. In the end, the individual’s and HEI’ fate comes to depend on it.

There may be “influence” situations whereby scholars search for connections with private and/or public institutions, such as governmental bodies or corporations. By maintaining these close connections with corporations or governmental bodies, “influential” scholars seem to be awarded more research money, more information and the ability to set the research agenda. And this will mirror inside the HEI to which the scholar belongs to. Thus, open and general problematization of these situations is not likely to happen.

“At University X I noted that when ZZZ party was in cabinet there was more money available for construction works, for research projects, things went differently”( S7 - Associate Professor, female, Portugal)

Many of the academics interviewed considered it to be part of normal modern-day sciences. And, what is more, they considered it to be something that HEI push academics into doing in order to secure funding, resources such as expensive lab equipment, or assistants and technicians:

“Universities most of the times see these interests not like that, not equally but providing expertise and research for them. You don’t see many big conflicts around it, you don’t see big scandals about it, no” (S8- Associate Professor, male, Netherland)

On the other hand, there were reported cases of “interference” in which funding (private or public) agencies come to interfere in research at different stages in the process. Some of the interviewees consider this kind of interference to be problematic inasmuch as they may bias research or limit “traditional” academic tasks, such as proposing the subject for research,

the research design or even the drafting of conclusions. Those who fund or commission research seem to feel they are commissioning a product (a result, a technique, a software, a drug) and not a procedure (methodological and theoretical sound research). At the extreme of these “interference” situations, academics may have their research results embargoed or dismissed when research results do not please those commissioning the research.

“Sometimes there are problems because research has to be directed to the topics being financed” (S19- Associate Professor, female, United Kingdom)

“When results did not meet the company [expectations], results were suspended and authors were not allowed to publish” (S3 - Full Professor, male, Portugal)

Threats to suspension of research and withdrawing of funding are something that scholars and HEI seek to avoid. When economic and financial resources are limited, the prospect of losing money, equipment, and staff is a cost that not every HEI or scholar wants to have.

But most of the times HEI and scholars tend not to react to subtle “interference” situations and academics admit to being more flexible when proposing topics for research they know are more fashionable. Some interviewees even admitted to negotiating the writing-up of conclusions and cherry-picking research results in order not to confront the funding institution’s demands or expected outcomes. Otherwise, with no financing there is no research, no publications and lesser possibilities for career advance. But when academics and HEI cooperate with power this is what might happen:

“So they are the people that count, they have money, they have influence, they have power, they have the votes within the faculty” (S13 - Associate Professor, male, Belgium)

The most dramatic outcomes of “interference”, although sporadic, were dealt with by resorting to formal accusations. Take the following statement of one of the interviewees. It is the description of an episode that finally alerted national HEIs for the need to implement control systems and codes of ethics that were inexistent until then. But this seems to be the exception – the rule is for scholars and HEI to informally negotiate the outcome of the “interference”.

“Here we knew of a case of a medical researcher, a good researcher, who published a lot about smoking not being dangerous for your health. Then we came to know that he was being paid by a pharmaceutical laboratory. Now he is in prison and that really shocked everyone” (S22- Full Professor, female, Switzerland)

Another set of questions was carried out – it intended to learn about the evaluation of academic performance, either when obtaining a degree or when applying for a higher hierarchical professional post. Here, two dimensions were mentioned as being somehow problematized by interviewees: some were concerned with jury tampering, while others considered the trend to quantification as something to be worried about.

In both situations, the interviewees feel like there are opportunities for hidden criteria (political, ideological, and personal) to be set and influence the final decision on the

granting of a PhD or when offering a professional post. This would enable some form of micropolitics and power action, allowing some colleagues to be preferred over others.

“I do know that, for example, in here there are a lot of... networks that do influence [the decision on granting an academic post]” (S15- junior researcher, female, Belgium)

Quantification was also considered to be a stressor for academics, eventually inducing other problematic practices, such as self-plagiarism, honorary authorship or sloppy teaching – whenever teaching is considered to be a less important activity, when compared to research, when it comes to evaluation. When evaluating staff, HEIs demand a high number of publications and not a high quality standard of publication. Thus, interviewees felt that there was opportunity for some colleagues to inflate their CVs with self-plagiarized papers, for instance, while examiners act as if there is nothing wrong with that. Again, this was considered a way of exerting power by protection of group loyalties.

