

# **Academic Apartheid**

A Case Study: Organizational Perspectives on the Academic Field in  
Iceland

Kristinn Már Ársælsson

**Lokaverkefni til MA-gráðu í félagsfræði**

**Félagsvísindasvið**

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# *Summary*

This thesis is a case study which explores the organizational structure of the University of Iceland, its relative positions of power, struggle for Bourdieuan capital, the mode of resource distributions, inequalities, logic of the academic field in Iceland, myth building processes and external and internal isomorphic influences. We use qualitative interviews with key actors in positions of power and academic staff and quantitative data to observe and reveal preliminary findings on the social mechanics and logic of the academic field in Iceland. Bourdieu's theoretical model is used to supplement organizational theory in an attempt to incorporate tools for analyzing struggle and inequalities within fields. Our analysis suggests a structural inequality reflected in our findings by a dichotomy of academic subjects in regard to positions of power and access and distribution of economic and academic capital. We argue that there is significant evidence of informal coercive isomorphism towards marketization. We argue for the need of a reflexive sociology of science and a deeper understanding of the social mechanics of science to minimize the risks of subversion as a result of external and internal pressures upon the academic field.

## *Why, what and how?*

Why did I [(Pierre Bourdieu)] choose to devote this, my final lecture course at the Collège de France, to the subject for science? And why publish it, in spite of all its limitations and imperfections? This is not a rhetorical question, and it seems to me in any case too serious to be given a rhetorical answer. I think that the world of science is threatened by a serious regression. The autonomy that science had gradually won against the religious, political and even economic powers, and, partially at least, against the state bureaucracies which ensured the minimum conditions for its independence, has been greatly weakened. The social mechanisms that were set in place as it asserted itself, such as the logic of peer competition, are in danger of being, subordinated to ends imposed from outside. [...] In short, science is in danger, and for that reason it is becoming dangerous (2001/2004: vii).

The above statement is our own statement<sup>1</sup> and the reason why we chose the academic field in Iceland as our research subject. It is in danger, it's autonomy is in jeopardy and many of its relative parts are also in danger from science itself. The academic field and the university in particular is in danger of being subverted and transformed because as a result of pressure,

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<sup>1</sup> And we echo an old philosopher and social critic: "I do not speak the minds of others except to speak my own mind better."

outside pressures to adapt to (isomorph) to criteria, demands and the logic of other fields such as the fields of power: religion, political and economic. These pressures could lead to changes being made to the basic structure of the academic field that weaken its capacity to produce relevant and meaningful works of science, either for the goal of furthering knowledge for knowledge or for the practical use in other fields of society (industry for example). The academic field has always been in danger from outside pressures and attacks from other fields of power. But it is also in danger from itself, from within universities and within the international university field. Changes made to the basic structure of the field can lead to struggles for resources and power where there was agreement before and can also lead to unforeseen consequences – which, perhaps, should not have been so unforeseen. For that reason, the lack of understanding of the basic inner workings, the social mechanics, of the academic field, renders it vulnerable to outside pressures and influence. When outside pressures and attacks upon the university or academic field have been obvious and highly publicized there was in many ways less danger than at times when the pressure was ambiguous and secret. And that is why Bourdieu argues and calls for the *necessity* of a new sociology of science which is *reflexive* – which looks upon the academic field as an *objectified subject*, from without, and reveals to those interested, and many should be interested, the logic of the field, its relative positions of power, the mode of resource distribution, organizational structure and connections with other fields – its social mechanics. The following thesis is an answer to that call, or rather, only a whisper. Our aim to report preliminary empirical findings, sketch a useable theoretical model and make rough predictions on the probable trajectory of the University of Iceland (UI) and the academic field in Iceland – hopefully creating space for a *reflexive discourse* to avert and minimize the dangers by offering a new perspective.

What we aim to do can be split into four main parts of the same whole. First we will sketch a theoretical outline of organizational field (such as the academic field) and its social mechanics. The theoretical framework of organizational theory has been empirically tested and developed for decades and will be used as a basis for a reformed theoretical model which also incorporates Bourdieu's theoretical model of field, habitus and capital. While organizational analysis provides tried and tested theoretical tools for the analysis of organizational fields it lacks tools for the analysis of built-in inequalities and struggle for power which Bourdieu's model provides. Secondly we will introduce the methods and data selected for the purpose of revealing preliminary results on the structure of the academic field. Both qualitative and quantitative data is used, including interviews with UI staff, official statistics and data on the academic output of the UI. Thirdly we will report our findings and analyze the data based upon the theoretical framework. We will analyze the relative positions of power, distribution of resources, built-in inequalities, formal structure, policy making processes, quality indicators, external pressures, vulnerabilities and many other aspects of the academic field using the theoretical tools described in the chapter on **Theoretical Background**. And fourthly we will discuss our findings, suggest further research, argue for necessary changes and make preliminary predictions on the probable trajectories for within the academic field in Iceland.

## ***Historical background***

### ***The Foundation: Björn M. Ólsen***

Becoming one of the most admired, respected and accomplished universities in the world is no small feat. The University of Iceland is not by any standards known to us amongst the greatest universities of our time. Iceland inhabits only about 300.000 people and, in all fairness, unsurprising that the UI is not as well publicized and respected as Harvard or

Princeton. But, despite being a very small university, with less funds and resources than universities in its neighboring countries, most notably Scandinavia, this small institution set itself the ambitious goal to become one of the **Top 100 universities** in the world in just a few years. Only a few years have passed since the UI enrolled its first graduate students. For about 90 years of its 100 year history the UI has been a bachelor degree institution, sending its most prominent and gifted students abroad for further education. Surely the goal of reaching the top 100 must be delusions of grandeur. We will argue, supported by data and references to empirical research, that the policy is part of a *normal* process within organizational fields, the result of changing relative positions of power within the UI and resulting from outside pressures from other fields, such as the political field of power and international academic field. The new *Top 100 policy*, one of our main focus points, is a product of a process put in motion by then newly elected Rector Ms. Kristín Ingólfssdóttir in 2006,<sup>2</sup> which in short is a plan to break into the *Top 100* of international research universities as listed by the *Shanghai Institute of Higher Education*. But before we turn our attention to the present it is important to look too the past.

The University of Iceland was founded in 1911 and had four academic departments: law, medicine, theology and philosophy. Björn M. Ólsen was elected its first rector and had a good understanding of the basic structure of universities, the University of Iceland in particular, and the immediate future of both the University of Iceland and the international university community. His speech on the day of the UI's establishment, in addition to sufficiently outlining many of the basic elements of the university field in Iceland and its connection to the international academic field, gives us an understanding of the durability and longevity of social processes. Research, analysis and discussion without such understanding risks

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<sup>2</sup> There is a rumor that the Minister of Education or someone from the Government Offices suggested the goal of reaching the Top 100 and convinced Kristín Ingólfssdóttir and the UI to adopt it. I had not heard this rumour before I started work on this research and in fact heard of it first in an interview with a UI scientist. I never repeated the rumor myself to anyone but it came up during two separate interviews. One was quite certain of its validity the other absolutely positive. I will not discuss the possible implications of this rumor as I had no opportunity to verify its validity.

overseeing important factors and overemphasizing the relevance of various patterns and processes observed over a short period of time. Mr. Ólsen in 1911:

[...] and now men usually, at least in the northern hemisphere, understand [the word university], as an institution that covers all those scholarly disciplines that the human spirit, at this time, occupies itself with, and they become gradually more numerous, because modern science divides work between many, so each chooses for himself his own subject of inquiry, and as a result some new disciplines have emerged and some of the older scholarly disciplines have branched into different academic courses. [...] A university is a scientific research-institution and a scientific educational-institution. In connection with this I cannot defer myself from mentioning the relation between the universities and the state or the government in each sovereign country. Experience has taught us, that absolute academic freedom, both in research and teaching are a necessary provision so the work of a university can be conducted in sufficient manner. [...] Free research and free teaching are as necessary for the universities as breathing is for the individual. The state should therefore suffice itself to procuring necessary funds and observe that the universities act in accordance to those laws that are pertaining to them, but otherwise allow them as much freedom regarding their own work and subjects as possible.

Yet universities have, also, a third objective, and that is to offer to men the basic education, which for them is necessary, to be able to fulfill the requirements of various official posts or work in the society. This objective is very useful for the society. It is not, or at least it does not have to be according to strict scientific principles, but, rather, it adjusts itself to the requirements of the students.

[...] Each university can be called a citizen in the great *respublica scientiarum*. Between the universities of the world there exists a close relationship [...] where all work towards the same goal in most disciplines. [...]

[The University of Iceland] is not only the youngest university in the world, but also the smallest and one of the most imperfect. This is normal, because our economy is small. [...] And we lack numerous things and much of each. Three of the universities departments are based upon historical example, those that come from older institutions: the theology department, the department of law and the department of medicine, and they are well equipped in regards to the necessary number of teachers. But it cannot be expected, erstwhile, that they can aim higher than to be preparation institutions for officials and beaurocrats, as the old scholarly institutes were. (From the inaugural speech of the University of Iceland on the 17<sup>th</sup> of June 1911, Björn M. Ólsen).

The UI was in the beginning, first and foremost, an institution for the preparation and supplying of officials – priests, medical doctors and lawyers – for the state; which had an increasing need for officials. Its main objective was to train men for the necessary posts and jobs in Iceland that required specialized training. The basic normative structure of the university rested upon the training of officials for the benefit of society and to adhere to studies singular to Iceland (language and history to begin with). But as can be noted in Ólsen’s speech, the objective was to become a *proper* university and participate in the international scientific endeavor; become a recognized citizen of the *respublica scientiarum*.

It is obvious from the speech that the UI is founded upon a structure that is built in accordance with the formal structure of a university, that is the organizational values of the international science community, and was expected to increasingly mimic that structure as time went by. The UI’s first policy, Mr. Ólsen’s speech in 1911 interpreted as the UI’s first policy document and statement was: to become a full grown member of that international community, although conscious of its limits for the time being, in the first years of its history. Although not always the most important policy issue, the quest to become a citizen in the *respublica scientiarum* has obviously been at the heart of the UI’s structure. The UI’s academics were all trained and educated abroad in those days, and for the most part still are, where they soaked up the structure of the university field around the globe. Many were educated in North America and Scandinavia but many also in Europe. The UI has therefore always been in good contact and well informed about the values within the university field, even in times of less travel and communication; which is a significant factor for a University on an island in the middle of the North Atlantic.

In many respects it comes as a surprise that the policy in the inaugural speech itself is as *internationally* and *research* minded as it truly is. The origins of the following thesis were in part because of the *seemingly* changing policy towards internationalization and more

emphasis upon research – primarily English – publications. One would assume to find some evidence at various stages in the history of the UI, of interest for more international cooperation and even occasional ambitions towards becoming a university that could be compared to other respected and prestigious universities around the world, but not necessarily in its first public policy statement. Long before the great changes in travel and communication, there was a strong emphasis on international cooperation and the international nature of scientific work. The possibilities for international cooperation that we enjoy today were irrelevant at the time of the UI's establishment for the importance of such cooperation. One of the main organizational values within the university field is the international nature of science: an international project which must reach beyond nationalities and state boundaries, in sociological terms, to be in a field of its own. To fulfill the demands of that value was perceived by Mr. Ólsen as necessary and therefore he promised that the UI would in due time reach that goal.

Mr. Ólsen's speech gives us reason to assume that the structure of universities is old and rigid. The university is in many respects a remnant from the Middle Ages, one of the last surviving institutions of feudalism. Without delving too deeply into the history of the university one can proclaim that its structure is based upon values that were intended for societies where the modern state and capitalism did not occupy center stage. Research into structural changes of the university is important. Unfortunately this paper will not look further back than to the founding date of the UI, and mostly occupy itself with the last 30 years. Nevertheless, we must stress the importance of researching thoroughly the basis of the phenomena or structure that is being observed, because of the real possibility of deeming something *new*, *current* or *innovative* that in fact is **old, rigid** and **has been used many times over**, often without actors being conscious of it.

## ***A short history of the UI***

Þórir Kr. Þórðarson published in 1986 (11-14) a short article on the history of the UI which will be the basis for the following historical overview.

The UI's foundation was a merger of three older educational institutions: The Priest School (founded 1847), the Medical School (founded 1876) and the School of Law (founded in 1908). The UI was then founded in 1911 with four departments, one for each of the former schools who merged into the UI and, also, a department of philosophy although it had neither students nor teachers during its first year – a demonstration of intent rather than natural demand. In its first year there were 11 scientists and four students. The department of philosophy would mainly be occupied with research in the Nordic sagas and other subjects connected with Icelandic culture.

The UI's next period of interest was during the years following the great depression. At that time the UI grew considerably mainly because of the University Lottery which was founded at that time and made new funds available, mainly for the building of new facilities. Several buildings were built during that time, including the main university building, which at the time was a revolution for the UI.

During the Second World War Iceland was cut off from the outside world and its academic connections with Copenhagen had been especially important. As a result the UI had to train engineers in Iceland which led to the foundation of the fifth department at the UI, that of engineering in 1944. After the war many of those trained in engineering at the UI went abroad to finish their training. The UI was though still mainly a teaching institutions which trained officials and beaurocrats.

According to Mr. Þórðarson it was during the 1960's that the UI took its first tangible steps towards becoming a *research* university. The UI received increased funding for research, both from the State and also from foundation such as the Rockefeller foundation in the USA. There were also new expectations on the importance of the UI for the society at

large, especially regarding *economic growth* which was taking center stage in the development of nation-states at that time. The Central Bank was founded and allocated substantial monies towards research at the UI. The department for Business was founded in 1962 and in 1966 the Institute for the Natural Sciences was founded with funds coming from the State but also from the USA. Ten years later the Department of Social Sciences was founded and has since then grown to be the largest of them when counting students. During that period, from 1960-1986, full time scientists at the UI grew in numbers, from being 35 professors and 22 part-time teachers and scientists to being 228 full-time positions at the UI.

In the mid 1980's there was an increased effort at the UI to partake in the international academic field. We are unable to trace in detail the history of scientific research in this thesis but it is important to note, for instance, that in the 1980's the first competitive research funds were established within the UI, prompting much debate within the UI. The University Science Fund is an indicator of change within the UI with a shift from the 'civic tradition'<sup>3</sup> at the UI to a more international scientific tradition (Thorlindsson, 2008). And "Icelandic scientists have been making great advances on the international scene for the past years. In 1988, the number of articles published in cited foreign journals was 128. In comparison the number had gone up to 452 in 2001" (Sigfúsdóttir, Ásgeirsdóttir, McDonald & Feller, 2005: 80). Sigfúsdóttir and Thorlindsson assessment in 2000 on the scientific output in Iceland is also a point of reference for the history of scientific research and in itself an indicator for the increasing emphasis on international scientific publications.

In the last 10-15 years new universities have been founded in Iceland. The University of Akureyri (UA) was founded in 1988 but only offered a few academic programs, mainly in business and health sciences. Since then the university has added academic programs and in 2003 students were accepted in social sciences and law. In 1995 the Business University at

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<sup>3</sup> The main task of the UI from its foundation up til the 1980's had been to produce civil servants (Thorlindsson, 1998).

Bifröst (UB) graduated its first students. Since then the university has grown and added programs gradually, mainly in law and business related programs. The Reykjavík University (RU) was founded in 1998 and has also added programs. In 2007 the RU accepted students to programs in technology and engineering, law, social sciences and public health, teaching and business.<sup>4</sup>

Iceland also had in 2007 four specialized institutions that are classified as offering studies on a university level: a teachers college, an agricultural college, a travel, fishing and horse-breeding college and an arts college. These universities are peripheral members of the university field that is the research focus of this essay. Although it might be worth to mention that the teachers college is being merged with or incorporated into the UI. In 2008 the Teachers College merged with the UI. In 2010 there were ongoing discussions of further mergers between universities in Iceland.

## *Theoretical Background*

### *Organizational theory and perspectives*

Much of sociological theory has from its very inception focused on the concept of *institutions* (Comte, 1974; Durkheim, 1893/1997; Goffman, 1961/1974 etc.). Jeppeson (1991) even argues that it is the single most important theoretical concept and tool of all within sociological theory. And he also argues that it's definition and use have, unfortunately, been inconsistent and even incommensurable. To understand why sociology is so occupied with institutions we need to understand one of the main endeavors of sociology. Sociology is the science of the social realm, using scientific theories and methods to discover and explain consistent repeating social patterns – to reveal the social mechanics. Analogous to chemistry

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<sup>4</sup> Before the founding of these three new universities, parts of classical organizational theory was inapplicable to the University of Iceland due to a lack of a *field with numerous organizations*. The University of Iceland was in a field of its own nationally but part of the international field of universities – see detailed discussion in the chapter on **Theoretical background**.

for instance which is the science of chemical agents, using scientific theories and methods to discover and explain consistent and repeating chemical patterns – to reveal the chemical mechanics. But there are important differences for instance that while chemistry and sociology analyze interaction the latter is more restricted to observing its research subject without obtrusive interference while the former is not as bound by ethical considerations. A more important difference is that the research subject of the former does not have the capability of conscious creative action and is therefore restricted to abiding by the laws of nature. And although sociology has shown that much of social action is guided by social mechanics and social structure few argue that there exist laws of society in the strict sense of the term even though we can predict certain social phenomena with great probability there is always the possibility of conscious creative action. All science uses theoretical *models* which use *abstract concepts* to *signify* observable and/or measurable phenomena as we can never observe any phenomena other than our own thoughts directly.<sup>5</sup> These abstract concepts constitute the observable phenomena as it would appear isolated from its environment. “Atom” and “string” are abstract theoretical concepts used in physics and “institution” is an abstract theoretical concept in sociology. There can be a great deal of agreement on the exact definition of a theoretical concept but also some variance or disagreement. There is no *sub specia aeternitatis* definition of “institution” but the following is a useable definition:

“An institution is [...] a social pattern that [has] [...] a particular reproduction process. [...] Put another way: institutions are those social patterns that, when chronically reproduced, owe their survival to relatively self activating social processes. Their persistence is not dependent, notably, upon recurrent collective mobilization, mobilization repetitively reengineered and reactivated in order to secure the reproduction of a pattern. That is, institutions are not reproduced by “action,” in this strict sense of collective intervention in a social convention. Rather, routine reproductive procedures

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<sup>5</sup> Which also is problematic in philosophical terms, how do I know that the thoughts are mine and even how can I know the meaning of the signifier “I”.

support and sustain the pattern, furthering its reproduction – unless collective action blocks, or environmental shock disrupts, reproductive process” (Jeppeson, 1991:145).

The university is an institution in sociological terms. Organizational theory focuses on how highly institutionalized organizations interact within social fields and the mechanics of the self-activating reproduction processes.

We use a number of theoretical frameworks to create a new framework for the purpose of analyzing an organizational field: the academic field in Iceland. We argue that by combining a number of organizational theories and Bourdieu’s field, habitus and capital theory we can create a theoretical model that is based on the empirically tested organizational theory but also incorporates theoretical tools which allow us to better analyze struggles, built-in inequalities and modes of distribution within the field. We will discuss each theoretical part in turn before we describe our theoretical model in detail but first an outline: We argue that institutionalized reproduction processes within organizations in institutional fields include *myth building* processes (Meyer and Rowan, 1977) where organizations signify their acceptance and adherence to the legitimate structures, procedures and goals of the field. These reproduction processes also include *institutional isomorphism* which can be mimetic, coercive and normative (DiMaggio & Powell, 1983). Many fields include efficiency and performance standards as legitimate goals for organizations which have been shown empirically to be relative between fields and even between sub-fields within a field (Kondra and Hinings, 1998); and also that often measures are taken to increase legitimacy that decreases efficiency (Meyer & Rowan, 1977). Empirical research has also revealed that in highly *institutionalized social settings* it is sufficient for a person who holds a legitimate position of power within an organization to tell another person *how-things-are-done* to successfully transmit, with high levels of *cultural persistence*, the legitimate structure and normative framework of a given field (Zucker, 1977). We agree with Bourdieu’s critique of the sociology of science (and

organizational theory) in that it lacks theoretical tools for analyzes of inequalities and struggle within the field. We therefore add to the more or less classic organizational theoretical model theoretical tools from Bourdieu's own theory. We contend that within any given field there are *relative positions of power* occupied by social groups, and that the *mode of resource distribution* favors those in position of power. Social groups and agents within fields compete for different types of *capital, economic, cultural, social and symbolic*, which have relative valuations between fields (Bourdieu, 1979/1984, 1990, 2001, 2001/2004).

Next we will discuss each part of our theoretical model in turn before we discuss Bourdieu's critique of the Old Sociology of Science and his own theoretical model. Lastly we will discuss our own theoretical model.

### ***Myth building and legitimacy***

Meyer and Rowan (1977) argue that institutions need to adhere to certain institutional rules to gain legitimacy. If institutions do not adhere to the normative frame of reference, they risk being labeled irrational and inefficient, regardless of a specific measurement for efficiency:

[...] Organizations are driven to incorporate the practices and procedures defined by prevailing rationalized concepts of organizational work and institutionalized in society. Organizations that do so increase their legitimacy and their survival prospects, independent of the immediate efficacy of the acquired practices and procedures. [...] In modern societies, the myths generating formal organizational and impersonal prescriptions that identify various social purposes as technical ones and specify in a rulelike way the appropriate means to pursue these technical purposes rational. Second, they are highly institutionalized and thus in some measure beyond the discretion of any individual participant or organization. They must, therefore be taken for granted as legitimate, apart from evaluations of their impact on work outcomes.

[...] Categorical rules conflict with the logic of efficiency. Organizations often face the dilemma that activities celebrating institutionalized rules, although they count as virtuous ceremonial expenditures, are pure costs from the point of view of efficiency. For example, hiring a Nobel Prize winner brings great ceremonial benefits to a university. The celebrated name can lead to research grants, brighter students, or reputational gains.

But from the point of view of immediate outcomes, the expenditure lowers the instructional return per dollar expended and lowers the university's ability to solve immediate logistical problems. Also, expensive technologies, which bring prestige to hospitals and business firms, may be simply excessive costs from the point of view of immediate production. Similarly, highly professionalized consultants who bring external blessings on an organization are often difficult to justify in terms of improved productivity, yet may be very important in maintaining internal and external legitimacy (Meyer and Rowan, 1977).

