

# **The ‘Knowledge Society’ paradigm: A *new* chapter on the Geopolitics of Knowledge?**

**A comparative insight into the discursive framing of two cases:  
Ecuador and Germany**

Der “Wissensgesellschaftsparadigma”: Ein neues Kapitel in der Geopolitik des  
Wissens?

Eine vergleichende Einsicht in der diskursiven Umrahmung bei zwei Fällen: Ecuador und Deutschland

**Bachelor’s Thesis**

**by**

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Ich habe gehört, ihr wollt nichts lernen.  
Daraus entnehme ich: ihr seid Millionäre.  
Eure Zukunft ist gesichert. Sie liegt  
vor Euch im Licht. Eure Eltern  
haben dafür gesorgt, dass eure Füße  
an keinen Stein stoßen. Da musst du  
nichts lernen. So wie du bist  
kannst du bleiben.  
Sollte es dann doch Schwierigkeiten geben,  
da doch die Zeiten,  
wie ich gehört habe unsicher sind,  
hast du deine Führer, die dir genau sagen,  
was du zu machen hast, damit es Euch gut geht.  
Sie haben nachgelesen bei denen,  
welche die Wahrheiten wissen,  
die für alle Zeiten Gültigkeit haben  
und die Rezepte, die immer helfen.  
Wo so viele für dich sind,  
brauchst du keinen Finger zu rühren.  
Freilich, wenn es anders wäre,  
müsstest du lernen.

- Bertolt Brecht

"Nadie educa a nadie —nadie se educa a si mismo—, los hombres se educan entre si  
con la mediación del mundo." – Paulo Freire

“The Master's Tools Will Never Dismantle the Master's House” - Audre Lorde

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## 1. Abbreviations

- **BRICS:** Brazil, Russia, India, China, South-Africa
- **BV:** Buen Vivir (Living-Well)
- **CELAC:** Comunidad de Estados Latinoamericanos y Caribeños
- **CDU/CSU:** Christlich Demokratische Union/ Christlich-Soziale Union
- **CONAIE:** Confederación de Nacionalidades Indígenas del Ecuador
- **EK:** Enquete Kommission
- **EU:** European Union
- **FDP:** Freie Demokratische Partei
- **FLOK:** Free/Libre Open Knowledge
- **HE:** Higher Education
- **ICT:** Information and Communications Technology
- **IO:** International Organization
- **IS:** Information Society
- **KAM:** Knowledge Assessment Methodology
- **KM:** Knowledge Management
- **KE:** Knowledge Economy
- **KS:** Knowledge Society
- **NPBV:** National Plan of Buen Vivir
- **NWICO:** New World Information and Communication Order
- **OECD:** Organization for Economic Co-operation and Development
- **PISA:** Programme for International Student Assessment
- **SKAD:** Sociology of Knowledge Approach to Discourse
- **TRIPS:** Agreement on the Trade-Related Aspects of Intellectual Property Rights
- **UNASUR:** Unión de Naciones Suramericanas
- **UN DESA:** United Nations Department of Economic and Social Affairs
- **UNESCO:** United Nations Educational, Scientific and Cultural Organization
- **US:** United States
- **WC:** Washington Consensus
- **WSIS:** World Summit on the Information Society

## 2. Introduction

Knowledge has never been so relevant. Either for national, individual and now global development, knowledge, it is explained, is the factor required for success. Such unprecedented increase on the value of knowledge is as well the point of departure for the transition towards a new paradigm: the knowledge society (KS). Yet five decades after coining the term neither the post-capitalist, nor the post-industrial or the post-modern visions of Robert Lane, Peter Drucker, Daniel Bell, among other KS theorists, turned true. In fact, neither did the hopes on education immediately translate into peace, social equality or intercultural learning. Bearing in mind that these theories originated in the same post-war environment, to put it differently, on the renaissance of scientific and technological promises of development, it seems that in spite of international cooperation and increasing investments on education, not only challenging hierarchies failed but the ‘education gospel’ might have strengthened global structures of power, instead (Brown2008). Could updated KS proposals, then, enable to diminish hierarchies between peoples, between knowledges? This is the central inquiry of this paper.

Between the 60s and 70s, together with the fever on Economics of Education, which sought to measure the effective translation of human capital training into economic growth (Vaizey 1962), KS theories emerged in the United States and rapidly expanded throughout industrial societies. On the afterwards, nevertheless, we have seen the spillover expectations on human capital for the benefit of national welfare (Stiglitz et al. 1999), being dismantled by credential and patterns accumulation within rising academic capitalism (Slaughter/Rhoades 2004). Instead of enabling capabilities for liberating minds and emancipating souls (Sen 1997), we have seen universities producing efficient subjects for the labor market (Lauder et al. 2006: 47), but incapable of being solidary. What could have gone wrong? For Boaventura Sousa do Santos, the answer lies in the fact that Eurocentric-thought can no longer respond to the problems it helped to create. “After five centuries of ‘teaching’ the world” he says, “the global North, (might have) lost the capacity to learn from the experiences of the world” (Santos 2014: 19). Hereby, Santos refers to the highly destructive “modern foundation of territorial and imperial knowledge” (Mignolo/Tlostanova 2006: 205). These insights arouse on the process and in the aftermath of decolonization struggles, which represent *as well*- although the

dominant discourse often opts for blinding it- essential landmarks on the second half of the XXth century. In this framework not only the political constitution of colonialism was questioned, but what is more, its inherent tools; the “*coloniality of power*” (Quijano 2000), “*knowledge and being*” where exposed (Maldonado-Torres 2004). Further, the “abyssal line” (Santos 2014) which separated the barbaric from the civilized, also sentenced the rupture nature/man, among other dichotomies commonly rooted in a “matrix of oppression” (Grosfoguel 2013). As a result, the function of knowledge that prevails in our days was set as the “rational control over the world” (Castro-Gómez 2007:81). Still, albeit oppression, indigenous, women, non-occidental “epistemologies of the south” *actively* resisted. Due to the systemic crisis of our times, as Santos argues, it is even more urgent to learn from these anti-hegemonic struggles, since without epistemological justice, there will be no social justice (Santos 2014). Hence, my approach to the geopolitics of knowledge relies firstly, on acknowledging the “historical diversification of colonial and imperial differences” (Mignolo 2002: 59), and, secondly, seeks for social transformation initiatives, which could derive from the KS paradigm.

One of the most relevant KS advocates is UNESCO, which in 2005- despite of owing the introduction of the term ‘KS’ to the attempt of recovering centrality in the ICTs’ debate (Rivière 2015) - called for global engagement in the construction of a, by the time, not-that-new paradigm. However, given the formerly elaborated scenario, UNESCO realized that if a transition towards KS is desired, then overcoming the techno-centric approach and considering further epistemic cultures (Knorr-Cetina 2007) was necessary (Mansell 2010). From Education, through Information, the focus became enabling knowledge societies For All (Mansell/Tremblay 2013). Hence, by emphasizing that the digital age offers opportunities, but might also generate exclusion, UNESCO urged “all stakeholders to ensure that everyone has the skills and capabilities to contribute to, and participate in, building inclusive knowledge societies (2014: 7). Accordingly, “those who can absorb and use information to develop new products and services are more likely to succeed in a world of technological complexity” (ibid: 18). Yet if this, among other, international organizations have repeatedly being denounced for recolonizing education (Salas 2013) as part of a broader hegemonic program (Sahrai/Sahrai 2006), then does UNESCO’s claim of including *everybody* imply that the co-constitutive oppression within the geopolitics of knowledge could be solved?

Consequently, this narrative went far beyond the theoretical discussions anchored in the North (Sahrai/Sahrai 2006: 375). But from Asia (Evers 2002, Shapira et. al 2006) to East-Europe (Afgan/Carvalho 2010, Batagan 2007), going from Africa (Hallberg Adu 2014) to Scandinavia (Henningsen 2002); everybody got immersed in the attempt of coping with the KS and derivatives. However, this did not lead to overcoming the ‘development’ myth. In contrast, the former appears as life or death enclosure, wherein technology is the entrance key. More than as a potential, the knowledge economy is seen as a survival need (Afele 2003, Ogunsola 2008). To put it differently, not only did the rich accumulate more, at cost of natural catastrophes and human exploitation; but also their corresponding countries were supposed to *know* better. Indicators prove that the machines they use determine a divide beyond class *within* the state, but inherently between developed/underdeveloped, center/periphery. Despite the terminology; fact is the “Knowledge-Gap” (UNDESA 2005) correlates with an additional myth; modernity. Accordingly the more rural, informal, unquantifiable, unpredictable, autonomous from technology people are, but rely on their hands, on the ground, on un-institutionalized social cooperation, the most knowledge they lack. Yet if the departing points were so asymmetric between nation-states, according to UNDESA and the World Bank (Hallberg Adu 2014), why would these be disposed to fiercely engage in the same race? Comparative studies are often based on benchmarking indicators (economy, technology, patents, ICTs), which measure the technical potential of nation-states (Brunner 2014). Yet this unveils the lack of seriousness on examining the states’ contexts and goals in regards to the KS project. Hence, I propose de- and reconstructing (Slater 2008: 344) *how* policy-makers conceive the KS. For this means I will compare two cases of study.

On the one hand, I will consider one of South-America’s Socialism of the XXIst century paradigmatic models, Ecuador. Since not only the country’s anti-imperialistic discourse, by criticizing the US’ and World Bank’s driven “neo-liberal night” attracted much attention; but also the Living-Well policy has caused a wave of hope as the Revolución Ciudadana deemed to prove that indigenous wisdom on holistically living with nature is not incompatible but keen to be institutionalized by the contractual state. Even more decisive hereby, is that Ecuador positions as a **Social Knowledge Economy**- pioneer. This is why the former fiercely promotes the centrality of the KS in the regional agenda.

On the other hand, I will analyze a main figure on the institutionalization of knowledge, as we know it: the “land of ideas”, the “research location”, Germany. Since “there- as Hans-Dieter Kübler claims- “passes not a single day without talking about the KS” (2009: 5). Moreover what characterizes the worldwide export’s champion is enabling to be a geopolitical leader in various instances, i.e. within and throughout the Union or through bilateral and international sustainable development cooperation. In respect to the **Global KS**, thus, Germany aims to take advantage of the current framework, in order to recover its leading role, which could be threatened by emerging powers.

More concretely, this analysis is structured as follows. Since the vast literature on the topic offered very contradictory explanations in respect to the definition, measuring criteria, and the moment when it started to matter, I engaged in an in-/deduction exploratory process, which decisively contributed to the establishment of the current research question. Hence, in the second chapter, I will explain this, as well as the **methodological toolbox** chosen for the schematic analysis. Subsequently I will trace an overview on the **theoretical grounds of the KS** as classic and current approaches describe the KS development in relation to additional concepts such as the Knowledge Economy and the Information Society. Moreover, even though **Ecuador** and **Germany’s KS discourses** might not directly point to such theorists, it is highly probable that former theoretical reflections on the KS nurtured their policy vocabulary. Therefore I will seek to reconstruct both countries' path towards the KS enterprise by introducing key moments on knowledge policy-making along historic, institutional, and situational contexts. Following, I will analyze the KS justifications so as imaginaries within both government discourses, first separately, and comparatively, later. In order to explain resulting similarities and differences I will reconsider the KS conceptions in respect to both countries’ contexts. Additionally, for the means of deepening on the consequences of Ecuador and Germany’s KS endeavors, I will summarize further critical perspectives and **discuss** implied power structures. *Which hierarchies ought to be alleviated or strengthened?* – I will ask. This will lead me to the **concluding remarks**, where I will reflect on the utility of the SKAD as well as on the relevance of this comparative analysis in respect to the global campaign “Towards KS”.



### **3. Methodology**

In order to justify the materialization of my former reflections on the current research question, I will draw on main events, which contributed to delimit the inquiry of the Knowledge Society phenomena by re-contextualizing, deconstructing, reinterpreting and comparing two political documents as crucial elements encompassing the German and Ecuadorian discourses (2.1). Subsequently I will introduce the proposed research question by shortly elaborating on related sub-questions (2.2). Following, I will outline the theoretical fundamentals of the methodology taken into account on the analysis, by relying mainly on the Sociology of Knowledge Approach to Discourse, as suggested by Reiner Keller (2011b; 2011a; 2012; 2014) (2.3). In addition, I will argue the pertinence of the chosen methodological framework, so as anticipate possible limitations (2.4).

#### **3.1 Initial steps taken in order to establish the research question**

As shown in the introduction reflections on the concepts “knowledge society” and “knowledge economy”, are far from being recent. Nevertheless this seems to be the case, when policy-makers make use of a discursive arsenal of modernity by highlighting their pioneer role on such enterprise, and thus, trying to sketch the idea that their proposals are innovative answers to immediate questions. As the KS rhetoric became louder in my ears, inquiry questionings emerged. “*What type of knowledge and what type of society* are people referring to?” were the most reiterative. Next these would be accompanied by “*what is actually new* on such enterprise?” As these signified very broad questionings, which serious consideration implied being answered from a multiplicity of disciplines and dimensions, I decided to undertake an explorative approach. The research process, which extended through a year of reflections, combined normative, diagnostic and critical readings. Additionally a three-months internship experience within UNESCO’s Knowledge Society Division was a very fertile scenario for interviewing program-specialists, education scholars, delegation representatives, among others. In sum this lead to the following conclusions/ points of departure:

- 1) Much more critical reflections on the origin, instrumentality and implications of the Knowledge Society program (i.e. reflected on the discourse) have to be done,

- 2) This matter is by no means limited to specific nation-states, but rather can be perceived as a global phenomenon. Further research, therefore, should consider geopolitical implications by unveiling global(ized) structures of power,
- 3) Three main subjects were recognized, a) **policy-makers, who actively promote the enterprise** (governments, IOs, NGOs), b) critics, mainly philosophers, sociologists and pedagogues. And finally c) advocates, i.e. economists and civil society foundations, who are engaged on facilitating the KS institutionalization.
- 4) After launching UNESCO's KS programme in accordance to a joint strategy, the specialists' synergies are put on implementing, much more than on reflecting.

Hence acknowledging the dominant role of policy-makers, and more specifically, of state representatives, corroborated to determine the analysis of the government's Knowledge Society discourse. As an exhaustive inquiry on all actors' involvement in the public discourse, i.e. would exceed on time and length the task of this paper, I will focus on two concrete political documents, which reflect the contextual fundamentals and the (geo) politico-economical strategy behind the Knowledge Society enterprise:

- a) Regarding Germany I will analyze the "Federal Government's Strategy for the Internationalization of Science and Research: Strengthening Germany's Role in the Global Knowledge Society" (BMBF 2008).
- b) Concerning Ecuador I will examine the KS' framing within its development agenda, the "National Plan of Living Well 2009-2013" (Senplades 2013).

The **research question** is thus composed of two parts: a) *how are the Knowledge Society-political discourses in Ecuador and Germany framed?* And, b) *how can similarities and differences be explained?*

### 3.2 Sociology of Knowledge Approach to Discourse

As a prime motivation discourse analysis has always tried to dismantle the hidden message within the script. Notwithstanding, as argued by Reiner Keller, throughout the last decades prominent approaches have failed on examining the various ways power relations can be entangled, as broadly influential methodologies have opted to focus on still relevant but rather tangential matters. Proving examples of how the "power question" could be evaded are to be found in Teun van Dijk's *Ethno-methodological*

*analysis* on “talk and text (inter)action” (Keller 2012: 50) , as well as in Norman Fairclough’s *Critical Discourse Analysis* (ibid: 51), so as in Jürgen Habermas’ quest for the most reasonable argument within the *Theory of Communicative Action* (ibid: 60). Correspondingly Keller’s critique points to the reductionism of microanalysis centering on one or two actors’ narratives (van Djik); the belief that actors ignore the origins of their discourse, leading, thus, to the researchers’ strive for uncovering such by semiotics analysis, *only* (Fairclough); and finally assuming that a reasonable discussion implies choosing arguments from a pool of objective and neutral knowledge (Habermas).

Hence, Keller’s SKAD entails the attempt of recovering the inquiry on power formation as the central impulse for disentangling the *genealogy* and *archeology of knowledge*, following Michel Foucault’s *discourse theory*. Keller sketches this as “the correlation between the sign usage as a social practice and the (re)production/transformation of social orders of knowledge” (ibid: 59). Therefore going beyond semiotics and grammar analysis is required, since discourse is understood not only as a statement, but as various practices, which “expand themselves - get expanded! - in more or less anonymous communication processes or practices, through the (help) of varied resources: mass media, law texts, etc.” (2011a: 71). Keller’s proposal points to the socio-historical genealogy, to the variation and transformation of such forms. “In what way does a speech or a text have to be formally constructed to count as being part of political, religious, scientific discourse at a given historical moment and context?”- he asks. Moreover, “what is being said and by whom, with what effects (?) (2012: 66).

