

Re-dressing the Technological Frames of Human Resource Information Systems

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Abstract. This paper explores the linkages between the normative foundation underlying the IT-enabled transformation of HR and insights out of sociology in order to bridge the gap between intentions of IT-enabled HRM and its organizational reality. I introduce the notion of HRM frames where the (IT-enabled) HR transformation in organizations influences employees' behaviors, at the same time it is influenced by human actions. The framework gives the opportunity to step beyond traditional polarities in the HR research (like subjective vs. objective, deterministic vs. phenomenological), resulting in the analysis of underlying assumptions, values, interpretations that employees have about IT-enabled HRM in organizations. Such interpretations are central to understand the role of IT-enabled change in the HR processes and their transformation like role changes, competencies modifications, re-structuring and globalization of the HR function.

1 Introduction: IT-enabled HRM Research Up-to-date and Research Questions

The modern HRM is one arena in which the dictum '*there is nothing constant but change*' is particularly relevant. One of the recent key drivers of this everlasting change is the application of Information Technologies (IT) in the HRM field, supporting its everyday activities, personnel administration, policy developing and decision making. More and more working organisations have been introducing Information Technologies for Human Resource Management, using a variety of names, for example electronic HRM, digital HRM, virtual HRM. It is therefore probably not surprising that IT is given lots of tributes in its potential significant impact on the ways how HRM is organized, allocated and accomplished.

In the literature there is a strong belief that IT-enabled HRM should facilitate the role of HRM as a strategic partner, allowing them to undertake critical people management activities [28]. A number of benefits are pronounced as expected from the introduction of IT-enabled HRM in organizations:

- *Integrated "total solution" approach to problems through the re-centralization of the HR function;*

- *more selective and strategic contribution from HRM by freeing staff from the burdens of administration;*
- *greater efficiency and professional provision of HR services through simplifying services; and through providing a single point of contact for clients;*
- *cost-effectiveness;*
- *more efficient resourcing through economies of scales in staffing;*
- *improved cross-group learning and sharing good practices through having a common information base;*
- *better management of information, provided more consistently across the organization as a whole;*
- *improved career development for HR staff; higher customer satisfaction through better service specification;*
- *greater transparency of cost of services and easier monitoring of budgets [31, 33].*

Despite of the growth of implementation of IT-enabled HRM, organizations continue to experience mixed results with a combination of success and failure stories. Recent studies, for example, indicate that in nearly half of the companies with a completely integrated HR Information Systems, HRM was not viewed as a strategic partner [26], but re-alignment of the HRM function led to the increase of the line managers' work stress .

Academics devote more and more attention to examining IT-enabled HRM in attempts to explore this contradiction. Within the last decade, scientific knowledge as regards IT-enabled HRM has comprises several conclusive notions about its goals [8,27,33], its types [28], the effectiveness of different applications [7,23,37], and the implementation of Human Resource Information Systems (HRIS) [2].

At the same time these studies discuss results of the introduction of IT-enabled HRM in organizations only from a one-size-fits-all approach by considering overall IT-enabled HRM's impact as cost reduction, or organizational added value. Moreover, the existing research into IT-based HRM has continued using the factors-based research approach, by analyzing four-to-five variables, that influence the IT-HRM adoption, HR competencies, changes in HRM roles [35], or IT-HRM effectiveness [12]. Such studies are very useful in sensitizing the researcher in issues of importance, and, in some cases, to help developing guidelines to overcome constraints in such an organizational change as introduction and diffusion of IT-enabled HRM.

However, first, the factor-based research tends to adopt cross-sectional survey methods, with little consideration of the *dynamics* of the HRM transformation process. Second, these studies are inclined to consider HRM practices as communications from the employer to employees about HRM content [6, 12], with modest thought about the social constructions of HRM by the employees.

Therefore, this paper aims to make a contribution to the research into the IT-enabled HRM transformation by adopting a process approach that involves in-depth case studies. To this end, this paper examines the attempted HRM transformation with the help of Information Technologies in organizations. Some of the key questions motivating this research were thus: why do some organizations manage to transform their

HRM function with the help of IT easier than others? In what ways have social and technological issues been significant in explaining the IT-enabled HRM transformation? To which extent do people's beliefs and perceptions construct the IT-enabled transformation in large international organizations?