Efficiency is by no means the sole predictor for policy changes as Meyer and Rowan point out but, rather, various structural and normative influences within organizations and organizational fields. Some of the organizational structure that institutions isomorph is incorporated into the formal structure of institutions as opposed to actual day to day work activities; in some instances these two structures overlap. Institutions create and recreate ceremonies that project a desired, if successful, myth about the individual institution or organization. Meyer and Rowan contend that by increasing legitimacy an institution increases its probability for survival.

Meyer and Rowan emphasize that institutions may try to evade inspection, both internal and external to mask the discrepancy between formal structure (for example policy) and day to day activities, or informal structure. Although this may be so in numerous instances the opposite is also possible and in fact probable. An institution that seeks to increase its legitimacy may indeed welcome or even apply for inspections to increase its legitimacy. This procedure can be realized in a number of different ways, for example by hiring expert consultants, allowing a public inquiry or inspection or by publicly exhibiting the institutions work procedures – even though selectively in some instances.

Although there will be a discussion in greater length regarding the field influences on a single institution it is necessary to emphasize the importance Meyer and Rowan (1977:360) place upon organizational environmental influences:

“Environments and environmental domains which have institutionalized a greater number of rational myths generate more formal organizations. This thesis leads to the research hypothesis that formal organizations rise and become more complex as a result of the rise of the elaborated state and other institutions for collective action.”

This hypothesis does not explain radical change, quite the contrary. Universities are institutions that in some respect pre-date the elaborated state and part of their structure is based upon values and a structure of great stability and respect. It also leads us to the conclusion that in such domains one can expect to find a high level of adherence to formal structure through myth and ceremony.

### ***Institutional Isomorphism***

DiMaggio and Powell intended their theory to be applicable to whole fields, rather than individual institutions or organizations within fields. Nevertheless it is possible to extract from their theoretical writing a workable and dynamic theory applicable for changes within individual organization (as part of an organizational field).

Institutional isomorphism is a structural process that isomorphs institutions within a developed institutional field. There are, according to DiMaggio and Powell, three isomorphism mechanisms: Coercive, normative and mimetic.

“Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations in the society which the organizations function” (DiMaggio and Powell, 1983: 150). Formal coercive isomorphism stems from regulations or laws that institutions must fulfill or abide by; and informal coercive isomorphism refers to non-formal norms regarding institutional structure or procedures. An example of formal coercive isomorphism process from the university field in Iceland is the University-law passed by the state, to which all universities must comply to gain official recognition and public funding. An example of informal coercive isomorphism is the peer-review system within the academic field for the

evaluation and distribution of scientific work which is not legally obligatory but any university which could chose another system for the evaluation of scientific results would run the risk of losing legitimacy and therefore decreasing it´s probabilities for survival as an organization. Both formal and informal coercion can stem from another institution within the organizational field; for example an institution that has much prestige/legitimacy/social capital within that field.

“Mimetic isomorphism [...] [derives from] uncertainty [...] that encourages imitation. When organizational technologies are poorly understood, [...] when goals are ambiguous, or when the environment creates symbolic uncertainty, organizations may model themselves on other organizations” (DiMaggio and Powell, 1983: 151). Two subjects are of importance in relation to mimetic isomorphism. First, that mimetic isomorphism is a process that can be acted out with or without the conscious awareness of the institution that is being *modeled* and the institution that is *modeling*. And secondly, that “[m]odels may be diffused unintentionally, indirectly through employee transfer or turnover” (DiMaggio and Powell, 1983: 151). Also it is worth mentioning that there is a possibility for *innovation* through *imitation* when something either is imitated poorly with good results or imitated and improved at the same time.

“[N]ormative [isomorphism] stems primarily from professionalization. [...] Two aspects of professionalization are important sources of isomorphism. One is the resting of formal education and of legitimation in a cognitive base produced by university specialists; the second is the growth and elaboration of professional networks that span organizations and across which new models diffuse rapidly” (DiMaggio and Powell, 1983: 152).

### ***Relative performance hypotheses***

Kondra and Hinings (1998) argue that performance and efficiency are relative within industries:

Martin and McConnell (1991) found that firms that underperformed [in their industrial field] were likely targets for takeover and, in turn, these firms had very high levels of top manager turnover. It is of great interest to note that, on average, the firms that were targets for takeover and subsequent management turnover performed as well as the overall market but worse than their industry, lending credibility to the relative performance hypothesis (Kondra and Hinings, 1998: 749).

The relative performance hypothesis is anecdotal evidence that sub-fields exist within fields which could explain diversity within fields. In other words, normal structure within fields and legitimate norms might not be stable or singular for the whole field.

Kondra and Hinings do not incorporate the relative performance hypothesis into their theoretical framework. Although most institutions within a field try to adhere to the *normal* structure of the field, there can be substantial differences in which norms the institutions perceive as more relevant or more legitimate for their own institution. Kondra and Hinings also argue that so called *Renegades*, institutions that deviate from normal institutional field structure but outperform other institutions within the field, can influence the normal structure and start a process of mimetic isomorphism within the field towards their structure. This is undoubtedly true in some cases where the difference in performance is substantial *and* has legitimacy in itself within the field. The new structure of the *Renegades* is influencing the structure of the field and other institutions must change to increase their legitimacy again; even those who had normal structure and normal performance. Kondra and Hinings model is an attempt to incorporate mechanics for change within institutional fields and in some aspects succeeds. But it overlooks the possibility to construct an even more dynamic model where change is explained in terms of a struggle between institutions for legitimacy; a struggle that might be between sub-fields that seek to change the normal structure through myth building. The normal structure is, in many fields, not constant and the relative importance of different norms can change rapidly. A *Dog*, an underperforming institution within Kondra and Hinings model, might not be worried about its underperformance because it does not accept the

legitimacy of the performance valuation; and it might at the same time be involved in a myth building process to reinterpret the normal structure and norms for legitimacy within the field.

### ***Cultural Persistence and institutionalization***

“Much of the confusion of earlier discussions of institutionalization centers on the use of intervening mechanisms to explain persistence. [Lynne G. Zucker] argues that internalization, self-reward, or other intervening processes need not be present to ensure cultural persistence because social knowledge once institutionalized exists as a fact, as part of objective reality, and can be transmitted directly on that basis. For highly institutional acts, it is sufficient for one person simply to tell another that this is how things are done. Each individual is motivated to comply because otherwise his actions and those of others in the system cannot be understood” (1977:726).

Zucker’s research (1977) shows that highly institutionalized social settings significantly increase the diffusion and cultural persistence in comparison with less institutionalized social interaction such as personal influence. Individuals entering an organizational or office context are much more likely to reproduce the structure of the field than those entering into a communication based upon personal influence. The normative framework is simply reproduced by those entering the institutional context as an intersubjective fact necessary for the normal function of the institution, basis for meaningful communication and the maintenance of the system.

The experiment model used was based upon a setting where subjects were asked to describe their perceptions (distance) of an autokinetic phenomenon. The setting was then changed between groups only in regards to the instructions given to the subjects. The experiment was split into three stages: a) Transmission, b) Maintenance and c) Resistance-to Change. In all three stages there were three separate groups: 1) Personal Influence, 2) Organizational Context and 3) Office Context. The level of institutionalization increases as we move from the Personal Influence group to the Office Context group.

In the first stage it was observed that there was a significant difference in the persistence of transmission between the Personal Influence group (average coefficient .43 for the rate for decline of response level between generations) and the institutionalization groups, Organizational Context (average coefficient .88) and Office Context (average coefficient .94). The results clearly indicating that the level of institutionalization having a significant effect on the level of persistence in response level and leaving the conclusion that highly institutionalized social settings reproduce the normative and structural framework. Subjects were also handed the task of answering questionnaires after the experiment which was designed to measure the difference in perceived certainty, judgment difficulty and whether subjects felt answer should be the same as experienced subjects. The objective of the questionnaire was to further confirm whether the social settings had different effects on subjects' trust in their responses and perception of obligation. Table 1 below shows the results.

**Table 1: Questionnaire responses by experimental conditions**

Question	Institutionalization		
	Personal Influence	Organizational Context	Office Context
Mean certainty score	5,35	3,62	3,22
Number reporting judgment difficulty	41	26	16
Number not feeling answer should be same as experienced subjects <sup>6</sup>	28	11	3

Table 1 confirms the results obtained in the autokinetic experiment, that there is more certainty and perceived trust and obligation in the more institutionalized and organizational settings. It is also worth noting that the difference between the two institutionalized settings is far less than between them and the Personal Influence setting.

In the second stage subjects returned a week later and were given the same instructions as before except that the text included "as you will remember." The objective of this stage

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<sup>6</sup> Question reversed so that all predicted magnitudes in the table would be in the same direction.

was to measure the maintenance of the level of responses and whether the ordering of magnitude of the differences would follow the same pattern as before:

Personal Influence < Organizational Context < Office Context.

The experiment confirmed the above hypotheses, leading us to the conclusion that the difference in social settings in the beginning, at the first stage, explains the variance in response levels between groups. No further social control mechanisms were needed to internalize the structure and normative framework than the initial information diffused through the institutionalized social setting.

The last stage was an experiment designed to test any difference in Resistance-to Change between the groups. The experiment was a continuation of the maintenance experiment where a confederate enters the setting and gives a response prior to the subject. The confederate gives a response lower than the baseline in an attempt to influence the subject to follow the lead. The hypotheses being the same as before, Personal Influence more likely to be affective in the Personal Influence setting and less influential in the more institutionalized settings. The experiment confirms the hypotheses and shows the same pattern except that that the difference between the two more institutionalized settings being of the same magnitude as between the Personal Influence group and the Organizational Context group (but in previous experiment stages the difference in effect was much less between the organizational groups). The Office Context registering the most resistance to change among the groups.

### ***Critique of the Old Sociology of Science***

In *Science of Science and Reflexivity* Bourdieu (2001/2004) puts forward a critique of the sociology of science, the philosophy of science, the scientific community and *science per se*. Each critique is an end in itself as a constructive criticism, and we will address each one in turn, but there are also at least two possible conclusions or interpretations that can be made on

the interconnection between the different criticisms or the overall critique (and are relevant for our purposes): a) The theoretical framework of the sociology of science is deeply flawed and in fact reproduces the normative framework of the field of science which, also, b) is either ignorant or consciously passive in regard to the social mechanics that reproduce the relative positions of power and distribution of resources within the field.

Bourdieu splits the sociology of science into two main camps, the “collective finalists”<sup>7</sup> and “finalism of individual agents”<sup>8</sup> and we will discuss his critique of each camp in turn, starting with the former. Bourdieu describes the normal logic of the scientific system of allocation: “The reward system orients the most productive towards the most productive channels and the wisdom of the system which rewards those who deserve reward diverts the others into sidetracks such as administrative careers” (Bourdieu, 2001/2004: 11). What seems obvious is that the scientific community itself has taken the justifications, the frame of reference, norms and the structure of the scientific field at face value – which is rather remarkable with it being one of the first rules of all science that one should never take anything for granted at face value. And Bourdieu contends that the Old Sociology of Science more or less also took the structure, of the relative position of power and struggle for capital and the relative worth of capital within the academic field, at face value, citing Merton (1957: 642/639):

„the institution of science has developed an elaborate system for allocating rewards to those who variously live up to its norms [and] when the institution of science works efficiently [...] recognition and esteem accrue to those who have best fulfilled their roles, to those who have made genuinely original contributions to the stock of knowledge.“

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<sup>7</sup> Mertonians.

<sup>8</sup> Latourians.

Bourdieu claims that too much of the Old Sociology of Science was content with counting publications and rewards – revealing a self-fulfilling prophecy<sup>9</sup> – without charting the relative positions of power, the distribution of resources and other relevant social mechanisms within the academic field:

„This approach – very objectivist, very realist (it is not questioned that the social world exists, that science exists, etc.), very classical (the most classic instruments of scientific method are brought into play) – does not make the slightest reference to the way in which scientific conflicts are settled. It accepts, in fact, the dominant – logicist – definition of science, to which it seeks to conform. [...] In an optimistic form of reflexive judgment, the scientific analysis of science as Merton practices is justifies science by justifying scientific inequalities, by showing scientifically that the distribution of prizes and rewards is in accordance with scientific justice since the scientific world proportions scientific rewards to scientists' scientific merits” (Bourdieu, 2001/2004:12-13).

Bourdieu's critique has a positive objective, which we will discuss and use in our own theoretical model, but first we must turn our attention to the weaknesses of the Old Sociology of Science. First there is a distinct lack of theoretical tools and scientific methods for the analysis of conflict within the academic field. Without such tools and methods we cannot acquire an adequate model or description of the academic field and, also, important social mechanisms within the social dynamics of the field will be hidden from us, decreasing our ability to make predictions of future events. Secondly, as a result, such sociology actually justifies any inequalities within the field. That which is not stated in the research is hidden, non-existent even, but the Old Sociology of Science in fact is part of the reproduction of these inequalities by confirming the normal logic of the distribution of rewards and resources within the academic field.

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<sup>9</sup> Merton's own theoretical model should have evaded such criticism and error by using the theoretical tools of manifest and latent functions; and Bourdieu later admits that his own criticism was unfair in that Merton was himself part of a struggle within the academic field and that his Sociology of Science was part of a process of legitimation for the Social Sciences – which, though, has no influence on the abstract theoretical critique (Bourdieu, 2004:13).

The sociology of science that has, according to Bourdieu (2001/2004:29), “[regressed] from a Mertonian collective finalism to a finalism of individual agents” lacks the theoretical tools to analyze and discern the positions of power, relative connections between them and the mechanisms of distribution of recognition, legitimacy and resources. Bourdieu takes the sociology of science occupied with the laboratory as an example, where there is a distinct lack of structural considerations – abstracting all meaningful action to the level of “conscious (even cynical) influence and power strategies [...] – and the science of science is reduced to the description of alliances and struggles for symbolic ‘credit.’:

“To give an idea of the limits of these studies one could see them as equivalent, in a quite different domain, to old-style village monographs (and even a substantial proportion of ethnographic studies), which took as their object social micro-units that were presumed to be autonomous (if indeed that question was addressed at all) – isolated, delimited universes that were thought to be easier to study because the data presented themselves, as it were, already prepared on that scale (with census records, local land registers, etc.). The laboratory, a small, closed and separate universe, presenting protocols all ready for analysis, laboratory journals, archives, etc., similarly seems to invite a monographic, idiographic approach. But it is immediately clear the laboratory is a social microcosm, itself situated in a space containing other laboratories, these together constituting a discipline (itself situated in a hierarchized space, that of the disciplines), and that it derives a major part of its properties from the position it occupies within that space. If one ignores this series of structural interlocking, this (relational) position and the associated effects of position, one is likely, as in the case of the village monograph, to look in the laboratory for explanatory principles which in fact lie outside it, in the structure of the space within which it is located (Bourdieu, 2001/2004:32-33).

The main argument against the paradigm of the laboratory studies (as a paradigm of the sociology of science) is that it ignores the structural influences at work within the field which the laboratories are situated. The theoretical focus is too much on agency and almost completely ignores the structure. In our next section we will discuss Bourdieu’s own theoretical model.

### ***Field, habitus and capital***

Bourdieu's habitus and field model is the (obvious) solution to his own critique of the Old Sociology of Science. But before we discuss Bourdieu's model we will turn our attention to another French sociologist. Emile Durkheim in his *The Division of Labor in Society* (1893/1997) outlines a theoretical model of a general social procession (leaving the debate on progress aside). Durkheim uses the dichotomy of *mechanic solidarity* and *organic solidarity*. Organic solidarity refers to a type of social structure with multiple normative frameworks interacting and coexisting at the same time within a given society, many different cultural beliefs without obligatory commitments and few shared ceremonies, where social interconnections between individuals and institutions produce the necessary social cohesion. Mechanical solidarity refers to the societies of old with high levels of conformity to a singular or uniform framework of rules, shared cultural beliefs and ceremonies. Much of theoretical sociology has since the publications of Durkheim and other contributors to sociology at that time,<sup>10</sup> centered on the theme of structure vs. agency, although in varying degrees between periods. But why do we mention that *old* dichotomy here, for what purpose? There are two reasons for bringing up Durkheim's dichotomy: First, the historical awareness of change and origin is scientifically advantageous, especially when coupled with a comparative-reflexive multiple-perspective philosophy of science<sup>11</sup>; and second, to bring to light an important correlation and connection between Durkheim's dichotomy and Bourdieu's dichotomy of field and *habitus*. Durkheim argues that social cohesion is a necessary prerequisite for the stability, reproduction and survival of societies – which he demonstrates with greater emphasis in *Suicide* (1897/2006) – and that the social structure of modern societies (organic solidarity) lacks the mechanisms which produced social cohesion in older societies (mechanical solidarity). Therefore, argues Durkheim, modern societies must consciously

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<sup>10</sup> E.g. Ferdinand Tönnies used the dichotomy of *Gemeinschaft und Geselleschaft*, to name one.

<sup>11</sup> See for example *Die Fröhliche Wissenschaft* by Friedrich Wilhelm Nietzsche and Paul Feyerabend's writings on the philosophy of science.

create interconnections between institutions and individuals to maintain and reproduce the necessary social cohesion – or face the consequences of *anomie*.

Bourdieu's model presupposes that modern societies and institutions have the necessary social mechanisms to produce, maintain and reproduce their own structure and at least a minimum required social cohesion and does not discuss that theoretical problem at any length. Bourdieu's model, like Durkheim's, is a structural model where there is a (social) *intersubjective-objective-factual* normative framework at work in the social space agents occupy. In fact there are many similarities to be found between these two theoretical models on that level. For example in that Durkheim discusses different types of *anomie* which correspond to different types of normative frameworks where Bourdieu uses the theoretical tool of habitus to analyze the effect of different habitus' on agents. The main difference, at least of our purposes here, between the models being that Bourdieu incorporates special theoretical tools for the analysis of *inequalities* within and between fields and, therefore, agents occupying clustered social spaces within fields – which we will discuss in more detail.

Habitus encompasses the set of beliefs held by an individual which stem from and are interconnected with a given field (social space which agents occupy). Habitus is always relative to a given field, and therefore in modern societies there are many habitus' which people internalize and act in accordance with, depending on the relative position within a field at a given time. The habitus theoretical tool seems to be a structural-normative-matrix, acted out by unconscious agents (Bourdieu, 1988) rather than a tool to incorporate agency into a structural theoretical model, such as Bourdieu's field model.<sup>12</sup> But Bourdieu's theoretical concept of reflexivity is defined as a social or even sociological conscious interpretation of one's own field position and habitus leading to the possibility of creative-conscious agency-

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<sup>12</sup> Bourdieu is supposed to have said that conscious agency is definitely positioned within the habitus and a possibility but that it is a *historical coincidence* that there is so little to be found of creative-conscious agency-emergence, meaning that man has the possibility (and here he seems to agree with Sartre which is a rarity) of conscious creativity but that he uses it sparingly.

emergence. Bourdieu invokes the concept of reflexivity to call for a necessary consciousness within the academic field of the social mechanisms at work there, the relative positions of power, inequalities and the distribution of resources – and claims that the sciences are in *need* of a reflexive sociology of science to avert the dangers to science from without and within. And at that point we diverge with Durkheim's theoretical model where he called for the conscious construction and adjustments to the social structure to ensure the necessary social cohesion, and where Bourdieu calls for the reflexive understanding of the dangers to the academic field, needed to make the necessary changes to the structure of the field (Bourdieu, 2001/2004).

The outline of Bourdieu's theoretical model:

“In an article published [in 1975], [Bourdieu] put forward the idea that the scientific field, like other fields, is a structured field of forces, and also a field of struggles to conserve or transform this field of forces. The first part of the definition (a field of forces) corresponds to the physicalist stage of sociology conceived as a social physics. The agents, isolated scientists, teams or laboratories, create, through their relationships, the very space that determines them, although it only exists through the agents placed in it, who, to use the language of physics, ‘distort the space in their neighborhood’, conferring a certain structure upon it. It is in the relationship between the various agents (conceived as ‘field sources’) that the field and the relations of force that characterize it are generated (a specific, symbolic relation of force, given the ‘nature’ of the force capable of being exerted in this field – scientific capital, a form of symbolic capital which acts in and through communication). More precisely, it is the agents, that is to say the isolated scientists, teams or laboratories, defined by the volume and structure of the specific capital they possess, that determine the structure of the specific capital they possess, that determine the structure of the field that determines them, in other words the state of the forces that are exerted on scientific production, on the scientists’ practices. The weight associated with an agent, who undergoes the forces of field at the same time as he helps to structure it, depends on all the other agents, all the other points in the space, and the relations among those points, that is to say, the whole space (those familiar with the principles of multiple correspondence analysis will appreciate the affinity between that method of mathematical analysis and thinking in terms of a field” (Bourdieu, 2001/2004:33).

The elementary form of a field consists of agents who occupy the space within the field and reproduce the field and assert, through their relationships, the forces in play.

But Bourdieu's model also includes theoretical tools for change and struggle: Within any given field there is an ongoing competition for capital and resources, which again are used to acquire more capital and resources. Bourdieu uses the theoretical concept of capital but in a different way than in any other theoretical model by defining several different types of capital: *Cultural*, *Economic*, *Symbolic* and *Social*, which can include sub-types of capital (for example Scientific Capital, within the framework of Cultural Capital) and also the concept of Symbolic Violence, which refers to the harm inflicted on an agent or group through the internalization of a habitus – as a given truth or necessity – which conceals the agents position as part of a interconnected network of relative positions of power within a given field. Symbolic violence is a type of ideological and social violence where a cluster of agents within a field are *ideologically* disadvantaged within the normative framework of the field, their effort and contributions less valued *a priori* – and, also, that an important aspect of the violence is that the agent subjected to the symbolic violence internalizes the habitus of the field and *experiences* the violence as any other given inter-subjective social fact (Bourdieu, 2001).

Although there are similarities between related fields and the *same* fields within different geographical territories, each field must be, according to Bourdieu, charted: The relative positions of power and their connections mapped out, the characteristics and relative distribution of the different types of capital indexed and also the normative framework or formal logic of the field coded. Bourdieu's *Distinction* (1979/1984) and *Homo Academicus* (1984/1988) are based upon the theoretical model described.