A further fundamental reference for Keller is Peter Berger and Thomas Luckmann’s *Social Construction of Knowledge*, which by focusing on the construction of meaning underlines that “discourses exist *as* but also *in* performances”. This means, in one hand that “discourse itself indicates a structuration context (...) [*and*, in the other hand] discourse is subject to the conditions of institutional inertia”. Therefore, Keller explains, “discourses can be understood as attempts to freeze meanings”. This *broad symbolic orders* are fixed in time by “institutionalizing a binding of meaning, values and actions/ agency within social collectives” (ibid: 59).

Concerning the discourse analyzes hereunder, it is essential to underline that neither Foucault, nor Berger & Luckmann, nor Keller propose a formal methodology. Rather

what these authors have in common is a preliminary understanding of knowledge being inherently related to power structures. Meaning that any lecture from it would not be free of the researcher's epistemological background and moreover it is to be considered as an "interpretative reconstruction" (2008: 12). In Keller's words "analyses proceed constructively because they generate interpretations, conceptual schemata, and observations *out of the data*, and in so doing they generate types of statements that were not in the actual data as such and *could not have been*" (2011b: 63). Therefore, Keller's main contribution is offering a methodological toolbox, which provides terminology for varied interpretation perspectives, "(s)ince the construction process is determined first of all by the relevancies – the questions, analysis concepts and strategies – [which] are geared towards giving the "field's own relevancies" a chance (2012: 73).

### 3.3 Pertinent methodological toolbox and its limits

By retrieving some elements (see appendix for details on the *interpretation scheme*) from SKAD the government's KS discourses will be analyzed as follows:

- I. *I Contextual analysis*: in order to understand *when, how* and *why* did governments start advocating for the KS paradigm, it is essential to review main historical events and political decisions in regards to the educational and economical fields, which lead governments to consider such enterprise. For this means, SKAD is particularly helpful since "(it) does not address singular, isolated, individualized discursive events for their own sake, but always as being part of a series of such events." Concrete the suggested analysis will differ between a) historic-social, time diagnostic (*zeitdiagnostischer*), b) institutional-organizational and c) situational contexts (Keller 2011a: 100).
- II. *Scheme of concepts*: varying arguments for the KS pursue can be found depending on the speaker's theoretical and practical understanding of the paradigm. Political documents, for instance, "freeze" the author's KS interpretation by expressing a specific definition. This interpretation establishes the validity of a KS according to each nation-state, in the first place, as well as reveals the governments' epistemological understandings of "knowledge", "society" and the resulting interaction of both elements within the same equation.

- III. *Argumentative (re)construction*: accompanying the overall interpretation of the historical diagnosis and the KS legitimacy, a more concrete structure containing the current “problem(s) to be solved” by the government so as the “social actors’ positioning” (the role of the state, for instance) is sketched (ibid: 68).
- IV. *Dispositive, action legitimating tools*: as mentioned earlier “SKAD examines discourses like performative statement practices and *symbolic orderings*, which “constitute reality orders and also produce power effects in a conflict-ridden network of social actors, institutional dispositives, and knowledge stocks. [Thus] discourse is concrete and material, it is not an abstract idea or free-floating line of arguments” (ibid: 59). This means that a deeper analysis on the concrete interaction between the “infrastructure designed [by the government] to solve a problem” and the “adoption or rejection” of further policies as suggested along the discourse is required.
- V. *Narration line*: finally, we will look at the story line enabling the articulation of argumentative elements as these are presented in a *coherent* ensemble.

In sum the suggested discourse analysis focuses on the argumentative structure and the meanings provided by the government, in order to justify the need of and goals by contriving a KS. Essential questionings for enabling a much holistic view would also consider i.e. *how are KS framed in the public discourse? How does this vary throughout time and space depending on the galleria, arena (Gerhards 2008)? Which policies were legitimated by the KS paradigm and which were its KS consequences?* However due to limited research resources, I will go forward to trace the genealogy of the KS term. This short overview seeks to provide bridges upon additional theoretical milestones, such as the “information society”, the “network society” and the “knowledge economy”.

#### **4. Theoretical grounds for the Knowledge-based Society**

If learning is a living-beings’ characteristic, much more is it for collectives to develop ways of using, transmitting and even extending their knowledge, in order for its members to be able to constitute (or “function” (Reinhardt 2010: 86)) as such. Hence, what do politicians and scholars mean when they claim the *emergence*, the *transition*, the *construction* or *reinforcement* of the “knowledge society”? Certainly, since the last decade the KS rhetoric among policy-makers has rouse to such extent that some put it

under the label of global phenomenon. Herein notwithstanding I opt for the term *globalized-phenomenon*, since the discourse did not appear at the same time, globally, but to be concrete it was developed upon the Anglo-Saxon post-WWII experience, by economists and social scientists striving for perspectives beyond industrialization. The proposed concept's genealogy will follow its reconstruction path within German<sup>1</sup> and Spanish-speaking scholarship (while focusing in Ecuador) so as consider the influence of international organizations as a possible explanation for its broad use.

#### 4.1 The Knowledgeable Society

Regardless of the standing point, there are two *classics*, overwhelmingly appearing in the KS literature; Peter Drucker, precursor of the “knowledge economy” and David Bell often considered as the “information society” forerunner. We will return to them later, because a prior step is crucial; namely **Robert Lane**, who coined and defined the KS as:

“one in which, more than in other societies, its members a) *inquire* into the basis of their *beliefs* about man, nature and society b) are guided (perhaps consciously) by *objective standards of veridical true*, and at the *upper* levels of education, *follow scientific rules* of evidence and inference in inquiry c) *devote considerable resources* to this inquiry and thus have a *large store of knowledge* d) collect, organize and interpret their knowledge in a constant effort to *extract further meaning* from it for the purposes at hand e) employ this knowledge, to illuminate (and perhaps modify) their values and goals as well as to *advance* them” (Lane 1966: 650, emphasis added).

An explanation for Lane's urge to develop an “epistemology of the logics of enquire”, is the “growth of knowledge and culture” he perceives (ibid: 651). Yet, he warns, not only ideology (which in his accordance is the target) could be challenged, but “knowledge is encroaching on politics”, too (ibid: 657). Therefore beyond provoking an individual “attitudinal disequilibrium”, due to existential questionings; more knowledge means political “pressure, even without pressure groups” (ibid: 661). Thus, Lane concludes, policy-makers are called to react (ibid: 662). As more information is conveyed, he adds, this will impact values (i.e. “ideological postures towards the business of government”).

Hence, since its conception, the KS does not value every knowledge(s) *equally*, but it is particularly interested in the interaction of scientific knowledge. As Carsten Reinhardt goes, it is defined by one knowledge form (amongst many), implying specific validity claims: objective, neutral, new, oriented towards the common good, useful (ibid: 88).

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<sup>1</sup> Which is where more exhaustive historiography attempts appear to be undertaken in comparison to English, Spanish (since Ecuador's case will also be analyzed) or French (in spite of UNESCO) speaking scholarship.

For this reason considering to reconstruct the history of knowledge in any society is definitely interesting and possible, he argues, yet such approach would fail to explain the *special status* acquired by scientific knowledge in modern western societies, so as the globalization of this knowledge throughout the 18<sup>th</sup> century. Crucially distinctive at that point, i.e., was that whereas traditional societies could opt for a narrow set of skills used in environments with rather constant characteristics, this is no longer the case in the industrial economy, as Marx, Weber and Schumpeter earlier remarked (Heidenreich 2003:5). In opposition, Reinhardt suggests that in order to track the emergence of the KS, rather the modernization campaign between 1950 and 2000 should be inquired, since this resulted in a changing relationship between science, politics and economy. Within this context, he adds, the *regulation* of science became as much relevant as *innovation* did (ibid: 86). As a result, this “extensive scientization” decisively changed the human being’s perception of the world and himself (Schelsky 1961: 6).

#### **4.2 Information, the raw material of Society**

Deeply related with the former exposition, the theoretical foundations of the “information society” (IS) take remarkable scientific and technological developments as point of departure. Hereby, potential transformation scenarios, in regards to the industrial sector are envisioned. Jochen Steinbicker, i.e. comprises the extensively literature on the matter in seven comparative dimensions: 1) new production forces, 2) new information and communication technologies, 3) organization change, 4) structural labor change, 5) stratification 6) power 7) conflict. Meaning that specific singularities may vary, according to each IS conception, however, altogether the IS is seen as the product of social development, which course is scientifically recognizable. For this reason while the IS idea impulses political action and social reforms, the social scientist task appears to be restricted to elaborate on industrial development requirements (2011: 124). Yet, *which* scholarship is under scope? Were there any KS/IS theorists outside of the US? As a noteworthy exception, **Tadao Umesao** appears in Steinbicker’s reconstruction as the only *non-western author*. In his accordance the particularity of the Japanese example is that contrary to the West the most important economical problems were based in high-incomes as well as both, workforce and raw material deficits. The

technical development appeared above all as a potential for saving energy and work without occasioning that work and industrial production loose their status (ibid: 17).

Heading back to the US, **Daniel Bell**'s prognosis encompassed in "The Coming of Post-Industrial Society" (1985) decisively differed from common approaches, which claimed that "bureaucratization" and science would develop "heteronomously" (Steinbicker 2011:78). Bell's postulate, in contrast, was that theoretical knowledge, information, would become the structuring axis of social and productive organization (Bell 1976). Meaning, that bureaucratization- rather asking for sharpening the professional ethos- would result on the emergence of the *knowledge worker*. Therefore meritocracy will rule. Enabling, subsequently, that social positioning is not determined by the subject's possessions or origin anymore. Yet due to theoretical and technical requirements in the labor market; the worker "skills" (P. Walsh 2013: 421) would predominate. Building up on Bell's relevance given to information, **Manuel Castells** further de-links the IS from the KS. His attempt is thinking globally, instead of only focusing on OECD countries (as former authors) and empirically demonstrating the existence of a global informational capitalism; "for the first time in history" he says, "the capitalist mode of production shapes social relationships all over the planet" (Castells 1996: 471). Determinant for such elucidation is a new "culture of real virtuality" nesting in the "information age" (Castells 2004). Herein a new world of representations develops, as an individualist "decentralized use of technology" turns to be particularly valued (Steinbicker 2011: 81). Therefore "what is actually new" in the rather called *network society* (as opposed to IS) is "an extension and augmentation of the body and mind of human subjects in networks of interaction powered by microelectronics-based information (and) communication technologies". Power is embedded in these technologies, as these are "increasingly diffused throughout the entire realm of human activity by growing miniaturization" (Castells 2004: 6,7).

In parallel, the IS fueled geopolitical struggles, to which **UNESCO** served as platform. Hence, lead by the Non-Aligned Movement, the MacBride commission demanded "universal access" (Nicey 2012: 166), the "decolonization of information", "cultural diversity in the cyberspace" (Nordenstreng 2012: 32) as well as re-shaping horizontal telecommunication networks (Masmoudi 2012). As a consequence the US and UK left



the organization; either due to corporative pressure (since the proposed New World Information and Communication Order would have been an inconvenient framework for their domination in the market) or for the sake of neglecting multinational cooperation (Nordenstreng 2012: 34). Fact is the subsequent financial crisis left the MacBride requests unconcluded. Strategic arrangements, therefore, had to be done, and re-formulating the IS term was a powerful way to recover UNESCO's leadership without pissing any power off<sup>2</sup>. Therefore, amidst the 2003 World Summit on the IS the term KS was introduced, in order to include all the sectors of the organization (Rivière 2015). Following, "UNESCO slowly moved from a techno-deterministic perspective to a more balanced vision of the role information technology should play for society" (Pohle 2012: 109). Concerns for socio-economic and environmental development, thus, were integrated in the novel multi-stakeholder strategy (Burch 2006). Notwithstanding throughout WSIS the technocratic discourse prevailed (Rooney 2005). Even later, i.e. as the Towards KSs report (UNESCO 2005) (ill.1) was entrusted to the Communication and Information sector, online multi-lingualism seems to be the farthest envisioned in regards to cultural diversity. While promoting the use of ICTs<sup>3</sup> (ITU 2014) by indigenous peoples appears as "life-long learning" innovation (Singh 2012: 160), instead of seriously considering indigenous epistemologies as sources for learning.

### 4.3 The Knowledge-driven Economy

Similarly for the global promotion of the KE paradigm a crucial role was played by the **OECD** and **World Bank**, which correspondingly published the Knowledge-based economy Report (1996) so as the Knowledge for Development Report (1998). According to the OECD i.e., "the role of knowledge (as compared with natural resources, physical capital and low skill labor) has taken on greater importance. [Consequently] although the pace may differ all OECD economies are moving towards a knowledge-based economy". Moreover the World Bank decisively forwarded the idea of "knowledge as a global public good", which enables spillover effects. As a result both international organizations, as New Growth advocates, called for increasing

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<sup>2</sup> [The] departure from the rather technological positivist approach (...) has to be seen in the light of UNESCO's situation after the withdrawal of the US and GB. Forced to change priorities and define new objectives, the organization introduced a new development paradigm, leading at the same time to a "depolitization" of debates and to a "detechinisation" of activities. (Elzinga quoted by Pohle 2012: 116)

<sup>3</sup> See: <http://www.unesco.org/new/en/indigenous-peoples/knowledge-societies-and-icts/>

investment (either through privatization or national policies) on universities. These being the main infrastructure inheriting information encompassed the “future service industries”. Onwards “know what” and “know why” changed to “know how” and “know who”. Knowledge, now seen as a commodity, points to the underdeveloped “knowledge gap” and “information problems”. The periphery is thus expected to develop “strategies for acquiring, absorbing and communicating knowledge” (Olssen/Peters 2005: 333–338). As a further attempt of establishing global hierarchy batons, the Knowledge Assessment Methodology (ill.2) was launched followed by UN DESA’s Index of Knowledge Societies (Hallberg Adu 2014: 9-12) (ill3). Herein the KS is defined by the “high concentration of knowledge workers”, while even beyond R&D laboratories and including business firms engaged in provision services, communities are valued as long as they become “factories of new meaning” (UN DESA 2005: 6)<sup>4</sup>.

Yet, where did this idea come from? Since **Fritz Machlup (1962)** was the first scholar, who attempted to measure the knowledge economy, for many the former together with the information economy, was born in the US (Kerr/Ó Riain 2009: 31). Relying on this empirical data, **Peter Drucker (1969)**, the “management theorist” (Steinbicker 2011: 20) extended the calculations to the service- and information sectors (Kübler 2009: 96). Thus increasingly blurred limits between private and public, targeting at knowledge about knowledge, in order to exploit its productive features nested the “knowledge industry” (Steinbicker 2011: 24-26), which presumed to lead to a “post-capitalist society” (ibid: 25). However post- did not mean anti-capitalist. According to Drucker, in spite of the knowledge productive revolution (which impulses the worker to escalate to the middle class) both workers and capitalists become further socially and economically peripheral (ibid: 36). Moreover as the overall goal is profiting at the core of cognitive capitalism, the idea of manageable education is conceived (Peters/Reveley 2014: 144). Notwithstanding, as pointed out by Klaus North, in contrast to information and data, knowledge remains “context specific and linked to the subject” (Kübler 2009:123). A “knowledge data bank” therefore, cannot exist. All the same, this does not hinder knowledge from being objectified and externalized nor further separated between

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<sup>4</sup> Only KS if proliferation of knowledge-intensive communities; basically linked to scientific, technical and business professions or projects, public or semi-public, strong knowledge production and reproduction capabilities, and the intensive use of information technologies. (David/Foray 2003: 45)

“implicit” and “explicit” (Polanyi 1966). Hereby as the latter can be codified and documented it is possible to grant knowledge a market value as well as model exact knowledge hierarchies (ill.4) in order to facilitate its management (Müller 2006).

In recent years, following the expansion of knowledge production and the need for complementing quantitative data (Powell/Snellman 2004), scholars have unceasingly invested effort on comprising a definition in pursue of measuring the KE. Ian Brinkley, i.e. clarifies that “the KE is not a *new* economy operating to a new set of economic laws, [rather it] represents a *soft discontinuity* from the past”. Furthermore it can be “present in all sectors of the economy, not just in knowledge intensive industries”, since, concrete, what the KE proclaims is an “intens(e) usage of ICTs by well-educated knowledge workers”, which further requires a growing “share of GDP to knowledge intangibles”. Therefore, in a nutshell, “the KE consists of organizations using new technologies (...), [which] allows [them] to handle, store and share information through knowledge management practices” (Brinkley 2006: 13). However other studies suggest that precisely this “new public management” discourse has to be associated with the rise of **neo-liberalism** (Olssen/Peters 2005), which particularly targets to skills and performance measurements, within HE (Peters/Reveley 2014). Consequently this discourse, being widely used by corporations and policy-makers requires reports so as statistical studies, in order to “legitimate a particular ideological agenda”. For instance, as illustrated above, IOs portray the KE as a “stage of development that all countries will or should attain and knowledge itself has come to be valued only in terms of the degree to which it can be codified, measured, owned, and traded.” (Kerr/Ó Riain 2009: 35). Hence this “informational form of capitalism”, which is supposed to have a planetary scale, is commonly “captured under the loose rubric of ‘network’ forms of organization”. Further “new patterns of socio-spatial inequality are linked”, i.e. ‘digital divide’. However it prevails as main objective to justify labor and social restructuration.

