

Universities in Innovation Systems: connectedness and alternative research evaluation metrics¹

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Abstract

The roles that universities play in the innovation system are conditioned by the structure, the functioning and the present orientation of such system, and by internal features of the academic institutions. During the last decades, a process towards marketization of academic knowledge production has been taking place. Part and parcel of this process is the academic incentive regime that functions as a main legitimator of what university people do. Research evaluation metrics explicitly and implicitly influence how universities regard themselves, their connectedness with external stakeholders and thus the role they play in innovation systems.

The paper systematizes the different attributes through which the prevailing research evaluations systems give rise to uncertain outcomes at individual as well as at collective level, and explore explanations for their resilience amid the increasing criticism they receive.

Finally, the idea of developmentally oriented research evaluation systems and metrics is put forwards and justified, identifying and discussing the characteristics of some of its main features.

Keywords: developmental universities, national systems of innovation, connected autonomy, research evaluation

1.- Introduction

The roles played by universities in National Systems of Innovation are conditioned by a broad spectrum of circumstances. Some of these are essentially internal in nature, while others are the result of specific characteristics of the innovation system in place, and still others are contingent on the configurations of the academic system at the global level. Consequently, the roles played by universities are quite diverse, responding to the type of

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stakeholders and the type of demand or expectations involved; they take different forms and are ruled by specific norms. However diverse such roles may be, in almost all cases they involve knowledge related activities. Universities act, in National Systems of Innovation (NSI), as knowledge providers, directly, through faculty acting as research performers and indirectly, through the knowledge conveyed to students that will act later as problem-solvers in diverse types of organizations. The role that universities play in innovation systems relates to one of its principal tasks: unleashing creativity by providing a rich learning environment. “This makes them central to the innovation process, which depends totally on the capabilities of people and on productive interactions between people having different skill sets, knowledge and perspectives. *Innovation is not something that industries do, or firms do or governments do. It is something that the people within those organisations do, not usually as individuals but as teams that nevertheless draw upon and depend upon the abilities of individual people.*” (Group of Eight, 2011: 8, emphasis added)

What people do within the academic system, particularly in universities, is an important part of any innovation system. Such undertakings are closely related to and influenced by the academic incentives in place, to which people get access by following the rules of the game of the research evaluation system. These rules heavily influence which research is done and not done, a central issue for the dynamics of innovation systems; thus, research evaluation has an important impact on such dynamic. In this paper, we will elaborate at some length on the issue of research evaluation, fundamental for the role universities play in innovation systems everywhere and particularly so in developing countries. It is, moreover, a fundamental issue if innovation systems should change direction to encompass sustainable human development.

The paper starts by discussing, in section 2, the roles universities play in innovation systems; it turns then, in section 3, to a concept tightly related to these roles, connected autonomy. In section 4, main characteristics of the research evaluation system and its impacts on universities’ roles are analyzed; the sketch of an alternative research evaluation system is proposed. Section 5 includes two examples, from the South and the North, of the type of tensions and conflicts arising from prevailing research evaluation systems. Brief concluding remarks follows.

2.- Universities in Innovation Systems

The features of universities that may be considered mainly internal and that mold the roles they can play in National Systems of Innovation include policies for student’s recruitment, quality of teaching, quality of research and how the university is positioned vis-a-vis society. The ways in which the last three features relate to NSI are rather obvious; the first is not so evident, though. Universities with high barriers to entrance, academic or monetary – and both are often intertwined - foster the continuity of the social and political status quo through the reproduction of the elites. This may be highly instrumental to the prevailing knowledge relations within a given innovation system, but it becomes a barrier to changing such relations and to expanding the type of problems currently addressed by research and by innovation. It is worth noting that the universalization of advanced higher education, of life-long higher education for all, is not a unanimous goal, even at a discursive level. The UNESCO World Conference on Higher Education, held in 2009, did not accept to include this as an aim, all the effort in that direction of developing countries, particularly Latin American countries, notwithstanding. (Arocena and Sutz, 2016) It is generally accepted that the speed of technical

change renders much of the training obtained at higher education prone to rapid obsolescence; this leads to recognizing the need for life-long learning. However, to broaden advanced higher education, attempting to make the access to university level universal, is not a clearly stated aim. This aim would imply, for instance, to overcome the bureaucratic certification of capacities and to allow people with DUI expertise (acquired by Doing, Using and Interacting) (Jensen et al, 2007) to be certified in their capacities to follow university studies. It will require the deployment of different strategies to teach to different people and an openness to diverse learning trajectories. Innovation systems in societies where most of the population has the opportunity to study at advanced level will exhibit a different dynamic than those where only a small part of the citizens has been trained in universities. In particular, a fundamental feature of universities as part of innovation systems, its connectedness with society at large, will be different.

The roles universities and university systems can play in National Systems of Innovation are also conditioned by the innovation system structure, its functioning and prevailing orientation, including the perception that powerful actors within the innovation system have of the roles universities should play. This conditioning acts in two directions. A first direction affects the level of autonomy of universities, particularly public ones, mainly through budgetary allocations and, in some cases, imposition of governance structures. Related decisions usually come from high level actors in the innovation system, like ministries of science and technology or governmental research councils. Almost thirty years ago, it was heralded that the research system, mainly the university research system, was in transition, the most salient indicator being the leveling off of the research funding as part of a wider movement towards renegotiating the “social contract” between science and society. (Cozzens et al, 1990) Some analysts posit that a reinvigorated social embeddedness of universities due to the expansion of higher education in the late twentieth century explains why the roles universities play have become a concern for broader segments of society, particularly governments and business firms. (Brundenius and Göransson, 2011) Be that as it may, the roles that universities should play in the innovation system are being renegotiated. The orientation of this process has been called the “marketization” of the university system (Dobbins and Knell, 2011). “Marketization” includes, in some countries, the freedom of universities to choose their students, denying access assured before by national regulations; more freedom is also given to choose sources of funding, like selling services, setting tuition fees, owning patents, and the like. The rationale behind these changes is to allow universities to do their best; this usually implies a stratification of universities at national level; state support is distributed accordingly. In France, where universities were funded with egalitarian criteria, changes in the described direction were fostered under Sarkozy’s government: “...funds will not be distributed evenly but instead will support the government’s policy of creating bigger, more autonomous universities that focus on excellence, have modernised governance, and are highly productive.” (cited in Hazelkorn and Ryan, 2013: 90) This is accompanied by what has been called “managerialism”: “Universities are now replete with many of the similar “management innovations” which are common in large corporations: they have quality control systems, performance measurement, branding initiatives, marketing and communication units, strategy exercises, visionary leaders, hedging strategies and alliance building initiatives. This strong belief in and widespread use of systems, procedures and initiatives driven by managers is what we refer to as managerialism” (Alvesson and Spicer, 2016: 31).