“You can quantify the number of documents but you cannot quantify the quality of research in terms of ‘he is a very smart guy, or he is not’” (S13 - Associate Professor, male, Belgium)

Nonetheless, not all interviewees considered this to be problematic. Evaluating and assessing the work of colleagues is a ‘necessary evil’ and there are always opportunities for subjective analysis. It is not uncommon for academics to admit that, when evaluating, they also screen candidates for that one who is a “*good colleague, trustworthy and loyal, a team player*” (S4).

### 3.3. Loose social control

Summing up what has been said so far, there seems to be little or no social control over a number of the situations just presented, with the exception of “traditional” plagiarism. And this loose social control system seems to be the common way to deal even with those behaviors and situations most censored and considered to be problematic, such as honorary authorship or data trimming. For instance, one of the interviewees mentioned that the really good forger of data is the one that does not get caught.

In fact, interviewees perceive that not all HEIs have codes of ethics, and when they do have, these codes tend to be addressed to students and/or to consider ethical and methodological issues, such as obtaining informed consent from participants, assuring confidentiality and sanctioning the forgery of data. Problematic behaviors and situations considered more nebulous, such as interference from (private or public) funding agencies on the research design, jury tampering, and self-plagiarism are not addressed by codes of ethics of most HEIs. Or so most of the interviewees thought. The exception is the interviewees from the United Kingdom, who were more aware of written rules and procedures.

It is Consoli (2006) who, very interestingly, points to the intricate ties between scientific methodology and ethics: “the fact that the Gordian knot cannot be untied is constitutive of the way the scientific endeavour works. Scientific ethics and scientific method do not just happen to cross each other’s path but represent a constant unity. Every time we talk about ones of the two, we must talk about the other one” (Consoli, 2006, p. 537). This might help explain why deviations to “good methodology” tend to be unanimously criticized by academics, formally forbidden by codes of ethics and controlled by ethic committees. This does not mean that detection and sanctioning mechanisms exist or are applied when situations are discovered.

In fact, many authors shared with interviewees the idea that trust is one of the pillars of science, and that whistleblowing is something scholars tend to avoid (Kakuk, 2009; Nowotny et al., 2001; Reich, 2009): “(...) it is risky and unethical to go public with a fraud allegation because of the possibility of smearing and innocent person and of provoking a political backlash against science” (Reich, 2009, p. 188).

When rules do exist, they are not always enforced and formal reactions seem to be the exception. Informal settling of affairs and secret deals were perceived as being somehow usual. What some interviewees perceived to happen was a process leading to unclear outcomes. These outcomes are different for each situation and behavior, depending on the status of the ‘offender’, the scientific group to which he/she belongs, the HEI where it all happened. The ability of the ‘offender’ to negotiate interpretations of situations and to activate power positions may have a strong impact on the functioning of social control mechanisms. As one of the interviewees clearly stated about plagiarism (and that we also found, to some extent, in responses about other situations and behaviors):

“all these cases of plagiarism (...) are dealt with in the same way that are dealt the crimes of the powerful. (...) The first strategy is not saying anything to the outside world, keeping it inside, how to deal with this in a very quiet way and low profile way. If somebody has to go, to be sacked, they put out another excuse. This is the kind of things you see also in economics, in companies” (S8- Associate Professor, male, Netherlands)

At this point, it can be stated that there is a wide range of behaviors and situations considered to be problematic by the twenty-two scholars interviewed. But those situations that some may consider a source of concern are deemed by others as a regular pattern of academic life. Patterns of organizational social control seem scattered, and interpretation of rules, behaviors and situations are not consensual but rather open to interpretation and negotiation in each case.

By taking into account some studies, we may theorize that (sub)cultural niches of working groups or disciplinary tribes (Becher & Trowler, 2001) may help explain the diversity of problematizations put forward by those interviewed. This would allow for an understanding of why come to existence the negotiated nature of interpretations about what should be considered right and wrong, what should or should not be allowed to academics and

funding agencies, what should be detected and labeled deviant, or what should be awarded with recognition and merit.

But, at the same time, one must acknowledge that scholars and HEIs are also experiencing a change that some authors recognize has been at work for the last twenty years: postmodern societies have changed, and so have science and higher education. They now have to adapt to a so-called Mode2 Science (Nowotny, et al., 2001). This new framework imposes new demands on science, namely on knowledge production institutions such as HEIs. Science must now change in co-evolution with society; HEIs have to be (more) open to the labour market, corporations, and politics stakeholders and to be more socially accountable. Science is becoming transgressive (*idem*) in its boundaries, in its subjects and in its demands: “it is common ground that in science today there are many actors; that more forces – social, economic, political – act on science; and that there has been an explosion of expectations about science’s ability to provide useful answers to an ever increasing range of social problems” (Nowotny, et al., 2001 p. 53).

