HR management in project heterarchies – the case of VFX production

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Abstract

This paper argues that HR management in project-based industries can hardly be understood as a neatly tiered and cascaded function, but needs to be conceptualized as a loose aggregation of practices that are geared towards a complex organizational and institutional environment, in which analytically distinct organizational forms collapse and amalgamate in practice. We take up extant approaches that address the embeddedness of project-based work, namely project networks, employment systems and project ecologies. However, by drawing on qualitative research into digital visual effects (VFX) production, the paper pursues a more inductive perspective and seeks to identify and analyse how HR practices such as recruitment, skill development and motivation are *shared* between and *distributed* among different organizational domains in such an organizational framework. This analysis shows that the organization of work in VFX assembles elements of a heterarchical structure, which is characterized by *multilayeredness,* the relevance of *organizational slack* as well as *the incongruence and latency* of HR practices.

Introduction

HR management when practiced in a project driven organizational environment faces a set of challenges that mainly derive from the disruptive and discontinuous nature of project-based organizing. *Training and the long-term development of competencies*, for example, are problematic since project workers change from one project to another and very rarely have the time to follow formal competence development programs, even if a large number of such programs is available (Söderlund/Brendin, 2006; Hobday, 2000; Prencipe/Tell, 2001). Paradoxically, the importance of attaining and developing the right competencies is enhanced by the generally knowledge-intensive character of project based industries. Therefore, DeFillippi & Arthur rightly ask: "How can project-based enterprises create competitive advantage when its knowledge-based resources are embodied in highly mobile project participants?" (1998:125).

Another challenge is how to integrate project teams and manage a temporary workforce. The transient nature of projects restrains the possibilities to build trust within a project team, as well as commitment between the team members and the (host) organization. Again, it is argued that, in contrast to more enduring forms of organization, temporary organizations might lack the continuity to build up trust and organizational commitment (Keegan/Turner, 2000).

Finally, recruitment is challenging as well, since getting the right people at the right time is the most important goal when it comes to selecting project workers. The question here becomes where to find and how to identify and select good people who suit the project's needs regarding skills and competencies (DeFillippi/Arthur, 1998).

The literature on HR in project-based organizations offers a wide range of policy and best practice recommendations for how to cope with these challenges and paradoxes facing recruitment, training or commitment strategies (Ulrich, 1997; Mohrman & Lawler, 1997), which are often derived from and normatively attributed to 'successful' project based *firms*. HR management in such a context seems to be an issue of delegation of tasks in an orderly cascaded process to the most functionally equivalent level.

However, the proliferation of coherent, goal-oriented and effective 'best practice' recommendations might be legitimate in a project based firm context, but remains in our view unsuitable for a project-based *industries* context for the following reasons: Firstly, project-based firms are *embedded* in a particular organizational and institutional context (Granovetter, 1973; 1985). Thus HR practices cannot only be attributed to a firm context since they could be geared towards other organizational domains like teams, projects, networks, career systems, (on- or offline) communities or labour markets as well. Secondly, HR practices are shaped by their context, but in return also change that context by *linking* or even *blending* organizational forms into new arrangements. This aspect of *reciprocity* between action and structure is too often underdeveloped or even ignored completely in the extant literature. Thirdly, the constant interplay between practice and organizational context means that both *evolve dynamically* over time. Any observed 'best practice' is therefore just a snapshot at a single point in time (Lundin/Söderholm, 1995).

However, the dynamically embedded nature of project-based organizing does not make HR management obsolete. In fact, as argued above, recruitment, staff retention, career planning, training and other HR functions might become even more important due to the high labour intensity and mobility between projects. But the issue of how, by whom and where - if not (exclusively) in firms - these functions are dealt with requires further investigation.

The aim of this paper is to explore the properties of the organizational frame in which project management in general and HR management in particular take place. More specifically, this paper seeks to increase our understanding of the distribution of HR practices in a project-based context by analysing how HR practices are *shared* between organizational domains. Based on a qualitative empirical study, the paper will discuss these issues by drawing on the example of the multilayered organizational context of *Visual Effects (VFX) production*.