Conflicts usually accompany these processes. The ways in which those conflicts are managed and how university roles end up changing, are influenced by the characteristics of the “national” part of innovation systems. The national setting continues to be highly influential even in the midst of global pressures towards homogenization. Comparative analyses of how similar pushes for change are “digested” by different university systems confirm the importance of how history structured them and their relations with the broader innovation systems. (Dobbins and Knell, 2011, Mowery et al, 2005).

A second direction in which national innovation systems condition the roles that university may play relates to the flow of knowledge demand stemming from productive and social activities. In science-based and innovation-driven economies such a flow is intense. Knowledge demand may come from national or international mega-projects and from technology public procurement; it also comes from business firms that perform internal R&D or command external research. The latter have become the heaviest R&D spenders in highly industrializing countries, showing the dynamism of the private demand for knowledge. When (i) different actors with purchasing power demand different types of knowledge, (ii) the universities are recognized as valuable knowledge partners by those actors, and (iii) universities are stimulated to become partners through organizational and legal transformations, it can be said that the innovation system fully incorporates universities into the system. However, this does not imply that such an incorporation exploits the cognitive strengths of universities in the best way. It may be quite the contrary, as several accounts of the failures and dangers stemming from a poor understanding of the economic role of universities have stressed. (Mowery and Sampat, 2005, Lundvall, 2010, Nelson and Mazzoleni, 2007, The Group of Eight, 2011)

The role that universities is expected to play by the rest of the innovation system influences what they do internally; this influences the role they are able to play in the innovation system. The expectations that innovation systems in developing countries put on universities are not too high. Professionals are needed, higher education are required to provide them, it is generally accepted that higher education must be accompanied by research to assure an adequate level of professional training, but neither governments nor business firms seem to expect that the capacities for knowledge production accumulated in universities may be important for their activities. The internal response to such meagre external expectations is - caricaturing to some extent - to develop a sort of academic self-referenced research agenda, a trend that evolves into a self-fulfilled prophecy in relation to how governments and business firms in immature, incomplete or fragmented innovation systems perceive the role of universities.

The modern academic world is to a great extent a global endeavor. The international community of peers forms the task force of the “organized skepticism” that validates research outputs, dubbed by Robert Merton an essential part of the scientific ethos. An international task force of post-graduate students working in countries different than their own forms the back-bone of much of the research done, particularly in the Global North, with a strong participation of young researchers from the Global South. Until relatively recently, this global character did not prominently interfere with the roles universities played in their own national innovation systems. This situation has changed, though. A complex web of

circumstances and features, present at global level, fostered changes. “Marketization” of higher education is paramount among them. This trend had some time ago a definite Anglo-Saxon flavor, but today it has spread all over the world.

It can be asserted that there are some salient features of the academic system at a global level that are reinforcing the trend towards the marketization of universities. The main point is that “the global academic system” is a way of referring to an extremely heterogeneous set of institutions with similar goals but different characteristics, modes of governance, and academic outputs. So, for those willing to “buy” any of the products offered by the global academic system, comparative information is important. This information came at a global level with the first university rankings in 2003. The impact of such rankings in universities all over the world, driven by internal reactions and by governmental reactions, has been immense. In an OECD report of 2007, precisely titled “How do rankings impact Higher Education” (Hazelkorn, 2007) it is said that “...the frenzy provoked by publication of the Shanghai Jiaotong Academic Ranking of World Universities and Times QS World University Rankings gives an indication of the seriousness with which many higher education institutions (HEIs), policymakers and the media attach to them. Their increasing credibility derives from their simplicity and provision of ‘consumer-type’ information independent of the HE sector.” A “gladiator obsession” (Ibid) with the place national universities achieve in the first positions of international rankings acquired the feature of a State affaire. The literature warning about the flaws of the measurements in which such rankings are based has done little to diminish their practical importance. Universities scramble to institute changes that may help them climb the rankings’ ladder; governments change their policies towards universities to push them further in that direction. Indeed, the role universities play in national systems of innovation, to the extent that what they do and how they do it affects that role, is being influenced by new features of the globalizing academic system.

3.- Connected autonomy

To produce socially valuable knowledge, universities need to be autonomous in the sense of not being subordinated to outside powers, be they economic, political or religious in nature. Autonomy in this sense means freedom to pursue research in directions that are internally decided, utilizing appropriate methodologies, and communicating the obtained results regardless of who may find them inconvenient or harmful to their interests. But university autonomy is by no means fully defined by these features. It may be fulfilled with total disregard for the society in which the university is inserted, claiming that the best to be done is to perform high quality research defined exclusively in their own way. Alternatively, autonomy may be conceived in such a way that, along the fulfillment of its defining traits, the aim orienting academic activities is to better serve society by taking into account voices that are outside academia. The first way of conceiving autonomy, the “ivory tower” way, is akin to autarchy; the second one, that implies dialogues with different stakeholders, and before that the recognition of the existence of legitimate “external” university stakeholders, may be named “connected autonomy”. (Arocena, 2015)

The concept of connected autonomy presents a resemblance with Evans’ concept of “embedded autonomy”. (Evans, 1995) Of course, there are important differences between both concepts, the most salient of which is that in one case it refers to universities while in the other it refers to the state. The differences between universities and states in relation to

the combination of autonomy and connectedness or embeddedness derive, primarily, from the different possibilities to exert power over their stakeholders. What states can do, especially if we refer to stakeholders external to the organization, universities cannot. However, all the differences notwithstanding, the link between the two characteristics is important also for universities, and for similar reasons.