#### **4.4 Towards (de)constructing Knowledge Societies**

In his KS historization attempt, Martin Heidenreich saw a main tensions between the nation-state’s regulation and the globalization of techno-scientific markets (2003: 14). German scholarship, notwithstanding, limits the scope to internal issues. Hereby relying

on Nico Stehr, who saw in scientific knowledge the social inequality of the future, essential to “master one’s life” (1999). Yet, in parallel, Stehr argues, this could cause fragility, due to the decreasing legitimacy of institutions (2001). Thus, his conclusion approaches Lane’s, as Stehr announces the “age of the politics of knowledge” (2010).

Latin-American literature on the KS, conversely, dates from the late 90s and early 2000s. Scholars often mention UNESCO and construct over the same theoretical grounds herein exposed (Bianchi 2009, Rivoir 2009). Castells is probably another catalyst for Spanish-speaking scholars to review the IS approach. Albeit referring to Spain implies different issues, i.e. departing from a “hiperconnected society” (Brey et. al 2009). In opposition, Latin-American authors still express wonder for the KS and/or show skepticism for hegemonic developmentalism, as it is commonly not assumed that the region is immersed in the digital age, yet. In this regard, we might not be able to cover the transnational development of the KS concept, exhaustively as it deserves. The following attempt, though, proposes organizing the revised literature in three themes:

- As the **term** is critically examined authors denounce “the badly called KS”, since it rather constitutes an imperialistic campaign to fracture labor stability (Pérez 2006). Further the “(in)transibility to the KS (viewed from) modern-sociology” also poses warnings for centrism, triumphalism, scientifism and expertocracy. Since knowledge does not mean knowing, nor the KE represents the real economy, nor society is a corporation and the world is not a market, the conception of KS emerges “in the midst of a society of ignorance” (Lara González 2011). Therefore analyzing the KS, often put as a distinctly economic phenomena, requires deepening on absences; looking for other knowledges, other beings, other ways of making, other spaces (Binimelis 2010).
- In a next stream a much pragmatic approach is sought as scholars reflect on the specific positioning of Latin America. The globalization of the **KS as a development model** is taken for granted. Not taking advantage of current potentials thus, would generate even more inequality (Lema 2001: 21). In this line, the whole education system has to prepare for the challenges posed by the KS (Tedesco 2000). Also this paradigm is able of counterweighing the 80s and 90s idea that poor countries had to concentrate on basic education, while centric countries could assume focusing on science and technology. In

contrast the KS as a desirable model for all recognizes the importance for each country to generate technologies according to their development needs (Marrero 2007: 72).

- An additional tendency strives for the **formulation of concrete policy measures** so as proposes country-specific ways of implementing the KS (Albornoz 1997). This is the prevalent case in the Ecuadorian literature, being the current Secretary of HE, science, technology and innovation, the only author, who re-theorizes the KS (Ramírez 2014).

As we try to make sense of the political discourses, it is essential to acknowledge that academic reflections on the KS have, since the beginning, being intrinsically oriented towards policy recommendations. Therefore, even though some have tried to fundament the knowledge economy or the network society statistically, the existence of the former has never gone through a serious empirical inquiry. Certainly, especially IOs have developed transnational KS indicators, yet these still focus on the way technologies influence learning, working, producing, etc. None of these considers how the broad knowledge (beyond science and technology) stocked in society could be a source for the reconfiguration of social organization, as it is *theoretically* the case. Thus, being the last stream our domain, it gives way to exploring Germany's and Ecuador's state-lead KSs.

## **5. Cases of study**

### **5.1 Germany: The Global Knowledge Society**

#### **a) Historical context**

“Sapere aude!” - was declared by Immanuel Kant on the introductory lines of what is broadly considered as the founding document of a new epoch in human history (if we follow Hegel's lineal conception of time). “Dare to know!” meant the order (Foucault 1984) inviting thus to join the leitmotif of the Illustration: finding the truth; a universal knowledge only reachable through individual inquiry, particularly, by the scientist, the cosmopolitan man (Kant 1784). Such pursue, was successfully institutionalized globally by the main knowledge structure valid until present times; the modern Humboldtian university (Angelmahr/Ertl 2007: 13), which as well, and not by coincidence, was founded in Germany. In this line, it is certainly not misleading to state that the modern understanding of sciences originated in the context of the German Illustration. What needs to be emphasized, though, is that such “achievement” was determined by prior philosophical understandings of the Western, white man at the centre of the universe,

who is capable of dominating nature and even of creating himself (Maldonado-Torres 2004). Precisely at the heart of this Cartesian dichotomy lied the bond “ego cogito/ego conquiro”, which set the basis for the *coloniality of knowledge* to constitutively replicate- despite the twilight of colonialism -along the construction of the “myth of modernity” (Dussel 1995). Consequently, even if Germany is commonly considered as the third territory (after the UK and France) nesting the industrial revolution there is no doubt that philosophers like Weber, Marx, Hegel, Schumpeter played a crucial role by linking technologica with social transformations. It is furthermore not surprising that as these authors and their reproductive platforms (e.g. “printing capitalism”, see Anderson 2006: 47) gained global influence, the acknowledged possibilities to exercise critique on the capitalistic and techno-centric civilization, once again concentrated the world’s eyes on Germany; first on Marx and on the Frankfurt School later (C. Walsh 2007).

The modernist ethos, originating on the Illustration and nurtured by the industrialization was so deep-rooted that in spite of two world wars, it did not cease expanding through the governmentality nor impeding the ordo-liberal subject to be framed. More concretely, not only the philosophical and methodological fundaments of *science*, as a superior form of *knowing* were grounded in Germany, but also its instrumental use for the state to manage the “social market economy” (Foucault 2008). According to this new conception, the main task of the state was providing all necessary services, i.e. health an education to enable its citizens to be productive. Moreover, its only possibility to exercise influence in the market was setting the ideal conditions and frame institutions, in order to guarantee profit optimization via competition (Dardot/Laval 2013). These underlying principles, characteristic from the 60s and 70s “planning euphoria” prevail nowadays (Kutscha et al. 2014: 12), although a much more advanced stage of capitalism was achieved (Hall/Saskice 2001). The fundamental question of education management, i.e., developed between the state and the market in a context of material radicalization of neo-liberalism (Kutscha 2014: 34). The triple-helix structure, e.g., was a political design in pursuit of optimizing the articulation between the industrial and education sectors, which later inspired KE indicators (Leydesdorff/Fritsch 2006). Altogether this means that the “expansion of education” much more derived from the state’s aim to fuel either material (currently export champion) or immaterial

(i.e. knowledge infrastructures) production, than from democratic struggles. Thus, equal opportunities and emancipation through education seem illusory (Kutscha 2014: 26).

#### **b) Institutional-organizational context**

On a broader international context, however, Germany was not the only state, which prioritized the “education system’s correlation with economic growth”. Rather, as evidenced on the foundation grounds of the **Organization for Economic Cooperation and Development (OECD)**, what united the West was the concern for securing its members international competitiveness. Especially in relation to the technological race with the East-block the investment on education did not seem to be enough (Kutscha et al. 2014: 11). This called for the renaissance on the discussions about the significance of education for national economies, further on institutionalized by insignia OECD, as well as World Bank reports on the KS/KE. As explained above, these claimed that accelerating the change from an industrial into a knowledge-based economy required strengthening investments on human capital. The state would provide resources yet it would be the individual’s responsibility to acquire the necessary skills to fit in a rapidly changing scene; that is, engaging in labor oriented life-long learning (Poltermann 2014).

The same paradigm was adopted on the **European Union’s** KS program, which sought to institutionalize the individual’s responsibility takeover (on qualifications and competencies attainments) for the sake of turning the EU into “the most dynamic and competitive knowledge-based economy in the world”, as determined in the Lisbon Strategy (Powell et. al 2011: 1). Accordingly the Bologna Process pointed to the homogenization and mobilization in higher education. Moreover the Copenhagen agreement enabled national policy-making to be influenced by supra-national discussions and inspections (ibid: 2). As a result, the European Commission, which might not have a “monolithic” constitution, certainly dominated the discourse and influenced various spheres; going through normative agreements for members to implement, to getting “directly involved in numerous ‘grass-root’ activities” so as on HE, research policy and the tertiary education sector (Keeling 2006: 205). What is more in accordance to comparative analyses, although the German and French education systems have been historically acknowledged as referent models, the aim to compete against the US within a KS framework, forces them to abandon traditional research

values and/or to adopt additional strategies, in order to secure their institutions and their citizens' competitiveness (Powell et. al 2011). Hence it seems evident that the KS program is strictly lead by the political elite (European Commission 2007), who in the process would try to evaluate the citizens' reception but has not foreseen the former's participation. Attitudinal data suggests that the KS-*trends*<sup>5</sup> were not *experienced* by the population in a homogenous way, rather the Nordic, Middle and Southern European populations' perception correspondingly varies on seeing the KS "positive(ly)", "practical and technically" or "negative(ly)" (Eurofound 2004: 6).

Yet harmonizing policies, in order to synergistically compete against strong actors outside of the Union did not prevent EU members from fiercely competing between each other for the sake of ranking positioning. Contrary to this, such was its relevance that when Germany scored negatively in **PISA 2000** this caused a "severe shock to policy-makers, schoolteachers and parents" (Grek 2009: 29). Consequently "education authorities proposed urgent reforms". Putting teachers under increasing pressure, these strove to focus more on outputs than on inputs, by develop(ing) skills standards upon completion of school and entry into the labor market. However, being seen as an *educational catastrophe* PISA's major impact did not limit to policy-making but most crucially affected public consciousness (ibid: 29, 30). As a 2011 study unveils, school achievements do not only correlate with social background (Kutscha et al. 2014: 22), but what is more, since its original institutional and cultural constitution, the German school *actively perpetuates* and *strengthens* educational inequalities (Kahlert 2008:791).

### c) **Situational context**

In the late 90s as the IS became a trend in global discourses, the German red-green coalition called for two inquiry commissions (Enquete Kommission, EK), which dealt with a) "The Future of the Media in Economics and Society – Germany's Way in the Information Society" (1995-1998) and b) with "the Globalization of the World's Economy – Challenges and Answers" (1999 – 2002). Due to this paper's focus on the discursive framing of the KS concept, particularly the report of the second EK will be

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<sup>5</sup> The "shift towards networked computing power, innovation as a source of competitiveness and as an instrument for increasing all types of organisation efficiency, development of service economies, social and life-long learning, so as recognizing challenges associated to globalization". See (Eurofound 2004: 2)



considered as a determining piece on the KS's conceptualization puzzle. However, it should be remarked that departing from the first EK, the term KS turned to be much often conceived as a further development from the IS, sometimes as a synonym and others as a different compound of it. In general blurred definitions were accepted. As Kübler points out i.e. the slogan did not matter, the *modern* attribute did (ibid 2009: 19).

Similarly the EK on the “globalization of the world’s economy” concluded that the relevant questioning is not if the current stage describes the way to the I/KS or having already achieved it. Fact is knowledge gains relevance globally, especially on the economic landscape, which calls for political actions (Deutscher Bundestag 2002: 260). Therefore within the chapter dedicated to the “global knowledge society”, policy recommendations always supersede the analysis (ibid: 259-308). Concise, the report foresees that increasing information and digitalization are changing working relations (1). As this transformation is lead by economic factors, challenges in light of the digital divide (which may hinder or boost participation in the KS) are envisioned (2), as well as on the increasingly complex Internet regulation. Moreover reflections on the assessment of knowledge encourage opting for open source initiatives, instead of patents, and urge to revise the TRIPS agreement (3). Further the HE institutions role on transmitting and generating knowledge is framed within an innovation system that presents strengths so as weaknesses (4). Finally (5), the section on options for action underlines the centrality of policy-making in a developing KS, where citizens are permanently forced to deal with new knowledge. For them to take part (in a rapidly changing world) politics has to increasingly concentrate in education, qualification and research (ibid: 306).

As a consequence of the EK's perception of the global KS, not only a total of 33 policy recommendations are worth deeper attention. Even more crucial for further political actions turned to be the opposition vote presented by the CDU/CSU (ibid: 493), which conduced to the KS institutionalization as a national strategy (see discourse analysis below). Its strategic relevance was later reaffirmed as the liberal coalition, CDU/CSU-FDP, introduced “Clearly Positioning Germany in the Global Knowledge Society - Further Promoting the Internationalization of Science and Research” (Deutscher Bundestag 2013). Accordingly “science and research policy move in a field of tensions

between cooperation and competitiveness”. This is not intrinsically contradictory, since global competition, it is argued, requires as well being an attractive cooperation partner. Therefore the main novelty is complementing the science strategy with a promoting foreign policy. As underlying motivation, in addition to classical big competitors from the Anglo-Saxon room, increasing developing countries are emerging as R&D powers. German global presence, hence, seems even more *indispensable* (ibid: 2,3).

#### **d) Discourse analysis**

- I. By approval of the Bundestag in February 2008, a new *Strategy for strengthening the role of Germany in the Global Knowledge Society* (BMBF 2008) was launched. Based on the CDU/CSU parties’ request, the increasing global competition called for more concrete and much aggressive measures; firstly towards the internationalization of higher education (Deutscher Bundestag 2013: 494), but on the long run for the sake of recovering the leading position on the already acknowledged “global KS”. Thus, the influence of the EK report on the strategy is twofold. Anew no definition lines were traced; yet what characterizes the KS is its global extension. On the other hand, the KS intrinsically generates a winners and losers (Deutscher Bundestag 2002: 53). Whereas Germany, so the report, accounts to be part of the first. However, one main difference should be remarked. While the EK examines internal divides, the strategy departs from external threats and potentials amidst the “changing worldmap of science” (ibid: 11).
- II. As rising economic globalization and increasing technological internationalization are constitutive of the same process, the urgency to act is conceived in the dimensions time, geographic-space, and life-world. Starting with the contemporary pertinence, the development of the KS is unstoppable. New knowledge results from new conditions, not engaging would imply being left behind. Further, if the KS’ reach is global, then the response has to be geopolitical. And finally, since “scientific progress and technological innovation have determinately contributed to globalization, grasping nowadays almost every sphere of life” (ibid: 3), then Germany’s positioning in this competition involves every citizen. In a word, what drives the emerging KS is not the German society’s knowledge or capabilities, but this (particularly pointing at researchers and corporations) is called to take part given the impact of external conditions. In fact the term “society” never appears except for accentuating that “in modern, knowledge-based

societies, innovative scientific findings and their technological application (are) the key for well-being” (ibid: 9). Thus, not any knowledge *per se* matters, but the capacity to create; *innovation*. Notwithstanding education as *Bildung* is completely absent (as opposed to formation (ibid: 7)) since *scientific innovation* is supposed to take place in research centers. As characteristic of ordo-liberal state, social well-being is not at the core of the state’s concerns, rather establishing conditions and motivations to compete.

III. The sources for the German government’s concern are multiple. In sum all of these point to an increasingly competitive (knowledge) environment, caused by the rising internationalization of development and research capacities (ibid: 5). This does not affect Germany alone, since the unchained concurrence on scientific talents (ibid: 13) calls for re-defining partners and competitors which broader includes Europe as well (ibid: 11). Hence, the perceived KS scenario is characterized by the global competition for “the best heads” (ibid: 10). This reveals a twofold understanding of the problematic. First, scientific progress is happening somewhere else. Being seen this rather as a threat than as a benefit, the goal is identifying where talent resides, before another subject capable of exploiting it (say another state) uses this in its advantage. For this reason, secondly, more than for a specific workforce (bodies are conceived separately), or the knowledge that could derive as a product, the competition is *against* other subjects, who can manage minds as resources. This is why motivating German researchers to work closer with the best researchers of the world (ibid: 3), does not aim to prepare the former better, but to attract the latter. As former minister Shavan claims, i.e. 90% of global knowledge is produced outside of Germany (ibid: 3). This in her accordance requires, assuming more international responsibility so as strengthening the introduction of German knowledge through international cooperation. Again in this statement it is clarified that knowledge is a resource subscribed to a geographic origin, which notwithstanding does not impedes the possibility of transporting it to “the innovation location” (ibid: 10). Moreover the mentioned percentage suggests that a country’s KS is possible to measure. Being this put as an alert, further concerns argue that international comparative studies show German decreasing performance (ibid: 7) in central sectors of the education systems (might be meant PISA), on the public support for sciences and on autonomous enterprises, since less people work in so-called top technologies (ibid: 13).

