Towards the Adoption of e-Refereeing and e-Ticketing in Elite Soccer Championships: an Institutional Perspective

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Towards the Adoption of e-Refereeing and e-Ticketing in Elite Soccer Championships: an Institutional Perspective

Research-in-Progress

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Abstract

Although the role of IT is salient in sporting mega-events (e.g. instant replay, goal-line technology), IS research has not yet paid any attention to the processes by which technologies are selected for and implemented at these mega-events, the strategies used by actors, nor the consequences of such implementations on actors in related sectors and industries. To tackle this underdeveloped research topic, we focus on the last three UEFA (Union of European Football Associations) soccer championships (2000, 2004, 2008) and we describe how some technologies are adopted (e.g., e-ticketing) while others (e.g., e-refereeing) are not. With an overall goal of deepening our understanding of IT-related institutional work surrounding mega-events in general and sporting mega-events in particular, our objective is to better comprehend the role and actions of institutional entrepreneurs in the selection and implementation of IT for sporting mega-events.

Keywords: Institutional Theory, Adoption, Resistance, e-Ticketing, e-Refereeing, Mega-Events
Introduction

Information technology (IT) has been an important part of mega-events (i.e., large-scale temporary events with a dramatic character, mass popular appeal and international significance) for several decades. The role of IT is salient at sporting mega-events, such as the Olympic Games, the soccer World Cup, and the Super Bowl, the events that attract most public interest, media attention and business ventures. However, IS research has not yet paid any attention to the processes by which technologies (e.g., e-ticketing and e-refereeing) are selected for and implemented at these mega-events, nor the consequences of such implementations on actors in related sectors and industries. We wish to understand how some information technologies are adopted (e-ticketing) while others (e-refereeing) are not. Indeed, e-refereeing remains a very controversial topic in elite soccer championships, despite its successful implementation in many other sporting events (football, hockey).

With this research in progress, we want to better comprehend the role and actions of institutional entrepreneurs in the selection and implementation of IT for sporting mega-events and also to understand in concrete terms how some institutional entrepreneurs use IT to build the foundation for their institutional work. We focused on the last three UEFA (Union of European Football Associations) soccer championships (2000, 2004, 2008) to examine institutional work done by actors in order to create, maintain or disrupt the central institution of soccer, i.e., the Laws of the Game. We also want to understand how they facilitate or impede IT selection, and what strategies they use to influence existing institutions by introducing IT. Finally, with this study we illustrate that information technologies may be adopted or rejected by key actors in order to protect and maintain an institution.

Context

Sporting Mega-Events

While there are various expressions and definitions used to describe “wide-scale,” “special,” “hallmark,” or “mega” events, we adopt Roche’s (2000) definition: mega-events are “large-scale cultural (including commercial and sporting) events which have a dramatic character, mass popular appeal and international significance” (Roche 2000, p.1). They are typically organized by variable combinations of national governmental and international non-governmental organizations. Besides world fair exhibitions, most mega-events are sports-related (Roche 2000). Sporting mega-events include international multi-sports competitions (the Olympic Games), specialist elite-level international sporting competitions (FIFA World Cup), and regional elite-level sporting competitions (European Championship). Mega-events attract business interests due to their ability to command substantial income through television broadcasting rights. While actual on-site attendance is in the thousands of spectators, television-viewing audiences count in the billions. Sporting mega-events attract considerable media coverage and are powerful brands that provide benefits to commercial partners (Smith and Westerbeek 2004). Corporate practices in this worldwide industry have widespread economic, social and environmental impacts (Roberts 2004). The economic impact of sporting mega-events should not be underestimated: “It is an industry with unparallel global reach and power. Globally, sport-related turnover amount to 3% of total world economic activity” (Dolles and Söderman 2008). To our knowledge, no systematic research (except for some case studies) has been conducted on the role and impact of IT at sporting mega-events. We believe that the combination of IS and institutional theory will help us develop insights into IT-related issues in the emerging field of research on sporting mega-events.