Autonomy needs to be shielded from the possibility of an institutional usurpation by stakeholders with sufficient power to impose policies, behaviors or ideologies to their advantage: this holds, even if in different forms, for universities and for states. But shielding may be as well asphyxiating, leading to an institution that only serves itself. As Evans put it: “The problem is separating the benefits of insulation from the costs of isolation.” (1995: 41) To avoid isolation some ways for immersing in society are needed, but strong voices against such immersion rise in both cases. For states, some voices said that being friendly with markets is all what is needed to achieve an optimal social output and that any deviation, for instance, having an explicit industrial policy, will led to commit costly mistakes. For universities, some voices said that following the pursuit of knowledge for their own sake is the way of maximizing the harvest of quality knowledge to be put at social disposal, and that any deviation will submerge universities in a mess of contradictory and short term requirements that would harm the scientific enterprise. Balanced outcomes are always difficult to achieve, tensions and conflicts accompany attempts to reach them, and they remain unstable amid changing circumstances. Moreover, again following Evans, it is important not to reify institutions by ascribing to them volition of their own: “In practice ‘the state wants’ because some group of individuals within the state apparatus has a project. This does not mean the project is merely a reflection of their personal biographies or individual maximizing strategies. It does mean that their project may well be opposed by others elsewhere in the state and that the definition of what the state ‘wants’ is the result of internal political conflict and flux.” (1995: 19)

If this is true for the state, it is at least as true for universities. What “universities want” is the outcome of a complex web of interactions and power relations involving different faculty groups, the governance system, the financial regime, and the kind and strength of the university relations with the rest of society. There is one more feature of potential conflict and power contest influencing what “university wants”: the academic prestige regime. “Prestige” is not a given but a social construct; its assigning criteria change when circumstances change and power relations inside and outside academia are strong enough; it is related to the type of connectedness universities have. The latter deserves some consideration.

Universities are knowledge producers and disseminators. Connectedness is the outcome of considering the knowledge needs of different social actors when fulfilling knowledge production and dissemination. This may be done by means of the settings of research agendas, the contents of teaching and the efforts to make knowledge available to those different actors. In democratic and pluralistic societies, universities should be connected to the whole gamut of social actors. This clearly is not the case. When David Hess (2007) talks of undone science, he refers to social actors that need knowledge support for their aims and concerns and cannot find it because the academic system does not connect with them: this is an expression of lack of connectedness. A more complicated one appears when social actors that would have benefited from a specific cognitive approach to their problems are not able to identify research as a tool for solving them: the most deprived part of the population is usually in this situation. On the other hand, there are actors with power

to have their knowledge demands taken on board, like big business firms in knowledge-intensive sectors and diverse sections of the state apparatus. Such actors often are the drivers of the connection: in exchange for the university services they need, they offer material or symbolic resources that the university requires for its functioning.

Two similarities between the embeddedness of the state and the connectedness of the university are worth mentioning. First, both require the initiative of these institutions: state and universities need to build the conditions for the linkages to get established, as well as to set the rules of the game that will govern them. Second, this building needs to be done in a way that preserves autonomy, avoiding the capture of the institutions by particularistic interests. “Without autonomy, the distinction between embeddedness and capture disappears”. (op. cit. 59, emphasis)

Evans posit (1995: 245) that connecting with society is the more difficult problem, a problem that need to be solved because “capacity without connection will not do the job”. This holds as well for universities, at least if the job is understood as maximizing the social usefulness of the knowledge produced, taught, and disseminated. To what extent universities become socially connected is in part an outcome of internal struggles, but also an outcome of how the innovation system behaves. In this sense, expectedly, universities are weaker than states. States, in Evans’ parlance, may “build” actors with which they become embedded: this is something universities can do to a much lesser extent, given that incentives for non-academic actors to become connected to universities stem from the functioning of the national system of innovation. The involvement of universities themselves in relation to connectedness with social actors requires an internal system of incentives where connectedness with diverse actors is appropriately valued without losing autonomy.

Any system of incentives signals which behaviors should be rewarded. In the academic realm, such system is not unitary and homogeneous; on the contrary, it is like a patchwork made from different pieces, some material and some symbolic. If universities want to get more connected to social actors that were historically at arm-length with academy, they need to accommodate the incentive system to legitimate the related activities.

Summing-up: connected autonomy refers to the capacity of universities to forge its way as an actor in national innovation systems. The research evaluation system is a main legitimator of what university people do; the scope of the connectedness of universities is, thus, influenced by research evaluation through the value given to the different activities they perform. The influence of research evaluation on the configuration of universities as actors in innovation systems justify paying close attention to this issue.

4.- The influence of academic evaluation on the role of universities in innovation systems

Around a hundred years ago, Argentinean students wrote what became an influential text for Latin American universities, the Cordoba Manifesto. Amid the romantic rhetoric of the text, fundamental roles for the university were proposed: to be “creators of truth, beauty and good”.

Every modern university must perform research, “create truth”, but to what extent and how they should also work for the “good” is neither consensual nor clear, leading to different aims and denominations: “entrepreneurial university” (Etzkowitz, 2004); “engaged university” (Weerts & Sandmann, 2008), “developmental university” (Coleman, 1986).

University research policies acknowledge the need to combine the “truth” and the “good”. Academic researchers, accordingly, aspire to legitimacy on the double ground of quality science and of socially useful science. It is important to bear in mind that the evaluation research system serve not only to perform ex-post assessment, but as a compass indicating what types of research efforts are worth pursuing, influencing in this way future research. How such a system ponders “quality” and “social usefulness” is a powerful tool in the setting of research agendas; it is worth remembering that the latter depends on the relative economic, social and political power of those demanding knowledge.

Evaluation does not necessarily constitute a coherent whole: it may be performed at department level, by the university as such, by a national organization, all using different criteria. Diverse demands over universities’ missions, from within and from outside, add to this diversity. Tensions and conflicts usually stem from this. In developing countries, where relatively small research communities struggle to survive and grow in the midst of all types of scarcities, such tensions may have severe consequences. If addressing developmental problems is seen by the research community, particularly by young scholars, as making it even more difficult to find a place in the “certified knowledge” world, then the role universities may play in development will be diminished.

4.1.- Main characteristics of prevailing academic evaluation systems

Accompanying the recognition of the immediate strategic value of knowledge, “marketization” of universities was accompanied by a new New Public Management (NPM) style of governance. The ‘value for money’ type of auditing of publicly sponsored research led to “a marked tendency to base trust on the use of quantitative information.” (Frederiksen et al, 2003: 155). This trend needs to be explained, because it does not derive logically from the renewed importance of research and higher education.

The increased relevance of activities connected with advanced knowledge and education implies that more actors become involved and that different interests may collide; consequently, it may not be easy even for the more powerful sectors to impose their goals by means of consistent practices. Therefore, prevailing evaluation patterns are characterized by uncertainty concerning their real consequences; however, they have expanded quickly. Perhaps that contradiction illustrates the notion of (mimetic) isomorphism, understood as a process of change that mimics models of institutional behavior dubbed successful, like NPM. The proponents of the notion put forwards the hypothesis that “the greater the extent to which technologies are uncertain or goals are ambiguous within a field, the greater the rate of isomorphic change.” (Di Maggio and Powell, 1983: 156) Regarding research specifically, it is stated that: “Among the effects of governance taken into account by any anticipatory or reflexive governance, changes in the content of research are the most opaque”. (Glaser, 2012: 3)

Powerful actors – particularly governments and entrepreneurial elites – are directly interested in changing the governance of knowledge production and use. Their concrete goals are not always clear and the actual results of prevailing procedures are not well understood. But such procedures seem to be fostered by the powers that be. Thus, they are quickly copied. Poor understanding of methods combined with clear awareness of who is in command foster mimetic isomorphism. It is not surprising, thus, that the prevailing evaluation system is not unanimously accepted by academy. A growing literature highlights a trend that may be

weakening academic performance: “Institutions are measured against other institutions, researchers compete with one another for funds and universities for students. This leads to a permanent state of war between all the parties, destroying the social fabric of the university (...) Of all tasks in the academic workplace, teaching is the least appreciated and has to be outsourced as soon as possible, allowing people to focus on the battle for coveted research money.” (Halffman and Radder, 2015: 168) A lot of factual evidence supports the last quotation; concern looks unavoidable.

