

# **Binding Human Resources in Project Networks: Theoretical Concepts and Empirical Insights From the TV Industry**

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**Abstract.** This paper examines how human resources are bound in project networks of TV production. It indicates how TV producers maintain market relationships to pools of staff such that they can flexibly draw on and withdraw from creative potential as needed. At the same time, it shows how ties develop within and between those pools so that relationships stabilize over time. The findings are based on a number of expert interviews and a structural network analysis of the project network of a famous German TV production company.

**Keywords:** Project Network, Human Resource Allocation, Structural Network Analysis, Flexibility, Television Industry

## **1. Introduction**

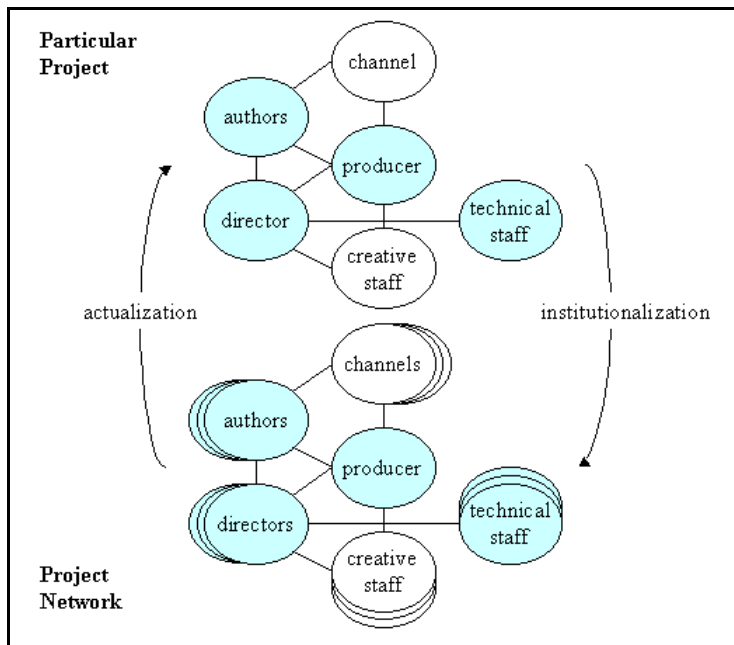
In many industries today, work is becoming more and more projectified (Midler, 1995). Typically, project-based work is assumed to be situated in matrix organizations which have been examined in detail (Payne, 1995; Eskerod, 1998). In the TV industry, however, a rather different form of organization has been identified: the project network. Unlike matrix organizations, project networks stretch beyond the boundaries of the firm, yet do not dissolve fully into the market. Rather, they take volatile positions in between, so that they, in turn, allow for short-term flexibility *and* long-term stability in allocating and coordinating human resources (Jones, 1996; Windeler/Sydow, 2001).

How human resources are bound and allocated in project networks, however, has rarely been scrutinized in detail. In particular, the development and dynamics of human resource pools lack understanding. To approach this issue, first, project networks are looked at theoretically with regard to human resource linkages. Second, the case of Colonia Media, a German TV production company, is introduced. A small segment of the company's project network is then examined from an aggregate and dynamic perspective by means of structural network analysis. The findings are finally discussed in terms of their implications and limitations for further research in this field.

## 2. Theoretical Concepts

The heuristic model of *project networks* has been developed to show how actors are coordinated within and beyond particular projects. TV production firms usually employ staff only on a contract basis to minimize fixed costs and to respond flexibly to changing customer demands for creative content (Windeler/Sydow, 2001). However, to guarantee for long-term success, producers develop and maintain contacts to pools of content developers, in particular directors and authors, but also to casting agencies and channel representatives. Directors, in fact, develop their own pools of technical staff. Project networks, however, are not fixed structural settings but are reproduced and refreshed dynamically with every new project (see figure 1).

**Figure 1:** Project network in the TV industry (Windeler/Sydow, 2001, modified)



To elaborate how human resources are bound in project networks, an organizational perspective is taken which emphasizes the *dynamics of linkages* between actors. Unlike in psychological studies (e.g. Mowday et al., 1982), linkages are here understood as (structural) conditions and outcomes of resource allocation. In project networks, those linkages are situated in pools of relationships which emerge and are reproduced over time. To exemplify this, the (producer's ties to) pools of authors, directors and technical staff (camera) are examined in detail as highlighted in figure 1. In addition, the career paths of central actors, i.e. their histories of embeddedness, are investigated, which is to substantiate the idea that in this industry personal bonds and team linkages play a key role in positioning in project networks (Grabher, 2002; DeFillippi/Arthur, 1998).