In the following section we will outline some main characteristics of the institutional background of project-based industries, referring to Sydow/Windeler's (2001) work on project networks, Marsden's (1999, 2004) work on employment systems and Grabher's (2002; 2004) work on project ecologies. After explaining our methodology, we will then analyse HR management practices in VFX by mainly looking at recruitment, training and issues of motivation. The subsequent discussion seeks to explore some key characteristics of HR management in project-based industries.

Main frame

Numerous attempts have been undertaken to conceptualize the organizational and institutional environment in which project-based organizing is embedded (e.g. Manning 2008:32-35). In this section we will discuss three concepts that in our view deal more directly with employment issues than the more general concepts of *'landscape'* (Prencipe/Tell 2001), *'field'* (Bourdieu, 1977; 1984; DiMaggio, 1991) or *'industry'* (Caves, 2000). These concepts are the *project network* (Jones, 1996; Sydow/Windeler 2001), *employment system* (Marsden 1999, 2004) and *project ecology* (Grabher 2002, 2004). We will first characterize these concepts which will then guide our subsequent analysis of HR practices in VFX.

Project networks

One of the most influential concepts with respect to project-based organizing is the *project network*, stressing the *organizational embeddedness* of project organizing activities in an inter-organizational network (Sydow/Windeler 2001; Jones, 1996). Project networks are conceptualized as temporary inter-firm alliances "connecting the project enterprise to the firms which participate in them" *(Sydow/Staber, 2002:217)*. These inter-organizational project networks are not seen as a series of isolated activities but are kept together by a "system of more or less enduring social relationships within the context of a project organization" *(ibid.:216)*.

Conceptualizing the embedding structure of project organizing as a *project network* therefore puts the analytical focus on the inter-organizational arrangement as well as inter-personal relations "within which the kind of trust, commitment, and reciprocity norms can develop that support project coordination." (ibid.: 216). Inter-personal relations are thus seen as a source of stability, absorbing the instability and discontinuity that characterizes project networks. Consequently, HR management in project networks has to be considered to take place at several organizational levels like firms, temporary inter-firm networks, and most importantly in trustful inter-personal relations which outlast current relations of collaboration.

Employment systems

Another perspective to conceptualize the embeddedness of project based organizing activities is David Marsden's (1999, 2004) *employment system* perspective, which sees project-based organizing as *institutionally* embedded. Usually, the term employment system is used to describe a holistic choice of firms or employers concerning the terms of employment and the characteristics of human resource policies (cf. Osterman, 1987). As Marsden has shown, the scope for these decisions is limited by characteristics of the institutional environment, which comprises rules of job design and task assignment, the labour market, inter-firm institutions, and the education system (see Haunschild, 2003).

Although Marsden does not restrict the term employment system to the firm level, he clearly tries to develop his argument from a firm-centred perspective by conceptualizing *inter-* and *intra*-organizational institutions as emerging from rational economic decisions at the firm level (1999). Whereas clear rules of task assignment and job design as well as highly institutionalized systems of either on-the-job training

(internal labour markets) or off-the-job training (occupational labour markets) are common in traditional industries, the so-called network economy is, according to Marsden (2004), characterized by 'functional equivalents' to these rules and institutions. Examples for functionally equivalent institutions that allow employers and employees to cope with discontinuous employment would be (1) reputation within an occupational community as a functional equivalent to occupational labour markets or (2) royalties and stock options as functional equivalents of deferred rewards in permanent employment relationships (Marsden, 2004: 672f).

The focus of analysis in his view has therefore to draw on the inter-organizational institutional environment in which employers organize employment relations. Similar to the project network perspective inter-firm institutions or 'functional equivalents' are seen as stabilizing factors in an otherwise disruptive and discontinuous environment. HR management in an employment system thus refers to "robust and stable rules delimiting managerial authority" that have to be "productively efficient and enforceable" (Haunschild, 2003: 910).