And European higher education and research policies seem to have been developed in such a way<sup>10</sup>. The European space has identified (scientific) knowledge as a key-factor for competition and economic development, and science and society are set to evolve and influence each other mutually. This is where the meso- and macro-levels of analysis intersect. And if one wishes to understand the variety of perceptions and problematizations, as well as the variety on the activation of social control mechanisms, one has to reach the macro-level for that purpose.

If this is so, one might find it hard to come across a stable framework to problematize or normalize behaviors and situations, rules and social control in scientific research and higher education. Nonetheless, we consider that such an effort should be done, and this is where one might try to resort to the Social Harm Approach.

#### **4. Social Harms of problematic behaviors and situations**

To the best of our knowledge, no effort has been made to identify and evaluate the social harms stemming from problematic behaviors and situations mentioned in the previous section. Nonetheless, this paper tries to underline the usefulness of considering the perspective offered by Hillyard et al. (2004).

The series of research on Social Harm tends to agree on the criticism of Hillyard & Tombs (2007) about crime: it has no ontological reality (a lesson better taught by Louk Hulsman); rather, it is a social construction, it consists of many petty events while excluding very

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<sup>10</sup> To understand that which was born as a supra-national movement for HEIs – the Bologna process – then came to be colonized by the European Commission, see Croché (2009). Gideon (2012) also analyses the several European treaties and the way education has been changing its value as an arena for broader intervention by the European Union.

serious harms, and it maintains power relations untouched. Conversely, research should look at events causing physical harm, financial and economic harm, emotional and psychological harm and the endangering of cultural safety. Criminology<sup>11</sup> should no longer be held hostage to what is defined at a certain place and time as being crime. On the contrary, it should acknowledge a broader task of intervening in situations where those in power have failed to problematize its actions and its consequences, and broader structural forces failed to empower the general public and hindered the improvement of the living conditions of citizens and nations.

The social harm approach stresses the importance of deconstructing the “social myopia” that tends to demonize, criminalize and sentence the acts and behaviors of the socially excluded, while condescending on the harms produced by the more powerful agents of society, like states and corporations (Tombs & Hillyard, 2004). Maintaining things as they are hinders the response to harms arising from globalization, neo-liberal policies and the central role of private capital and enterprise in its umbilical relationship with states throughout history.

As we have seen in previous sections, when looking at scientific research and higher education, we fail to find a broad consensus in what is considered problematic or deviant and subject to social control – apart from proper data forging and clear-cut plagiarism. But instead of this being a sign to give up any kind of scientific enquiry, it should be considered analogous to what is known to happen in those situations that come to fall under the categories of occupational, organizational and white-collar crime. Most of the problematic situations that were mentioned by the interviewees were perceived as being the result of negotiation and open-ended as to their seriousness or problematization, and not perceived as having an ‘ontology’ per se.

We have also concluded on CoI that “interference” and “influence” tend to exist between scholars or HEI, on the one hand, and states’ agencies and corporations on the other. Public and private interests on research outcomes may lead to interference in research topics, design or data analysis. These flows of interest are based on political ideology and on market demands about what should be known about the world and what HEIs and scholars are expected to produce. Research will then be conducted, not for the sake of knowledge or for improving people’s lives, but rather to be considered a commodity, and pertinent research results will be evaluated on the grounds of its usefulness, either for political purposes, or in accordance with economic standards.

Power relations inside the academic community, conflict and struggle strategies come to be decided not on the scientific merit or hard work of scholars, but rather, in many instances, on the human and economic capital (via funding, grants and commissioned research) that some acquire and some do not. These acquisitions seem easier when academics succumb to or actively pursue special ties with funding entities, explore the works of others for their

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<sup>11</sup> I will not debate in further detail whether Criminology should be allowed to live or rather give place to Zemiology. Criminology has, for as long as it exists, been broadening its scope of inquiry: from crime to the criminal, to deviancy, social control and victims or fear of crime. This ‘stretching’ propensity of Criminology may be considered a good indicator of its ability to come to consider social harms as one of its research subjects.



benefit, or even when they perform sloppy research that is intended to give ‘adapted’ and quicker answers to what is expected from those who commission research, with the consent or impulse of the HEIs to which they belong. Those who weave special relationships with private and public power have the ability to gain preferential access to information, have more saying in who is or is not allowed and progress in the academy, and have more access to other limited resources. Opportunities become differential within HEI and there are “*those who glow*” and those that are “*pushed to a corner*” (S13).