The following assertion is probably not (very) controversial: “The current situation is characterized by a tension between administrative needs for simple measures and more easy evaluation methods and researchers request for fair and comprehensive assessments of scientific quality.” (Aksnes and Rip, 2009: 905)

Such an assertion goes a long way towards the explanation of why the great shift in evaluation favored quantitative methods. In a word: simplicity. The “administrative needs for simple measures” has engendered a very specific system “supported by general and abstract tools (...) that can be used in fairly standardized ways across different substantial areas of activity.” (Dahler-Larsen, 2013: 31) It is even asserted that such evaluation systems don't have as their basic function the verification of what happens in a particular area of activities but to build a definition of those activities such that some verification is possible. (Dahler-Larsen, 2007: 99)

Prevailing evaluation patterns, strongly based on bibliometrics, use the Social Sciences Citation Index (SSCI) for the social sciences. Hicks (2006) asserts that “SSCI-only analyses are easier and cheaper” but also particularly dangerous. This is so because in the social sciences there are four distinct literatures: “international journal articles, books, national and enlightenment publications” and only the first one is indexed in the SSCI. If this index is the main basis for evaluation, the contribution of social scientist “to understanding their own societies and communicating their insights to the public” (Hicks, 2006: 162) becomes undermined. “It would be a tragedy if the intellectual development of the social sciences and its contribution to society were to be stunted. But that may be the ultimate result if in becoming accountable to narrow measures the enterprise is forced into the straight jacket of one of its historical four modes of scholarship and communication.” (Ibid) Understanding their own societies and communicating their insights to the public are activities neglected in prevailing research evaluation; they are often related with social critiques. Perhaps most governments and other powers that be are not unhappy with that.

The ‘Leiden Manifesto for research metrics’ posit that: “The problem is that evaluation is now led by the data rather than by judgment. Metrics have proliferated: usually well intentioned, not always well informed, often ill applied.” (Hicks et al, 2015: 429)

But the problem is even more complicated: “All measured aspects of a university’s activities and duties – education and research – are squeezed into one single measure, while another aspect – societal impact – is even neglected.” (Kronman, 2013: 96) A single measure may serve perhaps the interests of a well-defined group, but it is surely ill-suited to gauge the different activities universities must accomplish in collaboration with different actors and, moreover, in different contexts. Should the activities of a private university in a very rich city be estimated by the same measures than those of a public university in a poor country? No wonder that “societal impact” is neglected.

A general evaluation system based on quantification and the increased role of management seem to be fostering the market value of Higher Education (HE). The notion of

HE as a public good is contested. Universities used to be conceptualized as a very special type of institutions but this seems not to be the case anymore.

Let us pause to recapitulate. Academic evaluation has been a systematic activity for a long time. A great shift in this system has taken place in the last decades; evaluation activities grew quickly and procedures have become increasingly formalized and quantitative. Given the enormous quantitative growth of advanced knowledge and Higher Education, as well as its qualitative diversification, evaluation seems to be unmanageably complex and time consuming; a modicum of simplicity and time saving is provided by formalized quantitative methods. However, a question remains: why does the new dominant evaluation system persist, given that far from generating consensus it promotes great concern in the academy? Framed in a slightly different way – why do academics surrender their autonomy- this question is thoroughly examined in a recent paper. (Alvesson and Spicer, 2016)

Some elements for an answer have already been examined in this text. In a nutshell: the new economic and social role of knowledge fosters a change in the dominant perception of the university, accompanied by a shift in incentives; consequently, public policies for research and Higher Education are oriented by New Public Management viewpoints; the corresponding evaluation system, even if it generates doubts and resistances in academy, is a source of certainty and a guarantee of good results for governments. A closer look at those aspects is needed. That will be attempted next, by focusing the attention on what traits of universities are really fostered or hampered by actual evaluation procedures.

4.2.- How evaluation systems foster or hamper university models

Evaluation is usually seen as a source of certainty, often “regarded as an apolitical phenomenon, a formalized approach to accountability”. (Schwandt, 2012: 220) Thus, “the determination of quality is exempt from any kind of moral-political or normative debate; quality simply *is* performance (...), and performance simply *is* measurable against agreed-upon standards and traceable through indicators”. (Ibid) This has been contested in the scholarly literature, defying “the straightforward view that such measurement essentially constitutes a politically neutral, rational instrument facilitating the effective monitoring, and ultimately managing, of performances”. (Woelert, 2015: 75) Contrarily, “performance measurement works through social and political rather than mechanical channels and hence has winners and losers and is extremely consequential.” (Lewis, 2015: 11) Losers not only include academics that are not selected in contested calls, but also stakeholders in society at large who are not taken into account although they are actually or potentially related with - or may benefit from - the generation and use of advanced knowledge. If knowledge is power, more than ever, increasing conflicts concerning knowledge control can be expected. What type of university is fostered by prevailing evaluation patterns and related conflicts?

At least two main types of university are usually considered: the Humboldtian or Academic University and the Entrepreneurial University. The latter, dubbed to provide economic salvation (Halffman and Radder, 2015: 172), has become the leading model for transforming the university worldwide; fostering it can be seen then as an intended consequence of evaluation patterns.

