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Transitions In The Making: Introducing E-Health Platforms In Greece

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TRANSITIONS IN THE MAKING: INTRODUCING E-HEALTH PLATFORMS IN GREECE

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Abstract

This paper presents an empirical study of on-going efforts for the establishment of two novel e-health platforms within the Greek healthcare environment. Specifically, we present a comparative case study on the introduction of two web-based platforms that facilitate coordination among healthcare providers and social insurance funds: e-prescription and e-reimbursement. Both platforms have been recently launched and their deployment has been accelerated in order to address the financial crisis. We analyse the complex interplay between policy, technology and everyday practices and we conceptualize the attempted healthcare reforms linked to the new platforms' introduction as sociotechnical transitions. Applying the "Multi-Level Perspective" we map the overall dynamics. This mapping is complemented by employing the concept of "Institutional Work" that allows focus to the micro-level of transitions, the level of niche projects. We reflect on the usefulness of combining the "Multi-Level Perspective" and "Institutional Work" conceptualizations and we argue that this combination can offer a way to unpack experiences and gain insight that can be valuable for policy makers, technology providers and the academia.

Keywords: transitions, healthcare, institutional work, e-prescription, e-reimbursement, Greece

1 Introduction

In this paper, we discuss the Greek experience with information technology induced transformations within healthcare. Our study does not seek to develop new theory but to connect the innovation, technology and policy discourse to the broader “practice turn” experienced in contemporary social sciences by answering the question: “how are policies, technologies and practitioner activities co-shaping transitions in the making in Greece today?”

Specifically, we report from a comparative case study of two web-based platforms for facilitating healthcare provider – social insurance funds coordination. In our analysis and discussion we study the challenging relation between technology, policy and everyday work practices within Greek healthcare. We conceptualize the on-going transformation of healthcare as a sociotechnical transition and we apply the Multi Level Perspective (MLP) (Geels 2002) to map the overall dynamics. Using the notion of “institutional work” (Lawrence and Suddaby 2006) we focus to the micro-level of this transition, the level of niche projects. We reflect on the usefulness of the “institutional work” conceptualization and we argue that it can offer a way to unpack experiences and gain insight that can be valuable for policy makers, technology providers, health professionals and the academia.

The paper is structured as follows. First, we lay out the theoretical background, then we provide a multi-level overview of Greek healthcare and we present the two cases under study. Subsequently, we describe the method used to collect empirical data and present our analysis and interpretation. Finally, we conclude by discussing insights from our analysis, pointing also to the limitations of our work and to possible directions for further research.

2 Theoretical Background

In this paper we aim to discuss the transition attempted within Greek healthcare adopting a multiscale view that acknowledges both the institutional context, and the level of every day work activity. In our analysis we leverage the framework proposed by the Multi Level Perspective (MLP) (Geels 2002) and the concept of “institutional work” (Lawrence and Suddaby 2006). In the paragraphs that follow we introduce this theoretical background.

2.1 A multi-level perspective on sociotechnical transitions

In the past decade, a strand of literature that seeks to understand and analyse the dynamics of socio-technical transitions has been developed using as a lens the “Multi-Level Perspective” (MLP) (Geels 2002, 2004; Raven 2007; Rip and Kemp 1998). This strand of literature builds upon innovation studies, institutional theory, sociology of science and evolutionary economics. Transitions studied under MLP are major technological transformations in the way societal functions are fulfilled. They refer to persistent, complex problems faced by society (e.g. in energy management or healthcare). These transitions do not only involve technological change, but also changes in elements such as user practices, regulation, industrial networks, infrastructures and symbolic meaning (Geels 2002). MLP conceptualizes the dynamics of sociotechnical change at micro, meso and macro levels and emphasizes how the alignment of trajectories within levels, as well as between levels, produces transitions (see figure 1). This perspective provides an integrative view which acknowledges both the role of actors’ intentionality and institutions. At the micro level, actors need to put a lot of work to create and uphold “niches” (i.e. novel ways of doing things). At the meso level, sociotechnical regimes (technology, policy, culture, science, user preferences, markets) guide micro activities in similar directions leading to development along technological trajectories. Finally, the macro level, is considered exogenous, it comprises the sociotechnical landscapes that are beyond the direct influence of actors. The term ‘landscape’ is used because of its hardness connotation and includes