IT and Institutional Work

Institutionalist scholars believe that organizational phenomena cannot be explained by taking only the executives’ rational actions into account, as suggested by the rational actor model. Rather, they argue that we need to find a way to integrate the “irrationalities” (or multiple rationalities) stemming from the institutional context in which organizational actors evolve (Avgerou 2000). Institutional theory has been used in the IS field to study innovations (Mignerat and Rivard 2009) because the adoption of an innovation is deeply influenced by institutional factors (Swanson and Ramiller 1997; Tan and Fichman 2002; Teo et al. 2003), to study phenomena such as organizational change (Avgerou 2000; 2002), outsourcing (Ang and Cummings 1997), and power (Silva and Backhouse 2003). Among the several frameworks that have been used to describe the process of IT innovation (Cooper and Zmud
1990; Kwon and Zmud 1987; Swanson and Ramiller 2004), the one proposed by Swanson and Ramiller (2004) stands out as it suggests that IT innovation takes place both at the organizational level and at the level of the institutional field. For Swanson and Ramiller (2004), organizational innovation is comprised of four component processes: comprehension, adoption, implementation and assimilation. During the comprehension phase, the firm positions itself as a prospective adopter or non-adopter: “through the sensemaking efforts of its members, the firm engages the organizing vision in substantive terms and ponders the signals about its importance embedded in the broader community’s reaction to it” (Swanson et al. 2004, p.557). In the adoption phase, organizational *know-why* is central; the business value and the challenge of the prospective change are considered before the firm decides to implement the innovation. Implementation “calls for a myriad of considerations, choices, and actions that will shape the transition” (Swanson et al. 2004, p.557): the preparedness and readiness of the firm, and the maturity of complementary services in the larger community. *Know-when* and *know-how* are then central. Lastly, “*assimilation commences as the IT innovation begins to be absorbed into the worklife of the firm and to demonstrate its usefulness. In time, the innovation may come to be infused and routinized*” (Swanson et al. 2004, p.558).

**Institutional Entrepreneurship and Institutional Work**

Institutional theory does not preclude strategic endeavor and entrepreneurship. Institutional entrepreneurs are actors trying to manage their institutional environment (Phillips 2003). They “command resources which can be applied to influence institutionalized rules, either by committing those resources to the support of existing institutions or by using them for the creation of new institutions” (Beckert 1999, p.781). In short, institutional entrepreneurship includes efforts to maintain or change the status quo. Institutional entrepreneurs thus act to shape the institutional context through a range of strategies (Brule and Audebrand 2009; Green 2004; Oliver 1992; Suddaby and Greenwood 2005) directed at influencing the mimetic, coercive, or normative pressures experienced by other actors (Phillips 2003, p.221). Lawrence and Suddaby define institutional work as “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence and Suddaby 2006: 215). They identified nine categories of institutional work that create institutions, five categories that maintain them and three categories that disrupt them. In each case, they described the relevant actors, actions and rational for action (Table 1).

**Soccer cups and IT**

The European football championship has been held every four years since 1960. The governing body, which administers all international football competitions and tournaments on the European continent, is known by the acronym UEFA (Union of European Football Associations). However, UEFA does not directly organize the European Championship (also known as Euro). Each time several countries put forward bids before the event for the right to organize it. One of them is chosen and appointed by UEFA as organizer and host. After that, UEFA has only supervision and support functions. After its appointment, the host country has to take care of all aspects of the organization of the event. Among these aspects are – facilities, which include stadiums and training grounds for the preparation and adaptation of the teams after they arrive; accommodation, both for competitors and spectators; logistics, advertising, finance, ticketing, transportation, security, etc.