However, beyond intentions, such patterns point in a different direction: “By valuing some research more highly than other research, rankings – and similar systems of research

assessment – reproduce classical conceptions of knowledge and power relations. They encourage a return to ‘ivory tower’ research conducted by elites in selected institutions at a time when complex global problems and policy objectives require the involvement of interdisciplinary teams with diverse perspectives and experiences” (Hazelkorn, 2009: 11). Rather than promoting the Entrepreneurial University, the actual result seems to reinforce the Academic University. The British Research Assessment Exercise shows that “it has largely enhanced the authority of established scientific elites rather than orienting academic research towards economic goals and what the state considered to be user needs.” (Whitley, 2010: 37)

Nevertheless, it is not obvious that the prevailing criteria are good, in the long run at least, even from the point of view of the Academic University: “If researchers only focus on delivering short-term accountable results and managing their publication assets, what will happen with the long-term basic research that may deliver results that are important in 20-30 years?” (Kronman, 2013:124)

Again, why does the prevailing evaluation system persist? Perhaps there exists a sort of implicit agreement that keeps the system working: governments can show an example of their commitment to New Public Management while academic elites are satisfied with what really is a means of enhancing their world-view and power. This protects evaluation patterns that are, at least in the long run, academically damaging.

The last assertion has a tentative character. On the contrary, it is almost beyond doubt that the dominant evaluation system hampers the social commitment of universities, even if it is seen as “rhetorically correct”: “Long-term involvement with society, which is both complex and uncertain, sits at odds with an academic career progression that values a constant stream of research outputs.” (Trencher et al, 2013: 20)

The academic situation is even more worrying in the South; the peripheral condition of universities there is also seen in connection with validation and evaluation of academic work: “The Third World looks to the North for validation of academic quality and respectability. For example, academics are expected to publish in Northern academic journals in their disciplines. Promotion often depends on such publication. Even where local scholarly publications exist, they are not respected.” (Altbach, 2003: 6)

The result of this trend is clear enough: “Imposing an evaluation system that privileges international citations will force scholars to choose topics that interest foreign academics. Over time this poses the danger of forcing non-English language scholars out of the disciplinary core and into a fringe of colourful topics in the hope of attracting the international attention so valued by their governments.” (Hicks, 2013: 79)

It follows that, if the prevailing evaluation system makes it difficult for academics in the North to work in connection with problems of their communities while being recognized and rewarded as academics, the system makes that even more difficult in the South.

4.3.- How evaluation systems shape academic life

Even if at discourse level universities everywhere see their roles in national innovation systems re-conceptualized, their institutional integration in those systems is extremely diverse, and so it is difficult to compare the impact of evaluative practices on universities across the globe. This diversity narrows drastically when we refer to university

people as individuals: prevailing evaluation systems, highly globalized and homogenized, exhibit remarkable similar impacts on academics at individual level, important differences regarding university systems and national innovation systems notwithstanding. In every corner of academic life, measures of success and above all the incentives that are based on them shape what academics try to do: “If we start to measure research in certain ways and allocate funding according to the results, researchers will adapt to this and the measurements will start to be an incitement, driving research in directions towards the measurable.” (Kronman, 2013: 123)

The incitements derived from the prevailing ways of measuring research show similar consequences on scholars in very different settings; an example of this stems from the analysis of such consequences in Great Britain and in Mexico. The cases are not exactly comparable, in the sense that the British Research Assessment Exercise (RAE) focuses on universities and the Mexican National System of Researchers (NSR) focuses on individual scholars. However, given that the analysis of RAE includes its impact at individual level, comparisons are nonetheless meaningful. Both analyses are furthermore comparable given that they take a long-term perspective, assessing impact after more than 20 years of application of the instruments.

In the Mexican case, analysts of the NSR posit:

“...the NSR stimulus act against the activities more directly related to institutional objectives different from research. (...) Our science and technology system is evolving towards a unimodal one, meaning that the institutional diversity is being reduced, with serious consequences for the integral goals and the joint productivity of the system. (Foro Consultivo Científico y Tecnológico y Academia Mexicana de Ciencias, 2005: 50, our translation).

...20 years later, the NSR is inhibiting the quality and the creativity of researchers (...). Researchers simply comply with the requisites of the NSR. Researchers do not want to enter into much more risky projects in which they may pass 3, 4 or 5 years without publishing anything because the project they get involved with is too complex and will not allow to have in time the scientific publication required by the NSR.” (Foro Consultivo Científico y Tecnológico y Academia Mexicana de Ciencias, 2005: 54, our translation)

In the case of RAE, the assessment is not less clear:

- (i) In terms of the future of research orientation: “...the current approach to research assessment in UK universities is reductionistic and primitive, and almost certainly counterproductive in terms of generating a wide variety of intellectual innovations in the longer term.” (Martin and Whitley, 2010: 75) The RAE signals gave pointed to what is more rewarding: basic rather than applied research; shorter-term rather longer-term research; incremental rather than more ambitious or open-ended ‘pioneering’ research; mainstream rather than ‘alternative’ research or research in a highly specialized sub-field; monodisciplinary rather than inter- or multidisciplinary research; ‘academic’ rather than ‘professional’ research (for instance, in medicine, management, law, planning); research that yields journal

- articles rather than books; and research where the results can be published in ‘top’ journals rather than more specialist (and generally lower status) ones. (ibid: 70)
- (ii) In terms of driving academic activities towards an “unimodal” system where research is paramount: “...the RAE has reduced the willingness of faculty to engage in other academic activities such as reviewing, editing, translating, contributing to reference works, writing popular books, engaging in clinical medicine or community service, providing policy advice, and so on...” “Many universities and departments now struggle to persuade faculty to give due attention to teaching or administration. The emphasis on the RAE means that individuals (especially ‘leading researchers’) tend to devote less time to lecture preparation or to meetings with students.” (ibid: 71)
 - (iii) Impact on personal life: “The RAE has been a factor encouraging overwork and adding to levels of stress. It has disadvantaged those (predominantly women) who have taken time off for family or other reasons, resulting in a ‘gap’ in their published output.” (ibid: 72)

In particular, what Martin and Whitley call the “regulatory capture” of the evaluation process by academic elites (2010: 73) seems to be dysfunctional to foster “undone science”.

4.4.- On alternative research evaluation systems and metrics

A Developmental University may be characterized by the joint promotion of teaching, research and extension activities in cooperation with several actors with the overall purpose of contributing to human and sustainable development, with special attention given to the democratization of knowledge.

Faculty as well as students, particularly postgraduate students, need to feel backed-up for devoting time and efforts to pursue research directions that may take more time than average to show progress because, among other reasons, they involve non-academic actors. Developmental universities (Arocena et al, 2015) can as well be partially characterized as those where the social involvement of student and faculty receives formal academic status and where room is open to link research agendas directly to problems of development. The issue is not to substitute one type of agenda for another; it is a question of building academic legitimacy beyond the prevailing regulatory capture by disciplinary academic elites, with its sequel of exclusionary quantitative measurements.