macroeconomics / macropolitics and the material aspect of society (e.g. the material and spatial arrangements of cities or population demographics). Projects have a special role for transitions; niche innovations can be carried by projects that provide space for learning and articulation processes with regard to technical design, user preferences, regulation, infrastructure requirements and cultural meaning (Geels 2007). Projects' transformational capacity is different to the gradual evolution of institutionalised practices (Baptista et al. 2010; Nathanael and Marmaras 2008) as it is targeted and aims to the accomplishment of specific strategic goals.

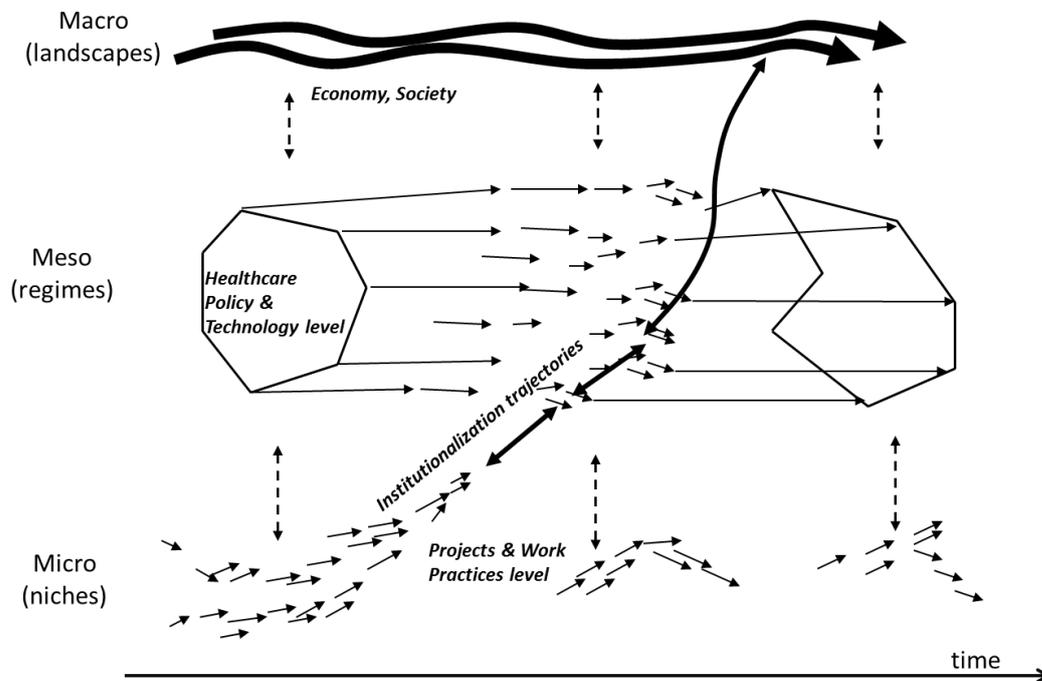


Figure 1. A multi-level perspective on sociotechnical transitions - adapted from (Geels 2002)

This paper aims to get insight to activities performed at the micro-level which can be instrumental for influencing transitions. Our work uses the MLP to position the initiatives under study within the overall healthcare transformation dynamics; in addition, it employs the concept of “institutional work” from institutional theory to make sense of the empirical material collected for these initiatives. Two kinds of phenomena are examined in institutional theory (Jepperson 1991): a) institutional effects, pertaining to processes where institutions affect other institutions or entities (institutions are here independent variables) and b) institutionalizing, pertaining to processes for the formation of institutions, institutional development, deinstitutionalization, and reinstitutionalization (the institution is here a dependent variable). Our study is relevant to this second stream of work: “the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behaviour” (Scott 2005).