## *Our theoretical model*

For our purposes it was necessary to create a hybrid theoretical model which incorporates various aspects of the models discussed above. DiMaggio and Powell's *institutional isomorphism*, Zucker's *Cultural Persistence* and Bourdieu's *field and habitus* models form the core of our model with incorporations of different theoretical tools and relevant research findings from others. The main theoretical tools (concepts) being: field, habitus, reproduction, isomorphism, economic, cultural and social capital, symbolic violence, legitimacy, myth building, and power and resource distribution. Most of these tools have already been discussed above but some need further clarification and demarcation which will be provided below.

The structure of a field is objective (formal structure, Meyer and Rowan, 1977), inter-subjectively internalized without any need for a socialization process<sup>13</sup> (the structure and normative framework persists even though agents enter and leave the field, Zucker, 1977). That structure and the normative framework internalized as a set of relevant beliefs inherent to a field and necessary for the purpose of meaningful action and interaction between agents (Zucker, 1977; Bourdieu, 2001/2004). Within a given field there are relative positions (space occupied by agents, often clustered) of power which corresponds to the *logic* (normative framework) of the field which in turn dictates the distribution of resources between organizations within the field and also the *inequalities* and symbolic violence (DiMaggio and Powell, 1983; Bourdieu, 2001/2004). Institutions reproduce (cultural persistence, Zucker, 1977; isomorphism, DiMaggio and Powell, 1983; Bourdieu, 1990/2004) the logic of the field to maximize the probabilities for survival (DiMaggio & Powell, 1983) which increases a given institutions *legitimacy* (Meyer & Rowan, 1977) and *capital* (Bourdieu, 2001/2004). The *logic* of the field dictates the relative value of capital which agents and organizations

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<sup>13</sup> Except in exceptional cases and circumstances.

accumulate to increase their legitimacy. Agents and organizations undertake *myth-building* processes to signal their adherence to the logic of the field (Meyer & Rowan, 1977) which does not necessarily lead to or stem from a change in the formal structure/logic of a given organization, but only as a superficial ceremony. Performance and outcomes are not necessarily an integrate part of all organizational fields but are important in many fields (as a *historical coincidence*) and efficiency is both *relative* between fields (Kondra & Hinings, 1988) and *contingent* on the logic of the field<sup>14</sup> (DiMaggio & Powell, 1983). Such being our theoretical model.

Our scientific task at hand is to chart the field, its logic, relative positions of power and value of capital, the distribution of resources, the myth-building process – revealing the social mechanics in play – and hopefully the probable trajectory of change. Of course it would be best to gather enough data to chart all the space within the field and all the relative positions even down to each singular agent, and also the interconnections of the given field with other fields and especially the field of power, but our resources are not sufficient for such a task and we are content with mapping out a portion of the field, undertaking the first steps, bringing back preliminary results.

We will argue, in and with Bourdieu's support, that a sociology (or science) of science *and* a reflexivity based upon that science is necessary for the understanding of the social mechanics at work within the academic field and as a tool (a martial art in Bourdieuan terms<sup>15</sup>) to increase further the probabilities for survival (and, perhaps, increase performance outcomes). But we will leave the argument until the last chapter.

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<sup>14</sup> “For example, hiring a Nobel Prize winner brings great ceremonial benefits to a university. The celebrated name can lead to research grants, brighter students, or reputational gains. But from the point of view of immediate outcomes, the expenditure lowers the instructional return per dollar expended and lowers the university's ability to solve immediate logistical problems” (Meyer & Rowan, 1977:355).

<sup>15</sup> Bourdieu referred to sociology as a martial art in the sense that it helps one be aware of ones social surroundings and the forces at play, enabling one to prepare, adapt and influence change of ones position with greater purpose and prescience.

# *Data and method*

The research is based upon the following data collected:

- Qualitative data
  - In depth interviews
    - With Mr. Páll Skúlason, rector of the UI 1997-2005.
    - With an anonymous university staff member knowledgeable about the financial and administrative changes at the UI in the last 20 years.
    - With 17 UI scientists
  - Björn M. Ólsens, first rector of the UI in 1911, speech on the day of the UI's foundation
- Quantitative data
  - Data set including information on UI staff, e.g. publications and citations.
  - Numbers of enrolled students at the UI and academic staff
  - Information on funding and funding procedures
  - Public documents on policy goals and the formal structure of the UI
  - Three audits on the UI

## *Qualitative data*

We will describe and discuss each in turn but first discuss the main outlines of the qualitative interviews. The interviews are based in the theoretical framework of qualitative research methods. The basis of qualitative research is founded upon the premise that it is both possible and necessary to gain insight into the understanding and perspective of human endeavor by categorization and interpretation of qualitative data. These data can reveal patterns which suggest structural and normative frameworks which guide human action. In my studies there was a certain tendency for qualitative teachers to stress only the possibility to gain insight into the *meaning* that people put into phenomena and *devalue* the legitimate deductive possibilities of qualitative data. Qualitative data are for example subject's explanations of his or her own ideas or conduct, *or* documentation of conduct or ideas of an observed subject. We argue that

qualitative data is both useful and necessary when analyzing institutional fields and, especially, the logic of such fields and the when discerning en delimiting reproduction processes within fields and individual organizations within fields. We draw upon the work of Goffman's symbolic interactionism in *Asylums* (1961/1974) and the *Presentation of Self in Everyday Life* (1972) and the work of Pierre Bourdieu in *Distinction* (1979/1984), *Homo Academicus* (1984/1988) and *Science of Science and Reflexivity* (2004).

Interviews were taken with 17 UI scientists recorded on a digital recording device (stereo) with conscious acceptance from the subject, acquired at the beginning of each interview.<sup>16</sup> The average interview lasted about 70 minutes but most took about 65 with the longest with a UI scientist lasting 105 minutes. No one complained about the length of the interview. The interviews resulted in over 500 pages of transcribed interviews with UI scientists. None interviewed is part of the same academic subject. There were nine women and eight men interviewed from UI full-time academic staff. Information on from which subjects and departments is withheld on the basis of anonymity and confidentiality.

Interviewing was discontinued interviewing when the data was judged to be saturated and hardly any new perspectives observed in each new interview. Those interviewed were selected randomly from the UI staff list but with the aim of having an equal distribution between the sexes and also from most departments. A list of full-time scientists at a given department was cut down so that each piece of paper had an individual scientists name on it, put them in a bowl from which I drew names and requested an interview, and repeated the process if denied. I received two denials for interview, one was without explanation and one was irresolvable as the subject was abroad and was not expected to return to Iceland for some time. All interviews were performed in the office space of the selected subject. As is both

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<sup>16</sup> All interviewed were promised anonymity, no personally recognizable data would be revealed, and confidentiality, that the recordings never be handed to a third party or played to anybody other than myself.

desired and required procedure in qualitative interviews full anonymity and confidentiality was guaranteed.

Questions were selected to gather information on a number of issues relating to the *logic of the academic field*, such as a) quality indicators for the measurement of the quality of universalities, b) opinion on quality issues at the UI and c) opinion regarding the new *Top 100* policy at the UI. All three question categories reveal the logic of the academic field and also important data on relative positions of power, normative frameworks, symbolic violence, myth building and struggles for power and resources.

The structure of each interview was as follows: First part was *semi-structured*, intended to gather responses to a list of abstract quality indicators selected from various university rankings (detailed discussion in below) and/or discussions with Dr. Þórólfur Þórlindsson on measurable indicators for university quality standards. The subject interviewed received a single paper with a list of these indicators,<sup>17</sup> and asked to read the list over and then respond to that list in light of two perspectives: a) Name those they thought good or important indicators and b) point out those that they thought poor indicators or irrelevant regarding the quality standards of universities. The second part of the interview was *open* where the subject was asked to point out those factors or issues that came to mind when thinking about quality issues at the UI, no matter which aspect of the UI – even garbage disposal. The third section of the interviews was also *open* and the subject was asked to give a description on *ideal teaching* and *teaching methods*.<sup>18</sup> The fourth section was also open where the subject was asked to give his/her opinion on the new public policy of the UI to reach the *Top 100*. This section was not always conducted because the subject had often already discussed and revealed the relevant information in one of the previous three sections. Information on

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<sup>17</sup> See Appendix I

<sup>18</sup> This part revealed some relevant information for this paper but was mainly used in assignments and essays written during my studies for acquiring a teaching license.

whether subjects believed the goal to be attainable and on the decision making process were also additionally gathered. The data was analyzed, first, by *open coding* and, then, by axial coding where the subject's responses to each issue were identified and lastly the identified position compared in search of a *pattern* on each issue.

The interview with former rector (1997-2005) Mr. Páll Skúlason was semi-structured, beginning with asking Mr. Skúlason to describe his view on the changes to the UI during the last decades and to describe the process of those changes. Information on his views on policy and changes to the formal structure of the UI was gathered. We also discussed the new *Top 100* policy. The main purpose of the interview was to gather information on the myth-building process but also additional information on the logic of the field and reproduction process. The interview with the anonymous financial administrator (referred to as N from here on) was structured in the same way as the interview with Mr. Skúlason except with a an emphasize on financial structuring and resource distribution within the UI during the past decades. The data gathered from the interviews was analyzed in the same way as the interviews with other UI scientists.

The speech of Mr. Björn M. Ólsen in honor of the foundation of the UI in 1911 was given special attention, although many speeches by UI rectors could have been chosen, it is on purpose that I only refer to Mr. Ólsen's speech, as it is extraordinarily foreseeing and insightful, and, obviously, relevant to the topic of this research.

### ***Quantitative data***

The relevance of quantitative data is based on the premise that social reality reveals itself in inter-subjective and objective patterns which are observable and can be meaningfully transformed into numbers and analyzed by mathematical methodology. Institutionalized patterns reproduce themselves in self-activating processes without the necessity for recurrent

collective mobilization (Jeppeson, 1991). The task of sociology is to create theoretical frameworks that explain these patterns, confirm or disconfirm hypotheses drawn from theoretical models and make possible predictions on future events (based upon mathematical probabilities when using quantitative data).

Quantitative data on the organizational structure of the UI was gathered for the charting of academic field, logic, distribution of positions of power etc. Official statistics acquired from the UI on the number of staff and students enrolled were accessible for the most part online but some documents on the division of UI staff were gathered from the UI offices. The data on staff and students is divided into categories, such as departments, full-time/part-time etc. Financial data was also gathered from the UI's website for the most part but also some documents from UI offices.

The UI division of the UI into faculties and departments did not coincide with our theoretical model of division of scientific subject fields which exemplify the relative distribution of power within the academic field. Therefore it was necessary, to ensure that the numbers were comparable between years, to group together departments as according to the division of departments before 2008 and split up departments and omit others after the changes made to the division of departments in 2008. The medical sciences were located in four different departments before 2008, Medicine, Ontology, Pharmacology and Nursing and were grouped into one category of Medical Sciences and Psychology was omitted from the category after 2008.<sup>19</sup> The Social Sciences department category was used unchanged before 2008 but numerous changes needed to be implemented after 2008. Education was omitted because the merger with the Teachers College made the data incomparable with previous data.<sup>20</sup> Business and Economics were omitted as they were separate departments before 2008.

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<sup>19</sup> Psychology had been part of the Department of Sociology since its inception to the UI and therefore included relevant data for the Social Sciences. In future research Psychology should be categorized with the Medical Sciences for similar research projects.

<sup>20</sup> The effect of introducing the TC and its logic to the UI calls for special attention and further research.

Psychology was added to the category. The Natural Sciences department was used unchanged before 2008 but Engineering was omitted after 2008. No changes were made to the category of Humanities either before or after 2008.

Three audits on the UI's structure and production were performed in recent years produced by a) *The Icelandic National Audit Office* (2005), b) *The European University Association* (2006) and c) *Inga Dóra Sigfúsdóttir, Bryndís Björk Ásgeirsdóttir, Allyson MacDonald and Irwin Feller* (2005) for the Ministry of Education and Science.

We were granted access to data (SPSS) containing information on ISI publications and citations, UI research points, gender, department, age, employment age and other variables<sup>21</sup>. The sample was all listed UI academic staff in the UI catalogue for the year 2003-2004 which was then compared to those registered by the human resources department at the UI for the year 2003 and those not listed there omitted from the previous list. The sample is therefore almost the same as the population for the year 2003-2004. Means for *ISI publications*, *ISI citations*, *ISI Impact factor* and *UI research points* for the selected academic fields (Medical, Natural, Social and Humanities) were calculated for the purpose of comparing the distribution of academic capital. We also calculated the means to compare the difference in academic capital distribution between men and women. Some variables had to be recoded, e.g. the variable for the medical sciences as the original variable was based upon the formal structure of the faculties at the UI. Variables were coded for the analysis of ISI publication and gender.

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<sup>21</sup> See Appendix II for full list and description of variables used. Sincere thanks to Vilhjálmsón for access to the data set.

# *Myth and isomorphism: External and internal pressures and legitimacy*

## *Myth building*

In this section we will analyze the *myth building* process of the UI within the academic field. The UI tries to influence the legitimate principles of the mode of resource distribution for universities in Iceland to increase probabilities for survival (Meyer & Rowan, 1977). The process of securing sufficient funding for an increasingly research oriented and expanding university, comparable to top international universities, was sustained over a long period. We have already established that the policy *to become an internationally recognized research university* can be traced all the way back to 1911 but the goal of every myth-building process is to increase the probabilities of intuitions survival and expansion by increasing legitimacy either by conforming to the legitimate structure of the field or manipulating the resource distributions system. In 2006 the UI signed a new contract with the government which changed funding for research and teaching. That contract raised hopes, at the time, of UI scientists, regarding funding at least, at the time; but did not solve many of its problems, for example those related the relative positions of power and mode of resource distribution between academic fields to be discussed below. We will analyze information on the myth building process gathered in interviews with Mr. Páll Skúlason, Rector of the UI 1997-2005, and an employee of the UI which is knowledgeable as on financial and policy issues at the UI over the last couple of decades, referred to as N. The detailed historical accuracy of the following reports is not important as the social circumstances and evidence for what type of influences were at work and the overall process and picture of the myth building process.

The UI's policy, since its establishment, of becoming a full member of the *respublica scientiarum* entered a new level in the 1980's when growing student population made it realistic to make the necessary structural changes to achieve the policy goal, for example offer graduate studies. N was asked about the connection between the fund raising efforts and the development of the UI towards a more research oriented structure.

The UI is established, in the beginning, to educate state officials and bureaucrats, priests, lawyers, medical staff and teachers. And not much changes until in 1940 when the new Main Building was opened and at the same time the UI offers courses in business studies. After the Second World War the UI offers courses in mathematics and in engineering. Still the UI is oriented towards the education of state officials. Nothing much changes in the next 20 years. Around 1970 the UI decides to offer more courses in natural sciences and add social sciences and ten years later the UI has a respectable offering of courses and academic subjects at the undergraduate level. In the 80's the UI is an undergraduate university, still focused on producing bureaucrats for official posts, all who seek graduate studies must do so abroad. Then, and in a large part because of Mr. Skúlason's policy, the UI offers courses in research oriented graduate studies. The UI sets itself policy goals to increase the number of Masters Students and there is an explosion in the number of graduate student population. Ms. Ingólfssdóttir then sets the official policy goal of increasing the number of PhD Students – which is the last step towards fulfilling the Carnegie Mellon Institutions definition of a Research University. It takes about 100 years to reach that goal, which in fact started in 1911.

Both Mr. Skúlason and N perceive the development process of the UI to be linear and can be traced back to the inauguration of the UI in 1911. Both were fully aware that the UI is not *changing* its policy in recent years but in fact, and at last, fulfilling the main outlines of a almost 100 years old policy and the formal goals set out in 1985-1995. The official goal to become a full member of the *respublica scientiarum* was an integral part of the fund-raising *myth building* process to acquire a distinct status as the only research university in Iceland and even as the only *possible* one, N:

One of the ideas was to raise funds by using the argument that the UI was not only a teaching university but also a research university. But it did not work and everybody took offence. Bifröst University got offended, University of Akureyri got offended, The Teachers College got offended, Reykjavík University got offended, just about everybody. When we were arguing that [Iceland] could have its own research university, and that the UI was in fact the only [university capable of fulfilling the international criteria], everybody was offended and the politicians did not buy into the UI's argument.

According to N the myth building process was problematic for the UI and in fact it had been going on with different levels of success since the early 90's:

The 90's, especially until 1995, was a difficult period for the UI. The relative value of funding decreased, there were no connections between funding and number of students and the number of students was increasing. In the years around 1994 the UI tried to convince politicians that it needed more funding and pointed to comparable universities in Scandinavia but the politicians rejected the comparison, said that circumstances were different in Iceland. The UI decided to try to find international guidelines to calculate what it would cost to offer the same level of service and performance as in Sweden. What would the cost be for wages, daily operations, housing etc. The ministry for education and the ministry of finances caught an interest in the project which was developed into the year 1996. At the same time it was decided to create a model to assess the financial needs of a university and in 1998 the ministries finally made their decision. All the work had already been done by the UI but when it was decided to create a model for all the universities the model was simplified. Then there is an important event in October 1999 when the research contract was signed between the UI and the state, which was the conclusion of a process that started in 1994, it took years to reach an agreement. For the first time funding was directly linked to the number of students. The state had been realizing in the years before that the UI's funding was way too low. But there was a cap in the contract of 4300 full-time students. In the years 1995-1998 the number of students had been stable and when asked about the cap the UI replied that the student population was had not changed for a couple of years and that the new universities were offering additional spaces for students and the probabilities for an increase in student population were low. Those estimates were completely wrong as the number of students grew rapidly in the following years. Also, at the same time in 1999, there was a discussion for a comparable contract for research. There was a draft made but the actual contract made was not favorable for the UI. All in all we received about 300 million krona over a three

year period. But in the agreement there was a clause stating that before the end of 2002 a model for the assessment of financial requirements for research based upon the number of graduate students, research points based upon publications in internationally recognized journals etc. was supposed to be finished. But the project was never finished. Then in 2003 we made changes to the teaching contract which raised the cap on number of students to 5300. In the years before we had hundreds of students which we did not get any funding for. In 2003 we signed a teaching and research contract for three years. These contracts were not very favorable for the UI; they did not increase funding. We were still graduating students without funding but it was not as bad as before. The state did not recognize increases in salaries. They recognized the basic values which were rising at the time but the salaries of academic staff also rise when they reach a certain number of points gathered through achievements in teaching and research. Each year about a third of academic staff gains a salary increase through that system which the ministry never accepted. In reality the net funding was therefore decreasing each year by 1-2%. The net decrease was faster than the principles of the contract dictated. The next important event is when Kristín Ingólfssdóttir is elected rector in 2006 and she introduces the Top 100 policy that the UI is going to reach the Top 100 best universities in the world and after that we made a favorable contract for the period 2007-2011 which was really implementing what had been promised years before, linking research funding with research performance which will lead to a 57% higher funding allocation to the UI in 2011 compared to 2007.

Up until 1994 there had been efforts to secure increased funding that had failed and the attempts to put forth evidence, and build a *sustainable myth*, that the UI received insufficient funding, failed in the years 1994-1996. The myth building process revolved around building a comparative funding model that was based upon references to the Swedish university field but took into account Icelandic circumstances and variables, such as interest rates, property costs and salaries. In 1999 the UI and the Ministry for Education agreed on a contract regarding a funding model for teaching that would increase substantially the UI's available funding based upon a performance model where the UI would receive a fixed amount of money for each graduated student, valued differently between academic fields, with the social sciences and humanities receiving least and ontology most.

At just about the same time the two parties reached an agreement to conclude a similar contract for research. But then things happen on the political scene that effect the course of the research contract, according to N:

There were meetings in 1994-1996 but when Björn [Bjarnason] became minister him and Páll manage to agree upon teaching and research, the latter was promising if the draft had been signed. Then Björn quits the ministry and Tómas Ingi replaces him, with less than a year until the next general elections. After the elections Tómas was again instated as minister, but only for nine months. He never really functioned as a minister of education. From the UI's perspective, relations with the ministry were paralyzed in that period.

N points to the fact that the incumbent minister, Tómas Ingi, didn't pursues the work of completing long term issues for the ministry. And Mr. Skúlason describes the importance of an understanding and dynamic relationship between the minister and the rector of the UI:

For the Rector of the UI it is important that the minister is interested in matters relating to universities and that [he or she] is open for discussion on those issues pending or important for the UI. It becomes problematic and complicated without direct co-operation and discussion with the minister. It takes a minister about one to two years to get accustomed to the ministry and its various subject fields. Ministerial changes can therefore automatically postpone issues.

Tómas knew he was not going to minister for a long period of time and therefore never really got into concluding long term contracts with the UI. This meant that the research contract agreed upon was put on hold, for the time being. This point is interesting because it obviously affects the course of action but not part of the social myth-building process. The simple fact seems to be that because there were changes on the political scene, everything pertaining to the issue of the funding of the UI was dropped for the time being. As a result the success of the myth-building process was limited in the years between 2001 and 2005 although much was written and put forth to convince the politicians and general public about the UI, Mr. Skúlason:

The new contract for teaching with the state which was signed in 2000 was a revolution [in funding]. About the same time a public wage committee is established which leads to greatly increased salaries for academics at the UI. It was the most significant increase in the history of the UI and it was only supposed to be the first step. The second step was a contract for research funding which was based upon a funding model similar to that used for comparative universities in Scandinavia, The University of Copenhagen for example, where the principle rule is that an equal amount of money is spent on research and teaching. We made an arrangement [with the state] to reach that goal. Then the state decided a new political policy to increase the number of universities. The funding which was supposed to go into research was allocated to teaching in departments in other universities, and greatly increases the number of students in business studies and law etc. The research contract is postponed. They wanted to support the RU. The research contract between the UI and the state which was signed in 2007 is almost identical to the one which was drafted in 2001. What we hoped to be completed in 2005 will come into practice in 2011. There was no real change.

Another possibly influential factor within the academic field at that time was the introduction of new universities in Iceland. Much discussion was centered on the possible influences of the new competition within the field and its effects on the formal structure of the UI. N had reservations about the influence being as dramatic as many have proclaimed in public debate:

The Teachers College is in another [academic subject] field, as are The Agricultural University of Iceland and the Iceland Academy of the Arts. Bifröst University has not had any significant influence in my opinion. We had been in co-operation with the University of Akureyri, trying to help them out by various means. The only university that has had any significant effect is Reykjavík University (RU), which has been the main cause of competition for the UI. Especially after it reached around 3000 students; including business studies, computer science, education and technical subjects.