Project ecologies

The systemness of project networks and the efficiency logic of functional equivalents that is prevalent in the two beforementioned accounts is neglected in the *project ecology* account (Grabher 2002; 2004). In this line of argument, recurrent collaboration in projects is seen as inter-organizationally embedded, but the individual layers involved (teams, departments, firms, inter-organizational networks, inter-personal networks etc.) are thought of as an interdependent and interwoven organizational fabric rather than a loose coupling of functionally dependent but otherwise independent organizational forms. The resulting multilayeredness of project ecologies means that otherwise incompatible organizational principles, logics, imperatives, and identities co-exist in an active rivalry to each other The fundamental incompatibility of diverse but otherwise interwoven and interdependent organizational forms is seen as an antidote against hegemonic best practices, too rigid production routines or codes of conduct and provides and maintains a gene pool of diverse organizing principles that project-based organizing activities can tap into. (Ettlinger, 2003; Amin/Cohendet, 2004; Latham, 2002).

Whether project organizing in shifting coalitions fails or succeeds to structure the ambient complexity temporarily, "the ecology remains unthreatened" (Amin/Cohendet, 2004:109) because the plethora of social ordering principles cannot be reduced to each other. HR management within a project ecology would therefore not be restricted to one best way of doing things but may be provided with a broad bandwidth of options to develop HR policies.

Preliminary conclusion

The three accounts of project-based forms of organizing introduced above clearly draw our attention from an intra- to an inter-organizational perspective. Yet the inside-out perspective remains dominant, making the organizational and institutional environment seem like consisting of separate layers decreasing in size and placed one inside the other. HR management in such a context would seem an issue of delegation of tasks in an orderly cascaded process to the most functionally equivalent level. In our view, however, individual and collective agents are not exposed to a set

of neatly complementary organizational contexts (teams, departments, networks, clubs etc.) but gear their strategic actions (incl. HR management) towards a much more complex frame.

Accordingly, instead of further differentiating organizational levels and logics that project-based firms and HR management could be embedded in, we propose to take a more holistic view. To further the argument, we propose to develop a more inductive perspective on HR management in project-based industries by concentrating our analysis on actual HR *practices*. We found that looking 'up' from HR practices to the embedding environment will open up a spectrum of overlapping instead of functionally complementary organisational levels. Of course, multiple membership can result in conflicts of loyalty, role ambiguities, incoherence of organizational goals and a multiplicity of HR logics and principles, but we argue that (in line with the project ecology account) such inconsistencies are inevitable characteristics of project-based organizing and play an important part in it's governance.

In the following, we will use the example of VFX production to illustrate and further develop the inductive analysis of such distributed and overlapping HR practices and the resulting inconsistencies.

The Case study

This case study is based on 42 in-depth interviews with VFX artists, producers and supervisors in London and Los Angeles carried out by the first author between 2005 and 2006.

Digital Visual Effects (VFX) is a relatively young industry which makes use of the technical possibility to digitally create or manipulate moving images. The highly project-driven sector began to emerge when movie post-production (including special and optical effects) 'went digital' which opened up a new field of opportunities for movie makers and directors to visualize their ideas. VFX shots are created or modified on a computer and then composited with live action elements (see Goulekas, 2001 for more details). Today, VFX work is a global term used to describe any work created during post-production of a feature film, commercial or music video that was not shot completely on camera with traditional live action techniques. Most of today's feature productions contain visual effects to some degree. VFX-intensive movies with reported VFX budgets well into the triple-digit millions like for example Harry Potter, Riddick or Brothers Grimm are produced in large, time-intensive projects, where hundreds of 2D and 3D animators, technical directors, compositors, lighters as well as VFX producers and supervisors collaborate across organizational as well as geographical boundaries to get the work done.

HR management in VFX

In the previous section we argued that academics and practice oriented authors have so far focused on HRM in project-based *firms* rather than project-based *industries*. While this has arguably helped to gain useful insides into the pitfalls and challenges

that HRM faces from an organizational perspective, the literature remained somewhat silent about HRM *between* project-organizations, as if there was no such thing as HR function-related career trajectories, training activities or integration and recruitment tasks to be 'managed' before or after the project organization existed.

In this section we will analyse personnel management practices in the light of their embedding institutional and organizational framework. We concentrate on some key personnel management areas such as recruitment, training and skill development as well as motivation. Our aim is not to establish a complete and coherent picture of HRM in project-based industries but to try to demonstrate the additional insights that can be gained when addressing HRM practices in project-based industries as organizationally *and* institutionally embedded.