2.2 Institutional work

Within the “institutionalizing” stream of institutional theory, Lawrence and Suddaby developed the concept of “institutional work” to describe “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence and Suddaby 2006; Lawrence et al. 2011). This conceptualization is explicitly positioned within studies of practice (Lawrence and Suddaby 2006) and it aims to explore the distributed nature of the institutionalization phenomenon: multiple individual actors’ activities purposively produce institutions (stable, operative, structural arrangements). By focusing to institutional work we aim to provide some insight on the challenges of creating local niches that “emerge from localized processes of negotiations and pre-existing

institutional, infrastructural, and material relations” (Timmermans and Berg 1997). Our study takes the project as a unit of analysis foregrounding micro-level activity and we concentrate on one of the three broad categories of institutional work: creating institutions.

Lawrence and Suddaby identify nine types of institutional work aiming for the creation of institutions that can be further grouped in three categories: a) vesting, defining, advocating, b) constructing identities, changing norms, constructing networks, c) mimicry, theorizing, educating (Lawrence and Suddaby 2006). These three types can be further linked to Scott’s three institutional pillars (Scott 1995): the regulative, normative and cognitive-cultural. Focusing on institutional work orients attention towards the actions of practitioners that aim to put in place new structures within existing settings (e.g. tools and procedures). The concept not only proposes a shift towards everyday action but also by emphasizing action types, rather than action accomplishment (Lawrence et al. 2009), it complements the framework proposed by Tolbert and Zucker which systematizes institutionalizing processes based on their outcome (Tolbert and Zucker 1996), i.e. the relative status reached by structural arrangements via habitualization, objectification and sedimentation processes. Furthermore, it extends work on institutional entrepreneurship by bringing into focus not only the activities of powerful actors who leverage resources to create new institutions or to transform existing ones (Maguire et al. 2004), but, also the mundane actions of practitioners who engage into institutional work.

MLP and institutional work conceptualisations have emerged largely independent of each other although they share significant common theoretical grounds and they aim to provide insight on the same phenomena of stabilization and change. They acknowledge the complex dynamics of transitions, the interplay between different levels, the key role of actors and institutions and the limitations of linear causality models. However, they focus to different aspects of the phenomena under study: the main focus of MLP is on the connections between levels while the main focus of “institutional work” is on the role of purposeful action taken by intentional actors at the micro- activity level. In a sense, the two conceptualizations are complementary to each other (see table 1).

	Multi-Level Perspective	Institutional Work
Epistemic field:	Technology, Policy and Innovation Studies	Organisation Theory-Information Systems Studies
Theoretical basis:	Evolutionary Economics, Institutional Theory, Sociology of Science	Institutional Theory, Practice Perspectives within Sociology
Object of study:	The interplay of activities at the level of socio-technical regimes (intertwined technologies, policies, norms, markets, etc.) with niche level activities (unstable and ‘in the making’ novel configurations). Micro-level (niche) activities by dedicated actors contribute to regimes’ evolution but they are also guided by them (developments along trajectories).	The micro-level work where purposeful actors’ actions affect institutions. Practice-oriented focus which aims to study intentional efforts irrespective of accomplishment. Efforts are directed by both individual agency and global agendas for institutional change or preservation.
Response to:	Belongs to family of systemic approaches opposed to simple causality and “linear models of innovation”. Studies dynamic complexity and local practices, but maintains that (inter)actions in many local practices can add up to patterns and regularities at a global level (Geels 2007).	Reaction to a) early institutional literature that emphasises structural features rather than human agency and b) recent institutional entrepreneurship literature that emphasises powerful human agency changing institutional arrangements. The “institutional work” conceptualization aims to balance the two approaches (Lawrence et al. 2009).
Contribution to this study:	Provides a framework for positioning the projects under study within the overall transition happening in Greek healthcare.	Allows focus to the micro level of specific projects while being aware of the bigger picture.

Table 1. Two complementary theoretical conceptualisations: Multi-Level Perspective - . Institutional Work.