At the international level, the government organization of soccer has a pyramid structure. At the top of the pyramid is the International Federation of Association Football (Fédération Internationale de Football Association, or FIFA) which governs association football at the international level and organizes major international tournaments, like the prestigious FIFA world cup. The 208 national member associations are represented in the FIFA Congress, that controls FIFA’s statutes. The decision-making body is the Executive Committee. FIFA also has four (out of the eight) members at the International Football Association Board (IFAB). IFAB was founded by UK football associations (the other 4 members, i.e., England, Scotland, Northern Ireland, and Wales,) to create and maintain the laws that govern association football: the Laws of the Game. This set of 17 laws governs the practice of football. Any change regarding the Laws of the Game has to be approved by at least six of the eight IFAB members. FIFA is comprised of six confederations (and their administrative bodies), that represent national associations and organize their own local tournaments: AFC (Asian Football Confederation), CAF (Confédération Africaine de Football), CONCACAF (Confederation of North, Central American and Caribbean Association Football), CONMEBOL (Confederación Sudamericana de Fútbol), OFC (Oceania Football Confederation) and UEFA, the biggest
confederation. UEFA is also the strongest and most influential confederation with the wealthiest clubs and therefore many talented players.

The organization of an event such as the Euro imposes various issues and problems for the organizers. Over time these events have seen a dramatic rise in popularity, meaning an increase in the number of people attending. This leads to greater challenges for the organizers in the areas of logistics, transportation, security and finance. On the other hand, in the last twenty years, the organizing countries have had the help of rapidly developing technologies. Nowadays, modern technology is implemented in virtually every aspect of the organization of an event as big as the Euro. The main information technologies to have been introduced are: online ticketing (the tickets are partially or totally sold through electronic means), online broadcasting (the games are broadcast through the internet), mobile broadcasting (the games and/or specific information or statistics are shared through mobile computing, i.e. cell phones), and biometrics (mainly for protection reasons). Other information technologies are currently being tested or have been tested but are not implemented. This is the case of experiencing (marketing strategies) or e-refereeing technologies (e.g. use of RFID technology on the soccer ball, communication devices for referees). Our study focuses on e-ticketing and e-refereeing.

E-ticketing

Until the year 2000, no tickets were sold online. Traditionally, the host country would print, allocate and send the tickets to all the participating countries (i.e. limited number per country). The federation or sports committee of each country then distributed them. Tickets were sold at stadiums and designated official shops, where people had to line up for considerable amounts of time. For the 2000 Championship, 60% of the tickets were reportedly sold online and both traditional and online systems coexisted. In order to purchase tickets online, fans had first to obtain an application form, which they downloaded from the Internet. In 2004, 80% of the tickets were sold online through www.euro2004.com and finally, in 2008, 100% of the tickets were sold online through www.euro2008.com. More specifically, applications were available online from March 1 to March 31; then a lottery took place for oversubscribed matches. Applicants were informed in April 2008. The online ticket portal reopened in June to sell remaining tickets on a “first come, first serve” basis. The structure of the tournament affects the manner in which the tickets are sold. 16 teams qualify for the championship and these are divided into four groups. In each group, each team plays its opponents. The winner and runner-up of each group progresses to the quarterfinals, where the two teams play each other once and the winner progresses; the same format is used until the final. Consequently, when applying for tickets the customers do not know when and where their favorite teams will be playing. They can therefore choose to pay for a ticket only if their team is indeed playing in a particular match. In that case, they are really buying the possibility of getting a real ticket (conditional sale). Due to time constraints, clients actually receive online countermarks that they will have to exchange for actual tickets when they go to the stadium.

E-refereeing

In elite soccer, the referee has “full authority to enforce the Laws of the Game in connection with the match to which he has been appointed” (Law 5), and the referee's decisions regarding facts connected with play are final, so far as the result of the game is concerned. The referee is assisted by two assistant referees and in some matches also by a fourth official. E-refereeing is the practice that allows the use of technologies to assist the decision-making process of referees on the field. There are three types of technologies: communication devices, goal-line technologies and video technologies. Until now, only the use of communication devices has become common practice in elite soccer games to help referees talk to each other on the very large field. The goal-line technology is used to decide whether or not a ball has crossed the goal-line. The Hawk-Eye is a computer system used in some sports to visually track the path of the ball and display a record of its most statistically likely path as a moving image. Cairo AG and the German Fraunhofer Institute have developed a system with a prototype of a ball with an embedded electronic chip. There have been some tests on the goal-line technology in U-17 Championships, but on March 2008, FIFA declared that they would no longer run tests on goal-line technology and the topic would be deferred until further notice. Instead, they decided to test the addition of two more referees into the game, one behind each goal, to better read if a ball truly crosses the goal-line. Today, the most controversial technology is the use of the video or instant replay. Instant replay is the replaying of video footage of an event or incident very soon after it has occurred. FIFA does not authorize the use of video evidence during games, although it is permitted for subsequent disciplinary sanctions. There is no discussion about the introduction of this technology at UEFA.
Methodology