As showed above a fundamental concern/interest for Germany is the EU's performance. Since Germany perceives to be ahead than the rest, following the situational context, its objective is securing to be the "topics' driver" (ibid: 16). Hence, in line with the Lisbon, Bologna and Copenhagen agreements, Europe is expected harmonize the agenda (ibid: 9). Yet particularly German leadership (seen as *true* task (ibid: 3)) is required, in order to "develop Europe into a competitive knowledge-based economic room" (ibid: 16). Finally, it is clarified that "internationality is not a value in itself" but in parallel to the reinforcement of Germany's role in the global KS, it is argued, the country "would be true to its increased international responsibility" (ibid: 10). Thus, not only German leadership is naturalized, while implying that the world depends on their research capacities. What is more this government assumes authority on identifying and managing "the best knowledge in an international comparison" while defending its objective to "make this useful for the *scientific and innovation location Germany*" (ibid.)

#### IV

##### **1) Strengthening the research cooperation with the best (plural) worldwide**

Overall, German researchers have to do better, although not necessarily on their work, but in respect to their network. Thus, if the former are already connected to international scientists, its task is working even closer with the best, the most innovative (ibid: 5). In the global race for hiring talents, Germany strives to become a primary research address. Firstly by internationalizing the formation of "scientific descendants" (ibid: 17), secondly by encouraging the researcher's mobilization (ibid: 18), thirdly, by improving international cooperation opportunities as well as profit (ibid: 19) and finally by further strengthening international oriented research structures (ibid: 21).

##### **2) Acquiring international innovation potential**

Moreover, public and private enterprises are invited to work together (ibid: 9). In the KS, a geopolitical arena, the enemy is not inside but external. "Not only corporations, also research centers and universities must increasingly strive for a fierce international competition for the efficient methods (...) they have to secure the leading emerging high-tech centers and the most creative R&D centers worldwide as partners" (ibid: 21, 22). To put it differently, innovation is obtained by growing investment, in order to "optimize knowledge transfer" (ibid: 22). Moreover targeting to foreign researchers reveals the ambition for centralizing the "best", who indeed exceed German borders.

### **3) Sustainably strengthening the education, research and development cooperation with developing countries**

If the concurrence against current powers motivates formulating the present strategy, then “striving developing countries and emerging economies” are framed as the target. The emphasis on positioning *on time* as partners (ibid: 24) unveils the urgency to act. Other hunting powers might be more agile on forging pacts and/or these countries might soon figure out how to take advantage of their minds. Therefore development policy is used as a convincing method, wherein German cooperation would contribute to economic, social and cultural development (ibid: 5). Thus, Germany’s superiority is multiple. In addition to research capacities (leading role in natural sciences and technology), their advantage resides in being capable to *economically* profit from science (ibid: 11). Therefore, Germany would enable “that modern HE, research and innovation systems can originate (...) in Africa, Latin America and Asia” (ibid: 5). Yet underlining what this state is capable of providing obscures the costs. A hint might be offering financial support while recognizing the negative effects of brain drain (ibid: 18). Researchers would thus be able to return to their countries and would be motivated to expand the German network by playing the role of culture, science and economy ambassadors. A second way is patenting new discoveries for German benefit (ibid: 25).

### **4) Assuming international responsibility and overcoming global challenges.**

In a wider sense the question remains: how to make German claims for assuming leadership over the international research agenda *credible* (ibid: 5)? The response anew relies on development; however, in foreign policy, adding the term “sustainable” ahead suits better. It is declared, i.e. “building functioning education systems and scientific structures in developing countries is a decisive condition for these countries’ to participate in the technological progress, while (being) sustainable and environmentally-friendly” (ibid: 9). Correspondingly, more responsibility has to be assumed by “economic and scientifically advanced countries”. Otherwise global challenges like “the climate change, fighting poverty, resources’ efficiency, health, security and migration“ (ibid: 26) could not be dealt without the management of these states, without setting international/geographical duties. Therefore via multilateral forums (G8, OECD, UNESCO), Germany strives for securing leadership on the *research dialogue* (ibid: 26).

As final remarks, it is underlined that the strategy's implementation has to be continually evaluated and updated (ibid: 30). Progress should be measured in a crosscutting sense including: presence abroad, international monitoring (ibid: 27) and promotion (ibid: 28). Thus, further neo-liberal tactics are unveiled. Not the population's access to knowledge i.e. is relevant but the country's overall portrayal and (regional) competitiveness (ibid: 29-31).

- VI. The leitmotif, which articulates the German *internationalization's strategy*, is the fear owed to the rising concurrence in the framework of a *global KS*, where Germany's superiority (leadership) might be challenged. Thus even without formal colonial rule, coloniality prevails, as the state has self-granted the authority to label (identify), capture (attract) - beyond its citizens' (researchers)- the world's knowledges, as well as assumes that German scientific knowledge, is universally worth for being inserted (cooperate), and expanded (respond to global challenges) for the benefit of the world. Furthermore those, who are called to materialize this neo-liberal project, are alienated researchers, which pressure to *be* on the top might have started in school (PISA), but herein this is disguised, because the focus is put on the competitive formation of- not even human, but- *mind* resources, whose responsibility is to cope with the synchronized requirements in the EU. Although it seems evident now whose interests rule on the agenda.

Prior Ecuador's KS analysis, it is fundamental reiterating that having chosen these cases of study is not fortuitous. In addition to their regional relevance in terms of the KS venture, the bridge between Germany and Ecuador since its first encounter has precisely being 'knowledge'. Therefore, despite the variance of topics and researchers on charge- i.e. Jesuits, ethnographers, educators (Haist 2015) (ill.4), colonizers (Kirchberger 2008)- since the 18<sup>th</sup> century, the German interest on Ecuador has signified an extension of both Humboldt brothers' legacy. Alexandre (ill.5), who was known for "having the sensibility to appreciate the knowledge coming from the periphery" (Sevilla 2011: 124), and Wilhelm, "the true founder of the *university* and *Wissenschaftspolitik*" (Hountondji 2014: 111): German researchers would study Ecuador's nature and in turn the latter would receive guides on how to keep/take advantage of its biodiversity. Such is the case that Germany remains one of Ecuador's main exchange and development partners (Auswärtiges Amt 2015). In spite of some sovereignty interference of the donator

(Telesur 2014), amidst the KS (Senescyt 2013), for both, prioritizing the reinforcement of scientific cooperation has being essential (Andes 2015).

## **5.2 Ecuador: The Social Knowledge Economy**

### **a) Historical context**

How far do we need to go back, in order to trace Ecuador's political and economical entanglement with education? How many presidents, how many centuries? We could start with the major event, which enabled those terms to have a meaning for the whole extension of Abya Yala not the discovery of the Americas, but colonization (Wynter 1995). Until present times the Spanish merit is celebrated for having provided language, religion, culture, short, civilization. But the outrageous robbery, the sanguinary exploitation and culture imposition, is what rather deserves being called barbarism. What is more, the large scale genocide did not only end with the Inca empire (which in the case of Ecuador lasted less than a century) in the material way of an ethnical cleaning, but it more concretely intended to destroy the systems of knowledge, cultivated throughout 2000 years of inhabiting the Andes. The objective was dominating via *epistemicide* (Grosfoguel 2013). Therefore one of the primary strategies for social control, the *encomienda*, was “educative”, indeed. By these means, in the aftermath of colonialism, the *colony of power* was institutionalized (Quijano 2000).

In some cases in spite, but in the majority relying on the formerly mentioned structure of oppression, along the next centuries the criollos progressively gained economic and political power, until independence from the Spanish crown was demanded in 1810. Ironically, insisting on such struggles turned to be proven later as the starting point of new dependency chains, since the required armaments were financed by a cynic US, which took charge of incrementing the external debt until present times (Acosta 2010a). According to Raúl Linares, this may explain the “criollos’ auto-defeatist” attitude (Linares 2010), but an *auto-colonial* one?- just partly. The schizophrenic abhorrence of the indigenous identity inherited by the *criollo*, while permanently aiming to show off his/her European lineage indeed counts as a social characteristic (Icaza 2006). Yet this closely derives from the constitution of the *illustrated* legitimacy via encounters with the *illegitimate others* in the periphery (Sevilla 2011: 16); meaning, in other words, that *modernity* and *coloniality* are two sides of the same discourse (Escobar 2007b). This is

evident on the construction of the social sciences, which based on the criteria of objectivity, blinded the *locus of enunciation* and by discarding other types of knowledge assumed the theory imparted by Europe, as universal truths (Castro-Gómez 2005). Moreover, also in the natural sciences *production* the subordination of indigenous peoples by neglecting and obscuring their immense knowledge (in spite of their contribution as excursion guides and the *generous* gifts to keep their fidelity) was not only a common imperialist practice, but even for the *criollo* this strategy was central on the hope to be recognized as a scientist (Sevilla 2011: 154-185).

In matter of basic education, however, there is no doubt that the implemented measures derived from following tendencies determined abroad. Starting with the ephemeral Gran Colombia, the Catholic Church exercised the broadest influence on an education system targeting wealthy families and male students. Such was the power of this institution that regardless of the Liberal Revolution of 1895 the establishment of “public, lay free and compulsory education” it prevailed playing a central role along the XXth century (Oviedo/Wildemeersch 2008b). It was not until the global modernist discourse of the 60s, where the education system massively extended. At this point the influence of UNESCO, so as from its financing organism, the World Bank, was determinant. Minimizing the state’s role, i.e., was demanded in accordance to the neoliberal doctrine grounded on the Washington Consensus (WC) (Oviedo 2014). Moreover even though the modernist campaign tried to overshadow the unceasing resistance of the peoples of Nuestra América (Santos 2014: 48-56); indigenous peoples, especially from the Andes, did not gave up on fighting against homogenization, demanding sovereignty over their territories, language, medicine, justice system, and particularly interesting for us, education practices. Hence while forming strong alliances with leaders of the Liberation Theology and pedagogy (Freire), the CONAIE decisively rouse in the 90s (Oviedo Freire 2015). This consequently called for the state’s (Oviedo/Wildemeersch 2008a) so as academic reconsideration of indigenous epistemologies (C. Walsh 2015a).

## **b) Institutional-organizational context**

Since Correa’s election, in 2007, profound transformations in almost every sector of the Ecuadorian state took place. Hence a primordial step in the *Revolución Ciudadana* framework was re-writing the constitution and hereby setting the **Buen Vivir** (BV) as a



milestone in the connivance pact between the state and the Ecuadorian society (Ramírez 2010). In this regard the country's "millenary roots forged by distinct peoples (were) recognized so as the "Pacha Mama (was) celebrated". This implied that both "harmonious coexistence" is guaranteed by constitutional rights granted to collectives as well as to nature (Asamblea 2008: 8, 9). In sum for some the BV offered an alternative development paradigm (Gudynas 2011); while for others, opposing to extractivism and growth, this was a key opportunity for engaging in a post-development approach (Acosta 2010b). Whichever the prognostic, though, BV advocates, coincide on anchoring the concept in the Sumak Kawsay. This principle, at the heart of indigenous cosmo-vision, is translated to BV by a modern state, which embodies the main power enabling a holistic change (Vila-Viñas 2014). Moreover and in accordance to the government, if the BV's departing and final point is fighting socio-economic inequalities, growth should not be discarded. Rather, measuring the BV should be complemented with production and time indicators (Ramírez 2012a). In this regard science and technology can be distinguished as contributors, capable of liberating leisure time (ibid: 43). Consequently, by nesting the public good *knowledge*, the university can be seen as one (Ramírez 2012b) but not the only source of social transformations towards a KS. More decisively a knowledge democratization approach would imply re-thinking the use and abuse of patents at the core of cognitive capitalism.

Motivated by the Ecuadorian government's determination to challenge the intellectual property regime, for the benefit of the population, a group of researchers gave birth to the "**FLOK Society**". Their mission was exploring (legal) ways, which would conduce to a transition into the Social Knowledge Economy. By overcoming academic barriers, however, the task became a collective effort, as thousands of citizens participated on the online redaction of policy and legal recommendations (Vila-Viñas/Barandiarán 2015). Without precedent this KE methodology established the *commons* as pillar and horizon, as it can be distinguished in both research periods. Firstly, lead by Michel Bauwens, the KE transition was envisioned as a "sharing economy" supported by the "partner state" (Bauwens 2009, 2012, 2015), and later on, with Vila-Viñas on charge, the open source focus remained, although broader activism (particularly by hackers) and further socialization forums (i.e. with indigenous communities) took place. Currently, the

FLOK Society's research remained as such, a proposal, which was expected to embody the "Código Ingenios" (ill.6) and is still on parliamentary debate (Senescyt 2015).

In the other hand, as pointed out by Rina Pazos, it cannot be denied that the route for changing the global hegemonic discourse on cognitive capitalism would be too difficult for Ecuador, alone (Pazos 2015). For this reason, by positioning as a KS pioneer (*El Ciudadano* 2014) within UNASUR (*El Telégrafo* 2014b) and Celac (*El Telégrafo* 2015) Ecuador advocates for prioritizing the revision of the intellectual property regime.

### **c) Situational context**

The KS institutionalization trajectory departs from the 2008 Constitution. Art. 187, i.e., declares that it is responsibility of the state to facilitate and impulse the incorporation into the KS, in order to achieve the development regime's objectives (Asamblea 2008: 119). However, the National Development Plan 2007-2010, does not include the term KS (Senplades 2007). Still for the following analysis it is crucial to remark that the opening question, "why does the Ecuador of the New Millennium require an urgent change?" (Senplades 2007) grounds its response on a critical view of neo-liberalism *and* developmentalism (ibid: 15). In this line the conceptual break with the Washington Consensus calls for re-proposing the development model (now BV), giving way to the constitutional, ethical, productive, social and Latin American revolutions (ibid: 5).

Being the name slightly modified, the National Plan for the BV 2009-2013 provides a much stronger emphasis on the citizens' participation in the construction of the plan (Senplades 2009). Further, main critiques still point to the past three decades of neo-liberalism, which in this occasion are put in contrast with the last three years' achievements of the Revolución Ciudadana (ibid 49-84). In addition, national planning includes for the first time the "transition to the KS". However, being framed under the strategy "towards a new mode of generating wealth and (re) distribution for the BV" (ibid: 111), the I/KS understanding is strictly limited to an extensive use of ICTs (ibid 112). Even though along the document, the contribution of knowledge is elaborated in multiple ways (see i.e. revalorization, recuperation, acquisition, generation, protection).

#### **d) Discourse Analysis**

- I. In line with the previously mentioned documents, the Ecuadorian KS is framed within a broad (4 years term) national development plan, herein conceived as BV (Senplades 2013). To provide a contextual overview, after the Socialism of the BV is presented (2) and the needs for National Planning are argued (3), the KS characterization is embedded in the “strategy for accumulation, distribution and redistribution in the long run” (5) (62-77). Further, the fundamental significance of transiting to a KS in light of the BV is underlined since “(moving) from the product country to the socialist society of knowledge” (80-94) represents one of the latter three axes. Therefore in this occasion (contrary to earlier formulations) the “social economy of knowledge” is not only sustained by the constitutional compromise, yet a National Assembly resolution has established the KS construction as a national priority (ibid: 354).
- II. Even without offering a concrete definition, it is obvious that the term KS fulfills an economic significance. More concretely, by KS it is meant a transition towards a knowledge-based matrix of production. This implies that the KS is not a given, nor a time diagnosis describing social dynamics. Rather constructing the KS is a progressive enterprise oriented towards a future scenario, where the main production income derives from the immaterial good knowledge (ibid: 67). As this initiative has been put forward by the state, this has full competence to determine which knowledge has a higher value, for production, for development, for the future. For this reason the state does not restrict to call for the “expansion of scientific and technological knowledge”. A substantial part of the KS enterprise, in contrast, is providing the required infrastructure (ibid: 63). This disproportionate emphasis on the generation and economic utility of a specific kind of knowledge altogether depicts a fracture in the holistic understanding embodied in the BV. Varied conceptions of development so as cosmologies at the heart of the pluri-diverse Ecuadorian society are presumed to harmoniously coexist within the BV. Accordingly along the whole document and in spite of the thematic nuances a multi-dimensional understanding of knowledge is framed. Knowledge can be nurtured by various means (like education and intercultural dialogue) and for various uses (e.g. cultural identity construction or also diversifying the economy). Moreover various sources of knowledges, in plural, are recognized (i.e. local, communitarian, traditional, ancestral), which emphasizes its cultural and territorial bound. Scientific knowledge, in

the other hand, would have a broad national contribution. For this reason, when referring to the KS enterprise, the pluralist characterization of knowledge diminishes. Since the economic paradigm for the future entails shifting from the reliance on finite to infinite resources, exclusively “innovation, science and technology” are seen as fundamentals for the *Knowledge Revolution* to happen (ibid: 19). This interpretation is based on the observation that even if *current* (i.a. rural and ancestral) knowledges and practices are perceived to be *currently* relevant (i.e. diversification of the solidary economy), a distinction line is traced by mentioning: “*along* the transition these will be given *enough space*”<sup>67</sup>. In a long-term the focus is put on “reaching a production structure based in technological knowledge”. Still the final objective is not promoting production, it is remarked, but the satisfaction of human necessities through the KE transition is what makes sense of framing the KS within the NPBV.