This is achieved by drawing on the Structuration theory and on HRM frames analysis. The work demonstrates that the IT-enabled HRM transformation is a dynamic process in which stakeholders frame and reframe their perceptions and thus, construct the transformation of the HRM function.

1.1 Structuration Theory

Our research starts from the beliefs in the importance of subjective meanings as symbolic actions in the process through which humans construct and reconstruct their reality. This requires the use of field of studies of humans in their social settings so as to describe, interpret, analyze, and understand the social world from the participants' perspectives [4]. That is, the research is focused on the dynamic nature of the social reality, which is both time and context dependent, and strives to understand the HRM transformation from the participants' perspectives, with the primary focus being the meaning of HRM, HRM transformation and the use of IT for that, as well as their expectations around this process, particularly with respect to their social, cultural, and work contexts.

The first step in understanding basics of the structuration theory is to see its objectives, driving forces. Giddens is very precise about it and describes it immediately in the beginning of his *The Constitution of Society* (1984). His thought is that previous dominant approaches in the social sciences are not enough to understand the social reality. He states that the basic domain of social science study is neither the experience of the individual, nor the existence of any form of societal totality, but social systems referring to regular patterns of enacted conduct by actors who interact with each other in situations with specific conditions. "One of my principal ambitions in the formulation of structuration theory is to put an end to each of [the] empire-building endeavors" [14], meaning previously dominant approaches in social thought – functionalism/structuralism seen by Giddens as too macro, and interpretivism/hermeneutics as too micro. So his task is to resolve a fundamental division within the social sciences between those who consider social phenomena as determined by the influence of "objective" social structures, and others who see them as products of subjective interpretations. Giddens proposes to view "objective" structures and subjective interpretations not as independent (even conflicting) elements but as mutually interacting duality [24]. Therefore, social structures can be viewed as created by human agents in their actions, while those actions produce and reproduce the social structures. Structuration is understood as a social process that involves the reciprocal interaction between human agents and structural features of organizations: human actions are enabled and constrained by structures, yet these structures are the result of previous actions.

More specifically, Giddens proposes three dimensions of structures, to some extent based on Marx, Weber and Durkheim, - signification, domination, and legitimation.

Attempting to apply the concept of structuration to the organizational life, Taylor states that a structured organization implies that

- *There is an established system of domination.*
- *The system is legitimated.*
- *It is inscribed in the framework of its members, as part of their normal interpretive sense-making [34].*

These dimensions are linked with corresponding dimensions of power, sanction, and communication, through modalities of facilities, norms, and interpretive schemes (figure 1).

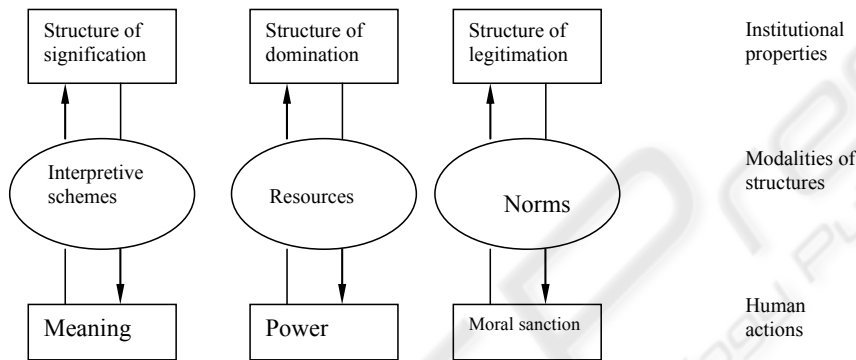


Fig. 1. The interactions of human agents and institutional properties, mediated by modalities of structures (adapted from Giddens [14]).

The recognition that human agents are knowledgeable and reflexive is one of the central premises in the theory: “All social actors, all human beings are highly leant in respect of k

nowledge which they possess and apply, in the production and reproduction of day-to-day social encounters; the vast bulk of such knowledge is practical rather than theoretical in character” [14, p. 22]. Reflexivity is not simply self-consciousness, but mostly – the ability of human agents to continuously monitor of physical and social contexts and activities. Through the regular actions of knowledgeable and reflexive agents, patterns of structuration become established into standardized practices like evaluating employees behavior or coordinating meetings. Over time the use of such practices becomes traditional and institutionalized, forming the structural properties of organizations. These structural properties (or structures) are drawn on by human agents in their on-going interactions.