This study explores the roles and actions of institutional entrepreneurs in the selection and implementation of IT (namely e-ticketing and e-refereeing technologies) for sporting events (here the soccer Euro championship). The theoretical framework for this study has two sources: Swanson and Ramiller’s (2004) characterization of sensemaking efforts in IT adoption, and recent developments in institutional theory: institutional entrepreneurship (DiMaggio 1988) and institutional work (Lawrence et al. 2006). Our research question is: What is the nature of the actions performed by various institutional entrepreneurs in order to facilitate or impede IT implementations for sporting mega-events? We compare three editions of the Euro championships (2000, 2004, 2008).

We use a case study approach, because it is appropriate for problems in which research and theory are at their formative stages, and have sticky practice-based problems, where the experience of the actors is important and the context of action is critical (Benbasat et al. 1987: 369). A single exploratory case is used, which is common practice in studying institutional change (Greenwood et al. 2002; Maguire and Hardy 2009), mega-events (Anand and Jones 2008; Anand and Watson 2004) or more generally to build theory (Dubé and Paré 2003; Patton 2001; Yin 2003). We selected this particular case because, due to the popularity of the event, the media scrutinize the actions of the stakeholders not only during the event itself but also during the organizational stages. Therefore, we can easily have access to relevant information through the study of archival data: a selection of press releases, interviews, articles, and specialized books and websites.

We first established a list of relevant newspapers and magazines (Anand et al. 2008). Based on this selection and on relevant specialized websites, we isolated documents (news reports or articles) related to each of the IT under study (e-ticketing and e-refereeing). We also studied UEFA annual reports as well as interviews with three major stakeholders: Joseph B. Blatter, who has been working for the FIFA since 1975 and has been its president since 1998, Lennart Johansson, who has been a president of the UEFA from 1990 until 2007, and Michel Platini who succeeded him. These archives cover a period of approximately 10 years (1999 to 2009). 119 documents were identified (53 related to the role of technology in the organization of Euro in general, 22 related to the implementation of e-ticketing and 44 related to e-refereeing technologies during this period). The documents related to e-ticketing and e-refereeing were then coded: the authors identified relevant segments in the texts and coded them according to a coding scheme based on identification of: (1) the edition of Euro, (2) the technology implemented, (3) the type of institutional entrepreneur / key actor, (4) the role played by the institutional entrepreneur, and (5) the type of institutional work. This last category is based on Lawrence and Suddaby’s (2006, derived from pp. 221-235) categorization of institutional work for creating (1 to 9), maintaining (10 to 15), or disrupting (16 to 18) institutions (see Table 1). Both researchers coded a sample of the data and inter-rater problems were solved to reach a consensus. In the results section, we will only give examples of institutional work when there is more than one occurrence. In our ICIS presentation, we will provide evidence for all categories.