3 Transition Contextualisation and Cases Overview

3.1 The Greek transition imperative

3.1.1 Macro-level view of Greek Healthcare

Healthcare is consolidated in the Greek Constitution (articles 5 and 21) as a right for all. Healthcare delivery is based on both public and private providers (mainly in primary care, diagnostic technologies and pharmaceuticals); healthcare services are reimbursed by social insurance funds (although out-of-pocket-payments are also significant and public healthcare services are subsidised); access to services is secured for all citizens and legal workers (Economou 2010; Notara et al. 2010; Wendt 2009). Key health indexes for the Greek population are good and aggregate public spending is moderate compared to the EU and OECD averages. Specifically, Greece ranks above average in most health status indexes including life expectancy and healthy life years, infant mortality, and adults' self-reported health status, while total public health spending (as a share of the Gross Domestic Product and in terms of Purchasing Power Parity) is below average (OECD 2012). In 2010, the Greek economy entered a deep financial crisis which captured global attention. In return for loans from the International Monetary Fund and European Institutions, the Greek government agreed to accelerate reforms including structural reforms of the healthcare sector and the introduction of new electronic tools.

3.1.2 Meso-level view of Greek Healthcare

A number of singularities lie underneath the seemingly good positioning of Greek healthcare within the developed countries league. Despite its apparent overall good standing, Greek healthcare is plagued by fragmentation, weak coordination and gaps in infrastructure (Kentikelenis and Papanicolas 2012; Mossialos et al. 2005). These singularities are evidenced by some peculiar statistics (OECD 2011, 2012): Greece has the highest number of doctors per capita (6.1 doctors per thousand population, nearly twice the EU average of 3.4.), the highest penetration of new medical diagnostic technologies (22.6 magnetic resonance imaging units per million population, i.e. more than twice the EU average of 10.3, and, 34.3 computed tomography scanners per million population, i.e. nearly twice the EU average of 20.4), the highest antibiotics consumption (39 daily doses per thousand population per day, practically double the EU average of 20) and, the highest expenditure on pharmaceuticals per capita and as a share of GDP (about 40% more than the EU average). Principally, healthcare is provided in Greece through a network of dispersed, loosely connected, semiautonomous entities. It is characteristic that there is no referral system in place, patients address specialists of their own volition and the distribution of patient conditions within the healthcare network is practically unmanaged. This situation challenges governance initiatives that need to accommodate the complexity of the standing configuration. Efforts to harmonise Greek healthcare with European "best practices" have repeatedly failed to deliver expected results and some of them were abandoned altogether (Economou 2010).

3.1.3 Information System Projects for Greek Healthcare Reform

Recent reform initiatives include significant information system related components. The development of electronic health records is identified as a major objective but although there is significant advancement in the creation and maintenance of records for administrative and medical patient data, exchange of medical data among different providers is practically non-existent (Angelidis et al. 2010). Medical data exchange has been impeded by the lack of a single personal identifier for all Greek residents up till recently (the obligatory social security number was only introduced in October 2009 (Greek Ministry for Labour 2012)), the lack of a secure network (the secure network "Syzeffix" that will connect all public healthcare is still under development and has only achieved partial coverage)

and the multitude of solutions with different logics and limited standardization (Bogdanos et al. 2008; Emmanouilidou and Burke 2012)). Other major initiatives address needs to capture, store and circulate management accounting information, to manage healthcare procurement and reimbursement processes, to promote standardisation and to introduce telemedical applications for primary healthcare (Angelidis et al. 2010; Ballas and Tsoukas 2004; Frigidis and Chatzoglou 2011). Similarly to all efforts made at the policy, regulatory, and organisational level, all major technology induced efforts for reform have faced significant delays and challenges (Economou 2010).

3.2 Cases overview

Among recent initiatives we single-out two that have similar nature and unfold in parallel. Namely, the “e-prescription” and the “e-disbursement” initiatives. E-prescription supports the circulation of pharmaceuticals’ prescription information between doctors, pharmacies and reimbursing authorities. The introduction of this new electronic platform aims to control doctors’ prescribing behaviour, to improve cooperation with pharmacies - eliminating time spent on disambiguation (“pharmacy call-backs”) and to capture data required to support knowledgeable policy development. All these healthcare delivery related aspired benefits are clearly set-out in the law that provides the legal basis and the rationale for the adoption of e-prescription (Law 3892/2010). The law also mentions the economic benefits expected, and these expected benefits energised the swift and broad e-prescription implementation after years of postponement. Actually, e-prescribing was included in May’s 3rd 2010 “Memorandum of Economic and Financial Policies” between Greece and the International Monetary Fund and subsequently in the “Hellenic National Reform Programme 2011-2014” issued on April 2011. The platform was launched on January 24th 2011, and although it is still used on a pilot basis it reached in less than a year almost 50% coverage (approximately 2 500 000 prescriptions processed by end of November 2011) having more than 10 000 doctors and 8 000 pharmacists registered as users (Greek e-Government Centre for Social Security 2011). The “owner” of the e-prescription platform is the Greek e-Government Centre for Social Security, the pilot version currently in use was developed in-house and it supports information exchange with a number of different social insurance funds.