“Human actors are not only able to monitor their activities and those of others in the regularity of day-to-day conduct, writes Giddens (1984, p. 29); they are also able to ‘monitor the monitoring’ in discursive consciousness.” Thus, interpretive schemes are seen as stocks of knowledge that are applied reflexively in the supporting communication. Normative components of communications always center around the rights and obligations expected from participants of interactions. If in formal codes of law we can usually observe claimed symmetry between rights and obligations, such sym-

metry does not necessarily exist in every day practice. This observation allows Giddens to conclude that in every day practice there are 'contingent' claims which have to be sustained through the effective sanctions. Normative structures are seen as reflecting asymmetrical structure of domination.

Actions always incorporates all three dimensions. Modalities are considered as the locus of interaction between the knowledgeable capacities of actors and the structural features of the system [24]. However, splitting the duality of structures into these dimensions serves more an analytical procedure than practical reality: in practice all three are interlinked. Jones and Karsten [24] draw on an everyday example of organizational life to illustrate the central concept of the structuration theory. The clothes that employees wear to work reflect the influence of social structures that are reproduced by individual's accepted practice. There is an expectation that people working in an office will wear more or less formal, business-like clothing, while medical doctors will wear white clothes in hospitals. When come across somebody in a work environment we conclude based on structures of signification that inform us about a person's role wearing special clothes. Clothes do not indicate who a person is, conclude Jones and Karsten (2003), but also put across important messages about the power he holds. It means that a police officer wearing special uniform will likely be more successful if he were in plain clothes, to influence people's behaviour. Structures of legitimation will define the appropriate dress code, where organizations may differ in the degree of formality. However if certain employees challenge the dress code, then over time, new structures (e.g., less formal) may develop. Thus, people are viewed as being able to develop structures through their actions.

Giddens puts it explicitly: social structures do not exist without human actions, nor they are material entities. Structure is what he calls "a virtual order of transformative relations", existing "only in its instantiations in such practices and as memory traces orienting the conduct of knowledgeable agents" [14, p.17].

The Duality of Structure. The emphasis is given on structuration as an ongoing process rather than structure as a static property of social systems [24]. Giddens [14, p. 25] gives the following definitions:

- *Structures are rules and resources, organized as properties of social systems; structure only exists as 'structural properties'.*
- *Systems are reproduced relations between actors or collectives, organized as regular social practices.*
- *Structuration is conditions governing the continuity of transformation of structures, and therefore the reproduction of social systems.*

Structures for Giddens have two components: rules and resources.

When we think about rules, we are likely to imagine something very explicit as rules of a game. That is precisely what he does not mean! [14, pp. 17-18]. Giddens' argument recalls, notice Taylor [34], the distinction between practical and discursive knowledge. Most activities demonstrate the presence of practical knowledge, and if rules-following behavior enters activities, then most rules are practically, not discursively grounded. Thus, rules are not even a part of what we consciously know but what we logically do, as "routines of social life".

Rules cannot be separated from resources, “which refer to the modes whereby transformative relations are actually incorporated into the production and reproduction of social practices” [14, p. 18]. One could probably get completely lost after reading the previous statement, ‘what on earth could Giddens mean by that’? As we mentioned earlier, his quantity, density, and specificity of writings is sometimes a lesson in interpretations. There are two types of resources – allocative (capabilities to generate commands over objects, goods, or material phenomena); and authoritative (capabilities to generate commands over persons).

In fact, rules are always about acting on or transforming something either material or human. They could get discursive recognition (“rationalized”) and then become rules: in their usual connotation as explicitly setting of special parameters, or constraining individual behaviors.

An important point is that structures do not exist as material artifacts, but only in human memory traces and through social practices. Even for example, technology for Giddens “does nothing, except as implicated in the actions of human beings” (Giddens and Pierson [19, p. 82].