The RU had a perceived effect on the UI, especially in those academic subjects in direct competition even though most interviewed agreed that the influences were over-estimated in the public debate. To discern the *true* effect is rather difficult as no comparative cases are available for study. The foundation of the RU can easily be traced to the international trend of

growth, the flood, within the academic field in Iceland. The formal changes to the UI's structure can be divided into three categories: Increased curricular assistance, extra-curricular activities and public relations and publicity. The last mentioned probably the most visible change, an enormous increase in advertising and publicity. The UI had not advertised its degree offerings, let alone published *public image* ads, publicized its policy before it perceived it necessary as a result of competition with the RU. Every year now the UI opens its doors to anyone interested in information on the UI's course offerings; and he can count on that a *professor* will be there to meet him to answer his questions. Expensive advertisement campaigns are funded each year; resources are spent on updating websites so that they attract *hits*. These are the main effects according to N:

There was an insignificant effect on courses and the standards did not change. The attitude and public image is what changes.<sup>22</sup>

And Mr. Skúlason supports N's evaluation that the competition mostly influenced the formal structure of the UI in regards to public image and quality of service provided to students and staff rather than core academic structures. Nevertheless it had an influence on the myth building process, although an indirect one, in that it increased the publicity of the UI, made its public image more visible. The UI had to portray an acceptable image which would increase its legitimacy amongst the general public. The *Top 100 policy* was exactly that, a slogan based publicity oriented policy goal, which was to finally gain the acceptance of the ministry for the UI's *research university myth*. We will argue that other elements were also at play at the same

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<sup>22</sup> I must add though that I came across, both during the process of this research and also during my own time as a student (2000-2008), numerous anecdotal evidence that the growing student population in conjunction with a differentially smaller increase in numbers of scientists that standards and expectations towards students were dropped. But I did not pursue that issue especially in this research and therefore do not have the necessary data to analyse or speculate further than to state my belief that a proper research might reveal that the aforementioned increase in student population had the effect of lowering standards and expectations. Overall I think that N is right and that the main outlines of the course offering and degrees has not changed dramatically, and definitely not changed as dramatically as issues of publicity and level of services.

time, there amongst informal coercive isomorphisms which we will discuss in more detail below in connection with the Top 100 policy.

But there was also another important factor, besides the Top 100 policy, which had a considerable influence on gaining acceptance for the UI *myth* in the form of three audits regarding separate issues of the UI, produced in 2005 and 2006 . Two audits were on the finances and administration and one on the research output of the UI. The audits were performed by different institutions: EUA (European University Association) performed an audit on the finances (2006) of the UI and numerous issues in connection with the UI's competitive environment; the Icelandic National Audit Office performed a comparative audit (2005) on the UI's finances; and the Ministry for Education had a report produced (2005) on the research output of the UI in comparison with foreign universities. I will begin with the last one.

Sigfúsdóttir, Ásgeirsdóttir, MacDonald & Feller (2005) analyzed the research output of the UI and compared it to other universities abroad. The main results were that the research output was rather good and in some sense even remarkable when analyzed in context with the results of the other two audits, that is the UI's lack of resources in comparison with international research universities. But their analysis also revealed that about one fifth of the academic staff at the UI was inactive in research.

The two audits on the finances of the UI lead to the same conclusion: The UI is very efficiently run and performs remarkably in light of its available funds which, it was revealed, in comparison with other universities were extremely poor. The UI did not rank amongst its selected universities for comparison in Scandinavia but rather it ranked in regards to funding amongst Eastern European universities that have limited funding in comparison with their western European counterparts. Despite that the UI was judged to be a well administered institution. The EUA also thought that there were too many universities in Iceland and that

any policy that supported such an environment should be re-examined and revised; there were not enough available students to form reasonable university units with up to eight universities competing for students.

The UI held special public meetings where the results of the financial audits were introduced and obviously thought them to be supportive of its own stance and policy. As we will see below, the UI had been arguing for years that it was underfunded and the UI's directors used these reports to legitimate their claims that there was a significant need for extra funding. N on the audits:

The three audits were a necessary precursor to [the dissemination between the UI and the other universities].

Mr. Skúlason on the audits:

The two audits [(EUA and NAO)] confirmed what we had been saying for over 20 years. We knew, there was never any fear within the UI regarding these audits, on the contrary. We welcomed them. Maybe we should have asked for them sooner, but it is important that audits are performed at the right time. I thought it important to do it at the end of my tenure as rector. The new rector then has an assessment to work with.

These audits were publicized by the UI as confirming the *true* status of the UI, especially regarding funding and administration. The UI contended for a long time, and actively since the early 1990's, that it did not receive comparable funds as selected universities in Scandinavia. These audits confirmed the UI's arguments and went even further in stating that not only did the UI receive significantly less funds than other Scandinavian universities, it received much less funding; in fact so much less that it was on par with struggling eastern European universities. Furthermore the audits confirmed that the UI was administered in a sufficient manner and that it produced admirable results with limited funds. From the UI's point of view there was not much new information delivered by the audits, the difference

being that it was no longer the UI itself that was the expert on its own issue but independent institutions. Their conclusions and judgments had legitimacy beyond that which the UI could produce in its own matters. The audits did not serve the purpose of increasing efficiency or performance outputs but simply supported the UI's *myth building process* by adding external legitimacy (Meyer & Rowan, 1977) through validating the UI's argument.

We have shown that the UI sustained a *myth building* process with numerous *ceremonies* to create the myth of the UI of being a research university, and as such, deserving of increased funds on a comparable level with international research universities. The process took decades and was problematic with various degrees of success and failures and unfavorable external circumstances at times. The use of audits to create and maintain external legitimacy was an important factor in the success of the myth building process and also the slogan based policy of *reaching the Top 100*. Our analysis of the myth building *per se* process is incomplete and for instance lacks an analysis of the probable *habitus* influences of actors in positions of power and the interaction between these positions of power. Further data and research are necessary to finalize a complete analysis of the *myth building process per se* but we argue that our data is sufficient to mark the main outlines of that process, which is sufficient for our purposes of being a part of our sketch the structure and mechanics of the academic field in Iceland. Our next part is in part another perspective of some the elements of the myth building process but also an analysis of other social mechanics, namely isomorphism.

### ***Isomorphism***

The same current in the UI's policy and formal structure can be traced all the way back to its foundation in 1911, as discussed above. There is evidence that its goal has in fact been more or less the same although different means and methods have been perceived necessary to

reach those goals, as stated in the UI's official policy, or in fact unofficial because it did not have a collective official policy until the year 2000. Björn M. Ólsen's reference to the *respublica scientiarum* and the adjustments made to the formal structure since the UI's foundation clearly indicates a *isomorphism* trajectory towards becoming a research university; clear evidence of mimetic isomorphism and highly suggestive evidence of normative isomorphism but little evidence of coercive isomorphism effects on the trajectory – quite the contrary: the legal framework seems to follow or contradict the mimetic trajectory. We will consider in length the mimetic and normative isomorphism over the last three decades but leave the coercive as a future research opportunity due to lack of time and resources.

According to Mr. Skúlason the UI's current policy is in most regards about 20-30 years old, at least:

The underlying policy that has in general terms guided the UI, with some minor changes, came into existence about 20-30 years ago. It is almost identical to the changes that we have seen around the world, in fact there is an international development ongoing in regards to universities, and has been for a long time. The policy of the UI is part of that development and it is also part of the development of societies and nations.

Clearly suggestive of normative and mimetic isomorphism is his view that the policy is in fact quite old and in full effect over the whole period, but also that the policy is in fact influenced greatly by an international current of development within the university field as was expected and predicted by our theoretical framework. His disposition, *habitus*, reflects an international academic field. This is further evidence that universities are guided by a social structure that reproduces itself regardless of borders or nationalities. Mr. Skúlason perceives the process to be a clear and universal one: “In all main respects you find the same university everywhere, universities are reproduced.”

The UI's policy is being part of an international current or prescription which most universities *follow* – as would be expected according to our theoretical model, it is necessary

to adhere to legitimate formal structures to increase the probabilities for survival. There seems ample anecdotal evidence to support the hypothesis that the international academic field follows a similar current, based upon a structure which in many respects can be traced all the way back to the beginning of modern state-democracies and in some instances even all the way back to the middle ages. But leaving social archaeology issues aside, it is obvious that Mr. Skúlason perceived his policy, and therefore the UI's while he was Rector, and before that, as part of an international current. The UI was, at least in most part, following the shared and legitimate formal structure and organization of universities. One of the main factors driving the changes to the UI's formal structure and official policy is the great increase in student numbers and also the addition of new academic subjects and departments. And while Mr. Skúlason recognizes the influence of the increase in student numbers he also points to wider societal changes as having influence on the formal structure of the university, not only in Iceland but within the international academic field:

[There was a] greatly increased need by nations, the public sector, administration and in fact most sectors for education. This becomes clear when one looks back about two centuries, and the development of technology plays a large role. There is a steady and growing need for increased numbers of people with university training. Research has shown that the increase in student numbers has been about 10% pr. year during the last few decades. And it is the same development everywhere in the world. Many academic subjects that were not part of the university field are taken over by the universities who have a tendency to incorporate other institutions and diversify their own subject base.

The universities have been expanding their field of training and research into new domains, which before were a part of different types of schools or training institutions. The universities are acting in accordance with a perceived need of society for personnel trained at a higher academic level. There is an increased demand for higher technical knowledge and expertise and the universities possess the legitimate degrees and means to meet that demand. As discussed above the UI was established to supply officials to meet the demand of the state.

Its purpose has in that sense not changed but has only been expanded to the public and market domain, Mr. Skúlason:

The origin of the university in the form we recognize it today, all over the world, from the USA to Asia, and anywhere, can be traced back to the beginning of the 18<sup>th</sup> century. At first the university was closely connected to the state and rendered services needed by the new modern-states but slowly that service has been diversifying, adjusting education to fulfill the needs of all sectors of society.

The idea that the universities purpose is to increase economic gain and social welfare is by no means a new one and can be found in writing long before the idea was born of founding the. It suffices to mention that the philosopher Friedrich Wilhelm Nietzsche (1924) had as early as the 1870's reservations about the universalization of education *and* the insistence that universities pursue the goal of increasing economic gain for markets and nation-states. The UI was indeed founded upon such values, to supply society with the needed officials that turn the wheels and cogs of society, both the state and the economy. Later, as the influence of the state decreased and the free-market expanded, the universities also diversified their own activities to meet those demands rising from the shift.

The second specific aspect of the international current, according to Mr. Skúlason, is perceived to be the increased emphasis on research, which, as noted above, was what Björn M. Ólsen stated as the future goal of the UI:

At the same time as new subjects are being incorporated into the universities there is another development which early in the 18<sup>th</sup> century became a basic principle of all universities and that is an increased demand for research; which has again increased even further in the last 20 years or so. Of course universities are schools that teach students but all universities must also produce significant research. Universities must focus on graduate studies and cannot be contempt with offering good quality undergraduate studies; the university must be a research facility. Research oriented policy starts at the UI in about the year 1985. At the same time we implement new ways to evaluate the

performance of the UI based upon all sorts of standards – according to international standards. It's the same ideas everywhere.

Mr. Skúlason mentioned that “one of the key influential elements for change within the UI was the steady increase of students” – and therefore also staff – over the years. It is possible that the increase in number of students has had an influence on the UI's decision to introduce post-graduate studies and a secondary effect on its increased emphasis on research as the UI grew also in number of staff and resources. As the UI student population increases, exponentially, the number of students increased greatly between 1985 and even more so during the 1990's and 2000's. The increase created opportunities to offer post-graduate studies but also a demand for post-graduate studies in Iceland. Slowly but steadily the UI began to offer post-graduate courses and degrees, and also to increase the emphasis upon top-quality scientific research. The fact that the UI has been formally pursuing to strengthen its post-graduate studies and internationally recognized research since 1985 at least and informally more or less since it's foundation supports the theory that institutions actively seek to conform to legitimate structures; within the international academic field being the top research universities.

The UI is situated between Europe and the United States of America, and has been influenced by both continents although Mr. Skúlason perceives the influence of the top American universities to be significantly greater:

One of the distinguishing characters of the UI which also makes it a little bit different from other universities is that our academics come from such a diverse pool of universities. Our staff is educated in Europe and America and also other parts of the world, in Scandinavia for example. Half of our academics graduated in the USA. One could say about American universities, if one can utter general statements on such a diverse group of institutions at all, that that all universities try to be like them, everyone. And this is nothing new we have witnessed how, in the last 20-30 years, universities all

over the world try to imitate them. It's not something only found in Iceland and Scandinavia.

This is a common disposition within the university community, one which I encountered on numerous occasions in my interviews with UI scientists and seems almost to be a given truth, that every university wants to be a comparable or even identical to the top research universities in the United States of America – which again supports the hypotheses of a mimetic isomorphism within the academic field. Most institutional fields have leading organizations and the academic field is no different in that respect. The rankings lists also confirm the USA's leading status with most of the top 100 universities on all rankings. The recent development and increased circulation of *University Rankings* has in probably generated more discussion on every universities dream of becoming Harvard; every university wants to occupy Harvard's *space* within the international academic field in Bourdieuan terms. And Mr. Skúlason perceives it to be exactly that way around the world that universities try to emulate the structure and activities of Harvard and the other top research universities of the US. Whether the *normal* structure of the international research university is based upon the structure of Harvard or if Harvard simply complies with that given structure the best in comparison with other universities is an open question, but irrelevant as they merge as one, occupy the same space within the international academic field, and the same structure in the minds of those act to conform to the legitimate structure.

But the UI is also affected by European influences where the Bologna process has been an integral part of the European university debate in recent years, Mr. Skúlason:

[The Bologna process] hasn't had much influence on the UI because we had the basic structure beforehand, there was no need for rigorous implementation like for many others, we had the degree system and everything was in place. The discussions generated by the Bologna process were much more influential than the standardization itself. We took part in symposiums all over Europe and brought back new ideas, e.g. on how to measure performance and organize our university.

According to Mr. Skúlason the Bologna-process has not had direct formal influence upon the UI because it already fulfilled the standards being implemented through the process. Rather the influences were the legitimate ideas and values of *European universities per se* which were diffused through meetings on the Bologna-process. One of those legitimate ideas being the integration of market solutions in structuring and management, Mr. Skúlason:

Europe decides upon a set of goals and standards with the Bologna process which was to create a system that increases mobility between institutions and emphasizes efficiency in management. It's the same in every sector, the same business principles and universities have been adjusting and conforming to these business principles. One could say that the question we are facing now, today, is to what a degree is the university like any other business? Universities are unique institutions in that every single [academic] employee and every single student is on his own terms. That is why universities cannot be governed like normal businesses with top-down management. The university survives from the Middle Ages and into the modern era because the [academic staff] had the freedom to follow their own initiative to do just about what they wanted to do.

Previously we mentioned that the UI had, as part of an international current, been expanding its services to include different degrees that were designed to meet the demands of the public or market sphere rather than the state: Training of highly skilled professionals for private companies rather than public institutions. But the influence of the capitalist market does not end there. The business structure of directing and organizing an institution seems to have been gradually gaining increased legitimacy within the public sphere, a process called marketization, and the UI is no exclusion in that regards, Mr. Skúlason:

The [unofficial] policy to transform the UI into a research university, in my opinion, surfaces in about 1985. The privatization and market ideology is an older phenomenon. I wrote an article in 1975, as early as then did we sense the marketization with its neo-liberal ideology which penetrated every sector of society.

N views support his assessment and points to the procedure that Kristín Ingólfssdóttir chose for her policy-process at the beginning of her term as rector:

The methodology used in [policy process at the beginning of Ms. Ingólfssdóttir term as Rector] was definitely business oriented. We were using SWOT tools for analysis and policy making. When [Mr. Skúlason] was Rector we used a methodology which was based upon interviews and meetings to reach a common conclusion.<sup>23</sup> The methodology in 2006 was different. There we used procedures well established in the private sector and both representatives of the minister in the University Council were active in the policy making process. And discussions with people outside the UI were also held. It is a top-down and bottom-up process. First the general policy is formed at the top and at the same time the grass root starts to form policy documents and half way through the grass root is informed of what is coming from the top. [The grass root] is asked to reform its policy so everything fits together. In the end we had a new general policy for the UI. I think the politicians believed in the process. What made the real difference was the goal of making UI one of the *Top 100* universities in the world. That raised questions amongst politicians: 'Is it true that Norway has one, Finland one, Denmark one and Sweden has four? And we don't even make the list? Reaching the Top 100, it was catchy and Icelanders bought it, the politicians bought it.

We discussed earlier the importance of the Top 100 policy for the myth building process and we will discuss later how scientists perceived the new policy but almost all scientists interviewed agreed that the Top 100 was a "brilliant policy stunt" and most used almost the same words as N: The politicians *bought* it. But the more important point here is that part of the UI's new policy, or *myth*, was to incorporate business-like management procedures, systems and structure. The UI would allow for the appointment of directors of Units within the UI which *could* be someone from outside the UI; which used to be impossible. Directors would be more accountable for their units, for finance and performance, than previous elected officials. The UI would set itself measureable goals and monitor its progress and so forth. The UI did not reach an agreement with the ministry where the ministry increases funding and the UI did nothing in return. On the contrary, the UI has had to spend many years convincing the

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<sup>23</sup> Mr. Skúlason: "I set two main goals when I became rector of the UI. Firstly to ensure a great deal of autonomy for the individual sections of the university, and secondly, and is required by the former, to implement democratic governing-system, you cannot tell academic staff at a university what to do, they need to find their own way but they must also co-ordinate and learn from each other through discussion. One of the most enjoyable memories from my time as rector was when we established what we called the *University General Forum* where heads of faculties, deans and others met and learned from each other."

government of its value, need for further funding and purpose for society – and also change to seem more trustworthy of increased funding. The perceived legitimate process is based upon a business structure, although no formal or public demand for such change in policy or structure was put forth by the government. Nevertheless, the UI perceived that business models had substantially more legitimacy than a peer-system of organization and decision making. These are examples of informal coercive isomorphism. And some within the UI were also afraid that if the UI did not meet certain demands the government might force them to make certain changes, N:

In the years 2004 and 2005 there were conferences and much written on the financial issues of the UI, the competition between universities and the issue of tuition fees frequently surfaces. Internationally there were a lot of things going on, Bologna process, Lissabon statement (that European universities become comparable with US universities). Also on the proportion of gross domestic product spent on tertiary education which the UI was criticizing. There was a discussion on transparency, that the UI was like a black box that politicians can't see into and don't understand what goes on inside. And at that time the UI promises to marketize its policy to some degree. It's the same demands as in those countries we compare ourselves with. And even though the ministry did not make these demands formally we perceived it [as real] and that we had to act quickly, had to marketize to some degree, which was done. Directors within the UI will not be elected as before and they will be made more accountable for financial performance. Decision making will be rearranged so that individuals will not make decisions that affect themselves. Increase the number of representatives from outside the UI on the University Board. Make propositions that the ministry would approve. Else the ministry would do the same thing that happened in Denmark where the universities did not play along and all the changes came from the ministry directly.

N's statement is a clear indication of informal coercive isomorphism where the ministry never formally demands marketization but the UI clearly perceives that they need to act and act quickly. Scientific staff was less concerned with such intangible threats and stood firm in their defense of the peer-system of administration, N:

The resistance to [the new general policy in 2006] was widespread and fierce. I think they have been changed too much, I am not sure that the ministry will approve them. If we had not included in our policy that we were going to improve administration, make it more efficient, allow more representatives from outside the UI, hire directors instead of electing them, we probably would not have received more funding [(the new teaching and research contracts)].

But in the end the peer-system of administration was abolished and the business oriented administration structure incorporated. The implementation of the new administrative changes were carried out during the latter part of 2008 and as there was a financial melt-down in Iceland at that time, it is impossible to predict whether the changes made were sufficient or not as external circumstances dictated the allocation of funds to the UI instead of former dealings between the UI and the ministry. Also the merger of the UI and the IUE was carried out in mid-summer 2008 followed by a transition period.

Mr. Skúlason distinctly differentiates between the pressure for business models in administration and corporate/institutional structure *and* the formal push towards making the UI a research university. There has been pressure perceived by the UI to integrate the market solutions regarding hierarchy, policy and structure of the UI:

Many have said, and done so for a long time, that universities are outdated, obsolete, relics from the Middle Ages that have to modernize. There has been a general development in business organization, especially with quality standards and performance outcome measures. Universities have taken some of that culture on board and even more so today and during the last decade. These two ideas, the classic university with great deal of self-management of basic units and horizontal management, and the modern business model with top-down management as a single institution with over-arching goals, have been in confrontation. And at that time we made our first official policy in the year 2000. Before that we didn't have a formal policy. [The university] adjusts to this rather technical process, you set goals, make plans, create standard work procedures, just like your producing any other product, and that's where the factory analogy comes from.

According to Mr. Skúlason the making of an official policy for the UI is part of a process of the UI conforming to an outside pressure, informal coercive isomorphism, to modernize its structure and activities; which is he perceives as part of a larger process of implementing business solutions in public institutions and public management. The UI, like other universities, had a horizontal management system with a great deal of autonomy for its individual departments and members. The pressure was to implement business solutions and a top-down model of management, where individuals take (business) decisions quickly and are accountable for those decisions. But did Mr. Skúlason have reservations or concerns regarding the modernizing and introduction of market structures in administration and other aspects of the UI:

Not the university *per se* but rather the general cultural development. I am convinced that the idea of the university, [horizontal management and great deal of autonomy,] is having a greater influence on business organizations and the social culture than many, especially in the market, realize.

Mr. Skúlason seems to have confidence that the diffusion of business models within the university field will not have significant damaging effects and indeed that he believes the opposite: That it will be the private firms who will be significantly in the future.