The e-disbursement initiative (labelled e-DAPY) supports the transfer of information from private healthcare providers to reimbursing authorities. The aim here is to capture and transfer information in a timely and accurate manner, to manage healthcare procurement and reimbursement processes, and build the knowledge base required to support policy development. The information includes details about services offered to patients, costs, and administrative data for patient and provider identification. Diagnostic medical services (e.g. blood tests or radiology screenings) are ordered by general practitioners and specialist doctors using a third electronic platform (e-diagnosis) that was also recently launched (obligatory use of e-diagnosis started on February 9th 2012). Reimbursing authorities (social insurance funds) use the information collected to pay private providers for their services. The e-DAPY platform was developed (by a contracted software company) for one specific social insurance fund (IKA)¹ and was launched on September 30, 2011. It uses HL7 messages for the exchange of information and supports both direct data input through a user interface and structured data-file uploads for massive data input. As of July 2012, there were approximately 10 000 private healthcare providers registered in e-DAPY (including private doctors, diagnostic, rehabilitation and physiotherapy centres). The average daily input of data on services to discrete patients was approximately 95 000, out of which almost 70% was entered via manual data input and the remaining with data file uploads (Balian 2012).

¹ Up till, recently, 35 different social insurance funds (for compulsory insurance) covered 97% of the Greek population, IKA specifically, covered about 45% of the population (Mossialos et al. 2005; Notara et al. 2010). These different funds are currently in a process of consolidation: on March 2011, the healthcare insurance funds covering farmers, freelance non-professional workers and public servants were merged with IKA and together formed a new fund (EOPYY, incorporated with Law 3918/2011) which is gradually absorbing the other still existing funds.

To illustrate the role and use of the platforms discussed we use as an example, the all too common case where a doctor periodically monitors an elderly person's health. In this case the following activities would take place: consultation, renewal of prescribed medications (via the e-prescription platform), tests ordering (via the e-diagnosis platform), finally, if the doctor is a private practitioner, the final step would be the submission of information on services offered in order to receive payment from disbursing authorities (via the e-DAPY platform). The patient, would have then to visit any pharmacy, hand over the electronically prescribed medications' list, the pharmacist would retrieve electronically the prescription (via e-prescription), scan the barcodes of medications (automatically captured in the e-prescription platform) and deliver them to the patient. Payment for the medications delivered is partially covered by patients and the rest of it is credited to the pharmacist's account from the disbursing authority (the social insurance fund that receives information from the e-prescription platform). Similarly, the patient would visit a diagnostic laboratory, hand over the tests ordered, the microbiologist would perform the tests and then access the e-DAPY platform, input all the information (no functionality for retrieval from the e-diagnosis platform offered), hand the results to the patient (but not enter them in the e-DAPY platform), receive partial payment from the patient and receive the rest of the payment from the disbursing authority (the social insurance fund that receives information from the e-DAPY platform, in this case only EOPYY)². All three electronic platforms (e-prescription, e-DAPY, e-diagnosis) are web-based and are accessed via the internet through a simple user identification process.

4 Method and Cases Analysis

4.1 Method

In our empirical study we have focused on the modes of e-prescription and e-disbursement appropriation by two specific professional groups: pharmacists and private microbiologists that perform laboratory tests. The two user groups have similarities: in both cases we study highly educated professionals, accustomed to information systems (because both in pharmacies and private laboratories information technology is extensively used) that use only one of the two platforms (pharmacists use only e-prescription, microbiologists use only e-disbursement). For both platforms, the specific groups' use purposes are very similar (to register services offered in order to be reimbursed). Other user groups of the two platforms are significantly different: general practitioners and specialists have to use both platforms which makes difficult to isolate experiences (and also e-diagnosis which is not covered in this paper), they are normally less accustomed with information technology and their purposes of use are different, furthermore, the remaining users/beneficiaries of the platforms (administrative personnel from the disbursement authorities) have a totally different profile. To study how the selected user groups reacted to the introduction of the new tools in their everyday work activities, we observed and analysed real-time usage.