Developmental research agendas require a rich variety of stakeholders with whom build together the problems they will contain. This is closely related with Elinor Ostrom's idea of coproduction as well as the seminal proposal by Amartya Sen of considering people as agents and not as patients. (Ostrom, 1996, Sen, 1999) It follows that developmental research agendas depend crucially on the level of connectedness of universities. Table 1 depicts in a stylized way how universities are connected to main stakeholders. This is done for universities in the South, in an obvious rough generalization. We suspect that the table would look differently in the North for government and firms, but would present similarities regarding other stakeholders. Repeated testimonies on how social commitment is disregarded by prevailing research evaluation criteria backs this presumption.

Table 1. Some characteristics of the connection of universities with main external stakeholders (in the Global South)

Stakeholders	Universities are aware of stakeholders' knowledge demands/needs?	Stakeholders have/are able to get resources to pay for demands?	Stakeholder takes initiative to become connected to universities?	Universities seek connections to stakeholders pro-actively?
Government	Usually yes	Yes	Usually yes	Yes
Knowledge-based firms*	Sometimes	Usually yes	Sometimes	Yes
Non-knowledge based firms	Usually no	Usually no	Usually no	
Focused groups/movements	Sometimes	Usually no	Sometimes	
Vulnerable social groups	No	No	No	

*We understand knowledge-based firms as those that have university graduates performing technical work.
Source: by authors

The gray cells indicate uncertainty. When the university: (i) is not aware of the demands or needs of a social actor, (ii) this actor has not capacity to pay for research done around his problems or interests, and (iii) is not able to take initiative to become connected to universities, if universities do not take a pro-active stance those actors will be invisible for research agendas. If connectedness is something that occurs only when an external actor wants to get in touch, the concept is narrowed in practice. If specific challenges faced by marginalized actors are to be considered in research agendas, the complex process of dialoguing, searching, understanding, translating and co-constructing problems that this entails needs explicit support from the university.

Attention needs to be payed also to the emergence of a counter-hegemonic prestige regime, because this relates to a fundamental part of researchers' academic identity. The latter leads directly to the research evaluation system, because ultimately, which research is done results from decisions taken by individual researchers that need to be recognized for what they do.

Research agendas are built around and influenced by diverse interests and incentives. Academic evaluation is a particularly powerful influence: prevailing criteria, emphasizing unilaterally academic status, hamper more than promote the developmental role of universities. New, more balanced and "pluralistic" evaluation systems are needed in order to foster both academic quality and social engagement.

What would a "developmental" research evaluation metrics, aiming at putting knowledge at the service of sustainable and human development, look like? It should be related to the aim of universities and not the other way around. So, we may take the following three points of departure, shared by other approaches to research evaluation:

First, a developmental university must perform first-rate research to promote creativity among its students and to address with some success the challenging problems that

affect the society in which it is inserted. Such research needs to be rooted in strong disciplinary performance, but research associated with the demanding problems societies are currently experiencing has increasingly a socially collective and academically interdisciplinary nature. So, a developmental evaluation system should avoid “discouraging measurements”, formally stated or customarily applied, that punish interdisciplinary work, joint definition of research problems with non-academic stakeholders, attention paid to local problems of little interest for international main-stream science or adventurous intellectual endeavors with uncertain outcomes. What metrics may embed this?

Second, a developmental research evaluation system should include “encouraging measurements” related to normative aims. Operationalizing normative aims in research is different from stating how many children should attain a full vaccinating scheme in a given period. Developmental aims cannot usually be related to research agendas and research outputs straightforwardly. The difficulties to define and apply comparable criteria to assess university-society collaborations have been acknowledged. (Bolling and Eriksson, 2016, Molas-Gallart and Castro, 2007) Moreover, research impacts the fulfillment of the envisaged aims through mediations that are outside academia. The latter notwithstanding, the orientation of research does play a role in such fulfillment. How can a metric appreciate this?

Third, a developmental research evaluation system should bear in mind that context matters. How can a metric consider the context in which research is done without fostering a culture of isolation from international knowledge production that would do little more than self-justifying mediocre research?

To approach these questions, it is worth asking another one: which are the strongest constrains that prevailing evaluation systems put on “developmental” research? Basically, pressures of time and pressures of prestige. Countervailing these constrains cannot - and should not - be done by throwing away concerns over research productivity and international visibility. But productivity should be understood differently from counting papers. Doing developmental research involves devoting time to building the research problem and to assure the fulfilment of the correct methodological conditions for research itself. So, productivity should measure not only the outputs of research but the inputs to research that the researcher must construct. Again, which metric may give account of this?

The prestige issue is more complicated to deal with. Building a counter-hegemonic prestige regime, even if not aiming at substituting the prevailing one but only offering a complementary one, will face fierce opposition. It is something neither universities nor governments can do individually; they will need to join forces. Different stakeholders may have influence on this, from international organization to grass-root movements working from below. Metrics will be able to capture alternative prestige criteria but only once they have been put in place. It is a bit like a chicken-egg issue, but if a metric is established that stimulate development related research even against the prevailing prestige regime, it will be easier to introduce in the latter a more pluralistic set of criteria.

To encompass to some extent the former considerations, a new metric should:

- i) Allow for flexible shifts from prevailing metrics to “devmetrics”; this means that researchers may work for a period being evaluated by one metrics and for another period evaluated by the other, depending on the working program they commit themselves to pursue;
- ii) Value the time devoted to help widening the cognitive connectedness of the university as research time;

- iii) Offer prizes for the best research outcomes that help solving societal problems; devise specific calls for research aimed at finding this type of solutions.

What would the identifying characteristics of a “devmetric” be?

- i) The evaluation period for individual researchers’ performance allows for the time needed to build research problems with external stakeholders;
- ii) During the period to be evaluated the researcher is required to show her capacity to do good research by having at least one publication in a good journal, but neither the number of publications nor the place of the related journals in the journals’ prestige ranking will be considered;
- iii) During the period to be evaluated the researcher is required to (a) give detailed account of the strategy she followed to build a research project with external stakeholders or that take stakeholders needs into account, (b) the results achieved in research terms -including formal papers as well as “grey” knowledge products- and (c) the results achieved in developmental terms. The latter is difficult to objectify; it can only be approached through preliminary results and subjective appreciations. Knowing this beforehand, and so not being fooled by any illusory objectivity, may help to perform a reasoned and convincing research evaluation exercise.

Indeed, research evaluation needs to be conceptualized as a tool “to improve or shape the research contents”. (Rafols et al, 2016: 3)

Summing-up: developmentally oriented research evaluation, accompanied by a consistent metric, should recognize that it is high time to give precedence over measuring, controlling, punishing, selecting, comparing and ranking, to encouraging and facilitating the dialogue with society around problems and how research and innovation can be part of its solutions. Some would say that “second rate science” will be the outcome of developmental research evaluation systems and of “devmetrics”; many more will probably say that the outcome will be that the “truth” and the “good” may have a chance to reach a fair balance. Avoiding the former and achieving the latter is indeed a difficult challenge; more researchers, all over the world, are uniting and organizing themselves to face it.