The process of modernizing and marketization also entail the need for measurable goals and standards for efficiency which the UI can be held accountable for. This aspect is part of the state's demand for accountability and measurement. Institutions cannot do just simply *whatever* and expect to get funding from the state on a regular basis. Each institution must complete certain prescribed functions, even though in some cases those functions are only in small detail influenced by state officials. Mr. Skúlason does not perceive the outside pressure to emanate from any single organization or institution, like the ministry for example, but rather:

It's something that is in the air. Often, when the government thinks it is deciding the public policy for universities they are seriously mistaken. The policy is often decided elsewhere and the state can't do anything other than follow the lead. When discussing policy people need to understand that the ship already has a heading and the captain needs to adjust himself to the policy already in place.

And in those words we see clearly that Mr. Skúlason perceived his role and the role of the UI to be defined, at least in a significant part, beforehand, by social processes; that the UI was and is following a given structure, although the details of daily operations are not included in the prescriptive structure. The analogy that the UI is a ship which already has a heading is revealing and one that would be expected if there is a legitimate structure to act in accordance with. Mr. Skúlason also gives evidence that coercive isomorphism on behalf of the state is a minimal influential factor for the UI. He perceives the policy to be part of a heading already plotted, and that it is by no means easy to change course. And it is important to note that he is not only referring to the influence of the state but also to his own and the influence of the management of the UI.

We discussed the influences of the introduction of new universities on the myth building process above but there are also elements of isomorphism that accompany the introduction of new organizations into a field, Mr. Skúlason:

[The emergence of other universities in Iceland obviously had an impact on the UI], which lead to the competition for state support. It was unavoidable, it simply happens. It started when the UA was founded; we lost funding to the UA which had strong support in parliament. Then the RU was established and with it came *real* competition, e.g. for staff. One of the first things the RU did was to try to recruit our staff. The competition had an effect on moral but there was another important aspect, which is directly linked to the business organization, publicity and visibility. If an organization wants to survive it must be highly visible. And the competition for visibility and public image is very real and fierce. The RU focuses on public visibility.

The influence of new universities is by no means inconsequential. Mr. Skúlason mentions the competition for staff that had never been an issue for the UI, being the only university in Iceland. And with the foundation of a private university the UI had to address different issues which had not been part of its policy or activities. In regards to staff recruitment the UI now had to compete with universities that could offer higher salary and in some respects better research facilities. But the UI in many ways still had a significant advantage, according to Mr. Skúlason, regarding research facilities, research funding, and opportunities for uninterrupted research periods and cooperation. But it could not compete on the salary front. Another aspect is the competition for students which has led to a great increase in advertising and publicity measures on behalf of the UI. Departments, even that not in direct competition with other institutions, now allocates greater amounts of funds and resources to publicity and advertising. Not to forget the competition for the state's recognition and acknowledgement. Mr. Skúlason thinks that the competition for attention is a significant part of the competition, not only for staff and students, but for acknowledgement – for legitimacy. And further on the influences of competition within the newly founded academic field in Iceland:

Those departments at the UI which had to compete with other universities for students and staff were already modernizing. Like the department of law, for example, had been adjusting to changes made in other departments at the UI. One must consider that there is significant competition within the UI. There had been pressure for some time on the department of law to modernize. Then when the department of law at the RU was established everyone says: Look how much the department of law at the UI improved after we entered the frame. In reality a lot of work had been done before the RU was established. Some influences can definitely be traced to the increased level of competition.

In public political debate statements regarding the influence of competition where all changes made are the effect of competition are of course exaggerations. Universities are influenced by many different factors, not least the various social currents through staff and students;

competition itself only being one vehicle of many that carries different influential frames of reference or value structures between institutions; the UI was already part of a university field, although there is an added dimension when a national field is formed with the foundation of new universities in Iceland.

Discussions on reconstructing the UI, from being an undergraduate university to becoming a graduate studies research university, began in the mid 1980's and the first stages were implemented during the beginning of 1990's, introducing the first MA and PhD students at the UI. At the same time the UI started discussions with the state on more funding to reach the goal of becoming a research university. The myth-building began with comparison with Sweden and an official policy in the beginning of the 2000's with some favorable results. Then there came three independent audits which supported the UI's myth of being underfunded but at the same time efficiently run. The last and most influential part of the myth being the structural changes towards a more business oriented management system and the official policy of Top 100, convincing the State to increase funding for the UI for teaching and research. Securing contracts with the state for necessary funding took a long time (and in the end were reviewed because of external influences due to the financial melt-down in 2008) and there were systematic changes which are a risk to academic autonomy, where the new management model is a result of a business oriented analysis and resembles more the classic top-down management system of the corporate sector rather than the horizontal and democratic structure of universities. This is a western *current* in public management during the last 30 years which at last reached the UI in the late 2000's.

Our analysis allows us to tentatively deduct that there the expected mechanisms of isomorphism are in play within the UI and the academic field in Iceland. Most notably are the effects of informal coercive isomorphism relating to the marketization process, as part of the field of power (wider societal structure) or perceived as an external pressure from the

Ministry of Education. There is also clear evidence of informal coercive and mimetic isomorphism, where the UI models its structure on international research universities, most notably top USA universities. We also argue that normative isomorphisms are at play due to the international background of UI academic staff but further research is needed to draw more distinct conclusions on that. We have established that the UI is under isomorphic pressure to adjust to the structure of the economic field and also the field of power, and that despite resistance to external pressures, concessions have been made to increase legitimacy as expected to increase probabilities for survival.

### ***Successful myth-building and the struggle for autonomy***

Institutions must cohere to the formal structure within their organizational field to increase probabilities for survival, which they do by a process of myth-building through official policy and other documents showing their conformity to external demands of legitimate structure or bodies of power within the field (Ritti & Silver, 1986; DiMaggio & Powell, 1983; Meyer & Rowan, 1977). We have seen that the UI has since its foundation had the same long-term goal of becoming a respected citizen of the *respublica scientiarum* and that there is some evidence that the UI has always been moving towards that goal, but that it has in a more deliberative manner been adjusting its policy and strategies in the last 15-25 years to isomorph the structure of *top international universities* while not making too many concessions to its academic autonomy. Whether the changes made will have significant effects on the UI's autonomy is yet to be seen, while many are aware of the risk most are content with the myth having its desired effect of securing new funds. The new policy also, although this issue did not concern the scientists interviewed as much, had numerous goals of linking the UI more deeply with local businesses, which also runs the risk of decreasing academic autonomy and freedom (Bourdieu, 2004). These issues might even become more relevant during times of recession with increased difficulties in securing sufficient funding.

One of the most interesting points of the myth-building process was that the UI scientists were aware that the policy was probably unrealistic but that it didn't matter as long as it delivered extra funds for the UI. The conscious awareness of the myth-building process does not seem to have any significant effect on the policy making process within the UI. It is to be expected that policy as formal structure and the myth building do not correspond directly with increased efficiency (Meyer & Rowan, 1977; DiMaggio & Powell 1983; Kondra & Hinings, 1998), which might be the case with the UI, but we can also deduct that there can be considerable awareness of that fact without it having detrimental effects on the myth-building. Whether it is an well kept open-secret or that those aware of the disparity between myth and efficacy never come in contact with those who do not have the means to judge the efficacy of the new policy is another matter, but well kept open-secrets are known within the academic field (Bourdieu, 2001/2007: 21-37)

### ***Formal structure or a façade: Scientists views on the Top 100 policy***

The scientists interviewed were asked about the new *Top 100* and a clear pattern emerged after coding and analyzing of the data. In this section we will discuss these perspectives and how they relate to the myth-building process.

If one were to predict, based on *the public discussion* on the new *Top 100* policy, how UI academic staff viewed the new policy, one would expect to find that there had been enthusiasm and overwhelming support. Yet amongst the scientists not much of either enthusiasm or support is to be found while neither there is much to be found in the form of strong opposition, the general disposition pattern is that of skepticism and cynicism.

The scientists raised numerous issues regarding the new policy but there are a few that were in one way or another reflected by the opinions of many of those interviewed. Many had concerns that the effects of the new policy could be negative in some respects, for example

that the pressure to publish as much in international high-impact peer-reviewed journals would decrease scientific work in native Icelandic and other work done for the Icelandic community which is not rated highly, or even at all, on the selected *Rankings Lists* as scientific capital. H from the Humanities gives a good example of these perspectives:

Discussions on the quality of the UI are welcome but I don't think that [the Top 100 policy] has been helpful, on the contrary. At the time of the policy decision making process my opinion was that it was all a bit peculiar, not because it's an unattainable goal, I have no idea about that, don't know which universities are among the 100 best, but rather that it was insensible. It's a slogan to catch the attention of the general media, Top 100, and it has not impressed me. Some of my colleagues perceive the process as some sort of team building, at last something to bring us all together, but I don't see it that way [(laughs)]. There is nothing new about policy making, we have done that before, written a lot of documents. What people perceive as different this time is the slogan of *reaching the top 100*. At last, the UI got the attention it deserved, everybody wants a good university, not to mention a world class university, now the politicians might need to address our situation from that perspective, what needs to be done to reach [the Top 100]. It also sounds very much like our minister [of education] who sometimes sounds like a sport commentator. It's catchy and good PR. Usually when people discuss *quality* I think the standards that come with it suit factories better than universities. The assembly-line ideology, of creating as much in the shortest amount of time possible, [if we incorporate it into our policy], I'm afraid we are going to decrease quality at the UI.

H's views are similar to other scientists interviewed, especially within the Humanities and the Social Sciences but there was a distinct difference between two pairs of academic subjects (Humanities/Social Sciences and the Natural Sciences/Medical Sciences) which is a recurring pattern which will be described and discussed in more detail in the chapter on academic apartheid. Most scientists from both pairs of academic subjects expressed reservations on the new policy but the difference being that within the Humanities, especially, but also within the Social Sciences, scientists felt the new policy threatened in some form the UI's obligations to the Icelandic community as opposed to the international scientific community. Many are concerned that the new policy might have damaging influences upon one of the main

responsibilities of the UI: To mediate their *knowledge* in Icelandic for the benefit of the people of Iceland. Some argue that the UI has a social responsibility to fulfill. H said that he discerned significantly increased pressure towards publishing in English instead of Icelandic, like “someone was watching over his shoulder and at his list of publications” and others said that they felt that their work in Icelandic was not “judged on equal terms as work written in English.” Some argue that the new policy goes against the UI’s basic principles and purpose. Another point of special interest H mentions is that he thinks that the policy works wonders in catching the attention of media and politicians, a perspective shared by many scientists. Some were certain that the policy “was *for* the politicians,” to acquire the needed funding; and according to a rumor mentioned in two interviews there might even be a possibility that the government pushed for the new policy to be able to argue for a special contract for the UI, as F puts it:

The [research contract in 2007] was a special agreement on these lofty ambitions [of the UI reaching the Top 100], it was made so that the other universities did not receive the same type of contract.

Many scientists are skeptical and even extremely skeptical about the new policy like C:

It’s not impossible but there needs to an enormous ambition on behalf of the goal [of reaching the Top 100]. We have a lot of human resources but we lack economic resources. Most days I think about the goal in the same way as “Drug free Iceland in 2010.” Especially when considering the resources the UI has at its disposal today.

Others don’t even want to think about it:

I don’t even want to think about it. I think it’s highly improbable. We are not even on the list and it’s another headache, of which I have too many already.

Such skepticism was common amongst the interviewed scientists. Most had no idea whether the goal was reasonable, and many had very limited knowledge, if any at all, about the

selected ranking lists. Those who had looked into it thought it highly unlikely that the goal could be reached. But many welcomed the new policy and one saw it as part of the UI's development towards increased participation in the *respublica scientiarum*:

We have been discussing [the new policy] in meetings and we are in a different environment now and we need to realize that. I think the UI needs to move forward, it's stuck in its tracks.

And many were of the opinion that the policy was a positive step while at the same time skeptical regarding the goal *per se*, O:

In some respect this ranking of universities is *naïve*, climbing of steps made by others, conforming to a foreign hierarchy. I think the discussion can be fruitful, but whether we reach the Top 100 is totally irrelevant.

And J:

It might be best that the UI take the Rectors new policy seriously, maybe we will never attain the goal, the quest for the Holy Grail, and we will spend our lives searching for it, but it is a goal and there is nothing wrong with the goal itself. Perhaps we are too small to ever reaching the goal.

Axial coding revealed a divergence on these issues within the group of scientists I interviewed where those from the Medical and Natural sciences had less concerns regarding the social responsibilities towards the Icelandic community, while the concern of Humanities and Social scientists was more frequent and remarkable. This was by no means clear cut where there were scientists in the Humanities and the Social sciences who were not that concerned and in fact more concerned about UI scientists publishing more in English and less in Icelandic; and *vice versa* in the Natural and Physical sciences. That the disposition of the scientists is so at odds with the official policy has many interesting aspects, one obviously being that the policy was obviously not conceived and supported from the bottom up but more likely from the top

down, which is at odds with the formal structure of the UI as it was at the time of the policy introduction, where the UI was a peer-governed institution. Interesting as that aspect is we will leave it aside and focus on what it tells us about the myth-building process.

It is perhaps not surprising that the support of the staff of any particular institution is not a necessary pre-requisite for the success or failure of a myth-building process. It is however a bit surprising within a peer-governed institution. There are many well-kept open secrets within the academic field (Bourdieu, 2004: 24-37), one being the academic apartheid discussed in another chapter, another being that the UI scientists are not fully supportive of their own official policy *per se*, but only supportive if it's effective purpose of securing further funds and increasing the UI's probabilities for survival and expansion. Meyer and Rowan use the terminology of *formal* structure and as we know there is often a clear distinction and difference between formal structure and operational structure, the former being part of the myth-building process and the latter often excluded from the process. In the case of the UI changes were made to the operational structure, which concerned many scientists. It is of course impossible to make any judgments on whether the well kept open secret would have significant influences on the myth-building process if it were revealed publicly but what is clear is that the support of the UI staff was not a necessary part of the myth-building process – even though the UI is a peer governed institution different from normal private business top down management where the workers have little or no say in policy and formal structure. In either case the support or opposition does not have significant effects on the process.

Mr. Skúlason's view on the Top 100 policy:

I would probably not have suggested the [policy of reaching the Top 100]. It was an effective publicity stunt. Everybody buys into it, as a marketing idea. What's dangerous about policy of this kind is that it's like a boomerang, it can come back to haunt you. There are certain risks associated with the ideology of a research university that are very

real. Fortunately I think that UI academic staff is aware of them. They sense these risks. There is a risk that universities neglect their obligations for teaching and the local community which is an important aspect of all universities. It might be many times more important for the Icelandic community to have many average scientists who are in good relations with the local community rather than a few excellent scientists who are more or less abroad occupied with issues unrelated to the Icelandic community.

And Mr. Skúlason echoes the opinion of H from the Humanities. Mr. Skúlasons reservations raise the question of habitus influences on positions of power within the social space of the field and on the trajectory of the organization. Mr. Skúlason being from the Humanities and Ms. Ingólfssdóttir from the Medical sciences might explain (at least in part) the policy difference between them. But to make any further remarks would call for more data and further research which we will not pursue here. What we have shown is that even within peer-governed organizations, there can be significant reservations and even oppositions to new policy without it having detrimental effects on the policy process or its conclusions. There is some evidence that the reservations on the new policy were mediated and buffered by the tangible possibility of extra funding for the UI, which as we will show below, was a major concern for UI academic staff. Our analysis also revealed the first indication of a habitus difference between the academic subject pairs of Natural/Medical Sciences and Humanities/Social Sciences, with more indications of reservations on the new Top 100 policy from the latter group than the former. We will analyze this dichotomy in greater detail below. Our main conclusions being that although many perceived the Top 100 policy as being first and foremost a PR tool to catch media attention, it definitely has the potential to change the formal structure of the UI in a way that would be unfavorable for certain local community services provided by the UI.

# *Indications of the logic of the field: Indicators, Quality and Rankings*

## *The logic of the field*

In recent years the use of quality indicators, as a basis for quality indexes for comparing universities around the world, has increased. These indicators in themselves reveal a lot about the logic of the international academic field, which indicators are frequently chosen and what types of indicators are omitted? But the opinions of academic staff towards these indicators also reveal the logic of the field at the level individual organizations or within a cluster (for example a geographical academic field). In this section we will discuss the logic of the international academic field and also the logic of the field within the field of a single organization, the University of Iceland. We begin with the latter. The following analysis is based upon interviews taken with UI academic staff in 2007 and 2008 (see details on method in *Data and method*) which was coded and transcribed. We will discuss each quality indicator (see Appendix I) in turn.

## *Quality indicators used in international university rankings*

There was no consensus on whether *Funding Acquired from Competitive Research Funds* was a good indicator or not. Some thought it to be an important indicator but few put it near the top of their list of good indicators. Those who judged the indicator important argued that it adequately measures: a) whether the university is capable of acquiring funding<sup>24</sup>; and b) if a university is successful in acquiring funding from such funds it is anecdotal evidence regarding the quality of the research produced at the university. Reservations made about the indicator were that the indicator might be sensitive to errors related to the relative funding

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<sup>24</sup> Closely connected to the issue of funding *per se*.

needs of different academic subjects. A university that needs expensive equipment obviously receives larger sums of money from such funds while a university that does not specialize or excel in expensive technology subjects, for example the Social sciences. The critique is not leveled against the value of such competitive funds but rather against the possibility of measuring the facts the indicator is supposed to measure. But there is another reservation which is closely connected to a central issue in regard to the whole development of the UI in recent years, to be discussed below: That the indicator must be supplemented by another that brings into light the *localized* scientific output of the university. Some of the scientists interviewed were of the opinion that “publishing in Icelandic was just as important as publishing in high-impact peer-reviewed international science journals;” and that the indicator was only based upon the latter.

There was a strong consensus amongst scientists that *Alumni Funding Contribution* was a poor quality indicator. But there were some who raised the issue that the UI should develop an *Alumni Funding System*, justified by the increased funding that it could provide for the UI. Many scientists said that the indicator was relevant for American universities but irrelevant in Iceland. Those who argued for the relevancy of the indicator argued that there is a funding system in Europe (comparable to the US system). Many university buildings in Europe are “built by funds raised by former students,” and funds are founded by former students which raise money for specific departments or projects. It was in this vain that the scientists supportive such funding argued for the importance of creating while at the same time usually judging the indicator itself as a poor one. The perspectives raised are irreconcilable but rather unrelated. And in a way there is a full consensus that an indicator of the same sort as used for measuring the *Alumni Funding* in the US is irrelevant and a poor indicator in Iceland. And also: scientists at the UI on the whole do not rate this indicator highly. The issue raised was

that the UI was not raising enough funds by this possible means, which is an issue unrelated to the indicator *per se* (usually a measurement of alumni disposition).

Some reservations were made regarding indicators measuring the number or *Ratio of Graduate Students at a University*. Most agreed that graduate students were a “necessary requisite for the operation of a research or a university of high standards” but few thought the indicator to be an important one amongst the most commonly used indicators. Some raised the issue though, which is distinctive for the UI, that should such an indicator become an official policy goal it might affect the *custom* that UI students finish at least at part of their studies abroad; it is commonly acknowledged amongst scientists within the UI that one of its “strong points is based upon the quality and international diversity of education of scientists teaching and researching at the UI.” It is therefore perceived as a threat and a disadvantage, that the UI should educate its students on all levels. Scientists stressed the importance of having graduate students to assist scientists in teaching and research.

No indicator was judged poor by all scientists interviewed. It is interesting though that one of the main indicators used by the *Shanghai Rankings* was deemed as a poor one by almost all scientists interviewed: *Nobel Prize Winners*. Some said that the indicator was “a nice icing on the cake” but all the same did not place the indicator near the top of their list of good or important indicators. Other indicators involving some sort of award, recognition or nomination were met by the same sentiment by scientists. These are nice “recognitions and can increase prestige but in themselves are not good indicators for university quality because the sample size is simply too small; the number of winners too few.”

The *Ratio of Teacher per Administrative Staff* was an indicator that most thought important although not many would place the indicator near the top of their list. Some did not mention the indicator but instead stressed the importance of administrative staff. This is an issue that scientists at the UI were concerned about. The main argument is “that scientists are

wasting time doing routine administrative tasks while others could perform these duties and clear up time for scientists to concentrate on teaching and researching” as one scientist in the Social Sciences put it. When there is a lack of administrative staff more time must be spent on administrative tasks that scientists think that should be carried out by others. There seems to be consensus that an indicator measuring whether the issue of completing administrative tasks and who carries them out is important although there was not full consensus regarding the indicator *per se*.

There was almost full consensus that the *Number of Courses and Subjects on Offer* was a poor indicator for the quality of a university. The reservations were supported by arguments like: “A university that has only two departments but those two departments are the best in the world is still a good university” and “the number of subjects is not a measurement of quality.” There was consensus that a top quality university does not have to be a multiversity.

Two indicators had mixed reactions from the scientists: a) *Quality Audits on Teaching and Measurement* and b) *Student Quality* (access restrictions/selective admission). Few took a hard stance against either one but many had reservations about both. The former was met with skepticism about “who could audit the *experts*,” when at the top – as professors are within the western curricular system – who is qualified to examine and give advice? Most acknowledged that of course it must be healthy to receive critique but there was a distinct hesitation regarding the possibility. Some said that they had had such audits and that they had taken a long period of time and work but the results and effects were unsubstantial. A few said that they had received critique and thought it helpful. Every single scientist acknowledged the importance of peer-review in research, it is therefore obvious that scientists do not think themselves exempt from observation and critique but there is something regarding other aspects than research that produces a distinct hesitation in allowing audits and advice regarding teaching. There is a similar kind of hesitation regarding the latter. All want good

students and none was categorically against selective admission *per se*. Most are in favor of some sort of selective admission at some point in university. *But*, most are hesitant on this issue. The first reservation is the idea of the UI as the *nation's university*: “The UI has a responsibility to admit students because the UI is a public university, and, therefore, accessible for all those who meet the minimum requirement of graduating from secondary schools.” The second reservation is that the scientists are unsure of the best possible method of selective admission. A few, but a clear minority, were in favor of tuition fees, but with restrictions and usually only in certain circumstances or subjects. Many raised questions and had doubts regarding the quality and effectiveness of the final exams at secondary schools as a minimum requirement. Both that they were not an effective enough filter for those “*not cut out* for university studies” **and** the scientists named examples of “good scientists that were poor secondary school students,” one scientist even pointed out himself as an example! Some stressed the importance of filtering out poor students in the first year at the UI; “the responsibility should be upon the university to try to educate students as well as possible but set acceptable standards”. One scientist pointed out that a selective admission system would decrease the universities funds because the funding system is dependent upon the number of students that take final exams.