Some scholars and HEI ‘agree’ with embargoed research, with external specifications about what should be studied and how, which deadlines should be met and which outcomes are expected. And, according to the interviews conducted, scholars may face difficult times when resisting this interference. After all, not everyone seems to label these situations as problematic or censured. The search for profit or winning the race on the “star system” of the academia seems to be, for scholars, legitimate goals to pursue. The matching of the HEI’s goals (gain funding) and scholars’ goals (obtain recognition) may press individuals to inflate their list of publications by resorting to self-plagiarism, trimming the data in order to get published more easily.

Nonetheless, those behaviors and situations that go uncensored may come to produce physical, financial and economic, emotional and psychological harms, and endanger the cultural safety of groups of people.

“Pressured” HEIs and “pressured” academics may lead to harm-producing situations. Reproach of scientific endeavor by the media or by citizens may come to happen. Health dangers may stem from pressured clinical trials and the testing of unsafe products (Hedgecoe, 2014). Public money may be spent more in “profitable” science, rather than being used to react to wider social problems, such as pollution, hunger, and infant mortality in ‘developing’ countries. There may be a devaluation of topics of research that could improve peoples’ lives, namely of those at risk of social exclusion and poverty, which is the case of research and action about public housing, or empowerment of ethnic minorities. Negligent higher education may come to produce poor or biased training of professionals that will later work in institutions or face-to-face with patients, inmates, victims, citizens. The non-funding of public higher education, which is deemed to be unprofitable, may trigger the championing of private higher education and research, with serious consequences on families’ budgets. Pressured science may deepen social injustices when the access to basic drugs, counseling and services is provided by HEIs only to those who can afford it.

Social harms stemming from pressured science can take various forms: the stigmatization of groups of people subjected to (medical, psychological, criminological, economic) research, like the unskilled, the non-consumers or non-voting, “problematic” youth or “dysfunctional” families – with the subsequent normalization of wrongful behaviour committed by those who sponsor research. Careers may become even more precarious for young researchers who are now socialized in seeking the money and not the knowledge, or whose work is exploited and unduly used for someone else’s credit. National and supra-national public policies on educational attainment, on genre-specific difficulties, on access

to jobs or social benefits will tend to be legitimized by pressured science, and not by sound and transparent research. And the list is endless.

While there is lack of research on social harms arising from pressured science, pressured HEIs and pressured scholars, it seems fair to conclude that such consequences may be plausible and seriously impact the lives of people, institutions and social practices.

## **5. Final remarks**

As we have reached the concluding remarks of this paper, I now turn to the reader of this paper, as I have done in the beginning. The reader has now recognized that he/she shares the same or similar concerns with those academics interviewed and presented in earlier sections. The reader is probably a peer in the field of Criminology or neighbouring science, and may be eager to learn more about what are the social harms, its consequences or what has been studied about problematic behaviors and problematic situations in Criminology. In fact, Criminology is known to be especially connected to a governmental project (Garland, 2000), which may impose more pressures on it, as Walters (2003) found. Nonetheless, this paper will not deal with those specific harms arising from scientific research and higher education in Criminology. In fact, many of those just mentioned in the previous section may also be the consequence of sloppy or pressured researching and teaching in Criminology.

But it would be important for criminologists, both the particular reader of this paper and any other, to make this kind of observations about Criminology research topics, methods and results, its nesting in Mode2 Science, its connection with the need for HEI to search for funding and the drive for recognition for individual scholars.

The little interest that Criminology has shown in researching mass atrocities, state-corporate crime, economic and financial offenses, structural inequalities, hate crimes, war crimes, international and transnational crimes (Bernal, Cabezas, Forero, Rivera & Vidal, 2012) may be due to its dependence (as any other science) on funding, political legitimacy and individual and institutional recognition. Again, Criminology should be opening its scope of inquiry to allow the understanding of acts such as those, but also to the understanding of problematic behaviors and situations in scientific research and higher education, as well as the harms that may be produced by sloppy science and negligent teaching.

What is more, Criminology should acknowledge the need and importance of researching not only its own domains for fraudulent and pressured science, for interference and CoI, but also for social harms that may arise from it. In the end, Criminology should look not only at behaviors considered to be crime and subjected to formal social control, but instead recognize that there is a role that it may play in studying and researching social harms caused by institutions, namely HEIs, corporations, states and the consequences of

neoliberal policies. These may, in fact, be pressuring science, research and higher education to a “search for the euro”, rather than a search for knowledge.

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