VFX projects as inter-organizational forms of collaboration

VFX production takes place in temporary inter-organizational arrangements. First, a production company or film studio hires a VFX supervisor/producer pairing alongside the director to take care of the VFX and animation work and budget for the film. VFX supervisors and VFX producers are typically independent senior members of the VFX scene. Depending on the scope of the project (i.e. quantity and complexity of "shots" to be created or manipulated), the workload as well as the budget then gets split into several sub-projects, each comprising a VFX sequence supervisor and producer, lead animators, technical directors, compositors etc. In practice, these sub-teams usually are employed or embedded in two principally distinct types of organizations, i.e. VFX *facilities* and VFX *studios*.

VFX facilities are typically matrix-structured, multi project-based firms, who provide the complex technology set-up and infrastructure, but also an internal labour market. Still, VFX facilities can only be characterized as hotels as a managing director commented:

> "...we are only ever a servant to the production company. We are like a hotel, that's the best analogy. If they need something, we provide it...We have to make their experience as good as possible..." (Managing Director #01)

VFX suites and working stations can be booked by the hour, sometimes even including a technician or a creative to "drive" the machines.

However, the hotel analogy does not hold true for the second type of firm, the *VFX studio*. Such companies can be characterized as (otherwise dormant) administrative shells that can be activated on a project-by-project basis. VFX studios are usually formed around the strong inter-personal networks of the same few 'independent' VFX supervisors, who are entrusted by film production companies with subcontracting work to VFX facilities.

This dual role of VFX supervisors - potentially being both, client of and rival to the facilities - gives them a rather strong yet delicate position within the inter-organizational production system. Facilities have to be closed to guard against rivals trying to poach staff. On the other hand they have to be porous enough to allow inter-personal networks to cut across their organizational boundaries to remain

embedded in the VFX scene, which revolves around otherwise competing VFX supervisors and studio owners.

However, the pivotal role of VFX supervisors points to the importance of personal networks that cut across both, facilities and studios alike. As a number of studies have shown, personal networks in project-based industries can facilitate the coalescing of project teams. Whereas the inter-organisational project networks of VFX production are only temporal, trans-organizational social networks endure and provide a forum for building up reputation, signalling skills and market value and thus communicate important recruitment information for potential employers (see, for example, Deuze, 2007; Jones, 2002; O'Riain, 2000).

In line with these findings, networks play a key role in mediating knowledge (incl. industry gossip) skills, jobs, and reputation in VFX production, too.

Recruitment

In VFX - as in many other industries - intra- as well as inter-organizational labour markets are pre-structured by inter-personal networks that transcend projects as well as firms. According to Grabher (2004), communality, sociality and connectivity networks can be differentiated.

Recruitment through *connectivity networks* is a formal, sporadic and anonymous form of inter-personal interaction. Examples would be mailing lists, online forums or social networking sites like LinkedIn, where jobs get posted. *Knowledge of* such forums and the mere membership in such mailing-lists constitutes a network structure.

An example of how to use connectivity networks to find good people or get a new job would be to have a "show-reel out there", out there meaning the only loosely-coupled, anonymous network of industry practicioners. VFX workers who subscribe to VFX mailing lists, have a "show-reel out there" and a current CV listed on LinkedIn do so to latently signal employability.

On the other hand, mailing lists or standardized email formats allow potential employers to tap into a rival's internal labour market by passing around e-mails. By using these channels, potential employees gain knowledge about new projects as well as employers gain knowledge about recruitment opportunities when project deadlines approach, as a VFX artist explained:

> "everybody kind of knows what production schedules are... [..]When there is a big project ending, companies are coming in for recruitment visits" (VFX artist #03)

From an employer's view, tolerance for such approaches and "unfriendly" email exchange might be an indicator of the importance and usefulness of connectivity networks. Membership in them and openness to them seems to be the only way of coping with such an almost ubiquitous network.

These rather impersonal forms of interaction are enriched by *sociality networks*, which are of a more personal yet still professional, career oriented and utilitarian nature. Sociality ties are governed by networked reputation which is transported, negotiated and built in constant feedback loops between its members, i.e. for example employers, occupational (specialist) communities and project teams.