III. Along the plan’s presentation, the National Development and Planning’s Secretary, Falconí grounds the KS enterprise by declaring that “(i)n order to reduce the structural vulnerability, in terms of exchange that Ecuador shares with Latin America, public investment has to be oriented towards seeding the oil and harvesting a productive matrix for the KS” (ibid: 17) Within this statement two crucial elements can be distinguished:

a) The KS campaign derives from a reflexive understanding of Ecuador in relation to the world. “Construct(ing) this new economic system”, it is argued, necessarily requires changing the matrix of specialization and “strives for a strategic insertion in the world” (ibid: 12). By going “from the product-country to the socialist knowledge society”, hence, the government desires that Ecuador is no longer seen as a raw materials-location. But rather seeks to be seen and actually to be able to yield high-added production, this is to say, one that involves *higher* knowledge (ibid: 82). For this means scientific knowledge and technology appear as requisites. Perhaps this is what former governments missed, as Ecuador’s “high vulnerability and external dependency” is conceived to reside on their incapacity of overcoming colonial and neo-liberal rule by restricting to agricultural and textile production (which generated none or low added value). Thus, in order to “break with this historic legacy in the Ecuadorian economy” the government has determined to opt for the KE. Hereby assuming that sharing the infinite good, knowledge, rather enables its multiplication, instead of depletion (in opposition to exploiting nonrenewable resources) (ibid: 82).

b) A next crucial observation points to the characterization of oil as the medium to achieve a “distinct form of producing and consuming”. Bearing in mind that a primordial objective towards the BV is abandoning extractivism (see above), it makes sense “tak(ing) the country from a dependency phase of limited (finite) resources to one of unlimited (infinite) resources such as science, technology and knowledge” (ibid: 19). However if the generation of sciences and technology is separated, in a dichotomist way, from the use of natural resources (herein perceived as material goods) it remains unclear, how will this economic model be sustained? To put it differently, *how much of what* will the transition cost? Relying on oil in order to finance and materialize the transition is envisioned, as the text goes “in terms of investment, the national government proposes using extractivism, in order to exit extractivism”. This will prepare the country to “face the post-oil stage under different structural conditions” (ibid: 82) Herein the costs of transitioning towards the KS are much clear. As suspected before, it is argued that overcoming exploitation intrinsically requires continuing with exploitation (yet in a lesser degree) and using such gains for financing the investment on education and new technologies. Paradoxically engaging in this modernization strategy is perceived to be inevitable. No KS/E could be founded relying on *existing* knowledges and capacities (as FLOK proposes), nor could prescind from exploitation.

- IV. Furthermore the modernist belief that sciences and technology will be the main tools to bring progress is palpable. Although “progress” as a term is not used, but rather “revolution” or “living well”, and even if at this point it is no longer clear what distinguishes them. The underlying explanation is that “the productivity increase based on technological knowledge (...) will be oriented towards satisfying the population’s necessities as well as promoting its’ capabilities” (ibid: 67). For this to happen the plan foresees creating the research and technological university Yachay (ibid: 68). Thus, the investment on research, development and innovation (as conceptualized in the formula I+D+i 67) consists of “creat(ing) a system for social innovation” (ibid.). The idea is facilitating the “institutional coordination of knowledge” in order to make it effective, productive. Therefore a “dialogue between traditional, ancestral so as other type of (non)-scientific knowledges” is also welcome, so that “differentiated strategies could be sought in the *inclusion* of rural and farm economies”. Consequently, transitioning from the current problematic stage to another, namely to the Social Knowledge Economy,

will not only depend on an “enormous investment”, both public and private, but it “needs as well a great cultural change”; it requires “excellence” (ibid: 82). Thus, first steps on that direction imply that Ecuadorians “recover dignity and confidence in themselves, so as self-esteem”. In this vein, the “democratic, plurinational and lay State’s” *assumes* “strengthen(ing) the society”. Otherwise the “matrix of production transformation and the democratization of the state will not have an emancipatory sense” it is warned. The goal is “empower(ing) society, not the market, as it occurred in neo- liberalism, nor the state, as it happened in the real socialism” (ibid: 27).

Yet if the KS’s *raison d’être* is “encouraging surplus production and export through a greater component of knowledge”, not only the fact that the term KS responds to a strictly economical purpose is accentuated, also it confirms that the KS is by no means intrinsically post- nor anti-capitalist. As the state assumes the role of transitioning to the KE, it also represents an authority on correlating factors, such as the interaction between knowledge generation institutions and the productive/commercial sectors (ibid: 77). This may remind the defining features of a triple-helix-structure. Nevertheless by including the *social element*, as the researcher Pedro Cacigal suggests, a *quadruple-helix-structure* would be more suitable (2015). Hence, the questioning follows, how will competitiveness be guaranteed? The NPBV points at biodiversity as “the major comparative advantage of the country (...), which without doubt, is as well the major competitive advantage if well utilized, through its conservation and the construction of owned industries relative to the bio- and nanotechnology”. In this sense, the strategy aims to construct (in the middle and long run) a “bio-knowledge society, (specialized on) eco-touristic communitarian services”. However, even if the knowledge on biodiversity is successfully institutionalized as an “open common good”, the insistent pursuit of economic income maintains the risk of commodifying nature. “Biodiversity is synonym of life”, the text follows, “and therefore, of information” (ibid: 292).

- V. If the BV’s leitmotif is transformation<sup>6</sup> the KS’s orientation is modernization. This revolution of knowledge, culture among others, seeks to know how to take advantage of the biodiversity the government envisions as a resource to the extent that such bio-

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<sup>6</sup> All-in-one bet, says Minister Long (MCCTH 2014) . Hence extensive revision of problematic(s) (identification of counter images, like WC, “the past we do not want to return ”), and comprehensive elaboration of a *new, revolutionary* paradigm.

knowledge is productive. The social pact is the main tool used to reconcile diversity and legitimate the Plan. In this particular case, while *transiting* to the KS, the pluri-national sense “becomes empty” (i.e. Rivera 2015) when the possibilities of a diversified economy are constrained to the present and overshadowed by future plans of the central authority. The state does not forbid others sources of knowing, nor its subordination is explicitly mentioned but in a developmentalist enterprise the power chooses, which knowledges to nurture, and which are lying behind. If the diagnostic resolves the need to *achieve*, to *transit* to the KS due to a) certain comparative *vulnerability*; then b) the solution as well, comes from abroad. Yet, both a) reference and b) source are obscured. Paradoxically *dependency* should be countered, but the *need to demonstrate* the country can participate (insert) from global dynamics might be a hint of self-imposed chains.

## 6. Comparison Results: So far, yet so close

At this point we have responded to the first part of the research question, namely, “how is the KS framed in the German and Ecuadorian discourses?” Hereunder we will advance to the second part. Both discourse analyses will be compared, seeking, thus, to identify similarities and differences. For this means we will rely on the formerly exposed dimensions in respect to the methodological structure. Further both states’ KS’ *inclination* will be clarified by drawing bridges to priory explained theoretical grounds.

- I. **Context:** A three-folded inquiry into the contextual emergence of the KS, followed by the reconstruction of both countries’ government discourses elucidated the fact that even without mentioning to each other, both KS enterprises are deeply interrelated. An underlying explanation is that departing from the KS’ theoretical conception, not whichever type of knowledge and human capacities were expected to drive progress, but specifically those constituting *modern* sciences. In this vein Germany’s leading role on the creation, expansion, and profit of scientific development put this state in advantage on the KS race. Hence, the contextual overview unveils an unequal disposal of *resources* required for the sake of constructing the KS, in the case of Ecuador, or for assuring a leading role in the global KS, as strove by Germany. Acknowledging that this is grounded on a hegemonic network of Western-centric epistemology, which has being woven for centuries, was determinant for encouraging a critical re-construction in

respect to scientific exceptionalism, along the historical overview. Altogether, it is both surprising and foreseeable that the relevance of “knowledge” is perceived in a geopolitical sense. Surprising, because both KS strategies were introduced at different times and considered different references. Germany, i.e. constructs upon the theoretical and empirical analysis provided by the EK in 2002. However in contrast to this document, the 2008 programmatic is not concerned with internal issues, but is strictly guided by global aspirations. This could be foreseen due to Germany’s solid initiative in a supra-national stage (EU, OECD) as showed in the situational context. On top of that, the unceasing desire of leading the field of “knowledge” could be distinguished from a wider historical perspective. Whereas in the case of Ecuador, the inspiration sources (e.g. studies or IO’s) for undertaking the KS transition could not be tracked, neither on the national development plans, nor on the theoretical genealogy. The only KS theorist, who also led the NPBV 2007-2009, is René Ramírez. Along his scholarship Ramírez defends the ancestral ascendance of the BV, yet alike the KS/E, he is not able to provide literature on such political model for happiness (2012) (similar to Hallberg Adu 2014 ill.7), and even obscures the origin of the latter terms (2014). If breaking with the World Bank is necessary for achieving “economic sovereignty” (Senplades 2013: 341), now the hopes on the knowledge-based economy have encouraged the government to engage in another (the modern) World Bank’s formula. Al though in coherence with the BV paradigm, characteristic elements from the UNESCO’s discourse, i.e. KS for social equality/inclusion were added. This prevalent orientation on ‘foreign’ education trends could as well be anticipated from the historical overview. Herein “the coloniality of knowledge” may serve as an explicatory concept, however in my perspective (so as the PNBV’s, allegedly) coloniality does not *have* to remain deterministic. Thus, as showed below, this inquiry seeks for current justifications and tools employed by both states.

**II. KS understanding:** In accordance to the governments’ politico-economical project, the former’s KS ideal shares a) a harmonious understanding of *knowledge*, b) a deviating conception of *society* and finally c) a paradoxically divergent yet similar **KS framing**.

a) Coinciding with basically all KS theorists, among all knowledge forms, scientific knowledge is in one hand the KS defining element and in the other its progress-



indicator. Generic terms such as *telecommunication technologies*, *R&D* and the rising tendency *innovation*, in fact refer to the same production/competitiveness-raw material.

b) In the German discourse “society” is an empty concept. The only reference alludes to researchers, who- seen as human resources -are called to improve their international *formation* in order to guarantee competitiveness. In tune with UNDESA’s vision of the KE, which is defined by a high concentration of knowledge workers (2005: 36), the German strategy urges researchers as well as institutions to connect with and *attract* the most innovative, most creative, in short, the best knowledge(-holders) to their advantage. To put it differently anyone can be considered as a *mind-resource* if this benefits to the German state. Moreover avoiding to explicitly refer to production, enables to keep distance from the (rather habitual) theoretical debates in respect to a post-industrial economy. In opposition, the strategy focuses on exploiting the power of mind networking (in correlation with Castells’ view of power).

On the other hand, Ecuador’s importance given to recognize and revalue the countries’ rich diversity of knowledge(s) uses and sources is significant. But the fact that the BV government traces a distinction line in respect to the economic development horizon (boosted by knowledge) even more. *Would a harmonious coexistence, amidst the BV, be guaranteed if a specific form of knowing is privileged?* Knowledge, it is clarified, is a common good, which being institutionally articulated (i.e. by Yachay) can generate spill-over effects (World Bank). Yet contrary to Umesao, the idea is not that high-added value is capitalized by few, but *socially re-distributed by the managed-state* (Drucker).

c) Both discourses match to the extent that the KS consists of a state-driven programme, which is expected to enable economic profit via techno-scientific knowledge. Certainly the fact that the Ecuadorian KS is positioned within a living-well vision, where the mentioned are crucial tools, but not the end in itself is a fundamental difference. However, similar to UNESCO’s KS proposal, it remains problematic to expect that *diversity*, being treated as a whole fits within one paradigm of digitalization as the future everyone aspires and deserves a right. Hence I wonder- and this includes Germany as well- why did these states opt for the term KE? Why do they refer to the knowledge *society*, when no profound change in social organization is sought? None of the governments depart from social calls, nor targets the use of scientific knowledge for daily-life (beyond work), as foretold by Lane. Rather North’s ladder should be climbed.

**III. Argumentative (re)construction:** In regards to the *justification issues* for the KS's, similarities and differences can be distinguished in three matters: a) challenges: national or international impulses for shaping the KS, b) role of the state: KS technocrat driven, establishing responsibilities and c) role of the Other(s): global/regional KS

a) In line with the absent characterization of society, Germany blinds societal matters. It seems there is no national issue to solve, in order to materialize the global KS strategy. As long as German students and researchers mobilize, cooperate with the best and knit transnational networks; that is, if the instructions to internationalize German knowledge structures are followed, the population and the world will be fine. Clearly the impulse, as sketched in the situational context, is (external) competitiveness.

This is immensely divergent in the case of Ecuador. The KS construction, as sustained by the government, is embedded within the *urgent need* and the *historical chance* for deep-rooted changes. For this means an extensive analysis is done in regards to the crisis of both the commons and the state, which leads to counter the “long neo-liberal night” by departing from the Social, Cultural, Knowledge (among other) Revolutions. Certainly the KS is presented as a solution to overcome economic vulnerability. Yet the perception of inferiority seems to be more deeply rooted than debt. The *true* concern is lacking *the* knowledge for a progressive matrix of production.

b) Furthermore Germany's authoritative role in the global KS is more than desired, naturalized. A heroic self-description is constructed as it is argued that global challenges cannot be responded alone, which calls for German solidarity. In addition to putting researchers and corporations under pressure, the German state pinpoints to a EU that needs to do more, it needs to modernize by relying on the *German-motor*, of course. Much different is the Ecuadorian formulation, which neither authority nor international role were (before the PNBV) a given, but required to pact with the pluri-diverse society. The BV, which was framed as an alternative to capitalist development, requires to reinforce profit through high-added value, so that the socialist state can tackle poverty and inequity. Still neither the articulation uses, nor financing sources seem democratic.

c) Yet finally achieving economic independence (sic.) is a very challenging endeavor, which Ecuador cannot accomplish on its own. Therefore constructing the KS is envisioned within a regional framework, focusing on the UNASUR and Celac, which

would be vital shields for Ecuador to “insert strategically into the world system”. Similarly, Germany’s KS does not result from the regional influence but this is used to lead over the agenda. Consequently, in both cases, the strongest arguments for engaging in a KS strategy are rather external, than internal threats.

**IV. Dispositives:** The infrastructure designed to achieve the KS goals can be comprised in a) doing research b) engaging in sustainability, c) investing d) managing e) positioning:

- a) *Infrastructure for scientific and technological research:* strategically planning is embedded on the deterministic development of R&D. This can be a tool for generating dependencies, but it can also be the enabling ticket to participate in global dynamics.
- b) *Sustainable development, particularly ecological concerns:* who would oppose to more education so as to augmenting the ways of looking for solutions to current urgencies? <sup>7</sup>
- c) The need for and celebration of *further public and private investment* sums without precedent in the history of the Republic of Ecuador is certainly pointed out in the strategic investment elaboration on the PNBV. However, much more palpable on the daily discourse. Similar is the case of Germany, even though in fact specific sums, in comparison to the US, OECD and EU, are mentioned in the strategy (ibid: ).
- d) *Optimizing institutional cooperation* for the sake of effective identification, transfer, articulation, generation; management of the raw material knowledge.
- e) *Geopolitical positioning:* the idea is taking advantage of knowledge indeed. However, both countries’ conception of methods and objectives clearly differ, as explained above.