Table 1: Extract from the Coding Scheme - based on Lawrence and Suddaby’s (2006)

<table>
<thead>
<tr>
<th>Category of institutional work and definition</th>
<th>Some key indicators (actors, activity or interest)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CREATING INSTITUTIONS (CATEGORIES 1 to 9)</strong></td>
<td></td>
</tr>
<tr>
<td>1- Advocacy: The mobilization of political and regulatory support through direct and deliberate techniques of social persuasion</td>
<td>Interest associations, organizations that represent important constituencies; marginal actors acquiring legitimacy. Deliberate direct representation of the interests of specific actors.</td>
</tr>
<tr>
<td>5- Changing Normative Associations: Re-making the connections between sets of practices and the moral and cultural foundations for those practices</td>
<td>Substitution of private-sector, for-profit norms for field-specific norms. Focus on issues as human welfare or professional autonomy. Appearance parallel or complementary institutions.</td>
</tr>
<tr>
<td>7- Mimicry: Associating new practices with existing sets of taken-for-granted practices, technologies and rules, in order to ease adoption</td>
<td>Use of skeumorphs; layering of new business techniques on traditional professional practices. Juxtaposition of old and new templates.</td>
</tr>
<tr>
<td>8- Theorizing: Development specification of abstract categories; elaboration of chains of cause and effect</td>
<td>Naming of new concepts and practices so that they might become a part of the cognitive map of the field.</td>
</tr>
<tr>
<td>9- Educating: The educating of actors in skills and knowledge necessary to support the new institution</td>
<td>Development of novel practices; connecting them to control mechanisms; development of new skills.</td>
</tr>
</tbody>
</table>
MAINTAINING INSTITUTIONS (CATEGORIES 10 to 15)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10- Enabling work:</strong></td>
<td>The creation of rules that facilitate, supplement and support institutions, such as the creation of authorizing agents or diverting resources</td>
</tr>
<tr>
<td></td>
<td>Introducing certainty into institutional arrangements which allows actors to avoid intra-institutional conflict. Importance of distributed authority and responsibility for maintaining institutions.</td>
</tr>
<tr>
<td><strong>11- Policing:</strong></td>
<td>Ensuring compliance through enforcement, auditing and monitoring</td>
</tr>
<tr>
<td></td>
<td>Enforcement, auditing and monitoring. Policing can involve the use of both sanctions and inducements often simultaneously.</td>
</tr>
<tr>
<td><strong>12- Deterring:</strong></td>
<td>Establishing coercive barriers to institutional change</td>
</tr>
<tr>
<td></td>
<td>Threat of coercion to inculcate the conscious obedience of institutional actors; threat of economic coercion.</td>
</tr>
<tr>
<td><strong>13- Valorizing and Demonizing:</strong></td>
<td>Providing for public consumption especially positive and especially negative examples that illustrates the normative foundations of an institution</td>
</tr>
<tr>
<td></td>
<td>Actors identify and evaluate the moral status of participants in the field, both as an enactment of institutionalized beliefs and as way of maintaining the power of those beliefs. Example: a public demonstration of what is right and what is wrong.</td>
</tr>
<tr>
<td><strong>14- Mythologizing:</strong></td>
<td>Preserving the normative underpinnings of an institution by creating and sustaining myths regarding its history</td>
</tr>
<tr>
<td></td>
<td>Actors mythologize their history. To create and sustain a myth, one needs a story and an occasion to tell it. Focus on the past, rather than the present.</td>
</tr>
</tbody>
</table>

Results

E-ticketing

Institutional work regarding e-ticketing pertains to one meta-categories: creating institutions. The introduction of e-ticketing has been carried out without major problems as the technology became available. In three consecutive Euro competitions, between 2000 and 2008, the total percentage of tickets sold online moved from 60% to 100%. Most occurrences are in favor of the modification of this institution (i.e. online ticketing). There have been few criticisms regarding the technology. Initial resistance came from actors worried that the technology would not work for a large-scale event like the Euro. The 2004 edition was not flawless, as some people bought their ticket online but were refused entry to the stadiums. However, authorities of the 2008 competition decided to make it 100% online. There was no turning back. It is important to remember that the previous ticketing process was long and fastidious, so the introduction of online ticketing helps not only the UEFA but also the national federations. They no longer have to manage the selling of the tickets and the criticisms associated with it. With the online technology, there is no line up. The new system uses the IP address of the customer who is logging in to verify from which country he/she is buying the ticket.