In VFX, because of the composite nature of the product, individual contributions of single VFX workers cannot be judged ex-ante. Accordingly, employers have to rely on (informal) references of (former) co-workers, for example by sending around lists with names of applicants to trusted colleagues asking for their judgment.

It is important to note that sociality networks are on the one hand governed by inter-personal trust and sympathy, but also by open aversion and distrust that unvarnishedly becomes part of recruitment decisions, as a VFX supervisor reported:

> "if you're finicky kind of artist who's always arguing... that will travel with you as well. It will make it more difficult for you to find work." (VFX Supervisor#05)

Still, it is important to note that even a bad reputation is not carried around like a (formal) certificate but is constantly created and (re-)negotiated between members of different roles and occupational communities.

Not only individual reputation, but also *organizational reputation* is transported and negotiated in sociality network relations. Therefore employers have to be keen to keep a reputation as a "good place to work" as well. Characteristically for the creative industries, however, is that the quality of working conditions is strongly influenced by the quality of projects and/or prestige of VFX supervisors or directors that the facility or studio is able to bind, as another VFX artist explained:

> "I ended up taking that job [..] because I've always wanted to work with Terry Gilliam" (VFX artist #01)

However, it remains a gamble which projects to work on since it could too easily all go wrong and the beforehand prestigious project could turn out to be a nightmare; but still there is the prospect that project participation in prestigious projects might enhance one's future employment chances.

What becomes clear when discussing the role of reputation and prestige in sociality networks is that there are at least three parties involved in recruitment (and application) decisions, namely the two contracting parties, but also the peer group or occupational community within which reputation is constantly re-negotiated.

Finally, but inextricably linked to the other network forms are *communality networks.* This type of network is the closest, most stable inter-personal layer. Communality ties might outlast episodic collaboration and solidify into stable and resilient relationships of trust, loyalty or even friendship as well as (again) equally stable distrust and rivalry.

As discussed earlier, the best example of the prevalence of this network form in VFX is the figure of a VFX supervisor who holds relationships with a stable team of trusted employees, sometimes even stable client relationships. Facilities try and use this mechanism by binding or hiring VFX supervisors because of their loyal client or talent following. Accordingly, hiring in VFX often takes place "by the dozen". Some VFX supervisor's communality network is even of such a strong nature that he or she holds *all* the necessary contacts. Such supervisors aren't hired by a facility but VFX facilities are booked by his/her production to accommodate a certain project.

The described principle of inter-personal loyalty as a medium of recruitment is somehow breached by the recruitment practice of *poaching*. Poaching usually takes place between rival employers and is of course tempting when not only a single person but a whole production team could be won. However, there is an implied industry code of conduct not to draw project workers away during a project. Again, the practice of poaching is so ubiquitous that employers would rather try and be part of it than staying outside, as a Managing Director commented:

> *"...if you lose a colourist or a senior compositor or 3-D animator, there is the possibility that a number of clients will follow... will follow them. But it's as many that will follow will come to you because of someone else, so there is an element of business that always moves around" (Managing Director#03;P121)*

Learning and skill development

Other traditional areas of HR management in project-based industries are training and competence development. Because technology standards in VFX production change continuously and even the momentary standard software packages are customized anew for each individual project, skills and competencies in VFX production are rather transient in nature. But because it is unclear which product to do next and which technology to use it is hard to envisage skills and training needs that could be addressed by explicit HR strategies or training and skill development programs, respectively. As discussed by many authors, this leaves "learning-by-doing" or "learning-on-the-job" as the main way of acquiring competencies over the course of a career (often described as a "steep learning curve"). In VFX, these forms of learning are supported by trans-organizational mobility and organizational slack.