### 3. Empirical Insights: The Case of Colonia Media

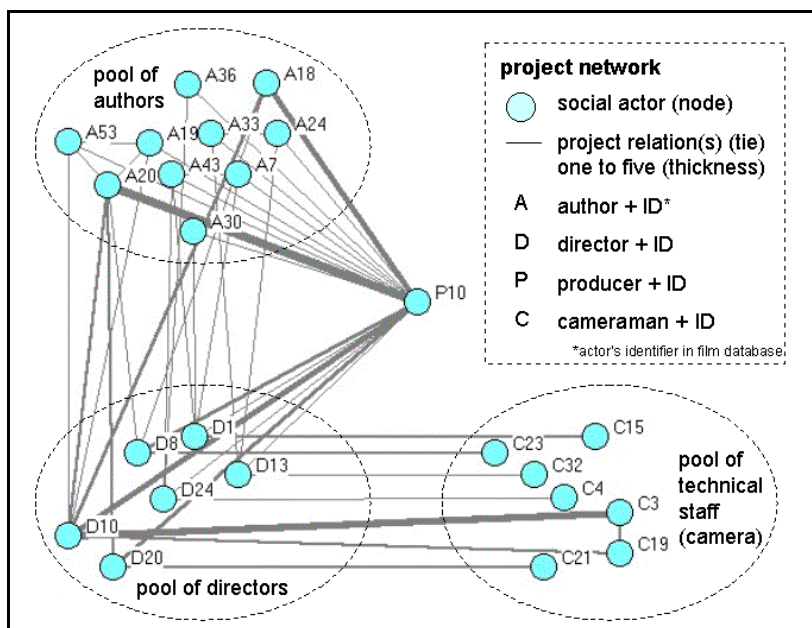
#### 3.1 Methodology

To study project networks empirically, the case of Colonia Media is taken, which is a German TV production company located in Cologne. The company is famous for its detective series. In this study, one segment of their project network – the Schimanski series (12 TV movie productions, 1997-2003) – is scrutinized. The model of figure 1 is applied to display all authors, directors and technical staff (cameramen) who have taken part in the series, grouped by their respective pools. Ties within and across pools are defined over (the number of) project relations between actors. First, the strengths of ties in this network are looked at, on aggregate. Next, the dynamics of ties is focused on. As analytical tools, UCINET and NetDraw have been used (Borgatti et al., 2002).

#### 3.2 Empirical analysis of the Schimanski series project network

For the Schimanski series, ten authors, six directors and seven cameramen have been employed by the producer, altogether. Most of them have worked only once for the series (weak tie). Some, however, engaged repeatedly up to five times, such as author A20 (strong tie). Figure 2 shows all project relations between all actors on aggregate.

*Figure 2: Project network of the Schimanski TV movie series (1997-2003)*



To elaborate the *tie structure of the project network*, densities and strengths of ties within and between pools are displayed in table 1. It shows that the density of ties, i.e. the actual ties in proportion to all potential ties, between directors and authors is higher (0.23) than between directors and technical staff (0.17), which means that relations between the former fluctuate more than between the latter. Correspondingly, the average strength of ties, defined as the number of actual project relations, between authors and directors is fairly low (1.21), compared to the strength of ties between technical staff and directors which is almost the highest possible (2). This demonstrates that TV producers indeed shuffle teams of authors and directors over time to some extent, but leave existing relations between directors and technical staff untouched (or: directors refuse to change their technical staff regardless of what TV producers might recommend).

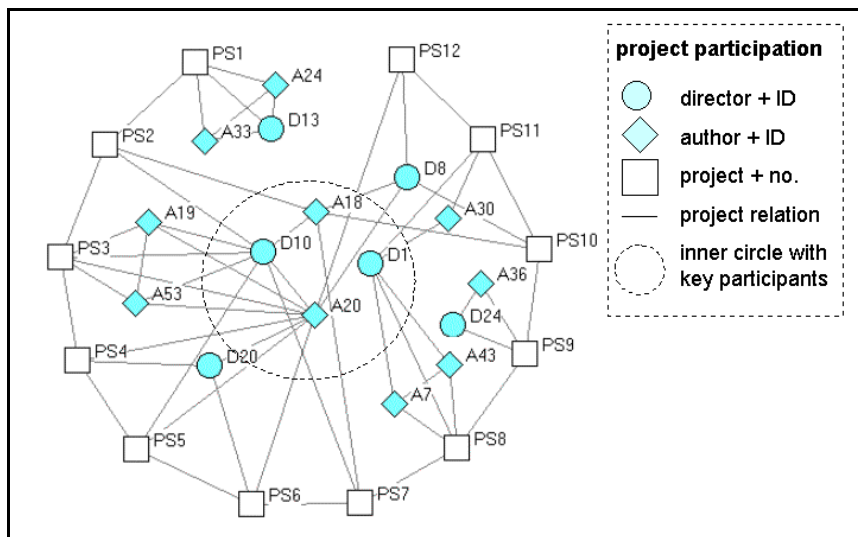
**Table 1:** *Symmetrical ties (density / average strength) within and between pools*