**V. Narration line:** Asymmetrical characterizations

a) *All-in-one bet, the vulnerability of Ecuador?* KS does not aim to take advantage of existing knowledge(s) and capabilities, but what makes sense of such transition is achieving what the country lacks. First of all developing technologies and doing research is required in order to generate knowledge. Their knowledge (infrastructure) does not seem enough to innovate, to develop an economic model for the future. More than a possible-one, inserting into the KS appears as *the* only path. Following

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<sup>7</sup> This idea was constant on the interviews to Lautaro Pozo (Ecuadorian representative at UNESCO), Reinhard Hassenpflug and Verena Metze-Mangold (German representatives) “Who would controvert the relevance of environment and education?”-they asked, in response to my question on critical views within the organization.

tendencies in the center in pursuit of modernity, of development. Hence in line with the Perceiving this as a challenge for the whole region reveals the concern for a shared vulnerability. To put it differently, a shared sense of inferiority. Problematic is not only other subject's intervention, nor the impossibility to fulfill a foreign receipt, but the conviction of lying behind and the (epistemological, natural) costs of overcoming this. Thus, the "coloniality of knowledge" was not proven to be deterministic, but *desired*.

*b) Germany, aggressive, but self-acclaimed winner?* The discourse altogether reveals an attitude of superiority as the speaker does not argue the strategy relying on tacit needs of its legitimate (by constitution of the state) room of influence, but it assumes the right of leading the region and finally the world. Additionally decisive is the emphasis on the strengths that have been constructed along history and allow the *science-location*, to have authority on determining which is the best knowledge, either for maximizing its utility or for subordinating other states lacking it. In a nutshell, the German interest on the KS has never being truly oriented towards learning, nor solidarity, but this paradigm is instrumentalized to fuel concurrence all over (Reisenhuber 2013: 3). For centuries the discourse has been modernized, but the the strategy of building a cultural, education, commerce network, in order to concentrate knowledge and power appears to be continuous. This is why the strategy does not fit easily in the KS theoretical genealogy. Yet the historical and institutional contexts offer better explanations for the desire of supremacy relying on science, which value, it seems, does not need to be questioned. Now that technology is developed everywhere; is Germany truly on risk, as it is told?

Summarizing the comparative results, in both cases the contextual overview provided concrete milestones on the formation of techno-scientific knowledge as a superior form of experiencing (by controlling) life. Even if the former's underlying philosophies were anchored in Germany, it is currently extensively institutionalized under the label *KS* as propelled by theoretical foundations and IOs advocacy. Hence, it seems safe to assert that an explanation for similarities between both KS campaigns is that these nation-states' asymmetric roles fit within the same scheme, that is, in the same understanding of what constructing a KS encompasses: a geopolitical dispute, either to lead or needing to catch-up. Consequently along Ecuador and Germany's discourses, the exercise of coloniality knowledge could be identified. Yet if constructing KS for all, following

UNESCO, intended to enable social justice *globally*; two main contradictions arise. Firstly, coloniality is precisely what Ecuador's BV paradigm sought to overcome, but the KS might rather enforce it. And secondly, Germany's strategy is not even concerned for its society, even though education has been a main stage for rising neo-liberalism. How can this be explained? - I insist. Could the KS be co-constitutive project from the *coloniality/modernity matrix of oppression*? Following I will sketch some insights from the manifolded KS' counterdiscourse.

## 7. Discussion: Knowledge(s) Societies (in)capable to learn?

Seeing that the KS discourse in **Ecuador** is relatively recent it is not to blame that there is not much academic literature, specifically dealing with the KS endeavor. Still in light of recent social and education transformations paramount critics point to:

- *The leftist revolutionary discourse, which has been dismantled as the "big re-accommodation of capitalism" (Acosta 2014a).* There is nothing socialist in the KE, critiques say, in fact everything has to change, in order for anything to actually change (Aguirre 2014). The deception on the Socialism of the 21<sup>st</sup> Century paradigm (Sierra 2015b), owes to an incoherent (Oviedo F. 2014) opposition to neo-liberalism, but in the praxis getting largely funded by the exploitation of oil (Villavicencio 2013), mines (Delgado 2008) and water for developing poor communities, which actually fight it (Giménez 2015). As clarified by Correa, the transition basically follows capitalism, but doing it better (Acosta 2014a: 295). In this line, the KE is a way to increase profit from trading with the EU (Acosta 2014b) and the BRICS (*El Telégrafo* 2014, Senescyt 2015).
- *The "nudity" of the living-well paradigm (Órtiz L. 2014) is exposed as it is utilized for autocratic means contradicting the Constitution.* Not only promoting exploitation, but also punishing social movements, which publicly criticize it (Aguilar, Martínez). The social pact appears as a tool for simulating social participation and rule (Salamea 2014), but actually faults ecologist, indigenous, workers' protests as illegitimate products of the opposition's manipulation. In other words, the KS is constitutive of a developmentalist project, which fear of obsolescence (Astorga 2010) clashes with the BV.
- *The modernist/Eurocentric character of the state, especially but not only, in regards to the conception of basic and HE policies, in sum implies a neo-colonizing campaign*

(Saltos G. 2014) by the political elite, which in spite of the intercultural rhetoric sees communitarian education as backwardness (*Plan V* 2015). The state assumes with absolute authority the evaluation, capacitation and even the closure of institutions, which do not fit to their standards (Zerega 2014). Thus, not only “garage schools” were forced to leave space to the state’s receipt Unidad Educativa del Milenio (Torres 2015), but also universities based on indigenous epistemologies (Torres 2013), like Amawta Wasi (Vargas 2014). The HE sector experienced a strong reform; which resulted in the creation of four state-lead university projects. The main one, the *city of knowledge*, Yachay, is expected to become Ecuador’s Silicon Valley (*El País* 2014), the innovation motor for the production matrix change to happen (Sierra 2015a). Millionaire contracts of foreign scholars (Albericio 2015, Órtiz L. 2015), together with alliances with known capitalist multinational corporations (Órtiz 2012) have been in the middle of the storm: techno-populism (de la Torre by Villavicencio 2013: 7).

On the other hand, Germany’s literature on the KS as a current diagnosis or future project is much extensive. In order to gain a more holistic approach, in this review I will focus on the KS’ social dimension, which was completely absent on the discourse:

- *The increase of scientization is not limited to the research sphere (Wendt 2006). Academization and expertocratization tendencies also influence significantly social dynamics.* The excellence campaign puts pressure on institutions and individuals to strive for more and better ranking points, such as credentials, skills or publications (Poltermann 2013). Degrees, and not necessarily a better understanding of life (Liessmann 2012), determine social stratification. Being overwhelmingly promoted by the state, the excellence-initiative is used to funded by all citizens’ taxes reinforce verticality by legitimating the elite’s superiority (Hartmann 2006), hereby standing on the same ground of the global elite (von Borstel 2015). Paradoxically since attaining more knowledge results in the discovery of more *unknown* knowledge, taking decisions seems even more complicated. Even in obvious or urgent cases, which would require action, politicians, i.e. hesitate, it rules the belief on the philosophy of the next [expert] step (Wolf 2010). Science is utilized to contain social change. Not only by the calculation or the prognosis, but echoing Lothar Hack, the political function of science is the experimental *company* of social processes of modernization (Hack 2006:165)

- *Widening social polarization: the elitist culture of excellence deepens, more than the digital and credential divides, especially the social-one.* Neither leaving the fabric for the services market overcame industrial relations (Rohrbach 2008) nor the expansion of education access democratized privileges (Vester 2006: 207–216). Contrary to this, post-modern horizontality has been rather illusory (Bremer 2006). Women and immigrants count as the more discriminated groups in the labor market (Hummitzsch 2014). “Diversity-policies” (Groll 2012), which promotes Germany’s “welcome culture” (Boenke 2012), rather derives from the consciousness that “xenophobia” is damaging for business, instead of being grounded on the conviction of social justice.
- *In the KS neo-liberal formation displaces education, as rather performance in the labor market becomes the target.* Thus, instead of incentivizing the students’ critical and analytical capacities, the neo-liberal school prioritizes knowledge and skills accumulation, which enable “individually socialized” (Bauer 2006) subjects to adapt as quickly as possible to a rapidly-changing market (Rößler 2006). Hence digitalization, among other devices used to generate precarity (Bittlingmayer 2001), does not just enable, but urges workers to be *flexible*. Moreover this mandate is valid for any sphere of life (Pfaller 2014). The fiercely competition on acquiring and showing specific talents on demand promotes the rationalization of any activity, which should fulfill a utilitarian, mostly economic, purpose (Krüger-Charlé 2008).

Overall, by bringing Ecuador’s and Germany’s critical views together, it seems that establishing “knowledge” at the center of social functioning is very problematic. Firstly, because prioritizing a concrete form of knowledge, namely technoscience, conduces to the reproduction of existing social (dis)advantages. And secondly, running this risk might not even be worth if the “very foundation of society is threatened” (Garcia dos Santos 2007: 151). Within “knowledge-based global capitalism”, as Jeremy Rifkin concludes, access to an unprecedented range of human experiences does not lead to social well-being (meaning that the KS fails on its purpose of creation), but the “increasingly intense and rapid instrumentalization of knowledge cannibaliz(es) cultural diversity” (ibid). Thus, Garcia dos Santos adds; “the cybernetic turn becomes the quintessence of control and domination by converting the means of access (...) into a weapon against nature and cultures-all cultures-with the exception of technoscientific culture” (ibid: 152). This means that if the strongest bond between the Ecuadorian and

German KS enterprises is the utilitarian imperative of taking advantage from the knowledge produced by societies- in all its diversity-; then similar issues could emerge from the attempt of managing knowledge. In the following discussion critical views on the politics of KM, a globally rising trend (Roland Berger 2015), will be displayed. The argumentation is based on both countries' disentanglements, although further authors on the subject were considered for the means of elucidating the main KS contradiction: being unwilling, and therefore incapable to learn beyond economic rationality.

Since its theoretical conception, the KS enterprise is vertically-driven, that is, by political and economical elites, who in the attempt of "regulating" knowledge, call for intersectoral adjustments, mainly on HE. Therefore as exemplified by Ecuador and Germany, the reconfiguration of problems and challenges to be solved by the state seeks to fuel the production of the knowledge and skills that fit their conception of development; that fulfills their ambition. For this reason even if the BV paradigm calls for the recognition of all cultures and knowledges; informal, uncoded, rural represent poverty for the state, backwardness. Ecuador simulates Shiv Visvanathan's "Laboratory State", where a society, a subculture or a species is labeled as obsolete and condemned to death because rational judgment has deemed it incurable(1997: 17). Hence Ecuador's developmentalist urge to transit to the KS by privileging technoscientific knowledge generates a paradox effect: the state thinks or at least argues that it is fighting class. But since this concern is based on global comparison, this recreates the "development gap".

In the other hand, Germany's method for fuelling competition is to subjectivize responsibilities and success. As a result, the state's thirst for knowledge and skills appears, in addition to public institutions, in every cultural sphere (Liessmann 2012). Thus, the oppression of those, who either are not interested on that form of knowing, e.g. artists (Cacigal 2015), or failed on reaching it, i.e. "disqualified workers" (Goeschel 2011:6) is legitimated. Yet if the KE is a propitious scenario for exploiting the manual worker, in parallel, this puts the intellectual worker under pressure. The human capital investment needs to be translated in evaluations and profit (Patrick 2013). Consequently knowledge has to be visible, performative, explicit (Luque 2001) in order to facilitate that corporative and education institutions, or altogether the state, manages it. This could be used by the right, but also by the (pseudo) left, via a redistributive rhetoric.



However technologies, which enable capturing knowledge, can be as well source of re-organization hopes, i.e. “radical democracy”, as Paolo Virno aspired (Peters/Reveley 2014: 148). Notwithstanding the risk that “the collective control of expression in networks becomes a political weapon’ (Hardt/Negri 2009: 358) likewise augments.

In this vein creativity, art, everything can be shared. But to the disappointment of André Gorz, capitalism will much probably reinforce, than diminish by increasingly valuing “the immaterial” (Nepper 2012). Accordingly the entanglement of sectors rather impedes learning from different epistemic cultures (Knorr-Cetina 2007) as the dominant logic subordinates others. Thus, according to Konrad Liessman, even Western philosophy has been betrayed, since all education ideals have been left behind, due to the *knowledge industrialization*. Short, what matters in the KS is not understanding better, but (re)producing for the sake of economic growth (Liessmann 2012: 50-73). In this sense technoscientific knowledge might well be disguised to be necessary for social well-being. Yet if this requires utilizing innovation and creativity in order to respond to *market demands* and engine competitiveness; “money-centeredness” (Himanen 2004) becomes self-destructive to the extent that not only possibilities to re-imagine ways of intervening in the world are shut. What is more, the focus- by the time- the “obsession” (Cacigal 2015) on generating profit is a suicidal move for the Pacha Mama as a whole.

There is no doubt that for German pharmaceuticals’ industry to lead worldwide, much more than access to biological knowledge and substances is required. Yet securing gains in the market, by establishing patterns, in other words bio-piracy (Shiva 2007), has been a fundamental tactic for newly capitalizing nature (Escobar 2007a, 342). This explains why even if the EK recommended avoiding such praxis and engaging on Open Source initiatives (Deutscher Bundestag 2002: 292, 301), the same government party that called for the Internationalization Strategy, CDU/CSU, opposed to revising the TRIPS (ibid: 504). Hence this confirms the will to further enrich from the privatization of knowledge, to be retained from nature, industrialized and later exported. Ecuador’s NPBV, in the contrary, advocates for the protection of biodiversity. Notwithstanding the step from the dominion to the abolition of nature (Gorz 2001) is also present on the Ecuadorian *realpolitik*, since the government seems to care more for knowledge *about* nature, Yachay, as this can fuel the economy; instead of decisively stopping exploitation. In

fact, as argued by Dona Haraway, “the biodiversity and bio-technology discourses (belong to the) post-modern reinvention of nature” (Escobar 2007a: 345). Therefore, when modern biology realized the utility of local systems of knowledge, the campaign for saving nature called for including “save local knowledge” as well. However by personalizing and de-territorializing knowledge in the attempt of commodifying this, even if the state tries to reward the communities, any price seems unfair (Walsh 2015b).

Hence if colonial difference set the criteria for categorizing illegitimate knowledge; the recently intended recognition is dangerous again (Agrawal 2002). Broader political control is aspired. Since major access to knowledge, it is argued, generates fragility (Stehr 2001, 2005), but “not-knowing” increases the fear of “devastating failure” (Gross 2007: 752), systematically using the right tools to *avoid*, instead of *enabling* a certain happening, has become a science (Hack 2006: 164); the politics of regulating knowledge. Nevertheless, or probably, *therefore*, the “epistemologies of the South” (Santos 2014) are by no means source of motivation for deep learning, since the egocentrism of the oppressor- the state - as Charles Mills and (2007) José Medina (2013) diagnosed, limits his cognitive capabilities via “lazy reason” (Santos 2014: 163). Despite, or rather, *because* of the KS, the dominant conception of the world is nurtured, not by the power alone, but above all by those agreeing this is the only way to go. Therefore the geopolitical race, KS, puts societies, even more than states, on risk.

## **8. Concluding Remarks: Beyond Knowledge Societies?**

This paper’s prior motivation was finding out how would comparing KS enterprises contribute to our understanding of the novelty, potentials and risks of this trend. In the attempt of responding to the research question, this was divided in two parts. Firstly: *how are knowledge societies framed in the German and Ecuadorian government discourses as exemplified in two strategic documents?* And secondly: *which similarities and differences can be identified, and how can this be explained?* The first section required an exploration on the genealogy of the term, which conduced to both countries’ participation on the KS theorization and further on its political endeavor. Whereas the second part extended its approach to reflect the context and discourse analysis vis-à-vis further critical perspectives. This shift seemed essential for countering the states’ KS monologue hiding some elements, but not the whole power structure. I will present the

results of my analysis starting with reflections on the contribution of SKAD; following I will draw on the discussion's deductions in regards to the KS' campaign implications for German and Ecuadorian societies; and lastly I invite to re-think the KS enterprise by referring to the initial question: *does an inclusive approach in the framework of the KS program indeed diminish or strengthen hierarchies between knowledges and societies?*

By relying on the *Sociology of Knowledge Approach to Discourse*, I adapted Keller's methodological toolbox, in order to focus the analysis of Ecuador and Germany's government KS discourses on the *historical, institutional and situational contexts* (1), the *scheme of concepts* (2), its *argumentative (re)construction* (3), *dispositives* (4), and the *narration line* (5). Certainly undertaking a critical **contextual examination** in three dimensions was a convenient approach for understanding the current attainment of- so to say -cognitive resources as well as the costs on the road. In both cases the knowledge on scope, *modern sciences*, have paradoxically been nourished by a *massive waste of experiences* (Santos) failing thus to offer concrete channels for social transformation. In this sense associating each country's contextual development with the KS theoretical genealogy seemed fundamental for tracking role models, which were not explicit in the discourses. Thus, IO's played a significant role. Ecuador's KS seems to be more compatible with UNESCO's K-Gap, inclusive approach, whereas Germany (ordo-liberalism and triple helix) appears to have had a crucial influence in the OECD. Withal the first KS theorists, so as World Bank's KE and UN DESA's KS project unveiled a common rooted path. Judging by their **argumentation** both government purposes are divergent: the German objective is securing leadership in the highly competitive, Global KS. While the Ecuadorian, Social Knowledge Economy seeks to transform the production matrix, as a necessity for attaining the BV. Moreover if we consider the government's vision of society, this expresses the evident, in the KS matter, Ecuador and Germany's points of departure are very far from each other. Yet coinciding in the **idea of which knowledge is useful and why**, brings them so closer. One country calls this "independency", the other "leadership"; at the end both want to convince knowledge is a resource, which should be managed by the state, either for the national or global well being. For this means, they stress the value of knowledge with the same rhetorical toolbox: research and technology mean progress. These are commonly out of reach, however in a KS framework five common **dispositives** in charge of the state

(research, ecological sustainability, investment, KM, positioning) would facilitate generating *innovation*. **Altogether** this confirmed that the KS enterprise intrinsically *responds* to and *forwards* a geopolitical dispute. Thus, as displayed on the discourses, the re-construction of asymmetric roles is instrumental to justify the *need* of formulating a KS strategy. The *coloniality of knowledge* and *power* prevail to the extent, that the articulation of technoscientific knowledge is institutionalized by the government. In Keller's words, its symbolic value is frozen. Hence, even if these target institutions, researchers or panoptic scope; by communicating that the KS' room is the globe, KM authority has to be entrusted to the state. This, and not society, is the KS' impulse.