5.- Two examples of tensions, conflicts and proposals around research evaluation, South and North

5.1.- Tensions derived from conflicting evaluation systems: a Uruguayan example

Uruguay has a very high institutional concentration in terms of knowledge production. Around 80% of FTE (full-time equivalent) researchers work in the standardized category of Higher Education, a high figure even in South America. But the really unique feature is that one institution, the public University of the Republic (UR), accounts for around three quarters of the research done in the country. It is not an exaggeration to state that in Uruguay, with the exception of the life sciences and to some extent agricultural research, where more institutional diversification exists, what is not researched at the UR is hardly researched at all.

The overall organization of UR resembles a loose agglomeration of different schools more than a single institution governed by a common set of rules regarding teaching and research. Amid this federate tradition, two institutions aimed at promoting university research were built at a central level: the Full-Time Regime (FTR) in 1958 and the University Research Council in 1991. A main characteristic of both organizations is that they established common rules, valid for all faculty regardless to which college they belong. The first entails a salary increase; the second provides funds to perform research activities.

A new institution of national coverage was launched in 2008: the National System of Researchers (NSR). The NSR evaluates researchers through a normalized CV model; those selected in any of the four categories of the system receive a monthly stipend.

Three quarter of all researchers belonging to the NSR belong as well to the university FTR; the other way around, 82% of researchers belonging to the FTR regime belong as well to the NSR. So, the overlap is substantial and potential conflicts affect a high proportion of university researchers. The FTR is fifty years older than the NSR; the latter, even if designed and fostered mainly by highly prestigious researchers belonging to UR, has different aims, consider otherer things and has a different evaluation approach.

Two important characteristics shared by the FTR and the NSR are that entrance is granted if merit allows -there is not a fixed number of admissions- and that the continuity in both schemes depends on evaluation. The differences are striking, though:

- (i) Main aim: Give better conditions for accomplishing an academic life, particularly research activities (FTR); Classify researchers and encourage publications in refereed journals (NSR);
- (ii) Evaluation scope: past activities and proposed future work (FTR); past activities (NSR);
- (iii) Required activities to belong to the incentive scheme: publications and post-graduate students' supervision (FTR and NSR); institutional building, outreach and undergraduate teaching (RDT);
- (iv) Work burden and period of evaluation: moderate, time for evaluation is flexible (applications come at any time and the work is spread over the year); 5 years (RDT); high, time for evaluation is rigid (applications come at a given date in great numbers and are studied simultaneously); 4 years for senior researchers and 3 years for junior researchers (NSR);
- (v) Monetary reward: FTR is three times higher than NSR.

A scholar belonging to the two schemes may end up tensioned in terms of her academic choices given the mutually exclusionary effects of some required features. However, the puzzling question is why these tensions should appear at all for university researchers in the FTR, given that it is clearly more convenient than the NSR in economic terms. The answer relates to the relative reputation weight of the two schemes: most researchers see the NSR as conferring more academic prestige, particularly because it stems from regulations set by the academic elite. This explains the increasing frenzy for publishing, given that this is the main NSR' criteria for valuing researchers and particularly for comparing researcher among themselves.

As indicated by the agency that provides the funds for the NSR -the National Agency for Research and Innovation (ANII):

The evaluation criteria of the NSR are steadily being adopted by the academic community, contributing to the establishment of standards. (...) Researchers, especially the youngest that represent the entrance door to the NSR, want to respond to the requirements of the instrument, which gives it an important normative power (...). (ANII, 2012: 7, our translation).

The “normative power” establishes standards that push for more publications, regardless the other possible aims of the institutions in which researchers work. Moreover, the NRS currently uses the H index as a proxy to academic visibility of research outputs. (Ibid: 16)

This is at odds with what the Uruguayan community of exact and natural scientists proposed time ago as an evaluation system to judge their own work:

It is currently a quite diffused practice among certain areas to quantify the impact of a scientific journal on the community through the ‘impact index’. (...) We found it a poor approximation to reduce to a number assigned to the journal where it has been published the diverse and rich facets that the potential impact of a scientific contribution has. This criterion has received multiple criticisms from the international scientific community and its use should be discouraged. (Programa de Desarrollo de las Ciencias Básicas, PEDECIBA, 2004: 4, our translation)

Given the smallness of the Uruguayan research community, the burden of qualitative assessment is high; the frequent, massive and tightly scheduled evaluation procedures of the NSR make quantitative proxies to academic value and impact a welcome shortcut. The PEDECIBA recommendations seem to have been forgotten, but concerns aroused by this type of assessment are starting to be voiced again.

A recent institutional attempt to change research evaluation criteria involved the university research policy as a whole. Fostering such change was part of the effort of making universities less elitists, particularly by democratizing access, by articulating research with social needs and by promoting the relations between the university and social movement and vulnerable groups. Perhaps the traditional way of evaluating faculty in the Full-Time Regime could have coped with these changes without much contradictions, given its traditional qualitative style of assessment. But the wide superposition of faculty belonging to the FTR and to the NSR introduced tensions at individual level.

Recognizing that the problem was institutional more than individual, the University Research Council organized in 2012 a wide discussion around how faculty in the FTR should be evaluated. The most original recommendation regarding research was to avoid a rush to produce papers by asking to have at least one paper published in a reference journal in the 5 years’ evaluation period. The idea behind this proposal is that if a researcher can prove that she is able to publish what is counted normally as a good piece of work, she may dedicate part of the remaining period to do research that may not lead to more papers without being punished academically. Research problems defined in common with non-academic actors or of mainly local interest may then be taken on board more easily.

The university’s main authority accepted the proposal. The reactions of the university faculty, however, oscillated between indifference and hostility. Few voices rose in its support and some questioned the possibility of endangering research efforts by taking too much into consideration “non-publishable” research.

What may come up? The “status group” role of the NSR is strong, because this is what it aims: signaling who are the best researchers. Fostering good and locally relevant

research is, for the time being, a weak competitor in terms of awarding academic status. However, the negative effects of research efforts strategically geared towards entering and staying in the NSR is increasingly being recognized in different institutions, even if the concerns tend to be voiced anecdotally. There is a long way to go from this malaise to an organized movement able to legitimize an alternative research evaluation system, but signals pointing in this direction are discernable.