2 Structuration Theory and Empirical HRM Research

Giddens frequently stated that structuration was not intended as a concrete research program [13, 18], and that his principles “do not supply concepts useful for the actual prosecution of research” [16, p. 312]. He is also very critical to those who “have attempted to import structuration theory *in toto* into their given area of study” [17 p. 213], but prefers those who use his concepts in a sparing and critical fashion [24]. One description of the role of structuration in empirical research is the use of principles derived from it as “sensitizing devices [17]. Among scientists who have put lots efforts to clarify Giddens’ theory of structuration, common opinion is that structuration is “fundamentally non-propositional” [1], and that it “does not give us anything to test or to find out” [10, p.1080. Gregson [21] views structuration as a second-order theory concerned not with explanation the events or contingencies but with conceptualizing the general constituents of human society. In view of Giddens’ himself, structuration should be seen as a generic theory meaning a meta-theory, a way of thinking about the world rather than as an empirically testable explanation of human behavior [15].

Gregson [15] even states that the structuration theory operates at too high level to provide any guidelines for specific empirical settings. Giddens does not accept this claim and provides some explanation on what he sees as a potential contribution of structuration to the empirical social research [14, pp. 281 – 285].

I summarize general guidelines for the empirical HRM research:

The HRM research always has ethnographic, cultural aspects. And any HRM field of inquiry has its constituted meanings before the study. (This is exactly what Giddens means by ‘double hermeneutic’). An “entry” to such fields means interventions in already existing meanings. Therefore, concepts in HRM are considered as ‘secondary-order’ concepts as they are always built on existing knowledge and interpreta-

tions. HRM researchers, therefore, have a role of communicators, introducing frames of meaning associated with certain contexts.

“It is important in social research to be sensitive to the complex skills which actors have in co-ordinating the contexts of their day-to-day behavior” [14, p. 285]. These skills influence happenings in the HRM life. It means that HRM events are predictable in their course, but such predictability is caused by the actors. Even if there are unexpected consequences in the HRM study, researchers should always look for interpretations within the flow of existing events.

HRM researchers cannot ignore time-space constitution of social life. It is not only historians who are dealing with time and geographers who are dealing with space, but HRM has to be sensitive to time-space coordination of social life. It implies studying the contextual features of “locales through which actors move in their daily paths and the regionalization of locales stretching away across time-space” [14, p. 286].

Later works of Giddens show further elaboration of a “structurationist program of research” [15, 17]. Thus, 10 aforementioned principles are simplified to just three: contextual sensitivity, the complexity of human intentionality and the nuances of social constraint [17, p. 300]. Further he mentions four aspects of structuration that are mostly generally relevant for social research: reproduction of practices, dialectic of control, discursive penetration, and the double hermeneutic (ibid, p. 313).

We summarize the key features and implications of the structuration theory for the HRM research as adapted from Jones and Karsten [24] (table 1).

3 The Transformation of HR: Making Sense through the HRM Frames

The structuring HRM transformation refers to the processes through which participants influence the developments within the HRM function, and the ways in which these processes reproduce particular social contexts of work. The structuring HRM transformation is influenced by participants interpretations of their work, social context, HRM policies and the information technology used to enable HRM transformation; their access to HRM, organizational and technological resources, and the normative rules that guide their organizational performance (figure 2).



Table 1. Key features of structuration theory, their implications and potential issues for the HRM research (adapted from Jones and Karsten [24]).

<i>Feature of structuration theory</i>	<i>Implication</i>	<i>Potential issues</i>
<i>Duality of structure</i>	<i>Structure and action are inseparable and co-existent.</i>	<i>Structure exists only through action. It never pre-exists action.</i>
<i>Structure is a “virtual order of transformative relations”</i>	<i>Rules and resources exist only in their instantiation and as a memory traces orienting conduct.</i>	<i>Material resources influence social practices only through their incorporation in processes of structuration.</i>
<i>Essential recursiveness of HRM</i>	<i>Structure is produced and reproduced in every instance of action.</i>	<i>Social phenomena are temporary regularities in an ongoing process.</i>
<i>People always have the possibility to do otherwise</i>	<i>Structural constraint simply places limits upon the feasible range of options open to an actor in a given circumstances.</i>	<i>Compliance with structural constraint implies choice to do so.</i>
<i>Agents are knowledgeable about their actions and continuously reflect on their conduct</i>	<i>People are aware of their condition and reflect upon it.</i>	<i>People may not be discursively aware of their knowledge.</i>
<i>Unacknowledged conditions and unintended consequences</i>	<i>Production and reproduction of society is not wholly intended or comprehended by people.</i>	<i>Social generalizations are temporally and spatially circumscribed.</i>
<i>Routine is integral to the continuity of the personality of the agent and to the institutions of society</i>	<i>Individual identity and social institutions are sustained through routine.</i>	<i>The seed of change is there in every act, which contributes towards the reproduction of any ‘ordered’ form of HRM.</i>
<i>Time space distancing</i>	<i>Societies “stretch” over spans of time and space.</i>	<i>The importance of face-to-face interaction for HRM and the capability of technologies to facilitate integration “at a distance”.</i>
<i>Double hermeneutic</i>	<i>Concepts that sociological observers describe are already constituted as meaningful by social actors and can themselves become elements of the actors’ understanding of their own condition.</i>	<i>People can reflexively appropriate the researcher’s understanding of their condition.</i>

