# OPERATIONALIZING THE CONCEPT OF

# CONFLICTING FUNCTIONAL DEMANDS

Forthcoming in *European Management Review*

**Nicolay Worren**
Norwegian University of Life Sciences (NMBU)
School of Economics and Business
P.O. Box 5003
1432 Aas
Norway
Tel: +47 91 000 693
E-mail: nicolay.worren@nmbu.no

**Abstract**

A number of authors have described the challenge of managing organizations that are subject to conflicting functional demands. These authors belong to different sub-disciplines of the field, and have demonstrated that conflicting external demands may result in inconsistent strategies, organizational structures, and management practices. Although the issue is widely recognized, the concept of "conflicting functional demands" has rarely been operationalized. The lack of operationalization complicates the interpretation of existing research. It also leads to weak prescriptions for practice. The question raised in this paper is thus how we may operationalize this concept and assess it empirically. The key proposal is to separate between function and structure (or ends and means) and to define functional conflict as a negative interdependency between a particular function (e.g., a goal or requirement) and a structural element (e.g., an organizational unit). This reconceptualization suggests an alternative manner in which to test dualistic models that contain two opposing factors, such as exploration vs. exploitation, related vs. unrelated diversification, or broad vs. narrow strategy.

*Keywords:* Functional conflict; organization design; strategic management; operationalization

**OPERATIONALIZING THE CONCEPT OF**

**CONFLICTING FUNCTIONAL DEMANDS**

Large and complex organizations tend to operate in an environment that pose conflicting functional demands. In the short term, they may face pressures for improved profitability. In the long term, they may need to develop new products or services to stay competitive. Some companies, such as multinational technology firms, may have subsidiaries that serve customers that expect customization of products to their particular needs. But the market that the firms operate in may at the same time reward those firms that are able to achieve global integration, which requires standardization of products. Other companies, such as consumer goods firms, address more than one market segment at the same time. They offer simple, low cost products or services to customers in a budget segment. But they may also target a premium segment, with customers who are willing to pay higher prices for sophisticated products and services.

Conflicting functional demands create considerable challenges for managers, who must select among (or try to balance) contradictory systems, practices, and structures in order to meet the demands. For example, a separate Research & Development group may be established to create future products and services, but such a group may be less able to contribute to short term, incremental improvements in existing product and services. A geographically structured organization, with national or regional units, may be the best choice for a multinational firm that seeks to increase its ability to address local customer requirements, but it may not be optimal in terms of achieving global integration. Creating two different business units, one targeting the budget segment, and the other the premium segment, may be a solution for some consumer

goods firms, but may hurt the ability to leverage common processes and technologies across the two segments.

Such dilemmas have long been recognized by authors in several different sub-fields. They have been referred to as *conflicting functional demands* in the organization design literature (Child, 1984; Donaldson, 2001); *conflicting logics* in institutional theory (Greenwood et al., 2010), *negative synergy* in strategic management (Mahajan & Wind, 1988), and *role conflict* in organizational behavior (Rizzo, 1970) .

The importance of the issue is widely recognized and this has spawned a number of studies of how organizations respond when they are subjected to conflicting functional demands (e.g. , Payne, 2006; Pache & Santos, 2013; Van de Ven & Ferry, 1980; Greenwood et al., 2011; Jarzabkowski et al., 2013; Smith et al., 2010). Although the issue is widely recognized, the underlying concept has rarely been operationalized or measured directly (Gresov & Drazin, 1997). This means that a key moderating variable – and in some cases a potential cause of important phenomena - remains unsubstantiated in the extant research. For example, in the ambidexterity literature, the processes and structures aimed at furthering *exploitation* are assumed to be in conflict with processes and structures aimed at furthering *exploration*. But what if some of the processes and structures that are intended to support exploitation, such as routines and control systems, also aid in pursuing exploration, and vice versa? (Farjoun, 2010) The goals of exploitation and exploration are viewed as dichotomous. Yet we may ask *to what extent* these two goals are in conflict. One can imagine that there in fact is a continuum (when considering the situation in different firms or sub-units), from a strong degree of conflict, to a weak degree of conflict, in which case the two goals may be pursued in parallel, without extensive organizational

adjustments. But only operationalization and subsequent measurement of the concept can confirm whether this is the case or not.

A lack of operationalization also means that we can only produce weak prescriptions for managerial practice. In the strategy literature, for example, a key prescription for multi-business firms is to separate units that pursue different (and potentially conflicting) strategies, such as differentiation and cost leadership (Porter, 1980). However, to my knowledge, no method has been proposed that can aid managers in evaluating when a given level of difference or conflict becomes dysfunctional and should result in such a separation.

The question raised in this paper is thus how we may operationalize the concept of competing functional demands – or  more simply *functional conflict* - and assess it empirically. Building on the work of system theorists like Suh (2001) and Gresov & Drazin (1997), I argue that it is necessary to separate between *functions (ends) and structure (means)* in order to define this term. Having made this fundamental distinction, I then outline an approach for empirical measurement.