Since learning opportunities only come with jobs, the need for *continuous* employment becomes a greater necessity since one could be "out of the loop in no time" (VFX artist#02). This necessity can be seen as one of the main drivers for trans-organizational mobility, as a creative director of a small 2-D boutique explained:

> "... a lot of animators will move to where the best work is. They will move around to find the work they wanna do. [..] If you think you are talented enough, you can go and work projects that are attracting you. So you [as an employer] have to have interesting work, that's an important thing. Because animators want to build up their showreel to enhance their employability." (Creative Director #01)

Trans-organizational mobility and learning between projects, facilities and studios might as well be fuelled by the pressure on the employees not to become locked-in to a specialist position or internal technology standard that might assure intra-organizational employability, but reduce inter-organizational compatibility and employability as one VFX supervisor explained:

> "I've always shied away from employing people who describe themselves as a 'Shake-', 'Flame-' or 'Domino'- artist... If they put a piece of machinery in front of 'artist'.. I'm not very happy with that.. I appreciate people have skill-sets which they can adapt to particular packages.. 'Shake' or 'After-Effects'. But if you can make a beautiful composition in 'After-Effects', then you can do it in 'Shake'.. you just need to be shown the structure of it ... so give me someone with an eye rather than someone who takes comfort in knowing which buttons to press." (VFX supervisor #04)

However, the concept of learning "*on* the job" in the context of trans-organizational careers is somewhat misleading as it assumes that learning takes place *during* work. Since learning in current employment is often of more importance for the subsequent job, employers only tolerate a certain degree of on-the-job learning during working hours. Accordingly, exchange, playful experimentation and the development of new skills predominantly takes place *off* working hours, during spare time between projects or phases of project slippage. In this light the project-based form of organizing itself could be seen as an institution that provides the necessary *slack* and opportunities for *"off* the job" learning.

Some VFX-facilities address this issue by being open 24 hours a day and – again in line with the previously mentioned hotel-like character - by being a place of work as well as place for leisure.

Motivation
Closely related to the just described practices and precondition for learning and skill development and the principle (intrinsic) driver for using these opportunities is of course the issue of motivation.

For many VFX workers, their key motivation (often referred to as "childhood dream") is to create novel, "cool" VFX they themselves would enjoy watching. "Coolness" and "enjoyment" are generally the key paradigms of this group. Money and financial rewards play a far lesser role as motivators, but VFX workers place a premium on being part of a creative scene in which to work and socialise in "cool places" (Pratt 2002) such as London's Soho with its abundance of commercial restaurants, bars and clubs (see also Nixon 2003).

Generally, it is debatable to which extent, if at all, it is possible for employers to deliberately influence workers' lifestyles. However, Florida (2004) and others have strongly argued for employers as well as economic policy makers to take into account the lifestyle of the "creative class", which Brooks (2000) has described as a mix of bohemian and bourgeois elements. HRM in VFX seems to be following this call. To VFX workers, work is part of a laddish lifestyle marked by excitement, hard work and fun, with a premium placed on "coolness" and "quality of life". It could be

argued that in the case of VFX, the HR function is so widely dispersed throughout the entire (temporary) organisation, that the only meaningful organisational frame of reference for any kind of HR policy might be something as diffuse as the *locality* (Grabher, 2002; Pratt, forthcoming), where lifestyles are enculturated and "hanging out with your mates" (VFX artist #01) becomes the main source for self-motivation and working morale. Consequently, VFX employers (similar to many other firms in the 'New Economy') try to facilitate the achievement of lifestyle aspirations not just through after-work activities but within the firm too. This might be particularly important during the final regularly intense phase of project completion, when project teams almost live at their workplace, eager to get the work done before deadline.

Discussion and Conclusion

The above analysis has tried to portray HR management practices in the context of project-based organizing. Discussing HR practices makes apparent that analytically distinct organizational layers more or less collapse into an indistinguishable organizational ecology *of* practice. In the normative literature, however, complexity is seen as problematic and advice is usually given to treat HR activities as "organization like" as possible by reducing complexity, uncertainty, variety in interpretations and meanings as much as possible (Sahlin-Andersson, 1992). In our perspective, the resulting complexity is not a problem that needs to be defined away but is emphasized and seen as *one* robust arrangement for project-based production, instead.

HR management plays a key role in that respect, because bringing the right people with the right skills together, holding them together and trying to build and maintain bridges for future collaboration are the key functions of project management in a complex environment, which is characterized by a high diversity of organizational forms and practices. We tried to argue that the diversity of organizational forms and practices constitutes an evolutionary potential that gets activated through a particular *organization of diversity*, which is characterized by

> - *Multilayeredness*
> Organizational structures (projects, departments, firms, personal networks etc.) overlap and build an interdependent and interwoven organizational fabric rather than a loose coupling of functionally dependent but otherwise independent organizational forms. The entangled multilayeredness of the organizational context means that any practice or routine takes place on several layers of action at the same time. Accordingly, HR practices seem to be dispersed across organizational domains rather than being concentrated on only one functionally superior level. There is no 'one best' locus for doing HR, but always multiple levels for and ways of doing things.