Consequently, de/reconstructing the government KS discourses was very beneficial for disentangling its projections and argumentation by putting forward the KS program. Nevertheless both discourses obscured the question, *what is the price of the KS, and who has to pay this?* Or, what is more: *is the KS used to pay for further enterprises?* Critical views, notwithstanding, unveiled very costly consequences. Ecuador, i.e. has deviated from the socialist KE, and rather a) the re-accommodation of capitalism could be observed. Furthermore its development agenda was b) financed at the expense of extractivism in spite of popular resistance, especially from indigenous groups, whose c) schools and universities opposed the modernization project. Whereas in the case of Germany a) the rising scientization implied as well an increase in academization and expertocratization, which did not benefit society as a whole, but that was nurtured by b) neo-liberal formation, and c) widened social polarization. Thus, the discussion's main contribution was elucidating that a reinforcement of social hierarchies can be foreseen *because* the KS paradigm, as demonstrated in these cases, intrinsically calls for a hierarchization of *knowledge uses*, mainly than sources. Therefore, even if critical contextual inquiry was an essential basis for reading between the lines of the governments narrative and identifying the neo-liberally- and neo-contractually-based power structures it was very explicatory to consider that the source of geopolitical supremacy lies in a common matrix of oppression incarnated by both states. For this reason, if brief look to the discourses is given, mainly the periphery appears to be affected. But coloniality is always destructive, since it affects both, the oppressor and the oppressed. Hence, it is essential underlining, that even if the German state appears to be benefited from this geopolitical dispute, this does not mean the German society is.

The *abyssal line*, as emphasized by Santos, is not strictly geographical. But there is also a South in the North. Both, manual and intellectual workers, are keen to become commodified cheap labor. And if somebody believes to be exempt from this, this analysis suggests, the costs of dehumanization and exploiting nature will be shared. In a nutshell, in a KS scenario, Germany and Ecuador's **societies** face similar issues. Mainly since the underlying motivation for engaging in a KS' strategy, was not learning, *per se*, this could be a tool, but rather the aim was institutionalizing the state's authority to "educate" (Freire 1970) and manage the gains. Yet these are only fragments from a much broader puzzle, where geopolitics (of knowledge) seems to be the structuration logic.

In this vein, the main contribution of a comparative approach entails- in addition to identifying similarities on the KS genealogy and discursive framings –encouraging its counterdiscourses to dialogue. Overall this paper comes to the conclusion that it is almost unthinkable to proceed in a serious critique of the geopolitical venture, where the KS is immersed, by refusing to seriously inquire the multiple ways (herein just an illustrative sample) that KM can be oppressive. For instance, by examining the KS literature in my reach, particularly German scholarship limits the analysis to national borders and, what is more, makes of the oppressive constitution of scientific knowledge a taboo, by missing out that the Wissenspolitik-network is the German state's main tool. Conversely, a decolonial approach was very helpful to identify power structures, despite the variance of the terms and contexts, but by focusing on the implemented and strove dispositives by the state. Crucial is to clarify that in parallel to the countless ways of feeling oppression, countless are the ways of explaining and denouncing this. One does not need to be part of a minority (although the *damnés* (Fanon) are clearly the majority), simply by not engaging in *know-how life-long learning certificates' race*, those who fail the evaluation and learn differently will potentially be portrayed as ignorants for the KS.

Furthermore, it is worth reiterating that this paper's aim was not condemning the KS, by the sole observation of this concept's Western-centric origin (and most probably, purpose). This would have been too simplistic. For this reason, prior and during the writing process I prioritized a qualitative approach, talking to people. Hence this inquiry was seriously committed on searching for the KS' emancipation potential in the cases of UNESCO, Ecuador and Germany. As a result, the KS was dismantled as an enterprise

on construction, which is strategically utilized for legitimizing KM by the state. Thus, even if the term KE seems to fit better (since rather cognitive-capitalism is propelled), theoretical expectations failed to be empirically sustained. In the case of Germany, there is no proof of an existing KE (Rohrbach 2007, 2008) whereas Ecuador's venture is much contradictory, since it is foreseen that in order to achieve the post-industrial, post-extractivist, service-based (ill.8) KE, first creating an industry is required by relying on the knowledge the country has never been able to generate (Ramírez 2014b). Even more if current interrelations are framed within a network society (I skip IS because states almost do not use the term), as underlined by Castells, the fact that power seems to be decentralized, does not mean that hierarchies have disappeared. Contrary to this a skillful reinforcement might take place (Hafner-Burton/Montgomery 2010; Oatley et al. 2013). Herein resides the urgency to demystify hierarchies, together with "post-theories" and gaps; far deeper than between nation-states, among epistemologies, in other words, ways of understanding, seeing, feeling the world. Consequently not only, techno-scientific knowledge, but any knowledge form/use being at the heart of the KS, would be oppressive, as this normatizes and labels deviating experiences. For this reason *inclusion* in the global KS cannot be a solution, either. Should we forget or abandon the project, then? I am afraid this will not be an immediate solution, since as mentioned in the introduction, and confirmed by UNESCO specialists, the globalized KS campaign is and will continue on march. Unless we insist on contesting it.

Relying on state regulation (Stehr) nor depending on the master's tools- a long tradition proofs (Meusburger 2015, 20) -might be enough. Along this research, the only initiative of social transformation I could envision, in a KS' framework, was FLOK Society's commons-collaborative approach. However there are certainly plenty of alternatives, which do not need to universalize a path, as the KS's discourse and implementation do. Therefore, in spite of good intentions, whatever the amount invested on education or efficient your city infrastructure is made; you will not be *smart* (Koolhaas 2014) by refusing to learn from the consequences of your "development" and *with* the people. Instrumentalized minds don't hold the gun, they are the powder. Stopping this war more, than inclusion and development requires humility, since, following Santos, we are all incomplete and every knowledge is ignorant of something. Thus, assuming and countering monoculture; would be hopefully the last chapter on knowledge geo-politics.

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## 10. Appendix

### Eidesstattliche Erklärung zur Bachelorarbeit

Ich erkläre ausdrücklich, dass es sich bei der von mir eingereichten schriftlichen Arbeit mit dem Titel:

#### **The ‘Knowledge Society’ paradigm: A *new* chapter on the Geopolitics of Knowledge?**

A comparative insight into the discursive framing of two cases: Ecuador and Germany

um eine von mir erstmalig, selbstständig und ohne fremde Hilfe verfasste Arbeit handelt.

Ich erkläre ausdrücklich, dass ich *sämtliche* in der oben genannten Arbeit verwendeten fremden Quellen, auch aus dem Internet (einschließlich Tabellen, Grafiken u. Ä.) als solche kenntlich gemacht habe. Insbesondere bestätige ich, dass ich ausnahmslos sowohl bei wörtlich übernommenen Aussagen bzw. unverändert übernommenen Tabellen, Grafiken u. Ä. (Zitaten) als auch bei in eigenen Worten wiedergegebenen Aussagen bzw. von mir abgewandelten Tabellen, Grafiken u. Ä. anderer Autorinnen und Autoren (Paraphrasen) die Quelle angegeben habe.

Mir ist bewusst, dass Verstöße gegen die Grundsätze der Selbstständigkeit als Täuschung betrachtet und entsprechend der fachspezifischen Prüfungsordnung und/oder der Allgemeinen Satzung für Studien- und Prüfungsangelegenheiten der HU (ASSP) bzw. der Fächerübergreifenden Satzung zur Regelung von Zulassung, Studium und Prüfung der Humboldt-Universität (ZSP-HU) geahndet werden.

Berlin, October 9th 2015

Michelle Ruiz

## **Interpretation scheme**

This interpretation scheme is based on Reinhardt Keller's proposed table in his work published in 2010, 2011b, among others, as an illustration of the Sociology of Knowledge Approach. It is crucial to emphasize that a) this is a methodological toolbox, a recommended tool, by no means is it imperative to explain each element separately. b) This does not comprise the whole discourse analysis, I adapted the dimensions (i.e. three contextual degrees are not considered here, nor did I dedicate a specific section for analyzing the symbolic orders, but introduced them in the re-construction, see below). c) This is strictly interpretational (see quotes below), hence no references are exposed, which I certainly do along the reconstruction in the text.

"(...) interpretations, conceptual schemata, and so on out of the data, and in so doing they generate types of statements that were not in the actual data as such and could not have been" (Keller 2011, 63)

"El ASDC apunta a una tipificación de los contenidos, a las reglas o los principios de lo que entra en consideración como contenido, y a cómo se efectúa esto, y no a una recopilación que sume todo aquello que se ha dicho mediante "citas originales" – aunque estas sí que pueden ser utilizadas para fines de descripción o de ilustración. Por tanto, los bloques reales de la estructura del fenómeno de un discurso tienen que ser deducidos de los datos. A tal efecto, los fragmentos singulares del discurso sólo contienen, por regla general, *elementos parciales*." (Keller 2010, 22, my emphasis)

### **Within the discursive analysis reconstruction this dimensions appear as:**

- KS understanding = II scheme of concepts
- Sources = I Contextual analysis (slightly)
- Responsibility= III Argumentative reconstruction
- Need to act=III Argumentative reconstruction
- Solution to the problem=IV Dispositive
- Self-positioning= III Argumentative reconstruction
- Other-positioning= III Argumentative reconstruction
- Values = V Narration Line

### **Recurrent abbreviations in this table:**

- K: knowledge
- S: society
- KS: knowledge society
- IS: information society

	<b>4.1 Germany: The Global Knowledge Economy</b>	<b>4.2 Ecuador: The Social Knowledge Economy</b>
<b>Document (original title)</b>	BMBF 2008: “Deutschlands Rolle in der Wissensgesellschaft stärken: Strategie der Bundesregierung zur Internationalisierung von Wissenschaft und Forschung”	Senplades: “Plan Nacional del Buen Vivir 2013-2017: Todo el Mundo Mejor”
<b>Arena</b>	State (government) / Bundesministerium für Bildung und Forschung	State (government) / Secretaría Nacional de Planificación y Desarrollo
<b>Gallery</b>	Further ministries, public and private institutions, other parties.	Mainly public institutions, citizens in general. There is a tendency for amplifying the receptive scope, as showed for instance on the incorporation of comments by Edgar Morín (p.21), the UNPD (p. 41), the CEPAL (p. 79), among others.

<b>KS understanding</b>	K: scientific and technologic ( <i>having</i> , but searching for more in superlatives) S: researchers Ks: global, competitive. Basically same scenario of research and finance globalization. But now concurrence for concentration of “mind” resources and research infrastructure increased.	K: scientific and technologic ( <i>lacking</i> ), yet <i>having</i> diverse sources and types S: diverse, in need of being empowered Ks: change of production matrix, generation of high added value. Further development stage after IS, incorporating ICTs is not enough, but producing technology.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- more knowledge emerging in other places, threatening</li> <li>- lying behind on “relevant” knowledge production, quantifiable</li> </ul> → external conditions as imperative	<ul style="list-style-type: none"> <li>- economic vulnerability: primary goods economy and relying on oil exploitation, lack of competitiveness in the trade market means dependency</li> <li>- lying behind on scientific publications, quantifiable</li> </ul> → external conditions as imperative
<b>Responsibility (competences)</b>	<ul style="list-style-type: none"> <li>- public and private enterprises need to invest</li> <li>- researchers need to attract the best</li> </ul> → state establishes directives to be followed mainly by the research and economic fields	<ul style="list-style-type: none"> <li>- the state will provide innovation system, articulated by public institutions</li> <li>- private investment also desired</li> </ul> → state determines transformation of productive organization by articulating the education and corporate spheres
<b>Need to act/ solution to the problem</b>	<ul style="list-style-type: none"> <li>- attract for innovation “talents” (search, identify, label, connect)</li> <li>- fundamental for the economy (research valuable when successful transformation into</li> </ul>	<ul style="list-style-type: none"> <li>- extractivism, prepare to post-oil phase (requirement of an economic matrix, which can hold competitiveness by modernizing the sources and</li> </ul>

	<p>business )</p> <ul style="list-style-type: none"> <li>- cooperation/concurrence (main logic of the game: compete. Whichever tools in reach should benefit the speaker to that extent that partner is still subordinated)</li> <li>- global challenges (k at hand has a universal value, not only by self-conviction, but certitude that overall recognition)</li> </ul>	<p>infrastructure of production, that is, increasing profit by <i>know-how</i>)</p> <ul style="list-style-type: none"> <li>- transition to k-based economy, services and bio-knowledge (as mentioned earlier solution seeks to boost competitiveness via receipts and resources trending globally)</li> </ul>
<b>Self-positioning</b>	<ul style="list-style-type: none"> <li>- Establishment of the agenda, national, EU, probably global (self-acclaimed leader, in every stage)</li> <li>- Provides infrastructure, but does not manage it (ordo-liberal orchestrator)</li> <li>- Can provide knowledge as orientation to complex issues to the world, economic, cultural and research support to “developing”, and modernize Europe (overall supremacy)</li> </ul>	<ul style="list-style-type: none"> <li>- establishment of the economic horizon, central matrix (socialist attempt to articulate and redistribute, manage whole system)</li> <li>- strengthen society (educador, paternalist or emancipator? not distinguishable yet. but prioritization of specific type and use of knowledge articulated by suggests rather second, utilitarian HE )</li> <li>- enabling and articulating innovation (manager)</li> <li>- plurinational, lay (comprises all social diversity, to its mandate, reconciliation)</li> </ul>
<b>Other-positioning</b>	<ul style="list-style-type: none"> <li>- subordinated: EU and development countries (naturalized superiority)</li> <li>- emerging economies (often mentioning BRICS as threats and targets)</li> <li>- Partners/competitors (both identities can be entailed in the same subject, idea is taking advantage)</li> </ul>	<ul style="list-style-type: none"> <li>- “our North is the South” (realization of the need to diversify partners in changing multipolar world, however South is prioritized since possible to build a block (Celac, UNASUR))</li> <li>- need to insert strategically (in opposition, currently being left apart, not playing a significant role, which can be changed by modernizing production)</li> </ul>
<b>Values</b>	<ul style="list-style-type: none"> <li>- Leadership = authority</li> <li>- Modernizing motor = impulse</li> <li>- BE the research-, investment-location = concentrate</li> <li>- Network = expand</li> <li>- Innovation = create, research</li> </ul>	<ul style="list-style-type: none"> <li>- Buen Vivir = social welfare framed according to the state</li> <li>- Bio-knowledge = on/about nature</li> <li>- Variety of knowledges = some convertible, others incompatible, need to generate new</li> <li>- Social pact = legitimacy</li> <li>- Innovation = generate technology</li> </ul>

## Illustrations

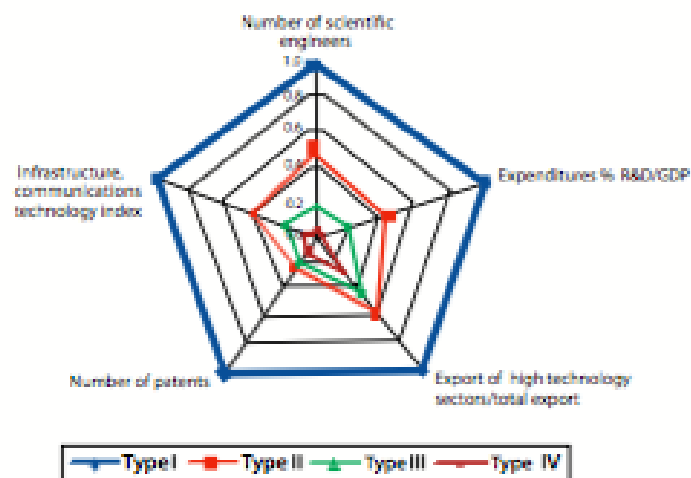
### 1. Indicator's proposal by UNESCO

#### Box 10.3 Towards a multidimensional development of knowledge societies

Such diagrams seek to show the physiognomy of knowledge societies in both their quantitative aspects and their qualitative aspects (more or less balanced development of the different dimensions considered).