The institutional change went fairly easily for many reasons. First, most sport aficionados and prospective buyers already knew this type of system, as it was used in many countries for both sporting and other types of mega-events. The online technology is mimicking the previous system in many aspects, for example by making a certain number of tickets available for each country. Second, there were external pressures, especially from the European Commission, to ensure security and diminish the volume of tickets sold on the black market: they wanted each buyer to be traceable (identity, address), which was more easily done with e-ticketing since the work of entering this data is now performed by the buyer. In some occurrences, the new system is depicted as a way to eliminate hooliganism. Lastly, the introduction of the online system worked because there was a real champion, Jos de Kruijf (Table 2). Several quotes reported in Table 2 are from Jos de Kruijf, who as a “Manager Ticketing” for UEFA and FIFA since 1998, was responsible for all tickets sales and ticketing issues.
The most interesting effort that was performed with the implementation of this new way of selling tickets was to change the way one sees how these tickets are being sold: 1) problems with the technology and the access to tickets and 2) tickets being sold on the black market. The institutional work performed here is “change normative associations” by making sure that the new system makes up for the problems that existed in the past. The person in charge of implementing the new system and making sure that it works and is used, Jos de Kruif, has used at least three different strategies to create the new institution, i.e., the new way of doing things. He monitored what was being done in other sporting mega events to make sure to use best practices (mimicry). He made a tremendous effort of education. Hundreds of quotes from him and interviews can be found on the Internet (in our data, we found four occurrences): he explained, detailed, justified the new system and its benefits both before and during the time the sales took place.

### E-refereeing

Institutional work regarding e-refereeing falls into two meta-categories: creating and maintaining institutions (Table 3). The target institution in both cases is part 5 of the Laws of the Game. Part 5 of the Laws of the Game, about the authority of the referee, states: “Each match is controlled by a referee who has full authority to enforce the Laws of the Game in connection with the match to which he has been appointed.” According to the Laws of the Game, decisions of a referee regarding facts connected with play, including whether or not a goal is scored and the result of the match, are final. The referee may only change a decision upon realizing that it is incorrect or, at his discretion, on the advice of an assistant referee or the fourth official, provided that he has not restarted play or terminated the match. The referee is not allowed to use any technology to facilitate the decision-making process.