The article is structured as follows. I first review how this phenomenon has been described in various strands of the strategic management and organization theory literature. I then define the term "function" and describe why a functional approach may help address the current challenges related to the concept of conflicting functional demands.  I propose a way of operationalizing the concept as well as a specific procedure for identifying functional conflicts in organizations using a combination of interviews and survey questionnaires (in the appendix). I end with a discussion of some broader implications of this approach for research on ambidexterity, diversification and broad versus focused strategies.  The aim of this article is to

contribute to conceptual clarification and to identify an indicator that can be utilized by both scholars and managers to assess the degree of functional conflict.

## AN OVERVIEW OF THE LITERATURE

The key issue of interest here has been discussed by many authors, belonging to different sub-disciplines of management.

In strategic management, Porter (1980) described two generic strategies (cost leadership and differentiation) and argued that they were in conflict[i]. He claimed that a firm will compromise its ability to achieve competitive advantage if it does not make a choice between these generic strategies. The key argument was that efforts at achieving differentiation are costly, and thus incompatible with a cost leadership strategy. However, a large firm may be able to combine different strategies as long as it separates sub-units pursuing different strategies. A specific example that was mentioned is a British hotel firm with five different chains, each targeting a different customer segment.

A related, but less well developed, concept in the strategic management literature is that of *negative synergy[ii]* (Mahajan & Wind, 1988). Scholars who have examined corporate mergers and acquisitions have argued that potential positive synergies between two companies are often exaggerated and that potential negative synergies are frequently neglected (Shayne Gary, 2005; Shaver, 2006). The result is that the realized profits of the merged entity will be less than the profits of the independent entities prior to the merger. An example (cited in Johnson et al., 2009) is the 2008 acquisition of Merrill Lynch by Bank of America. Merrill Lync lost business

after the merger because it was no longer allowed to advise on deals targeting corporations that were lending clients of Bank of America.

Another area in strategic management that deserves mention is the research on strategic decision making processes. A general finding in this literature is that there is a tendency in decision making situations to start searching for a solution at an early stage, instead of investing time in defining the problem (Baer et al., 2013). Frequently, the search is dominated by one particular requirement, such as the need for cost reductions (Nutt, 2002). A more careful consideration may have uncovered other requirements, such as a need to improve customer service, that may be negatively affected by the proposed solution to reduce costs. Various approaches for managing strategy processes, and problem solving more generally, assume that the quality of the solutions that are generated will increase if one is able to include a consideration of multiple (and potentially contradictory) goals and requirements in the formulation of the problem (e.g., Nutt & Backoff, 1993).

If we turn to organizational theory, we find a similar situation, where this phenomenon is described in several different strands of the literature. The key assumption in *contingency theory* (Donaldson, 2001) is that there is no universally valid organizational form, and that managers must adopt an organizational structure that reflects the demands in the business environment (as well as the organization's own strategic intent). In the original version of this theory, it was assumed that one particular structural option would fit a particular contingency factor. A classic example would be a manufacturing firm with one main product. For such a firm, a simple organization with departments for sales, engineering, production, and so on will suffice. In contrast, a firm that serves diverse customers with a range of different products may need to

adopt a multidivisional structure. A more recent example would be the prescriptions for traditional, product oriented firms versus firms offering solutions (i.e., customized combinations of products and services). Whereas product oriented firms can be organized by product, solutions-oriented firms need to adopt an organizational structure based on customer segments (Day, 2006; Galbraith, 2002)

Yet Child (1984) argued that managers often face multiple contingencies, with different structural implications for the design of the organization. He concluded that this problem had not been recognized sufficiently, and that it is a key limitation of the contingency approach. However, he also mentioned that it may be possible to satisfy two conflicting requirements (or contingencies) simultaneously by internal differentiation, such as when companies split into two business areas, one employing mass-output, standardized technology to meet a stable environment, and another employing more flexible processes to customize products to individual customers.

This idea is developed more extensively by authors interested in *organizational ambidexterity*, although most of the theorizing and empirical studies in this area have focused on one particular challenge, namely, that of balancing exploitation (i.e., achieving short term profitability or efficiency) and exploration (i.e., longer term innovation). As in the examples cited above, the main intervention that has been prescribed is internal differentiation, i.e., separation between units facing different requirements. More recently, authors have also begun to investigate alternative ways of achieving ambidexterity that does not necessarily require structural separation (e.g., Birkinshaw & Gibson, 2004).

A similar concept is also discussed by authors within *institutional theory* (e.g., Pache & Santos, 2013) and *resource dependency theory* (Pfeffer & Salancik, 1978). Compared to the theories mentioned above, these authors incorporate stakeholders more explicitly. The main argument is that organizations must meet the interests of different stakeholders or interest groups (e.g., customers, suppliers, government), and that these are frequently incompatible with each other. This literature is typically less rationalistic in its orientation, in describing various political and symbolic tactics that managers use to respond (or give the impression of responding) to conflicting institutional demands (e.g., Oliver, 1991).