All interviewed stressed the importance of adequate funding and that it was imperative to increase available funds to the UI. Despite that only two interviewed point to the indicator for *Available Funds* as an important indicator for quality universities. From the responses we were able to conclude that the scientists classified funds as a necessary requisite for quality university activities but not a good indicator of quality. “A rich university is not necessarily a good university, the teachers might be poor teachers” was one scientists argument. Few made an argument but simply skipped over the indicator.

A strong consensus was observed on three indicators: a) *Number of Articles in Peer-Reviewed Journals*, b) *Student/teacher Ratio* and c) *Involvement in International Cooperative Research Projects*. The strongest consensus by far was on the peer-review indicator and it can safely be deduced that the peer-review system still exerts a normative influence upon scientists and holds great legitimacy. Some stressed though the importance of a “blend of international publishing and local or Icelandic publishing of scientific articles.” That was not to undermine the importance of the international peer-review system but only a belief in the importance of the UI for Icelandic society. In that vein concerns were raised by some interviewed that responsibilities of producing scientific writing in Icelandic and mediating knowledge to different parts of Icelandic society could be neglected if too much emphasis be put upon the international publications. There was similar consensus on the international cooperation with all interviewed, none judging such an indicator to be non-indicative of quality, a witness to the *international* character of the academic field. And finally there was also an almost unanimous consensus on the importance and relevance of the S/T ratio as a quality indicator.

### ***Indications on the Logic of the Field***

The pattern of responses and arguments indicates and adds to our previous findings on the relative distribution of resources and positions of power. Although all scientists agree that peer-review publications were important, no one in the Medical or Natural sciences aired any reservations while scientists from the Social Sciences and, though, mainly from the Humanities expressed their concerns and reservations on putting too much weight upon such an indicator in official UI policy. One remarked that he “felt as someone was looking over his shoulder” and that created a pressure to publish increasingly more in English and less in Icelandic which was a point of concern for many in the Humanities and, although to a lesser degree, in the social sciences. One amongst the Medical and Natural Scientists expressed his

support of the Humanities and Social Sciences writing in Icelandic but most did not comment on the issue and if they did argued that the same rules regarding publications should apply to all. Many in the Humanities argued that there simply were no international ISI journals in their academic field and therefore their work could not be measured by such an indicator. But the difference between the Medical/Natural sciences and the Humanities/Social Sciences was that the former emphasized a uniform policy goal of ISI publications (which should also guide funding within the UI) while the latter emphasized the importance of UI scientists partaking in a general discussion with the Icelandic society and that there should be a balance between academic work in Icelandic and publishing in international peer-review journals.

Another difference between the Medical/Natural sciences and the Humanities/Social sciences was that a few belonging to the latter group (and especially in the Social Sciences) when discussing the S/T ratio quality indicator mentioned the inequalities in funding which they argued were the main causes for them having “too many students per teacher.” They argued that they were trying to conduct their science but that they did not receive enough resources and that the resources of the UI were distributed unfairly. This adds to our previous findings on the dichotomy of Medical/Natural Sciences and Humanities/Social Sciences. It is also interesting to note that UI academic staff judged many of the most widely used indicators for university rankings as being poor measurements of quality, which we will discuss in further detail in the next section.

### ***International university rankings***

The quality indicators selected for university rankings give further information about the logic of the field. There are numerous organizations that produce university rankings from which we have selected three: US News, Times Higher Education and the Shanghai Rankings. These rankings are amongst those most used and cited and they also originate in three different continents. The UI chose the Shanghai rankings as a guideline for its new Top 100 policy.

## ***Rankings, indicators and methodology***

### **US News**

- 40% Peer Review Survey (worldwide), total of three year's responses, divided into five subject areas
- 20% S/T ratio
- 20% Citations per Faculty member
- 10% Employer Review Survey (worldwide), total of three year responses
- 5% International Faculty, proportion of international faculty at school
- 5% International Students, proportion of international students at school

### **Times Higher Education – World University Rankings**

- 30% Teaching – the learning environment
  - 15% Reputational Survey on teaching (worldwide)
  - 6% PhD awards per academic
  - 4,5 % Undergraduates admitted per academic
  - 2,25% Income per academic
  - 2,25% PhD awards against bachelor awards
- 32,5% Citations – research influence (normalized)
- 30% Research – volume, income and reputation
  - 19,5% Reputational Survey on research (worldwide)
  - 5,25% Research income (scaled)
  - 4,5% Papers per academic and research staff
  - 0,75% Public research income against total research income
- 5% International mix – staff and students
  - 3% Ratio of international to domestic staff
  - 2% Ratio of international to domestic students
- 2,5% Research income from industry (per academic staff)

### **Shanghai Rankings**

- 25% Highly Cited Researchers (isihighlycited.com)

- 25% Papers Indexed in Science Citation Index (ISI)
- 25% Percentage of Papers Published in top 20% journals (ISI)
- 15% Award (Staff of institution winning Field Medals and Nobel Prizes since 1961)
- 10% Alumni (Alumni of institution winning Field Medals and Nobel Prizes since 1951)

The only indicator used in all three rankings is *Citations* although the methodology differs. All three rankings rely heavily on peer-review either through indicators measuring peer-reviewed work and/or awards **or** through specially designed surveys. US News and Times Higher Education (THE) both use surveys which count for 50% (US News) and 35% (THE) of the total rankings score for each university while the Shanghai rankings relies only on awards (Nobel Prizes and Fields medals) and publications and citations (ISI). The surveys mainly measure *prestige* and *reputation* and although scientists, who take part in the surveys, are asked questions on teaching and research few are likely to have detailed information on either for a wide variety of universities. Surveys weigh heavily in the US News ranking or a total of 50% which is supplemented by two indicators weighing equally: the *S/T ratio* as an indicator for the quality of teaching and *Citations* for the quality of research. The other two rankings place proportionally more weight on research than teaching or 100% (Shanghai) and 65% (THE).

When comparing scientists' judgments on commonly used quality indicators with those actually used by the three of the most widely used rankings it becomes evident that the rankings are in large part based upon indicators that are not highly rated by university scientists. Surveys did not rank high amongst those interviewed and an indicator for awards was the least favorable of all the indicators. But at the same time, publications and citations were the indicator which ranked the highest and is also widely used in rankings. Another important point is that the *S/T ratio* as an indicator for the quality of teaching ranked highly

amongst the scientist' interviewed but is only used by one of the three selected rankings (US News).

The prevalence of indicators counting *publications* or *citations* leads to several problems which call for further discussion. The first problem being, which was reflected in the interviews with UI scientist's, – most prominently from the humanities – the total exclusion of the Humanities from the Shanghai rankings, because there is no international data available for the indicators selected. The same problem holds for the other rankings were universities who emphasize the humanities have to compete on an unequal basis. The second problem, related to the first one, being that there is a substantial difference in the number of *publications* and *citations* between subjects, more numerous in the biological sciences than the social sciences for example. Some rankings standardize and/or normalize the data which has helped but the basic problem is the relative performance difference between subjects. It's the same problem as comparing performance and outcomes between industries, the standardization makes the comparison *less* favorable for those with a higher relative performance standard. The third problem being that counting *publications* and *citations* as method is vulnerable to errors. Indicators for publications and citations aim at measuring meaningful and successful scientific output but many citations (and also publications) are exactly the opposite, when criticizing poor academic work. There are no easy logistical solutions to the problem as it is a daunting task to judge and review all citations on the basis of their scientific merit.<sup>25</sup> All the same, we are left with rankings that are susceptible for such errors.

The selection of indicators *per se* is tentative data on the logic of the field. The Shanghai list, which is produced by a research institution within the academic field in China, only focuses on research indicators and only those which are heavily oriented towards the Medical

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<sup>25</sup> And probably only realistically possible for past publications and citations, leaving one with a ranking of the quality of universities of the past.

and Natural Sciences, the Humanities being “immeasurable.” The other two lists, US News and Times Higher Education, are produced by media corporations. These lists are proportionally more frequently used by the general public, especially prospective students, than the Shanghai list. Nevertheless, they are both more oriented towards research/academic measurements than indicators for the quality of teaching. None of them includes information on the performance of local community scientific diffusion of knowledge or publications in other languages than English. These rankings mirror the logic of the field and reveal the informal coercive isomorphism trajectory within the international academic field. Gaining legitimacy as an international research university, becoming a member of the *respublica scientiarum*, entails that universities adjust to the indicators, which are heavily Natural/Medical Science-ISI-English oriented.

### ***Quality issues at the UI***

**Funding** was the main concern and obstacle in raising the quality standard at the UI according to those interviewed. In one of three audits on the quality of the UI, the Icelandic National Audit Office (NAO) had judged the UI to be a “well run institution,” meaning that it had sufficient funds and was administered adequately. One of the explanations for the discrepancy between the disposition of the scientists and the NAO’s conclusion is that “The UI hires numerous part-time teachers, makes scientists do much of the administrative tasks so there will be no need to hire full-time administrative and office personnel *and* hopes that the most scientists don’t have time to do *costly* research!” It was obvious that scientists were concerned, irritated and even angry about the lack of funds; some were even resigned on the issue. But there might be some or even a great deal of truth in the sarcastic note on the NAO audit.

One of the reasons for the UI’s cost-efficiency is without a doubt the dependence upon part-time teachers, who are *cheap academic labor*. One part-time teacher I spoke to said that

part-time teachers referred to themselves as “white slaves.” In Bourdieuan terms: The UI supplements its cultural capital, of holding a teaching position at the UI, even though part time, and uses (or abuses) the opportunity to offer low economic capital. On the whole the scientists are long since fed up on the situation regarding funding.<sup>26</sup>

A few scientists said that the UI did not lack funding although they accepted that the UI had funding problems, saying that “part-time teachers bore the brunt of the problem while they themselves had no reason to complain.” Others said that too much funds went “to the office in the Main Building” referring to the central administration.

### ***Part-time teachers***

Most agreed that the number or ratio of part-time teachers to full-time teachers at the UI was too high at the same time there was a discernible satisfaction with the effort of part-time teachers. Many thought it important to offer different viewpoints and to mediate the experience and knowledge of other scientists. The argument against using so many part-time teachers being that full-time professors are *better* informed and equipped than part-time teachers and should *a priori* be better teachers; and that there is too much teaching handled by part-time teachers. Increasing the number of full-time teachers at the cost of part-time teachers should therefore raise quality standards. Some scientists said that part-time teacher’s pay and facilities were so inadequate that they truly and honestly had “difficulties with their conscience” when recruiting part-time teachers. A few mentioned that part of the problem regarding part-time teachers was that they were not responsible for administrative tasks and as a result the administrative load increased significantly for full-time scientists; and furthermore that time spent on administrative tasks was already unreasonable. Not that they wanted part-

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<sup>26</sup> The new contract for research was signed when at the time of the process of holding interviews; the effects of it were therefore not felt at the time but optimism increased dramatically with its signing. Since the Icelandic Banking System Crash of 2008 the UI has been forced to cut spending significantly and though no interviews have been done since, it is safe to assume that the level of optimism has dropped again.

time teachers to fulfill administrative responsibilities, “that would be too much to ask and probably inefficient”.

### ***Administration***

As mentioned above there was considerable consensus on the issue of administrative tasks where most agreed that they took an unreasonable amount of time. One said though that “we should count ourselves lucky in comparison with our colleagues in Britain.” Those who mentioned the administrative task-load as being too heavy thought that the administrative staff at the UI were simply too few. Many subjects do not have enough staff to assist in numerous tasks, for example: “resolve student issues, copying, assist in application processes, schedule meetings, plan birthday surprises etc.” One scientist recalled when he “started out in the UI and he had assistance with typing, copying and most tasks that do not need the expertise of a scientist.” The argument being that time is spent on tasks easily executable by others than scientists who should focus their efforts on research projects and teaching.

### ***Equipment***

The issue of equipment is proportionally important relative to different academic subjects, in regards to special equipment and facilities, other than tables, chairs, computers and inexpensive software. There was considerable consensus, especially where expensive special equipment was needed, but also for basic equipment and facilities, that the UI did not adequately fund the necessary needs; let alone anything beyond that. Some scientists used their personal equipment because educating students without it was inefficient, even “ridiculous.” Others had used parts of their own research funds to buy equipment or even “added a request for equipment in an application for their own research” which was not, strictly speaking, necessary for the research. One said that they had been sponsored by a private firm and because of that their basic needs were fulfilled. Another related issue was that many were dissatisfied by the number of book titles available at the UI. The main concern

though was the lack of sufficient equipment: “I know of no university we should be comparing ourselves with that does not have [the equipment] we lack.”

### ***Post-doc Assistants***

Two interviewed expressed their concerns that there were almost no opportunities and positions for post-docs at the UI, leading to two different types of problems: a) many post-docs who are forced to work outside the university field where their talents and knowledge *should be utilized* and b) scientists could not count on assistance from post-docs in research as can their colleagues in universities abroad. There are numerous post-docs who work for the UI as part-time teachers, advisors, assistants and student thesis supervisors. Very few of them have a full-time contract at the UI or hold post-doc positions. Some scientists had concerns that the UI was “exploiting” these *short-term* employees, many of whom had worked on short-term contracts at the UI for many years, hoping to gain the necessary scientific and academic capital to acquire a full-time position when available. The main issue though was the almost total lack of post-doc positions at the UI. These positions could be for a period of one to three years which would benefit the post-doc to begin its research and establish connections within the Icelandic research community while at the same time offering much needed assistance to the scientists at the UI.

### ***Salary***

The issue of salaries was raised by scientists interviewed; most notably in subjects with less scientific capital and greater chances of economic capital gains outside the academic field, but in others as well. One interviewed had decided to “resign in the coming month because of salary issues”. The issue is not only that the scientists want higher salaries, although most think they should have higher salaries, but also there is a concern that the UI was “losing out in competition for highly qualified scientists to foreign universities, other Icelandic universities and private companies”. Related to the economic capital concerns were

observations on the lack of facilities and research funds. One suggested that the UI “should offer new staff a handsome sum of money to ensure and speed up the adjustment process of new scientists to their position” which then would lead to “higher retention rates and better quality research in the first years of research at the UI.” Some were resigned on the issue and said that “the UI should not try to compete with foreign universities; it would be to no avail.” Another related issue is the application and appointment process, for full-time positions at the UI, which many think too slow and complicated, leading to the possibility of missing out on qualified applicants. Some had first-hand experiences of such instances where the UI had missed out on the “most qualified applicant.” There were also examples of applicants who were given a position but quit after only a short while at the UI because of better offers abroad or in private firms. There was real concern amongst many interviewed that the UI might in the near future have problems in attracting highly qualified scientists, although most were of the opinion that the UI still had advantages that should attract qualified applicants; namely being the “leading research university in Iceland.”<sup>27</sup>

### ***Students***

Many scientists complained about students and had a feeling that student performances had dropped in recent years or at least that there was “greater variance than before, you still get good students but you also get really poor students.” This had lead, as mentioned earlier, to reflections on selective admission. The main issues with students were that they skipped classes, their preparation was insufficient for desirable learning outcomes and they worked too much in paid occupations while attending full-time studies. One scientist took an example which might exemplify all three listed: “One student who had not attended class at a regular basis, showed up to hand in a required report, explained that he had not been able to attend all classes because of work. I looked at the report and immediately noticed that it was too short

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<sup>27</sup> Worth noting that it is highly debatable whether the UI could be classified as a research university – such as classified, e.g. by Carnegie Mellon.

and well below standard and explained to the student that full-time studies require a great deal of effort, to which the student replied: What do you mean? I spent all last night on this report!” Fortunately this particular student is a rare breed but there are concerns amongst scientists at the UI that greater numbers of students have too much work-load besides their studies. Some said they knew that students were even in 70-100% occupations and full-time studies as well; and that’s besides leisure and family responsibilities. There is considerable concern amongst many scientists regarding the work-load of students and that they do not acknowledge that full-time studies are *full-time* studies. Another issue is that students want all lectures delivered via e-mail as PowerPoint notes and some scientists suspect that there is widespread misunderstanding that it is enough to acquaint oneself with the material registered on the PowerPoint notes.

## ***Objective Structure of the Academic Field in Iceland: The Relative Positions of Power and Mode of Resource Distribution***

### ***Increase in Student Population***

The number of students at the UI has increased year by year, almost every year, since its foundation in 1911. The increase in student population during the past 10-15 years is especially relevant. The increase in student population over the world has been referred to as a flood<sup>28</sup>, which hit the UI in the year 2000. Registered students grew by 1672 students during the 1990-2000 period and again by 3324 in the years 2000-2008 (the last year before the

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<sup>28</sup> The concept “flood” is attributed to the Spanish academic Roja (1996)

Icelandic Teachers College merged with the UI) ([www.hi.is](http://www.hi.is)). In the former period the student population grew by 32% in ten years, but in the latter period of eight years the student population grew by another 50%. Since the year 1990 the number of enrolled students has more than doubled. In 2010 there were about 15.000 enlisted students at the UI compared to about 5000 in 1990, 3000 in 1980 and 1500 in 1970. Add to that the fact that the UI did not enlist graduate students until the mid 1990's and it becomes clear that the UI has been expanding rapidly and the increase has been proportional to its total number of students resulting in a greater increase in numbers over time. The great numerical increase is a significant factor in changing quality standards at the UI (UI statistics).

The number of students at the UI has increased since its foundation in 1911. The increase is proportional and gradual, except for two instances in the 20th century where student population decreased. If the history of the UI is split up into 10 year intervals the growth in student numbers varies between 50% and 100% - on average doubling in numbers of students enrolled. The UI has always been a small university in comparison with universities abroad, and especially until the beginning of the 21st century. Even now it is a rather small university, though recent growth has made it possible to implement modifications in the formal structure of the UI towards becoming a research university that can compare itself to distinguished universities around the world. In the year 1970 students at the UI were 1500, less than 10% of the population of *normal* universities in Europe and the United States of America. In 1980 the student number reached 3000, which must have had significant influence upon the UI, to double its number of students in such a short period of time. It is worth mentioning that the UI's most populous department today, *The Department for Social Sciences*, was founded at the beginning of that period. The increase in student numbers since the beginning of the 1970's to the present day that has had significant influence upon the formal structure and activities within the UI as will be discussed below. The number of students grew by about

4000 from 1970 until the year 2000 when the numbers grew at an even faster rate. Between 2000 and 2008 the student population grew by 3324 students, twice the total student population in 1970, roughly the whole student population around 1980 and about half the student population in the year 2000. Never before in the history of the UI has the number of students increased so much in such a short period of time.

### ***The development of the S/T ratio***

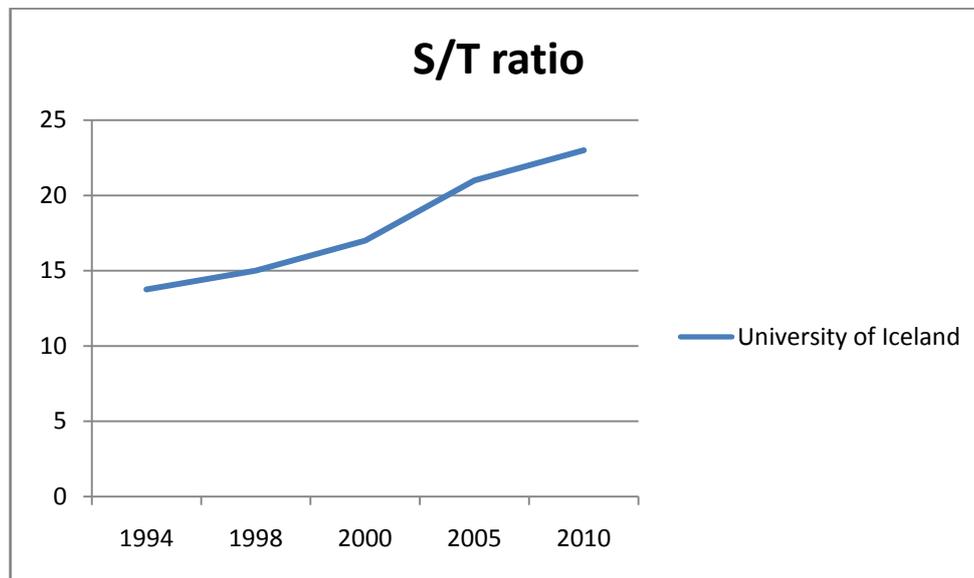
The ratio between students and full-time scientist/teachers at a university is commonly used as a measure of quality, assessing the probable time allocation of expert resources available to students. Numerous quality standards use the ratio in their assessments and many universities, especially those who have a low ratio, advertise their ratio publicly as a sign of quality. The S/T ratio is a scale variable, and therefore, there is a differential decrease in quality as the ratio increases. Those universities who publicly advertise their *low* S/T ratio usually have a ratio of 13 students per teacher or lower. *US NEWS* (usnews.com, 27.2.2011) has one of the most cited and used rankings in the world. *US NEWS* rates colleges around the world using a standardized weighted index where the S/T ratio is one of the index's five variables.<sup>29</sup> The S/T ratio counts as 20% of the ranking. According to *US NEWS* "a student-to-faculty ratio is, at present, the only globally comparable and available indicator that has been identified to address the objective of evaluating teaching quality [... and the S/T ratio] is a commonly used measure in many evaluations and rankings around the world."

Student numbers at the UI grew by 151% or 8808 students during 1995-2010. At the same time, the number of teachers increased by 62% or 245 full-time scientists. The number of teachers does not increase gradually or parallel to the increase in the number of students. In the year 2002 full-time teachers were 438 and the number decreased in the following years

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<sup>29</sup> The other four being: a) Academic peer review, b) Citations per faculty member, c) Employer review survey and d) International student and international faculty factors.

but then again increased for three consecutive years until the merger with the Teacher's College (which is not taken into special consideration in the current thesis but clearly changes the structural dynamics of the UI and calls for special attention).