5.2.- Agreeing on what is wrong but not how to fix it: some reflections from Sweden

Research and development (R&D) has received high priority for the last several decades in the Swedish research policy community, resulting in a consistently high level of funding for R&D regardless of which political parties have been in power. In 2013, Swedish R&D amounted to 3.30% of GDP, one of the highest figures among OECD countries.

The business enterprise sector accounted for 69% of total R&D activities in 2013, while universities and other higher education institutions accounted for 27%. (SCB 2015). The private business sector finance R&D up to around 60%; almost all these R&D funds go to companies.

The State directly (through the budget) funds most of the research activities in higher education, reaching in 2013 almost half of the R&D revenues of this sector; the rest was accounted for by research councils and other external sources like SSF (strategic research), Mistra (strategic environmental research), KK-foundation (knowledge and competence development) and STINT (internationalization of higher education and research).

There are four main research councils responsible for financing research:

- the Swedish Research Council (VR) – funding basic research in science, technology, medicine, the humanities and social science,
- the Swedish Research Council for Health, Working life and Welfare – funding basic and needs-driven research,
- the Swedish Research Council (Formas) – funding basic and needs-driven research in the areas of Environment, Agricultural Sciences and Spatial Planning,
- the Swedish Governmental Agency for Innovation Systems (Vinnova) – funding needs-driven research in technology, transport, communication and working life.

The high consensus achieved concerning the need for a high and sustained level of funding for research has not reach the governance, organization and form of research, though. This reflects partly the constantly evolving discourse on the nature of knowledge and the knowledge creation process. This notwithstanding, governments of different political shades have during the last decades instituted a clear shift towards marketization of knowledge production. (Fischer 2015) This has been done through funding steering mechanisms as well as other measures to better align academic research with market forces. With half of the funding for academic research coming from core funding and half from external sources, the respective evaluation systems determining who gets access to the resources become critical. Moreover, incompatibilities in the systems may give rise to disincentives.

The competition for core funding rests on performance-based ex-post evaluation by academic peers. Already in 1997, in a seminal paper, Wennerås and Wold pointed to the nepotism and sexism inherent in the peer-review system for post-doctoral fellowship at the then Swedish Medical Research Council and called for “a scientific evaluation of the

scientific evaluation system” that would scrutinize the biases in rewarding particular persons or subject matters over others. (Wennerås and Wold, 1997). More recently, Hammarfelt and de Rijcke (2015) in a study of effects of the present Swedish research evaluation systems on publication practices, conclude that the implementation of a performance-based research evaluation system has resulted in an increased number of publications in English (rather than Swedish) and in peer-reviewed high-ranked journals. In particular, younger researchers appear to have understood the implications and devote most of their time to publishing, lest they perish. Such an evaluation system may divert research interest away from problem areas that are not perceived as interesting or too local by the peer-reviewers in the editorial staff of prestigious international journals. Moreover, as van Dalen and Henkens (2012) found in a worldwide survey of demographers, the pressure for publishing has resulted in a move away from policy and translating research outcomes for the public, toward publications intended for academic circles. They conclude that: “a strong focus on academic publications tends to crowd out activities that may increase the amount of information available to policymakers and the general public” (van Dalen and Henkens, 2012:1292).

Given that securing funding from external sources allows the scholar to reduce teaching requirement and increase research time - thus advancing his or her academic career - the pressure to compete for external funding is intense. Even tenured professors are expected to raise at least 50% of their salary from external sources to complement the university core funding. This puts a heavy load on the research councils to evaluate and select projects to support; the approval rate can be as low as 8-12% of the applications, as in the case of humanities and social sciences at the Swedish Research Council.

The ex-ante evaluation of research proposals takes into account “the academic quality and the applicants’ competence” and likelihood of success. The review is carried out by review boards reflecting the research society at large and consists of prominent researchers in respective areas. As Lamont (2009) note, however, review panels are inclined to act on personal preferences and disciplinary orientation, where elitism, gender bias and populism can lead to non-diversity and “business as usual”. (Lamont 2009) A research evaluation system that prioritizes the “best” researchers (which tend to be old and male) often leads to what Merton (1968) dubbed the Mathew effect (the recognized researchers get appropriations because of their reputation and newcomers are crowded out), to gender imbalance and to a paucity in the width of research projects.

The evaluation systems for core funding and external funding exhibit some overlap but both contribute to the weeding out of certain projects. In particular, it would seem like multidisciplinary projects have problems in finding appropriate funding instruments.

The tensions among and between the internal and external evaluation systems is further exacerbated by the pressure on researchers, departments, faculties and universities to publish in first-rate international journals in order to climb in university rankings.

The universities as well as research councils are well aware of the unintended consequences of the evaluation systems. In the research policy discourse there is a general agreement that: a) the balance between free basic research and commercial research continues to be skewed in favor of the latter, b) increasing short-term external funding precludes new and bold research initiatives and leads to the emergence of universities as research hotels, and c) too much strategic research leads to conformity and conceptual inbreeding.

The research councils have instituted a number of measures to counteract drawbacks in the peer-review evaluation system. In its policy, the Swedish Research Council recognizes

the risk of conflicts of interest in the rather small research community in Sweden, as well as the risk of mainstream research being favored over innovative and multidisciplinary research. The measures include an expressed intention to fund younger researchers, to encourage multidisciplinary research and to mainstream gender in project calls.

At universities and faculty level the responses have been of a more ad hoc nature. The awareness of and knowledge on challenges associated with evaluations are broad at all levels of the university system but there is less consensus on what needs to be done. A recent study of the evaluation model for university-society collaboration confirms the broad general knowledge on difficulties associated with evaluation; it finds that discussions tends to focus on how to construct relevant indicators rather than on the fundamental objectives and goals of the collaboration to be evaluated. (Bölling & Eriksson 2016)

Why do the prevailing evaluation systems with their focus on more or less relevant quantitative indicators persist? The tentative answer offered in a preceding section may have some relevance to the case of Sweden: that there exists a sort of implicit agreement that maintains the status quo in the evaluation system so governments can point to examples of their commitment to New Public Management while the academic elite continues to exert their power and propagate their world-view.

Concluding remarks

When knowledge is more related to power than ever, the governance of knowledge production is a key issue for development and for democracy. Democratizing knowledge is a requisite for innovation systems able to promote human and sustainable development. The prevailing research evaluation system act as a barrier towards this aim. Fostering alternative systems and metrics where the engagement of researchers with their social milieu is encouraged instead of punished should be part of Globelics concerns. Only that way one of the main goals of Globelics will have a chance to be achieved: consolidating a vibrant community committed, South and North, to innovation and development.

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