Our research is designed as an interpretive case study (Eisenhardt 1989; Klein and Myers 1999). Data collection was carried out in two phases. At first, we reviewed relevant available documentation which included: the user manuals, the Greek healthcare legislation and guidelines, the healthcare and welfare funds guidelines for medication disbursement, the Health Ministry position papers and the pharmacists' and doctors' codes of conduct. The second phase included fieldwork (field observations and semi-structured interviews with the pharmacists and microbiologists). The empirical data used in this paper were collected from three different pharmacies over a nine month period (January 2011 – September 2011) and from three different private laboratories over a different nine month period

² Payments to private healthcare providers from disbursement authorities (social insurance funds) are significantly delayed (even for years). To keep the analysis concise, this aspect of the provider-disburser relationship is not covered in the paper.

(March 2012 – November 2012). Our interviews were directed towards understanding: the stances of users towards the new platforms, their expectations, initial difficulties and the ways they overcame them. No access to personal health data was required and consequently no such data were obtained. The pharmacists contacted were all experienced, with an average of 25 years in their profession. They were also familiar with computer applications. The microbiologists contacted were also experienced, one of them had 10 years in the profession, and the other two more than 30 years. Two of the three were familiar with computer applications, while, the third one employed a permanent administrative assistant that supported all computer based tasks.

4.2 Cases Analysis

Both platforms under study are still in “project status”. The e-prescription platform in use is practically a prototype of the fully fledged application that will be launched in the future. The current platform is continuously amended and improved while a call for tenders for the full application has been announced. The e-disbursement platform is also continuously amended and improved while, at the same time, there are major extensions to its functionality underway (e.g. coverage of services offered to patients insured with funds in other European countries) and also plans for further extensions in the future (e.g. cross validation of data with the tax authorities, inclusion of information on hospital admissions and discharges) (Balian 2012).

For the two different platforms, different strategies have been followed. E-prescription is technologically simple and was developed in months with few resources. E-disbursement is technologically elaborate and it is the outcome of a lengthy and costly development effort. Both platforms are positioned within the same economic, political and technical environment and they are enabled/constrained by the same infrastructural components. In the analysis that follows we compare the same aspects of institutional work across the two platforms.

4.2.1 Institutional work to enact rules

Lawrence and Suddaby (2006) identify three forms of institutional work that focus on rules (i.e. vesting, defining and advocacy). Advocacy work is a necessary precursor for defining new rules that confer status and privilege, which in turn provide the foundation for vesting actors with new rights. In both cases the rules for professional work have not been altered. The aim at this point is not to change existing rules and codes of conduct but to ensure conformance by enabling close monitoring. This close monitoring is advocated as an obligation towards the International Monetary Fund and European Institutions. In both cases, the introduction of the platforms is promoted as unavoidable, indisputable and imposed by actors that are outside the Greek political environment. What is different in the two cases is how intrusive into everyday work the new platforms are. In the case of e-prescription pharmacists must electronically process prescriptions before delivering medications and always in the presence of the patient (patients have to sign a printout at the end of the process). So the use of the new tool has been introduced as a new step in pharmacists’ usual workflow. In the case of e-reimbursement, the new tool can be used at any time and there is no requirement for patient’s presence.