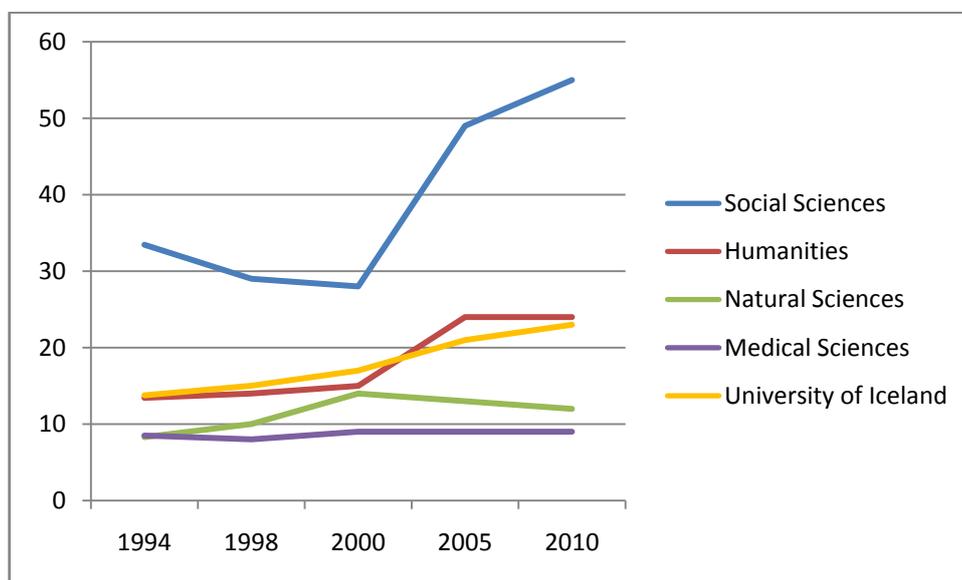
Graph 1: Mean S/T ratio for the UI

In 1994 the mean S/T ratio for the UI was 14:1, 18:1 in 2000 and 23:1 in 2010. Graph 1 shows the change over the whole period. That is an increase of about eight students per each teacher over a 15 year period. The increase of 8:1 is a 53% increase in the S/T ratio compared to 1995. The S/T ratio for the UI and how it has increased is an indication of *decreasing* quality of education at the UI.

*But* while the mean S/T ratio for the UI shows that the quality has been decreasing one must take a closer look at the S/T ratio for specific departments and subjects, and again for undergraduates and graduate students reveals a pattern of variance. There are significant differences in the ratio between departments and subjects and there is a clear pattern in the change over time and between the departments. The increase in the ratio has effects on teaching that are echoed in scientists' responses to questions on the quality of teaching at the

UI which are discussed below, but first let's examine the differences in the S/T ratio between departments and subjects and the changes in the ratio over time.

If one were to compare the S/T ratio between schools or even if one wanted to interpret the full meaning and effect of a single S/T ratio value or changes to a single measurement value, one must take into account the variance. Universities are comprised of many individual units, such as departments, faculties, subjects, courses etc. Though a mean is always the best projection, without any further information regarding a sampled individual unit, it can be misleading; especially if there is in reality a high variance from the mean.<sup>30</sup>



Graph 2: Mean S/T ratio for selected academic subject fields

Graph 2 shows significant variance from the mean S/T ratio for the UI between 1994 and 2010.<sup>31</sup> There were numerous changes made to the structure of the UI and its departments in 2009 but the graph shows comparable statistics except that in 2010 the Social Sciences does

<sup>30</sup> There are also other issues regarding the S/T ratio that have to be taken into account: a) Not all teachers who hold a contracted position are full-time teachers, some only work part time but are listed in official data with those who work full time; some assistant professors only work 50% for example; b) teachers are at different ages and usually an older teacher has less teaching responsibilities than younger ones, so at some points in the history of the UI circumstances could be in such a way that many teachers have little teaching responsibilities that are then carried out by part-time teachers; c) one cannot deduct from the S/T ratio the number of students in individual courses as there is also great variance at that level. Some have therefore suggested another indicator which would measure the percentage of courses with over 25 students at the university or at departmental level. That indicator is at present more difficult to process because the information for the enormous number of courses but in the future it should be easy for the UI to create a computer script that would automatically calculate and produce values for such an indicator.

<sup>31</sup> Comparable data available for that period.

not include numbers for teachers and students in the new Education Science department as comparable numbers were not available since the merger with the Teachers College in 2008 which had a favorable effect on the S/T ratio for Education Sciences at the UI (about 19:1 at the UI in 2010).<sup>32</sup> The Social Sciences has by far the least favorable S/T ratio at 55 students per teacher in 2010. As graph 2 shows the ratio has risen sharply in the Social Sciences and Humanities while there were fairly insignificant changes Natural Sciences and no change at all in Medical Sciences. The ratios for the Social Sciences and Humanities are well above any reasonable quality standards regarding the S/T ratio. At the beginning of the period there is a discernible difference in the mean S/T ratio for the selected sciences although to a lesser degree than at the end of the period. The difference increases significantly over the period, where the S/T ratio for the social sciences increases but little change is discernable for the Natural and Medical sciences – leaving one with the interpretation that the UI’s mode of resource distribution was heavily skewed between faculties, protecting quality standards in the Natural and Medical Sciences while allowing for decreasing quality standards in the Social sciences and Humanities.

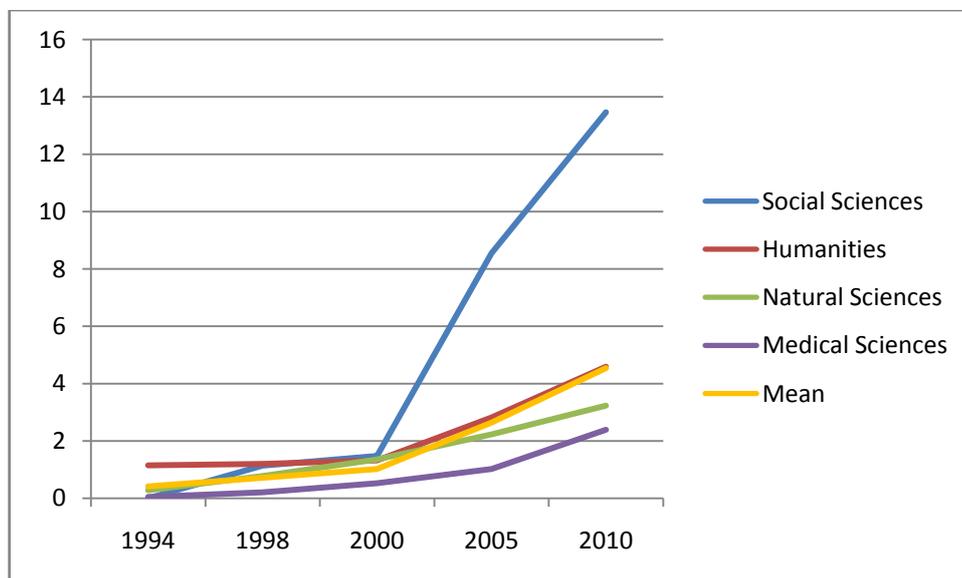
The UI had virtually no graduate students until the mid 1990’s. As mentioned before, there were 178 graduate students enrolled in the year 1996. In a short period of time there have been enormous changes in graduate studies at the UI. Graduate student numbers tripled between 1999 and 2005, a rise from 485 to 1448 students. That was on top of a rise from 178 to 485 in 1996-1999. The UI did not receive special funding for graduate students, arguably more expensive students, as the UI received the same amount for undergraduate students and graduate students. The number of teachers was virtually the same in 1999-2005. Graduate studies are usually considered to differ from undergraduate studies where more time is allocated by scientists to each student. When the UI started accepting graduate students there

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<sup>32</sup> The merger with the Teacher College had a favorable effect on the S/T ratio at the Education Science department but still the UI mean S/T ratio increased from 21 to 23 between 2005 and 2010.

was no limit at the UI for how many graduate or undergraduate students a scientist was allowed to guide but some faculties have implemented guidelines since 2007.

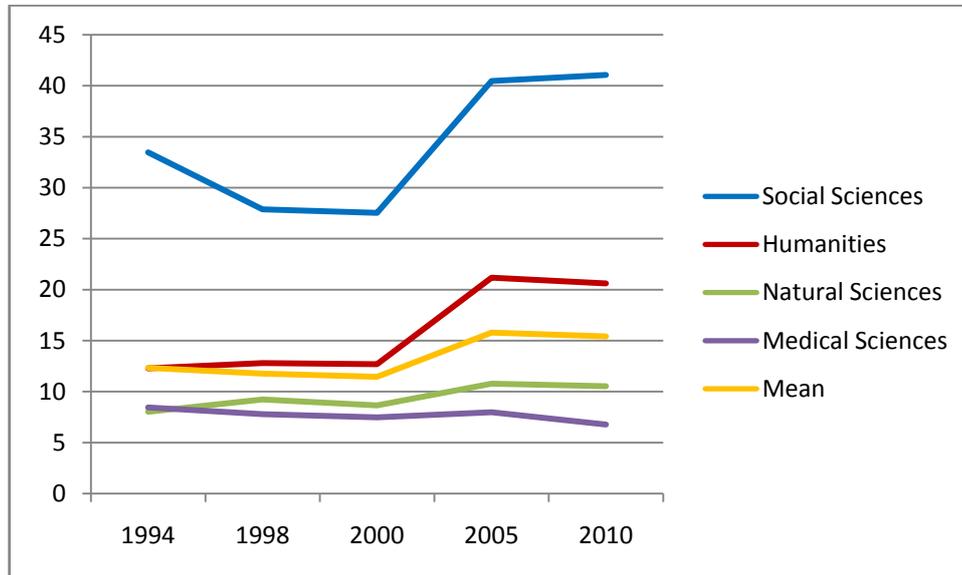
The variance of the S/T ratio is even greater at the graduate level where the social sciences are again in a league of their own with three times as many graduate students per teacher in comparison with most other departments; many of which had a ratio of three or fewer, which is quite acceptable. Graph 3 below shows how the ratio has changed since 1994, at which time there were on average <1 graduate student per teacher at the UI, even in the social sciences. Over a 12 year period (1998-2010) the increase in graduate students per teacher in the social sciences is 13-fold eclipses the 5-fold increase in the humanities, which by no measurement can be said a small change. Overall there is an increase in the S/T ratio at all faculties during the period, but with the same differential difference as seen before, the greatest increase in the Social sciences the least in the Medical and Natural sciences.



*Graph 3: Mean S/T ratio for graduate students – selected subject fields*

The S/T ratio increased from 13 to 20 for the selected departments between 1998 and 2010. The number of full time teachers increased in the same period but not enough to hold back an increase in the S/T ratio at undergraduate level where the ratio increased from 12 to

15 during the period; at the graduate level the ratio grew from 1 to 5, a five-fold average increase. The variance the same as before, greater increase in the Social sciences and to a lesser degree in the Humanities and little or no increase in the Medical and Natural sciences.



*Graph 4: Mean S/T ratio for undergraduate students – selected subject fields*

Over the same 12 year period the S/T ratio for graduate students at the social sciences increased 13-fold, from 1 to 13; and from 28 to 41 for undergraduates, also an increase by 13 students per teacher, for a combined increase of 26 students per teacher. The total number of about 55 students per teacher is by all quality standards extremely high. The S/T ratio for the humanities at graduate level increased five-fold over the same period, from 1 to 5; and from 13-21 at the undergraduate level. Medical sciences and natural sciences hold their respective undergraduate ratios but increase from 1 to 3 and <1 to 2 at the graduate level, which is a significant increase but is dwarfed by the increases in humanities and social sciences and by all quality standards a respectable ratio. The S/T ratios for the Natural and Medical sciences are respectable compared to international university standards.

Graduate students in the social sciences were 42 in 1998, 59 in 2000, about 400 in 2005 and 700 in 2010. In the humanities the number went from 110 in 1998 to 459 in 2010; from

59 to 255 in the natural sciences; and from 26 to 406 in the medical sciences over the same period. The increase in student population was proportionally much greater at the graduate level than the undergraduate level. For example the increase in student numbers at undergraduate level in the social sciences between 1998 and 2010 was around 100% while the increase at the graduate level was 1700%; and while doubling the number of students at undergraduate level is a significant change a 17-fold increase is by any standard an enormous change which by itself calls for special attention and extra resources – which were not made available, at least not for the Social sciences and Humanities.

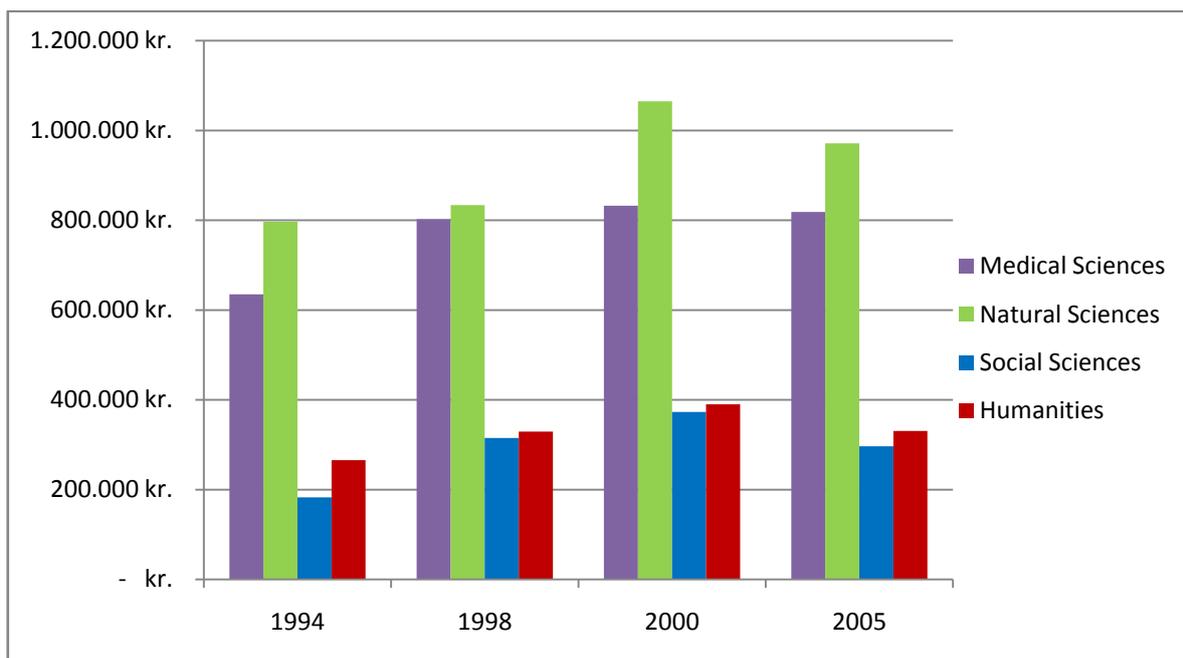
### ***The mode of resource distribution***

Variance in the S/T ratio is always caused by a difference between subjects in the number of teachers and students, some departments having fewer students and more teachers than others. The *direct* cause of difference in number of teachers per student can be traced to a funding model used within the UI to distribute available funds – or in Bourdieuan terms: The relative access and distribution to resources, in this case economic capital. Most of the funding is from the state, some from the university public lottery and a small portion from private donations. Faculties were before 2009 divided into groups or categories which determine the amount paid for each full-time student enrolled. Table 2 shows the funding classification for the fiscal year of 2002:

**Table 2: Funds for each single full-time student classified by subjects in 2002**

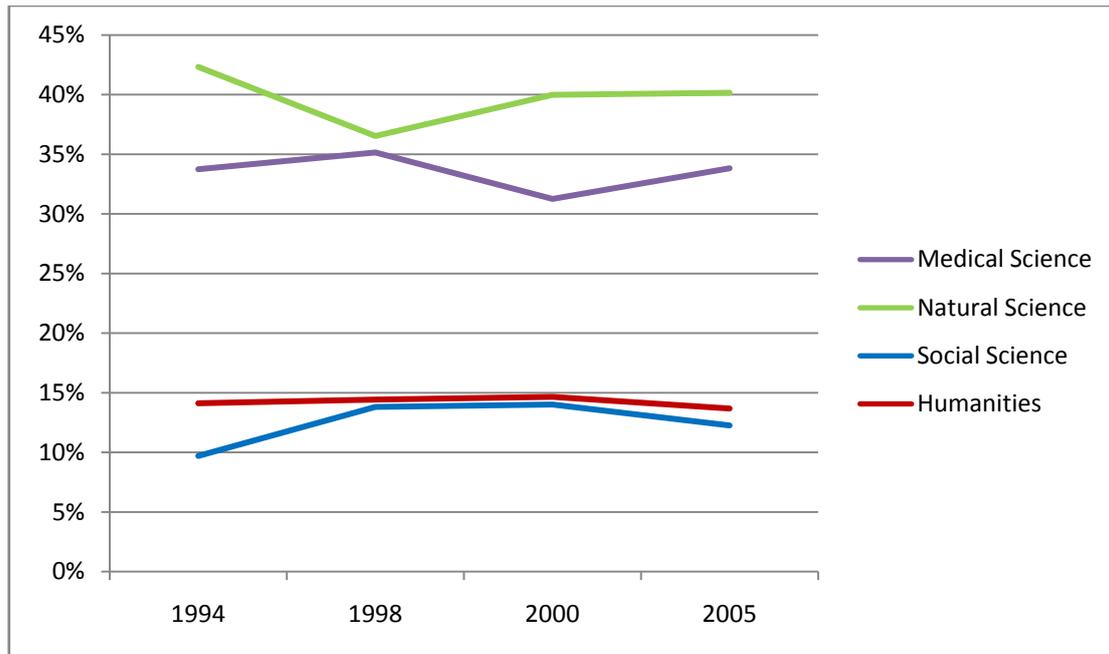
Humanities and Social Sciences	364.000 kr.
Mathematics and Computer Science	576.000 kr.
Nursing and Physiotherapy	615.000. kr.
Education	647.000 kr.
Engineering and Natural Sciences	828.000 kr.
Medicine	1.153.000 kr.
Odontology	1.926.000 kr.

The unequal resource distribution is a formal part of the state funding system that is to say that before the UI takes any decisions on its resource distribution the state has already decided upon a classificatory system which distributes economic capital. The UI then distributes its funds between departments, administration and other sections of the UI. Graph 5 shows the relative distribution between our selected academic fields (fixed currency rate 2010):



*Graph 5: Distribution of economic capital per student between selected subject fields*

The graph reveals that all except for the Natural Sciences received increased funds per student between 1994 and 1998, and again between 1998 and 2000 except then the Medical Sciences did not receive and increase but the Natural Sciences instead. The graph also shows that the increase between 1994 and 1998 for the Medical Sciences amounts the total amount of funding per student for the Social Sciences. On the whole the funding per student was increasing for between 1994 and 1998 for the selected academic subject fields but then after 2000 seems to decrease again. The graph is further confirmation of the relative positions of power and mode of resource distribution. Graph 6 below shows the proportional changes in funding per student between the academic subjects:



*Graph 6: Proportional distribution of economic capital between selected subject fields*

The graph shows that there have been relatively small changes in the proportional resource distribution between the two pairs of academic subjects, Medical/Natural and Humanities/Social, although there have been fluctuations between the Medical and Natural sciences. The Social sciences receive less than 15% of the total funding made available to the selected to these academic subject fields.

Funds allocated by the UI for teaching is inadequate to decrease the mean S/T ratio. The UI could divide funds in a more equal fashion but that would ultimately only lead to an even 23:1 S/T ratio for the year 2010 in all departments; but such an experiment might even lead to a higher mean S/T ratio because there are other cost items than salaries, for example housing and equipment.

### ***Academic Apartheid and Scientific Capital***

The interviews with UI scientists reveal discernible differences in habitus between subjects, especially regarding a) differences in dispositions, b) on the variance in the S/T ratio and c) the mode of resource distribution between the pairs of faculties. We will connect these

habitus´ to their guiding field structure below but first outline the two habitus´. It is important to note that the interviews were not designed to discuss consciously or draw out especially the views and opinions of those interviewed on the difference in distribution of resources or the use of different types of capital in struggles within the academic field, and that the dispositions below emerged from an open discussion on the quality of the UI (or lack of quality).

The habitus of Humanities and Social scientists is that of the *oppressed*, of those with relatively scarce resources and access to power – those subjected to symbolic violence – compared to the disposition of the Natural sciences from a position of power.

Z a social scientist:

On the whole the UI has too few scientists compared to students and there is a certain type of colonialism within the UI. Some subjects being more equal than others which is caused by errors and bias in the [resource distribution] models. For historical reasons, of course, some departments and faculties have proportionally more professors in comparison with associate-professors and have better libraries, salaries, grants and so on. From our viewpoint within the social sciences the colonialism must be destroyed and [the distribution of resources] equalized. I have sometimes described it as an Apartheid-system within the academic field in Iceland. Of course it can also be found elsewhere but if you are part of the Social sciences or the Humanities you have an equal demand for resources, but you receive proportionally less than if you were in the Natural sciences or the Medical sciences. It is kind of like being black or white.

P from the Humanities:

The logic of the mode of distribution at the UI is peculiar, based upon quantity, mass quantity, which encourages us to have as few scientists and as many students as possible. It's ridiculous. [...] The basic resources for teaching should be the same, and then there could be specific reasons for extra resources, for example expensive equipment and facilities.

X a social scientist:

“The mode of resource distribution is mad in my opinion. It’s absolutely mad. The [Natural and Medical Sciences] receive 80% more per student than the [Humanities and the Social sciences] – without hearing a single argument [of justification] for the unequal distribution.

R a natural scientist:

Yes, I have heard these arguments from the Humanities and the Social sciences that [the mode of resource distribution] is unfair. I happen to totally disagree – unequivocally disagree - because circumstances *are*<sup>33</sup> simply different in the Natural sciences. You cannot train [Natural scientists] without proper hands on training. Without it there is no point in it at all, we could just as well move on to something else.

Q a social scientist:

[The mode of distribution] is of course completely unfair [...] because our subject, like other social sciences, is a research subject, and we strive to do ambitious research, and we want to have the resources needed. This [mode of distribution] needs to be restructured from scratch, it is absolutely necessary.