> - *Incongruence*
> Another structural property that can be interpreted as a catalyst for HR practices like learning and knowledge creation is the *incongruence* of organizational forms. A VFX artist, for example, who is involved in a VFX

project will share his working experiences with other project participants as well as his community of practice. His "experience space" and "evaluation space" are thus detached. Because dis-embedding and re-embedding of knowledge or routines can be considered to be a primary source of novelty (see, for example, Manning 2008: 35ff), the incongruence of both organizational forms is likely to stimulate a diversification of business practices, technological knowledge or styles rather than the formation of only a few 'best practices'. Because each project member (artistic, management, technical staff etc.) will do so, the diversity of 'lessons learnt' will be further enhanced.

The same is true for reputation, since status and prestige are evaluated and negotiated across the same set of incongruent organizational forms. Accordingly, and because reputation plays such an important part in labour market governance, VFX workers try to be part of as many contexts as feasible so that their skills can be evaluated by different communities and their reputation gets further diversified and broadened.

Seen from that perspective, incongruence of entangled organizational forms might be the organizational solution to the specific recruitment, learning and training needs in project-based industries, since they allow for discussion, dissemination and interpretation of skills, knowledge, and reputation out of their context of origin.

- Organizational slack
Another constitutive element that is characteristic for the portrayed multilayered and entangled organizational fabric is *organizational slack*, a term proposed by Penrose (1959) who first suggested that organizations always have some stock of unused resources that sometimes inevitably emerge as a by-product. Learning, playful experimentation and the development of new skills taking place during spare time between projects or phases of project slippage can be seen as an example of organizational slack in project-based organizations, because such new knowledge is often of more importance for the subsequent job than the current one. Employers thus have to tolerate a certain degree of on-the-job learning during working hours but also try to be the organization that remains the primary beneficiary of the knowledge that has been produced accidentally.

- Latency
HR management under such conditions often takes the form of a *latent practice* rather than an explicit function or role. For example, due to the high staff turnover there is a constant need for employers to engage in all sorts of recruitment activities to have good people "by the hand" as and when they are needed. A lot of recruitment activities and job interviews are therefore only precautionary in character so that employers can draw on a list of potential candidates as soon as a job comes in. Some staff are even kept "on hold" between projects, even if there are currently no projects for them to work on. Recruitment can thus be seen as an example for a latent practice that is much more geared towards future (potential) employment relationships

rather than the monitoring and control of present work practices. The latency of HR practices in project-based industries might even be interpreted as 'functional equivalent' to the institutionalized role of an HR manager in functional hierarchies.

Elements of all three concepts that have been introduced above can be found in our case study. The inter-organizational nature of project networks, the functional equivalent logics of employment systems and the entangled multilayeredness of project ecologies all unfold relevance when discussing the organizational frame that HR in project-based industries is practiced in.

We have tried to demonstrate that HR management in project-based industries can hardly be understood as a neatly tiered and cascaded function, but that it needs to be conceptualized as a loose aggregation of practices that are geared towards a complex organizational and institutional environment, in which analytically distinct organizational forms collapse and amalgamate in practice.

We have used the case of VFX production as an example of how analytically focusing on practices might be a useful way to uncover the properties of the organizational context in its totality rather than its distinct parts. Rather than finding a clear hierarchy of levels of management authority we could observe an almost heterarchical structure with HR practices spread across different levels of the production processes and social entities (firms, projects and networks) (see also Stark, forthcoming). The described properties of the organizational frame are by no means complete or exhaustive, though, and more could be said about the institutionalized environment such as legal and labour regulation or training and education systems. However, ignoring organizational properties like ambiguity, organizational slack, structural overlap and simultaneity in project management is likely to cut-off projects from an organizational ecology that helps to keep project-based industries running.

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