Using the e-reimbursement platform for direct data entry is cumbersome and time consuming. The information that has already been entered and stored in the e-diagnosis platform is not retrieved automatically and everything has to be input anew. Data input includes patient identification (including multiple identification numbers: the newly introduced AMKA number and pre-existing insurance fund specific numbers), prescribing doctor identification, details on services provided and tax related information. Although the process is lengthy and costly there is no strong opposition from the microbiologist because they can arrange this to happen at their own convenience or delegate it to administrative personnel and accountants. The e-prescription platform is user friendly and requires minimal data entry (prescription data are retrieved automatically and dispensed medication

information is entered by scanning packaging barcodes). Nevertheless, pharmacists were frequently observed to employ workarounds in order to process electronically the prescriptions asynchronously to patient servicing (e.g. at the end of the day) (Vassilakopoulou et al. 2012). System response delays and losses of internet access were mentioned by pharmacists as reasons for workaround employment. As advocacy was mainly based on obligations towards third parties and less on patient safety, using the new platform in a different way than the one foreseen by its designers (while still providing the basic data required) is not considered detrimental to effectiveness by pharmacists. However, the workarounds employed undermine the effort to control the correspondence of drugs delivered to drugs prescribed and results to limited traceability of what actually happened at the moment of delivery. As Lawrence and Suddaby note, “advocacy can determine which norms are to be followed and which may be violated, both of which are key elements in the cognitive legitimacy of new institutions” (Lawrence and Suddaby 2006). In our cases, referring to IMF and European Institutions obligations was a powerful advocacy strategy with a significant side effect: rules enactment was communicated and understood mainly as a mere administrative burden and less as a meaningful professional task.

4.2.2 Institutional work to reconfigure belief systems

Both electronic platforms implemented have as a key strength the establishment of visibility for the actions they mediate. The psychological effects of this new visibility alone are such that warrant appropriate conduct or what is termed as “anticipatory conformity” (Zuboff 1988). Exploiting technological capabilities (mainly the availability of the world wide web) Greece is aiming to enhance governance “giving overall direction, overseeing and controlling actions and satisfying legitimate expectations for accountability” (Tricker 1984). The three main categories of institutional work that aims to reconfigure belief systems according to Lawrence and Suddaby are: identities construction, changing norms and constructing networks. Norms and networks are not affected at this stage of platforms’ deployment but there is some effect on identities construction. Both pharmacists and microbiologists get the feeling that what is valued from their work is the mere implementation of prescribing doctor’s recommendations. Microbiologists are only asked to contribute administrative and financial information on the services offered. The results of lab tests are not registered and they are only handed to the patients in order to be evaluated by the specialist doctors. Even more significantly, the possible actions of pharmacists are constrained by e-prescription and they are not practically allowed to exercise professional judgment before delivering prescribed drugs. In cases where only some of the drugs from a prescription are delivered to the patient, pharmacists can only use three possible platform defined justifications: (a) limited drug availability, (b) discrepancy among the recommended dosage and the prescribed quantity, (c) patient refusal to take certain drugs. Nevertheless, pharmacists are also sometimes taking by themselves the decision not to deliver specific drugs (e.g. after identifying potential adverse drug interactions). Pharmacists feel they have a singular expertise on medicaments which entitles them to professional judgments and obliges them to refuse supply of drugs that they don’t deem appropriate. In such cases they register “limited drug availability”. Pharmacists are reluctant to take the role of mere pharmaceutical dispensers and they defend their capacity to exercise judgment and assume a role of a “gatekeeper”.

4.2.3 Institutional work to alter abstract categorisations

As discussed in the previous paragraphs, the introduction of the new platforms was facilitated by pressures to address the economic crisis and the availability of the world wide web. Furthermore, the recent introduction of a single patient identification number (AMKA) has provided the means for shifting healthcare delivery from loosely coordinated incidence handling to a more coherent patient centred mode. It is now possible to provide through the new platforms views per patient that would allow healthcare practitioners to have an overview of past encounters with the healthcare system relevant to their specialisation. For pharmacists, this would mean having access to past medication regimes and for microbiologists to laboratory exams’ history. Nevertheless, this is not currently possible in any of the two platforms. For the moment, existing sets of taken for granted practices that

favour autonomy and preclude private healthcare practitioners from accessing information on previous encounters with other service providers of the same field are preserved. This is identified by Lawrence and Suddaby as “mimicry” (Lawrence and Suddaby 2006). Mimicry eases adoption by associating the new with the old but can result in delaying the appropriation of advantages from innovative solutions. In our cases, swift adoption was prioritised. It is expected that in the near future, patient centred views will be made available as practitioners are becoming increasingly aware of technological capabilities. But, for this to happen, theorising and educating will also be needed in order to minimise risks of information abuse and uncontrolled antagonisms among practitioners.