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<table>
<thead>
<tr>
<th>Category</th>
<th>Total occurrences – Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CREATING INSTITUTIONS (CATEGORIES 1 to 9)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5- Changing Normative Associations</strong></td>
<td>2 occurrences Members of the Euro2000 board have been keen to avoid a repeat of last year’s World Cup where fans were angered (...) by the fact that large numbers of tickets ended up on the black market. There will also be no repeat of last year’s system of telephone hotlines, which saw phone lines around the world swamped by a late dash for the last tickets. In another significant change from past tournaments, there will be no use of authorized tour operators, many of whom stood accused of exploiting fans by charging excessively for package trips linked to tickets for the World Cup in France (Journalist Steve Beauchamp)</td>
</tr>
<tr>
<td><strong>7- Mimicry</strong></td>
<td>2 occurrences Euro 2008 SA ticketing manager Jos de Kruif: Things can always be better so we are constantly monitoring new developments in ticketing by looking at other events. In that respect, the World Cup is very interesting for us to see how new technology is being implemented.</td>
</tr>
<tr>
<td><strong>9- Educating</strong></td>
<td>4 occurrences Euro 2008 SA ticketing manager Jos de Kruif: The technology used makes applying through the internet very user-friendly. The step-by-step instructions make it easy to understand - you cannot make mistakes. Moreover, people will immediately receive a receipt confirming their application which clearly summarizes their transaction. (...) Euro 2000™ was the first major football event where tickets were sold using the internet. We are now four years down the line and have used our experience to improve the process and make the tool even easier to use. We are very confident that huge numbers of supporters will apply for tickets via the official website for what will be a fantastic tournament.</td>
</tr>
</tbody>
</table>
Table 3: Extract from Results – e-refereeing (2 occurrences or more)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total occurrences – Citations (mention when in favor of or against e-refereeing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATING INSTITUTIONS (CATEGORIES 1 to 9)</td>
<td></td>
</tr>
<tr>
<td>1- Advocacy</td>
<td>15 occurrences (in favor) Arsène Wenger (Arsenal Coach): Failing to use video replays is like refusing to use electricity</td>
</tr>
<tr>
<td>8- Theorizing</td>
<td>2 occurrences (in favor) Arcangelo Distante (Goal-line Technology Project Director): It’s automatic. It doesn’t depend on the human eye … and it’s more accurate than putting a microchip in a ball</td>
</tr>
<tr>
<td>MAINTAINING INSTITUTIONS (CATEGORIES 10 to 15)</td>
<td></td>
</tr>
<tr>
<td>10- Enabling work</td>
<td>28 occurrences (against) J. S. Blatter (FIFA President): We continue developing the system that can determine at once if a ball entered or not in the goal. But as for stopping the game to consult a monitor to check if there was an error in a move, we will have to live with certain errors</td>
</tr>
<tr>
<td>11- Policing</td>
<td>4 occurrences (against) J. S. Blatter (FIFA President): The laws of the game say the referee’s decision is final</td>
</tr>
<tr>
<td>12- Deterring</td>
<td>2 occurrences (against) A request submitted by the French football association for tests with a video assistance system for referees was rejected because the proposed system and its scope went beyond the remit established by the Board and it would lead to delays in the decisions of the referee</td>
</tr>
<tr>
<td>13- Valorizing and Demonizing</td>
<td>11 occurrences (against) J. S. Blatter (FIFA President): We don’t want cameras for offside or deciding whether something was inside or outside the penalty area. That should be left for the discretion of the three referees M. Platini (UEFA President): I’m against refereeing by video. Where would it stop? If you start with videos, you will finish with videos and there would be no more room for the referee.</td>
</tr>
<tr>
<td>14- Mythologizing</td>
<td>7 occurrences (against) J. S. Blatter (FIFA President): Football is a game played by human beings, to be controlled by human beings, with errors committed by human beings. It is passion and emotions. If we were to introduce scientific means to control it, the passion and emotions would be lost J. S. Blatter (FIFA President): The critical issue, however, will be to ensure that such technology would not affect the Laws' universal nature or the authority of match officials</td>
</tr>
</tbody>
</table>

Those in favor (e.g., coaches) of modifying the Laws of the Game are using institutional work to create institutions rather than to disrupt institutions. In fact, they do not want to replace the Laws of the Game, but rather they wish to improve it through some additions. They claim that there is a lot at stake in elite soccer championships and thus a need to supplement the referees. They argue that as referees cannot see everything that is happening on the field, they are in great need of the help and support of the technology. Hence, the technology is not there to replace the referee, but to facilitate the decision-making process. Those against the use of technology (e.g. FIFA and UEFA presidents) employ institutional work to try to maintain the institution as it is by sticking to the Laws of the Game as they are. They use a variety of somehow contradictory tactics that sometimes show openness, and sometimes show uncompromising reticence. First, they use a tactic named “enabling work,” which consists of showing some openness to change but only under very specific conditions. They also use policing and deterring tactics, which consist of refusing any change because it is against the Laws of the Game. They also use a tactic that consists of valorizing the referee’s role and demonizing technology for dehumanizing the game. Finally, they also use mythologizing, which consists of making allusions to the long and rich history of soccer in order to refuse any change.