	Producer	Authors	Directors	Technical staff
Producer	-	<b>10 (1 / 1.6)</b>	<b>6 (1 / 1.7)</b>	0 (0 / 0)
Authors	<b>10 (1 / 1.6)</b>	5 (0.11 / 1)	<b>14 (0.23 / 1.21)</b>	0 (0)
Directors	<b>6 (1 / 1.7)</b>	<b>14 (0.23 / 1.21)</b>	0 (0 / 0)	<b>7 (0.17 / 2)</b>
Technical staff	0 (0 / 0)	0 (0)	<b>7 (0.17 / 2)</b>	1 (0.05 / 1)

These findings correspond to what producers of Colonia Media and other companies tell about team packaging. For each film project, authors are key actors when it comes to creating content in the first place. Only after the script has been accepted by the channel, directors are chosen for the script implementation. Directors, in turn, keep long-term relations to their technical staff who they can rely on for further projects. Interesting however is the huge number of authors (10) engaged in this series. One reason might be that, to promote innovative content development, the producer tries to combine new talents (A53, A19) with experienced authors (A20) from time to time, which is a measure he can apply as the director of a local authors' training school. This shows how important it is to look behind the structure of the project network which itself only represents a fragment of the entire network of relationships.

However, to understand the *dynamics of tie structure in this project network*, yet a different perspective must be developed. A dynamic positional analysis is employed to account for the project relations actors share with others, in conjunction with their participation in succeeding projects. Unlike in figure 2 where the difference of tie strength within and across pools is displayed, figure 3 shows how project participation and team relations develop over time. For simplicity reasons, the producer and the technical staff are taken out of the model. Instead, all single projects (PS1 to PS12) are displayed and introduced as nodes in the diagramme. This model resembles a two-mode network as it shows relations among and between actors *and* events.

**Figure 3:** Development of project relations along the line of Schimanski productions



The figure shows the *team structures of each project and the ties across those structures* beyond particular projects. The actor nodes are arranged such that they show their dynamic centrality in the network. While most actors are located at the periphery, D10, A20, A18 and D1 are placed in the inner circle. Having this in mind, participation patterns along the line of projects can be analysed. To start with, the teams around PS1 and PS9 stand quite isolated from the others which indicates their low level of participation in the project network. In contrast the teams related to PS3 to PS7, PS10 and PS12 are interconnected via D10, A20 and A18 as central actors. Finally, the teams around PS8 and PS11 are linked via actor D1. As for individual project participation, some project relations spread out in time, such as of A18 (PS2, PS7, PS10), others concentrate in time, such as of A20 (PS3-PS6, PS12).

The reason why the *number and distribution of project participation* vary among actors might be due to their multiple engagements in different networks, the variety-seeking human resource strategy of the TV producer or simply just chance. Notably, however, some relations stand out which must be looked at more closely. The most central actors in this picture, based on the crude measure of the number of their actor and project relations (degree), are D10 and A20 (degrees of 8 and 10). In fact, D10 and A20 even worked together in two projects (PS3, PS5). Looking back in history, D10 had been the director of quite a number of Tatort films which are the predecessors of the Schimanski TV movie series. Similarly, A20, among others, had written the scripts for some Tatort episodes, notably for the first one in 1981 when D10 was director as well. Though this is just anecdotal it shows how project relations co-develop over time, yet vary significantly for each project. This is (made) possible because, over time, social actors get embedded in larger team structures within and across pools which allow for short-term flexibility and long-term stability in project (network) participation.

## 4. Conclusion

The model of project networks serves well as a framework for analysing how human resources are bound to and across projects and project pools in the TV industry. In this pilot study, the project network of the Schimanski movie series has been elaborated. The empirical project relations between authors and directors, as well as between directors and technical staff resemble to a great extent the propositions made by the model. In addition, the quality of pools as flexible resource potentials for projects could be demonstrated. However, the structural dynamics of tie development within and across pools is not captured by the model and still lacks understanding. The paper indicates that, in the long run, flexible meta-structures develop across pools which some actors belong to, others do not. These structures, it seems, must be looked at from different time perspectives to learn about their impact on the flexibility and stability of human resource allocation in project networks in the TV industry and beyond.

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