These diagrams are useful for several types of study:

- they easily allow us to visualize the more or less balanced character of the development of the various components of knowledge;
- they enable us to define, as is proposed by Francisco Sagasti, different phases of social evolution, which constitute in his view so many possible stages towards a knowledge society;



Source: Towards Knowledge Societies Report, UNESCO 2005: 165

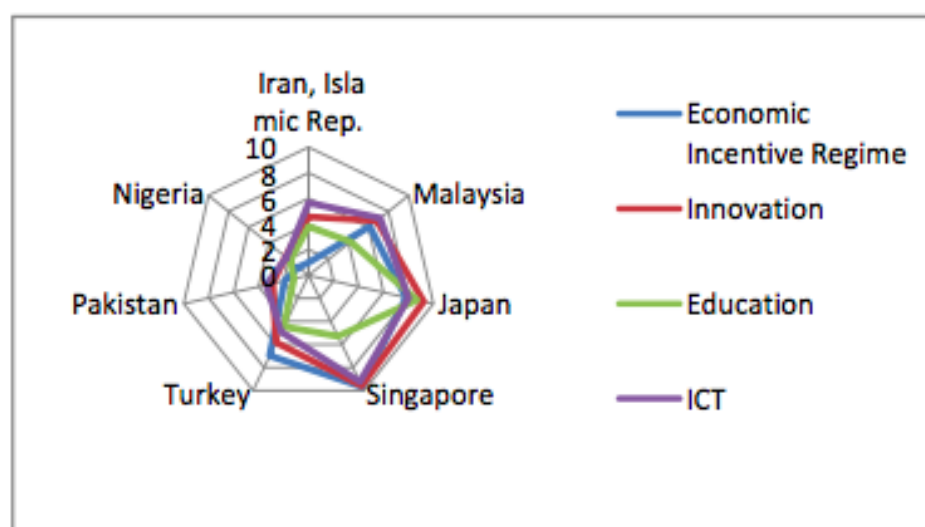
### 2. Study on the World Bank's Knowledge Assessment Methodology



**Table 2: T KEI Indexes (seven countries)**

Countries	Economic Incentive Regime	Innovation	education	ICT
Japan	7.81	9.22	8.67	8
Singapore	9.68	9.58	5.29	9.22
Malaysia	6.11	6.82	4.21	7.14
Turkey	6.98	5.83	4.46	4.92
Iran, Islamic Rep.	0.99	4.56	3.8	5.65
Pakistan	1.91	2.88	1.17	3.39
Nigeria	0.99	2.29	1.83	2.23

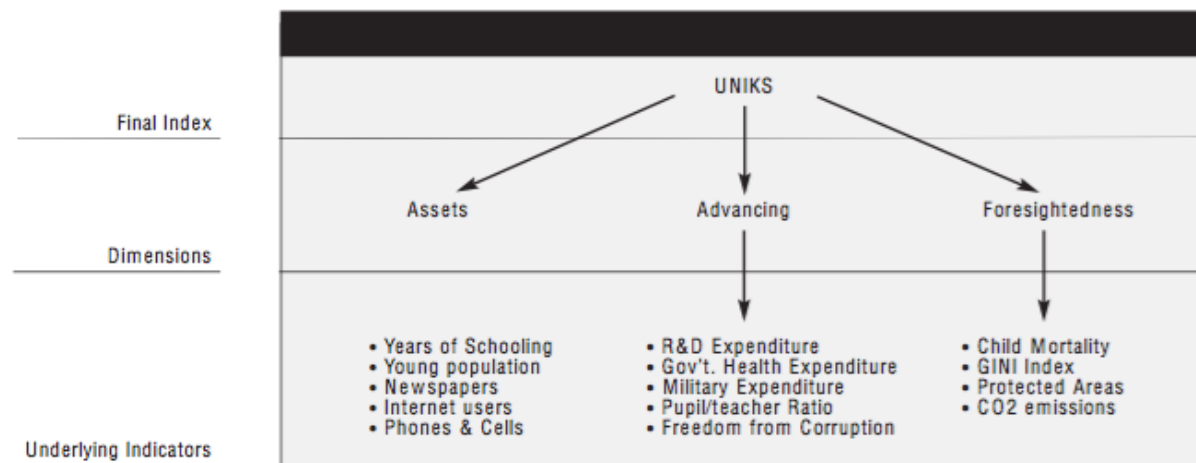
SOURCE: The Knowledge Assessment Methodology (KAM 2009) website  
[www.worldbank.org/kam](http://www.worldbank.org/kam)



**Figure 2: KEI Indexes (KAM 2009) (Spider Chart) – seven countries**

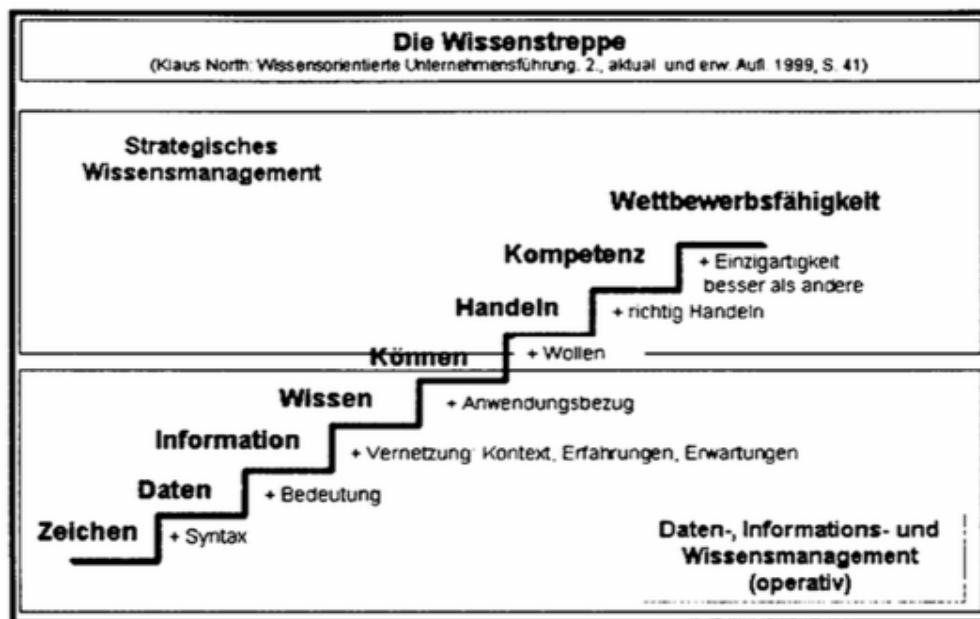
Source: The Knowledge Economy and Knowledge Assessment Methodology, Gorji and Masoomah 2011: 59

### 3. UN DESA's Index of Knowledge Societies



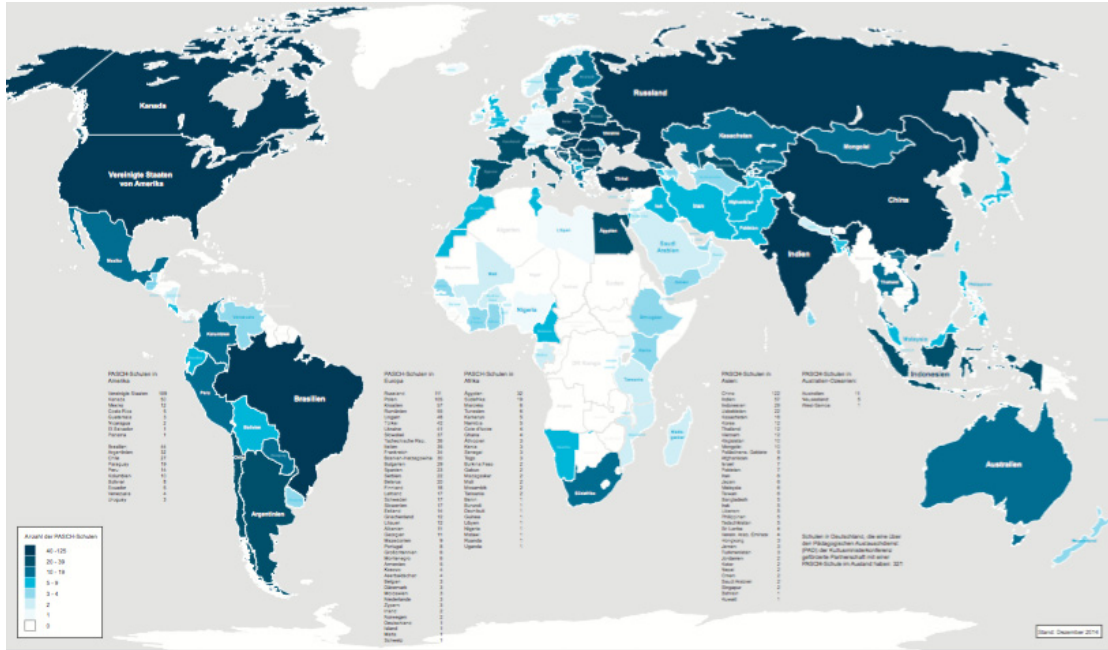
Source: Understanding Knowledge Societies, UNDESA: 152

#### 4. Klaus North's Knowledge ladder, 1999



Source: Wissensorientierte Unternehmensführung- Wertschöpfung durch Wissen, North1999, 41

#### 4. Network of German(- partner) schools



Source: Initiative Schulen: Partner der Zukunft <http://weltkarte.pasch-net.de/>

## 5. Humboldt, Bonpland and the *unknown indigenous* in Chimborazo, 1810



Source: Friedrich Georg Weitsch  
[https://upload.wikimedia.org/wikipedia/commons/7/72/Humboldt-Bonpland\\_Chimborazo.jpg](https://upload.wikimedia.org/wikipedia/commons/7/72/Humboldt-Bonpland_Chimborazo.jpg)

## 6. Principles on the “Código Orgánico de la Economía Social del Conocimiento” as sketched by the National Secretary of Higher Education, Science, Technology and Innovation

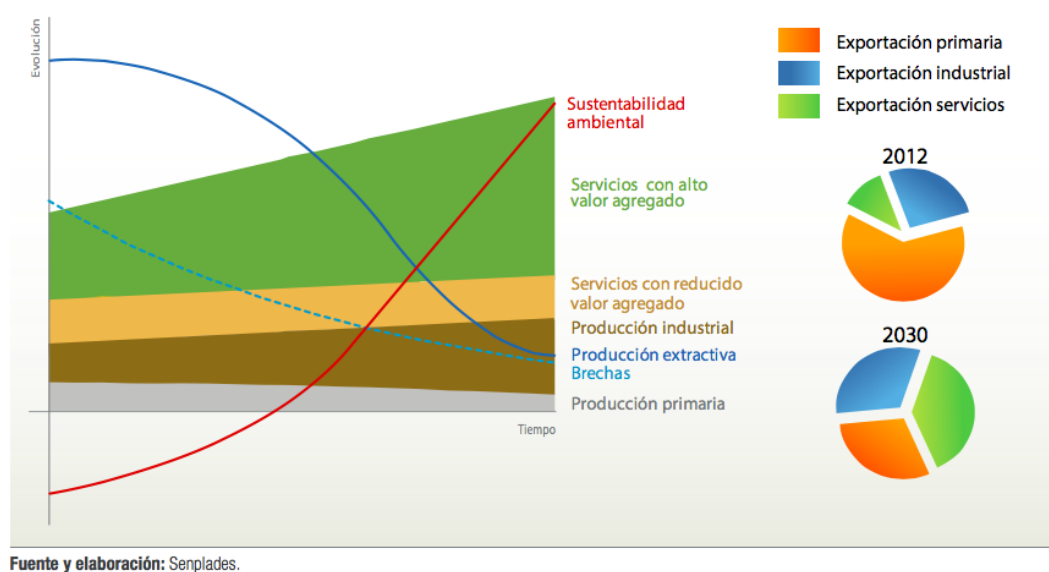


Source: René Ramírez' post in Twitter, May 2015

## 8. The PPBV's “infinite-resource-knowledge” - matrix of production

GRÁFICO 5.1.

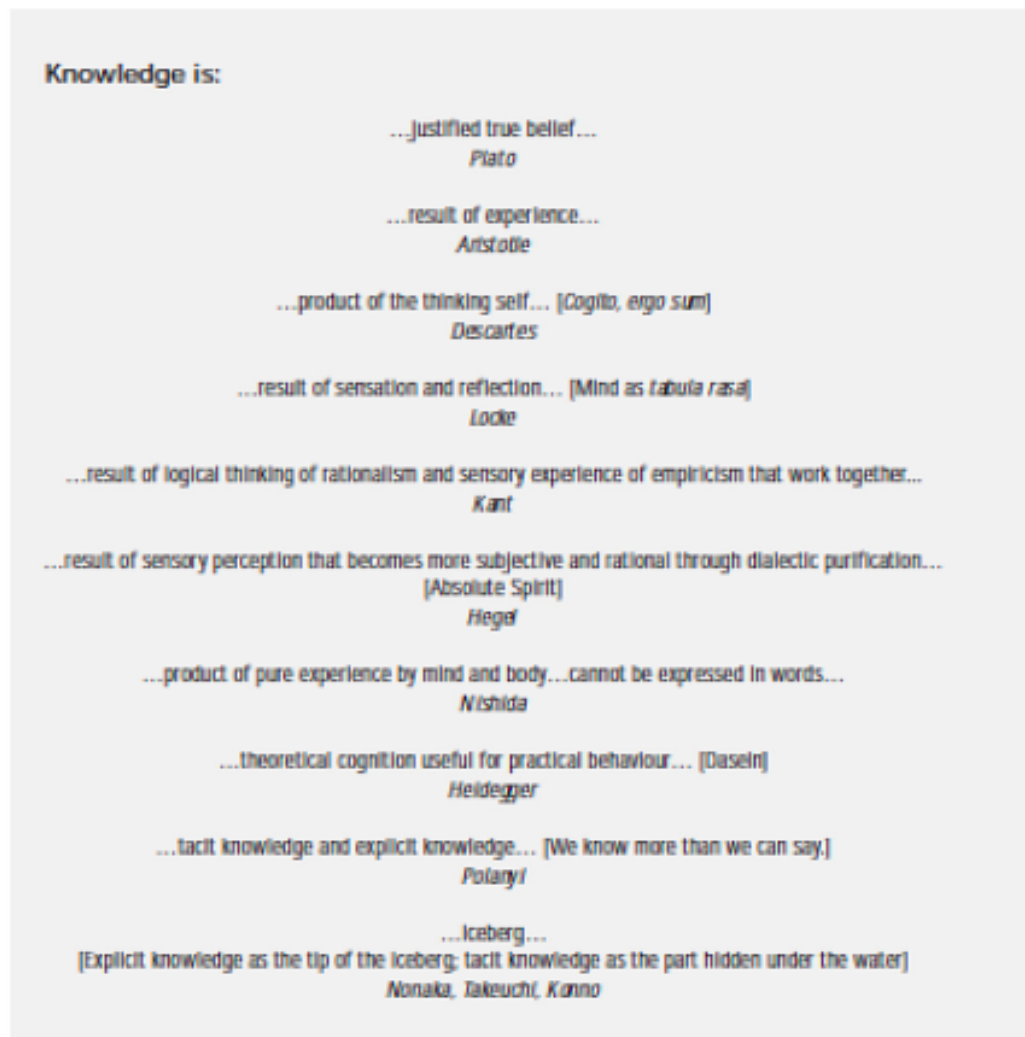
**Estrategia de acumulación, distribución y redistribución en el largo plazo**



Source: National Plan For Buen Vivir 2013-2017, Senescyt : 63

## 7. Fundamentals for the conception of “knowledge” according to UNDESA

Figure 3. UNDESA textbox on “knowledge” (UNDSEA, 2005, p.32)



Source: What is the Opposite of a Knowledge Society?, Hallberg Adu 2014: 8