5 Discussion and Conclusion

This paper integrates innovation and institutional scholarship to study two niche initiatives for strengthening coordination within Greek healthcare (e-prescription and e-disbursement). We initially position the two initiatives within the overall transition that is currently being attempted; we then focus to the micro level of everyday actions aiming to identify efforts that aim to affect the institutional setting. We demonstrate how e-prescription and e-disbursement are becoming gradually and cautiously entrenched through purposive institutional work. Our study confirms the importance of attending both at the macro- meso levels of defining strategies (e.g. the Hellenic National Reform Programme 2011-2014), policing (e.g. the new rules for healthcare services reimbursement) and providing required infrastructural components (e.g. introducing the single identification number AMKA) and at the micro level of local initiatives for studying attempted transitions. We subscribe to the argument made by Raven et al.: ‘both the translation of a generic concept into a local project variation as well as the transfer of local lessons into global rules occur, but are difficult and require dedicated work... new projects are not literal reproductions of the emerging niche trajectory; rather, they are local variations of a generic design. Similarly, each project yields new results and new lessons, which—through interpretation and social learning—can be selected and aggregated into generic lessons for the emerging niche trajectory’ (Raven et al. 2008). Following this argument, we focus our study to the “dedicated work” required for introducing specific e-health platforms. This work is conceptualized as “institutional work”, a notion developed to help moving ‘beyond a linear view of institutional processes - to account for, and reflect on, the discontinuous and non-linear processes that take place’ (Lawrence et al. 2009).

We identify different forms of institutional work performed which include: (a) an on-going process of conferring status to the platforms by advocating their benefits (mainly based on the financial crisis rhetoric), (b) efforts to reconfigure the relationship between healthcare actors and the field in which they operate by establishing visibility into domains that used to be cloistered, and (c) efforts for swift adoption that deprioritise other changes even though they might improve quality of healthcare (ease of adoption is facilitated by the preservation of existing approaches). As institutional work unfolds decisions have to be taken, paths have to be chosen or abandoned and ideas have to be revisited and reworked. Work is guided by the overall policies and supported by technologies but also involves considerable agency. Adopting the institutional work perspective we reveal the effort it takes to operationalise via technology strategies and policies and to reach some level of maturity.

Our research is not without limitations, first of all, although we place our study in the context of “transitions in the making” within healthcare, our cases are specific to the Greek context where after a series of failed reforms, transitions are more likely to be attempted via cautious little steps and persuasive tactics rather than imposed by mega-all inclusive initiatives and central management. Second, we have confined our analysis to the very first stages of the new platforms’ introduction. For a more comprehensive analysis the longitudinal trajectories followed would have to be studied.

Despite the limitations, we believe our research makes a contribution to both theory and practice. At the theoretical level, we bridge theoretical developments on the study of transitions (Geels 2002, 2004; Raven 2007; Rip and Kemp 1998) and institutional work (Lawrence and Suddaby 2006; Lawrence et al. 2011) to understand field level institutional building. Through this synthesis from the broader

literature, we offer an integrated view of the challenges related to institutionalising change. Studying these challenges can help researchers provide more accurate explanations about the different courses of technology innovations. At the practical level, our research provides a concise account of currently attempted changes within Greek healthcare. This could be useful for practitioners that seek to plan and promulgate technologically supported reconfigurations within healthcare. Early awareness of the discursive nature of institutionalising can help practitioners plan and prepare better.

Future research may proceed in two general directions. The first direction is towards the comparative analysis of similar cases that followed comparable or totally different trajectories (e.g. similar systems in Greece such as the e-diagnosis platform). This direction can lead to analytical generalization (Yin 2003). A second future research direction is related to extending our analysis by following the specific platforms' trajectories in the future. At this moment we cannot predict the fate of any of the two: they may be sustained or rejected at any point as the situation with Greek healthcare is still very fluid. The study of institutional work is the "study of activities rather than accomplishment" (Lawrence et al. 2009) and this is the approach that we have followed in this paper.

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