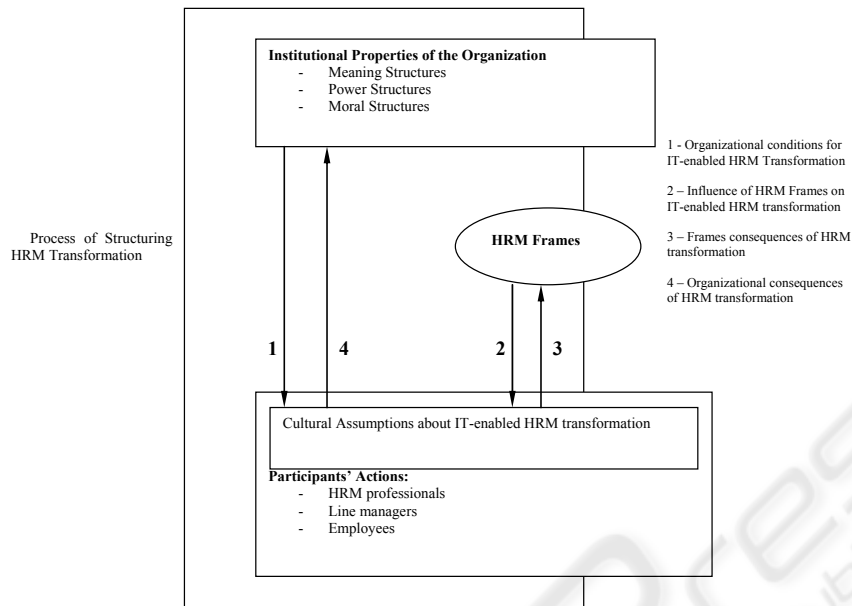


Fig. 2. Structuring of the IT-enabled HRM Transformation, adapted from Orlikowski, [30].

3.1 Frames

A major premise of the social cognitive research is that people act on the basis of their interpretations of the world, and in doing so they enact particular social realities and give them meanings [5, 30, 36]. The frames of reference held by people in organizations serve as implicit guidelines to shape interpretations of organizational events. Thus, an understanding of people's interpretations of HRM transformation is critical to understand their interactions with the HRM system. To interact with the HRM system, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of HRM, which then shape subsequent actions towards HRM. Even if these assumptions, interpretations and frames of reference are taken-for-granted and rarely studied or reflected upon, they nevertheless do play an important role in influencing how people think and act towards HRM.

Borrowing the concept of "schema" from cognitive psychology [3], an individual "frame of reference" has been described as a "repertoire of tacit knowledge that is used to impose structure upon, and impart meaning to, otherwise ambiguous social and situational information to facilitate understanding" [20, p. 56]. A variety of terms has been used to express the idea of cognitive frames, addressing in parallels notions of mental models [29]; cognitive maps [11, 9, 25]; cognitive frameworks [5]; scripts [20].

Then, an important issue in understanding the role of frames in management research, is to see them as pictures or visual aid in understanding and selecting elements of the thoughts of an individual. In a less profound way, frames are defined as organized knowledge structures that allow individuals to interact with their environment

(Mathieu et al, 2000, p. 274). They include assumptions, knowledge, expectations, being expressed symbolically through language, visual images, metaphors and stories (Orlikowski and Gash, 1996). Frames are flexible in time and context (recall Giddens, 1984), and they are structured more as networks of meanings than as linear schemes. By facilitating decision-making and problem-solving processes of people, frames allow them to explain behavior of the world around them, to recognize relationships between components, and to construct expectations for what is likely to occur next (Rouse and Morris, 1986). Hence, frames have three crucial purposes: they help people to describe, explain, and predict events in their environment [11, 29].

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