Bourdieu shows in *Homo Academicus* (1984/1988) that there are different groups within the academic field who are defined by different criteria and have a vested interest in them. There is a struggle for capital and the definition of legitimate criteria for what counts as capital and the differential value of various capital resources. Bourdieu’s theoretical model counts four types of capital: Social capital, Cultural capital, Economic capital and Symbolic capital. Each type has sub-categories and Bourdieu identified the sub-category of scientific capital within the category of cultural capital. Within the national academic field there are various groups and capital resources which vary between spaces occupied within the field, such as institutions, subjects, laboratories, etc. and also between national academic fields, the logic

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<sup>33</sup> With much emphasis!

and structure being (at least possibly and therefore necessarily *a posteriori*) different in terms of groups and capital distribution. Bourdieu's analysis rests heavily upon social background indicators and also the spatial structure of the French academic field (especially that within Paris) and the differences related to occupying different spaces within the field. Our focus is upon the relative structure of the academic field within the UI<sup>34</sup> and the struggle for academic capital and access to resources and power.

Our analysis below reveals a struggle, between habitus' or sub-fields within the UI's organization, for capital and also the power to define the relative value of different types of capital; *and* a struggle for resources using the different capital available to these groups. The comments above reveal the dispositions within a struggle between the subject pairs of Humanities/Social Sciences and the Medical/Natural Sciences over power and the means to acquire or change the mode of resource distribution. Of course they do not express or exemplify the views and opinions of *all* UI staff but they reveal meaningful and significant indications of the basic structure of the struggle and the connection between habitus and the structure of the field. Scientists within the Humanities and Social sciences consciously feel oppressed and unfairly treated within the academic field while the Medical and Natural Scientists judged the distribution to be fair or, which is no less revealing, expressed no concern for a relative lack of access to resources, nor did any of them express concern for the relative lack of funding in the Social sciences and Humanities. Furthermore it is important to note that the Humanities and Social Scientists expressed discerns on possible changes being made which would further affect their access to scientific capital, pointing to an ongoing struggle for the criteria of *Research points*. Within the UI there is a system of criteria which measures each scientist's achievements on several different aspects, for instance scientific output (Research points), teaching (Teaching points), governance/management, academic and

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<sup>34</sup> Which, it could be argued, is in a field of its own due to the fact that there is no other university in Iceland with a similar history or comparable structure – but for our purposes we are content with observing the field within the UI, the academic subject field.

public services, former employment experience and other relevant experience. The ongoing struggle on the definition of the criteria for scientific capital, the Research points – where the Medical and Natural scientists argue that ISI *publications* and *citations* be given significantly more weight and the Humanities and Social sciences oppose such a change as it is not equally relevant for all academic subjects (some have no ISI journals at all) *and* that such a change is detrimental to the UI's goal and purpose of doing research and academic work in Icelandic and in tandem with the Icelandic community.

Next we will focus on the structure of the academic field within the UI, its particular logic and distribution of Bourdieuan capital, and, having discussed the habitus differences between the Social sciences/Humanities and the Natural/Medical sciences above, to discern the particular logic and structure of relative positions of power and distribution of capital within that academic field; and linking together the logic of the field with the habitus dispositions. Data on the various measurements of scientific and academic achievements for all the UI scientists was available which made it possible to compare the scientific and academic capital between the selected faculties and faculty pairs. Holding to the particular logic of quality standards as expressed first and foremost by UI scientists, and as a core indicator in many rankings (i.e. Shanghai, 2011), the publication and citations of ISI-articles<sup>35</sup> we can observe the difference in scientific capital between the faculties. The indicators also have a high correlation with other variables likely to increase scientist's scientific capital. According to our theoretical discussion and analysis of the mode of resource distribution and the habitus dichotomy between the Medical/Natural and Humanities/Social above and

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<sup>35</sup> Bourdieu points out that a simple measurement of ISI-publications is a crude measurement of scientific capital because it also measures citations on grounds of *poor scientific results*, such as for the argument of refutation and therefore a possibility of a false interpretation of success instead of the complete opposite. The only means of discovering such an error would be to look at each publication and removing such instances of non-success publications. The impact of an highly cited non-success article could distort the correlation but in our instance the logic is not a correlation of scientific *excellence* but of scientific capital which is contingent upon the uneven distribution of access to publications and the logic and structure of the international academic field – contrasted with correlation between faculties in the search for greater scientific *excellence* and its causes; and, also, importantly that we are comparing total scientific capital between subjects but not within subjects or individuals between or within subjects, which in all cases are more vulnerable to a *bias* of the type Bourdieu discerns (2001/2004).

Bourdieu's findings (1984/1988; 2001/2004) we should observe a correlation between the resource distribution, as shown above in funding and the S/T ratio, and scientific capital; and also a difference between the faculties, where the Medical and Natural sciences having more capital to use in the struggle for resources than the Social sciences and the Humanities. Table 3 shows three indicators of scientific capital, mean values, for the four selected faculties.

**Table 3: Scientific capital<sup>36</sup>**

Scientific Capital	ISI Publications	ISI Citations	ISI Impact factor (0-3)
Medical science	36,4	909,7	2,4
Natural Sciences	27,3	589,1	2,5
Social Sciences	6,2	60,0	1,3
Humanities	1,3	22,0	0,2

The correlation is confirmed with a significant difference in the distribution of scientific capital between the faculties, the Medical and Natural sciences holding greater amounts than the Humanities and Social sciences, a gap between the pairs of faculties clearly discernible. The correlation between the distribution of scientific capital *and* the difference in habitus between the two pairs of faculties *and* the difference in quality measurements between faculties (the S/T) ratio reveals the particular logic of the academic field and of the *academic apartheid structure*.

As shown above there is a significant disparity between the subject pairs in resource access, i.e. funding, which has the effect of leading to disproportional quality standards, which follow the same pattern as the distribution of academic capital. The Medical and

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<sup>36</sup> ISI Publications is a mean for the total publications in the ISI Data base for each faculty of all fully employed scientists at the UI between 1970 and 1998; the same applies for ISI Citations; and the ISI Impact factor is calculated as  $ISI-IF = (\text{Number of journals in subject category} - \text{rank of journal within subject category of journals} + 1) / \text{Number of journals in subject category}$ . See Appendix II for further details on variables used.

Natural sciences have more academic capital and also better access to resources and more favorable quality standards as indicated by the S/T ratio. This leads us to a discussion on the system of awards and progress within the UI which is highly contingent upon an index of scientific achievement, properly named *Research points*, which measures various scientific achievements, publications, translations, participation in scientific congresses etc. The index has been the subject of much debate within the UI as many within the Natural and Medical sciences argue for the an increase in the proportional value of ISI publications within the index while many in the Humanities and, to a lesser degree, within the Social sciences stress the importance of keeping a healthy balance between international publications and domestic publications, citing the necessary *national* role of the UI or a communitarian obligation of a sort. To quote G from the Humanities: “Our purpose used to be, to a large degree, to mediate knowledge to the Icelandic community, an ethos all but disappeared against a growing pressure to *internationalize*, publish only in English.” On the other hand those arguing for the increased importance of ISI publications point to the fact that if the UI wants to increase its legitimacy as an international research university it must increase its ISI performance output. An important point is that all the social scientists interviewed stressed the importance of ISI publications and international publications but at the same time some of them talked of the importance of balance while the humanities scientists stressed the importance of national publications and expressed doubts about the pressure to publish in ISI journals; while all the Natural and Medical scientists stressed the importance of ISI-publications in particular and expressed frustration and doubts regarding *insignificant* academic work of lesser quality, such as publications in Icelandic – the balance being in the opposite direction of increased importance of ISI-publications and decreased importance of Icelandic publications.

## *The paradox*

A comparison of the average ISI publications and ISI impact factor and the average research points in between 2000/2003-2008 years reveals an unexpected reversal as seen in table 4 below:

**Table 4: Research points<sup>37</sup>**

Scientific Capital 2000-2008	ISI Publications 2000-2008	ISI Impact Factor (0-3) 2003-2008	Research points 2003-2008
Medical science	9,6	2,3	110,9
Natural Sciences	9,4	1,8	158,1
Social Sciences	2,3	0,8	229,4
Humanities	0,25	0,1	166

As before the Medical and Natural sciences have the greater scientific capital of ISI publications but the research points average is higher in the Humanities and the Social sciences. This explains the struggle for changing the criteria of the category of *Research points*, observed in the arguments of many of the Natural and Medical Sciences scientists interviewed, for increasing the weight of ISI publications within the index of *research points*; and *vice versa* for the Humanities and the Social sciences. But it leaves us with the question of why the index *per se* does not follow the logic of the field but quite the opposite. Obviously the index does not reflect the relative distribution of power and access to resources but it has some influence on academic progress and access to other capital, such as symbolic and economic, the latter having little weight within the academic field in comparison with the former. The obvious reason is that the index of Research points, restating the paradox, that it does not have a significant influence on funding or the mode of resource distribution, as shown in our previous section; or the social Sciences would receive proportionally the most

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<sup>37</sup> Table 4 shows the same data as Table 3 except for a different time period, between 2003 and 2008, the same time period as we show the relevant mean score for 'Research points' for the selected subjects. See Appendix II for further information on the variables.

amount of funding. Why exactly it happened that the index does not reflect the logic of the field is unanswered and calls for further research. With increasing measurements of academic performance there are high probabilities of an increased struggle for changing the index.

What table 4 also reveals is that the index of research points does not contribute significantly to scientific capital within the academic field as a whole although it might have a faculty-specific impact, dictating the relations of individuals to positions of power and capital within the individual subject-faculties. There is a significant correlation between ISI publications and Research points of 0,268 at the 0,01 level as expected, it being one of the weighted variables but it's weight obviously does not have the singular effect as expected.

### ***A note on gender***

The issue of gender inequality is important when analyzing the logic of a particular field which in part always reproduces the field of power. Unfortunately we did not have the time and resources to acquire the necessary data to draw any final conclusions but, nevertheless, the issue is of such importance that one must disseminate and analyze the available data. Numerous studies have shown that women's access to resources and positions of power is significantly restricted in comparison with that of men's (Bourdieu, 2001). One would therefore expect women's scientific capital to be less on the whole within the academic field, but to a lesser degree within subjects and with more proportional difference between women in different subjects as predicted by the relative efficiency hypothesis (Kondra & Hinings, 1998). The logic of gender inequality being that although there are cases of women having the same success as men, the overall distribution of resources and power is in men's favor. We would therefore also expect that women be proportionally more numerous within those academic subjects having less scientific capital and resources, positions of relatively less power.

**Table 5: Scientific capital distribution**

Scientific capital	ISI-publications 1970-2008	ISI-publications 2003-2008	Research points
Men	23	6,4	211
Women	9	3,5	208

As table 5 shows there is a significant difference in the mean publications between men and women while there is not a significant difference in research points. As a result we can assume that there is also a difference in the total scientific capital accumulated. When comparing the ratio between men's and women's ISI-publications and again between the period reaching back to 1970 and the shorter period (2003-2008) one sees that the ratio decreased – which might indicate that the gap is closing but further information is needed to draw any meaningful and reliable conclusions on the issue. There is a significant difference at the 0,01 level of -0,209 for ISI-publications between men and women in the period between 1970 and 2008.

Our main focus is, although interesting, not on the relative scientific output (defined as *normal* science within the academic field) of men and women, but on the distribution of resources and scientific capital, where, as shown above, women have less scientific capital on the whole. According to our theoretical model we should expect women, as a being a group with relatively less power and access to resources in the field of power (Bourdieu, 1984/1988; 2001), to be proportionally more numerous within those spaces in the academic field with less power and access to resources and with less scientific capital on the whole. The data confirms our hypotheses as seen in table 6:

**Table 6: Positions of Power and Gender**

Academic field	ISI-Publications 1970-2008 <sup>38</sup>		Number of scientists		Ratio men/women
	Men	Women	Men	Women	
Social sciences	9,4	3	21	21	1,0
Humanities	1,8	0,4	41	23	1,8
Natural sciences	28,2	22,3	60	12	5,0
Medical sciences	46,2	15,3	91	42	2,2

The distribution of men and women is unequal between the subject pairs of Social sciences and Humanities and the Natural and Medical sciences, the same pattern as encountered before in regards to the S/T ratio, funding and scientific capital. Women being proportionally positioned within those spaces of the academic field where there is less scientific capital and less access to resources, as expected. The Social sciences and Humanities having a much lower me-to-women ratio, that is proportionally more women, than the Natural sciences and at the same time less scientific capital, power and access to resources. The results for the Medical sciences call for special attention where the difference in ISI-publications is rather high and the ratio between men and women rather low. As it turns out these differences explain each other. The low number of ISI-publications and high number of women within the Medical sciences can be traced to the fact that within the category of Medical sciences the department of Nursing has 25 women scientists with an mean score of 5,8 ISI-publications therefore significantly lowering the ISI-mean and the men-to-women ratio. The fact that the department of Nursing has a low ISI-mean and is almost solely occupied by women further reinforces our hypotheses.

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<sup>38</sup> Mean score for the same variable, ISI total, as before, see Appendix II for further detail.

# *Conclusions*

Our aim was to outline a theoretical framework for the analysis of the academic field in Iceland, perform a case study on the largest organization within that field (which had until recently been, literally, in a field of its own) and report findings that give preliminary support and indications of the logic of the field and the social mechanics at play. We contended that, as within all fields, there are isomorphism forces at work and a continuing myth building process, to increase probabilities for survival, which influence and reproduce the structure of the field. Within organizations and fields there is also a struggle for positions of power and different types of capital which are connected with the mode of resource distribution. The relative value of capital, which there is also a struggle for power to define, and the relative positions of power must be charted within fields and cannot be deducted *a priori* from other similar or even *same* fields in other geographical areas.

The world of science is threatened by a serious regression. The autonomy that science had gradually won against the religious, political and even economic powers, and, partially at least, against the state bureaucracies which ensured the minimum conditions for its independence, has been greatly weakened (Bourdieu, 2001/2004:vii)

Our case study supports Bourdieu's, and our own, fears. Although further research is needed to reach final conclusions on the structure of the academic field in Iceland, relative positions of power, habitus-influences and other factors, we argue, based on our data and analysis in this thesis, that there is strong evidence which calls for a reflexive reform of the UI, the academic field in Iceland and also on university rankings and their influences on university structure.

Our data indicates that informal coercive isomorphism forces of marketization acted upon the UI's structure which played a part in its policy changes during the 2000's. The UI's adjustments towards a business-oriented administration system might, especially with

increased links with the corporate sector or state influence on policy, even within subjects, lead to decreasing autonomy. There is significant reason to be wary of external pressures and attempts at influencing or even controlling the output and throughput of the UI and the academic field in Iceland. The UI by its monopoly on certain types of knowledge capital is an important player on the field of power and other organizations will seek to adjust and control that capital for their own benefits.

The UI's myth building process was a sustained effort which lasted decades with varying degrees of success until the new policy of reaching the *Top 100* proved to be *the* successful ceremony in a series of ceremonies although the external legitimacy of the three audits should also deserve ceremonial mentioning. The Top 100 ceremony was closely related to the marketization changes made at the UI. There was evidence of informal coercive isomorphism within the academic field where universities increase their legitimacy by adjusting to the structure of top international research universities (see any rankings). The increased influence of international rankings suggests that international comparison will be even more influential in coming years – further influencing the logic of the international (and local) academic field. Any university who has the goal to become or maintain its status as an international research university must increase legitimacy by conforming to the logic of the field through myth and ceremony, or its probabilities for survival will decrease. Currently that entails adjusting to the research-ISI-oriented indicators of international university rankings as the UI's chances of reaching the *prestige* level of the world leading universities are non-existent. The only other possible means for the UI to increase legitimacy would be to adjust the rankings methodology itself so as to include indicators which are not as highly ISI-oriented.

Our data indicates that even within peer-governed organizations official policy can be hierarchized and popular support is not a necessary requisite. UI academic staff was critical of the Top 100 policy. There was also evidence of UI academic staff being critical of

international university rankings indicators for measuring quality. In fact many of those widely used were judged to be poor indicators by UI academic staff. That suggests either that there is a need for improvements or adjustments to the methodology of university rankings or that UI academic staff have serious reservations on significantly adjusting the structure of the UI in accordance with the logic of the international academic field as reflected in international university rankings.

Previous research on the academic field in Iceland and the UI as an organization (for example Sigfúsdóttir & Thorlindsson, 2000; Thorlindsson, 2005; Thorlindsson, 2008) have discussed the structure of the UI and its influence on policy and organizational structure. As noted above the UI's structure was for most of its history based upon civil duties, producing civil servants. Our main focus in the current thesis has been on the logic of the field in recent years and on the influences of an increased emphasis in international research. Further research is needed to demarcate the detailed influences and boundaries, for example on relative values of capital, of different structures and the prevalence of these structures; and, also, the detailed nuances between sub-fields, for example the Medical/Natural Sciences and the Humanities/Social Sciences.

The interviews with UI academic staff revealed a dichotomy of academic subject pairs of Medical/Natural Sciences and Humanities/Social Sciences. Further research is needed but we observed strong evidence for the existence of sub-fields within the UI's organization reflected in different sets of beliefs, *habitus*, regarding the structure and logic of the academic field and its constituent parts. There were two issues highlighting the different sets of *habitus* (which further research into micro social structures might reveal further influence but our analysis mostly revealed macro social structural influences on the field level). The Medical/Natural Sciences argue for increased emphasis on research oriented goals and performance measures, based upon ISI publications and citations in most part, the Humanities/Social Sciences

(especially the former) have serious reservations of such policy and argue the importance of local community scientific services. The other issue being the perceived injustice in the mode of resource distribution and relative positions of power within the UI perceived by the Humanities/Social Sciences (especially the latter) and the defense of that same resource system by Medical/Natural Scientists. These findings support our hypotheses of struggles within fields for positions of power and capital (Bourdieu, 2001/2004).

Further evidence of these structural inequalities was observed in our analysis of the distribution of academic capital, which is, again, unequally distributed between the Medical/Natural Sciences and Humanities/Social Sciences, with the former two holding much more academic capital. An analysis of the distribution of economic capital showing the same results, proportionally greater amounts of capital diverted to the former subject pair than the latter. Our investigations into the development of the S/T ratio, also a commonly used quality indicator, reveal the same pattern. The Social Sciences have always had a higher S/T ratio and its development since 1994 has been a significant increase in the academic pair of Humanities/Social Sciences and no changes to the ratio in Medical/Natural Science.

Our analysis of the struggle for academic capital and on the mode of resource distribution shows preliminary indications of the logic of the field but calls for further research. Our data shows that the Social Sciences have relatively more academic capital than the Humanities yet have fewer resources. If we for example look at the development of the S/T ratio between 1994 and 2010 we can see that the ratio is growing for the Humanities and Social Sciences and holds the same for the Medical and Natural Sciences. At the beginning of that period the Social Sciences were in a league of the own with a much higher S/T ratio than all the other subjects selected. This might be indicative of a structural change within the UI and we argue that our evidence suggests that the relative value of academic capital has been increasing over the period. The Humanities were part of the founding subjects of the UI and always held a

central position within its organizational structure, as reflected in the S/T ratio in 1994 but it has since then been losing resources. The Social Sciences on the other hand seem to have never had much power or capital from producing civil servants or much academic capital and therefore had the least access to positions of power and the least resources. These indications call for further research.

A short analysis, which calls for further research, on gender influences and positions within the logic and structure of the field revealed preliminary data supporting our hypotheses that women have less access to resources and are proportionally more numerous in positions of relatively less power.

We argue that our reformed theoretical model shows preliminary signs of success as it revealed information on the struggle for resources and positions of power which, possibly, had otherwise, only using organizational theory, been overseen. The model offers meaningful explanations for the structure and logic of the field, describes main social mechanisms and we are not left with unexplained phenomena or data, except as a result of a lack of resources – which calls for further research. Further empirical testing and theoretical analysis is needed but the initial results are encouraging. We hope this thesis will provide information and useful perspectives for reflexive discussions on the academic field. The need for the understanding of the inner workings and outer pressures upon the academic field is great. Without reflexive knowledge and awareness the academic field is in greater risk of being subverted for the purposes of other fields of power; or by its own adjustments to the formal structure of the international academic field leading to unforeseen consequences that should have been less unforeseen.

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# *Appendix I*

## *Indicators used in international university rankings*

1. Staff awarded Nobel prize.
2. Staff awarded other academic prizes, Fields etc.
3. Number of published articles in peer-reviewed journals (ISI).
4. Funding available (for example per student).
5. Funding acquired from competitive research funds.
6. The ratio between students and academic staff.
7. The ratio between students and administrative staff.
8. Alumni funding.
9. Opinion of academic staff from the world of science (prestige of institution).
10. Alumni disposition towards former university.
11. Number/ratio of graduate students enrolled.
12. Number of courses/subjects on offer.
13. Participation in international scientific cooperation.
14. Number/ratio of published articles from students in peer-reviewed journals.
15. Quality assessment/audit of teaching (teaching methods and evaluation processes).
16. Student quality (for example level of rejection).

# *Appendix II*

## *Index – variables*

### **Gender**

- Males
- Females

### **Department**

- Medical science
  - Medicine
  - Medics
  - Pharmacology
  - Ontology
- Philosophy
- Natural sciences
- Social sciences

## *ISI*

**ISI Total** – Total number of all publications registered to an individual scientist at the UI in the ISI database between the years 1970-2008. Various methods were used to isolate the publications of more than one UI scientist had the same surname and first letter of first name: Publications were categorized by subject area, co-authors and institutions, authors publications lists compared and lastly the published article in question was examined. In less than five instances it proved impossible to determine the author of an article and were these instances omitted from the data.

**ISI XX** – Total number of all publications registered to an individual scientist at the UI in the ISI database between the years in the year 20XX. Data available for each year between 2000-2008.

**Citations Total** – Total number of all ISI-citations from all resources, e.g. ISI-papers, books etc. The Cited Reference Search was used in the ISI database. Same method used as before to confirm authorship and omitted if unable to determine author.

**ISI Impact Factor** – Measures the Impact factor of journals. The formula used to calculate a single journals impact factor:  $k=(f-s+1)/f$  where f is the total number of journals within category and s is the ranking of the individual journal within the category. The Impact factor was sum of the three highest journals impact factors which an individual had published articles during the period 2003-2008. The 2007 edition of Journal Citation Report was used. If a journal belongs to more than one category the highest impact factor was used.

### ***Research points***

The total amount of research points acquired 2003-2008.