In conclusion, while e-ticketing has been widely adopted, e-refereeing remains a proto-institution within the institutional field of soccer. Lawrence et al. (2002) labelled proto-institutions those “practices, technologies, and rules that are narrowly diffused and only weakly entrenched, but that have the potential to become widely institutionalized”. Proto-institutions are institutions in the making as “they have the potential to become full-fledged institutions if social processes develop that entrench them and they are diffused throughout an institutional field”
Discussion and Expected Contribution

In examining institutional work in elite sport championships, we have studied IT intention to adopt and IT adoption through the lens of institutional work and institutional entrepreneurship. The IS literature has a strong tradition of studying resistance to IT adoption and use (e.g., Laponte and Rivard 2005; Markus 1983). However, most of these studies focus on the individual use of IT, inside an organization. The studies related to the diffusion of innovations (Rogers 2003) focus on the decision to adopt a given innovation but do not necessarily tackle resistance strategies from individual actors. Finally, more recently, IS scholars took an institutional approach to improve our understanding of the institutional enablers and barriers to the intention to adopt (i.e. comprehension phase) a given technology (Davidson and Chismar 2007; King et al. 1994; Mignerat et al. 2009; Standing et al. 2009; Teo et al. 2003). Our study tackles the dynamics of institutional resistance to IT adoption by focussing implicitly on the type of actions performed by key actors. Some categories of institutional work can be characterized as active resistance since actors explicitly reject the technology and delay its adoption (Joseph 2010). However, other categories are more subtle, such as “enabling work”, which consists in showing some openness to the technology, or “mythologizing”, which consists in focusing on the past rather than on the technology itself. It is important to notice that various tactics that can be used. Moreover, it is important to note that actors sometimes use contradictory tactics to meet their objectives, such as enabling work and deterring.

A further contribution can be added to scholarship of both institutional theory and information system. Our preliminary data analysis suggests that the complex, intertwined field of elite soccer championship comprises several institutions of various natures. Some institutions may be core ideas or values (e.g., referees’ role and power), some are recurring events (e.g., Euro), and others are entities (e.g., FIFA, UEFA). Together, these various institutions form a complex web in which they all influence each other, and which is difficult to map. The concepts of ”core” and ”peripheral” institutions might be key in accounting for the fact that in any given field some institutions are more fundamental than others. We suggest that while core institutions are relatively stable, enduring and protected from modification by many barriers (or buffers), peripheral institutions, that surround the core, are characterized by a greater variation and flexibility. Our preliminary results suggest that new information technologies may thus be adopted easily when they are linked to peripheral institutions (e.g., the way tickets are sold and bought), but reluctantly when they are threatening core institutions (e.g., referee’s power and duty). There is also a potential ongoing process of integration between these two types of institutions; the peripheral institutions can be used as buffer, either by protecting core institutions (e.g. IFAB protects core values) or by redirecting attention elsewhere (e.g., FIFA stating that e-refereeing is not flawless and could have unintended consequences).

The next-step of this research-in-progress will be twofold. First, we will collect more data to enrich and strengthen our current study. We will conduct interviews with carefully selected stakeholders that can provide us with an historical perspective. This will allow us to identify and describe in details the strategies that proponents and opponents of IT adoption use to meet their objectives. We would also study how potential unintended consequences of the adoption of e-refereeing are anticipated and described by stakeholders. Secondly, we will study how IT may act as a buffer to institutional pressures. Indeed, there are some smaller peripheral institutions that seem to act around core institutions as buffers, in order to protect them (Thompson 1967). For instance, some business processes such as the ticketing technique used for the first time during Euro 2000 could be seen as lower level institutions that buffer the impact of possible attacks from outside the institution (e.g., negative press linked to hooliganism and black market ticket sales). We suggest that those peripheral institutions (such as the business processes attached to the way of selling tickets) are probably those that will need less work from the part of institutional entrepreneurs since they are not threatening the high-level institutions.

In conclusion, we suggest that the more central the proto-institution (e.g., e-refereeing, e-ticketing) is in relation to the core institutions, the more institutional work will be needed to put it in place. For instance, one can wonder why e-refereeing has not been used as intensely in soccer as in other sports. E-refereeing manifest itself through the introduction of a RFID chip in the football, which would automatically enable referees to actually know if the ball was within the permitted limits. However, powerful actors (e.g. Michel Platini, UEFA President) seem to be very reluctant to adopt the use of these types of technologies: they may – slightly or significantly - change what soccer really is, whereas other technologies (e.g., e-ticketing or biometrics) are merely changing the customer experience of what soccer is.
References