We may also consider *conflicts of interest* as a potential cause of functional conflict. This issue is at the heart of agency theory (Jensen & Meckling, 1976), which considers the relationship between shareholders and managers in firms. The key assumption is that shareholders (the principal) and managers (agents) have competing goals that they seek to maximize. This gives rise to so-called agency costs (e.g., the cost of monitoring the agent's actions) when the principal delegates authority to the agent. Traditionally, agency theory has held an "outsider" perspective on corporate governance, but Child & Rodrigues (2003) argued that one may use the same approach in considering the relationships inside an organization, such as between top managers, making strategic decisions, and lower level managers, making tactical and operational decisions.

At the individual level, a related term is *role conflict*. It has usually been defined in terms of its effects: Rizzo (1970) defined role conflict as stress and dissatisfaction that role holders experience as a result of being subjected to conflicting expectations from different superiors. A related issue is role ambiguity, i.e., a lack of clarity with regards to expectations. Both have been

extensively studied by scholars in organizational behavior (for a review, see Van Sell et al., 1981). Traditionally, one has assumed that role conflict and ambiguity were caused by a violation of the classic administrative principle of single accountability (i.e., that each employee should be accountable to only one superior) (ibid.)[iii].

In the literature on international management, the external market demands are often characterized by means of the integration-responsiveness framework (Bartlett & Ghoshal, 2000; Doz, 1986). Some firms primarily face demands for responsiveness to local demands (e.g., firms in the food industry, which are highly dependent on local consumer tastes). Such firms usually organize themselves as a network of independent country subsidiaries. Other firms primarily face demands for global integration (e.g., manufacturers of products such as PCs, which are similarly configured around the world). Firms in this category usually consolidate their activities globally. But there are also a subset of firms that face equally strong pressure for responsiveness and global integration (called a "transnational environment") and which require a combination of structural and cultural means to achieve both differentiation and integration across countries (Ghoshal & Nohria, 1993).

Each of the theories reviewed so far focuses on one particular type of conflict, or a specific unit of analysis. But more generic models have been also been proposed. The identification of functions, and the resolution of functional conflict, was a key element in Russell Ackoff's contribution to systems theory (Ackoff & Emery, 1972; Ackoff, 1971). Nam Suh (2001), a scholar in the engineering sciences, argued that functional conflict (or what he termed "coupling") is the main cause of complexity, and that minimization of functional conflict should be a key goal for the design of both physical and social systems.

An overview of concepts in the existing literature related to conflicting functional

demands is listed in Table 1.


_ _ _ _ _ _ _ _ _ _ _ _ _ _


Insert Table 1 about here


_ _ _ _ _ _ _ _ _ _ _ _ _


## ANALYSIS AND EVALUATION


This review of extant research covers authors from a range of sub-disciplines and

theoretical perspectives, using different terms and studying different aspects of strategies and

organizations. Nonetheless, they all describe a similar phenomenon, the fact that organizations

(or sub-units or individuals within organizations) are sometimes subjected to two or more

conflicting demands. Many authors assume that conflicting demands will generally lead to poor

performance, as managers are forced to either prioritize one demand or requirement at the

expense of the other, or make trade-offs that result in mediocre performance with regards to each

of the requirements (e.g., Gresov, 1989; Payne, 2006; Greenwood et al., 2011)[iv].

However, operationalization is a weakness in the current literature. The concept is sometimes invoked as an explanation for an empirical result, but without having been measured directly. Two examples from the strategic management literature may illustrate this challenge. Yin & Zajak (2004) compared the performance of two categories of pizza restaurants: Restaurants that offered one type of service (either dine-in or delivery) or two types of services (both dine-in and delivery). They found that, on average, firms pursuing two types of service perform worse than those that focus on one type of service. They explained that the cause of this result is that having two types of services represents a more complex strategy, and that a complex strategy is "more likely to be subject to conflicting demands and can create uncertainty and instability in organizations" (p. 371). In a somewhat similar study, Huckman & Zinner (2008) compared *focused and unfocused firms* in the biopharmaceutical industry. They found that focused firms achieved higher output and productivity than unfocused firms. The explanation is that a lack of focus (i.e., broader, or mixed, strategies) implies that the firm is engaged in "conflicting or competing operational activities" (p. 177). This explanation is certainly plausible and logical. However, the concept of conflicting demands (or activities) is not operationalized or assessed: It is assumed to exist, or assumed to cause an observed effect (i.e., poor performance), but it has not been measured directly. For this reason, we do not know what the *degree* of conflict was between the competing goals or activities in the firms studied.

Similarly, in the ambidexterity literature, a conflict between exploration and exploitation is usually assumed, but rarely examined directly. There are many studies that make use of questionnaires to measure the degree of exploration and exploitation in a firm (e.g. , Wong et al., 2007; Cao et al., 2009; Jansen et al., 2012; Lubatkin et al., 2006). Yet in none of the studies I

have reviewed is there an explicit assessment of the degree of conflict between exploration and exploration. There are several alternative definitions of these concepts (see Popadiuk, 2012 for a review). But typically, authors have constructed a questionnaire and asked managers to rate the importance of different activities in their organizations that are assumed by the researcher to contribute to either exploration or exploitation (for example, "We experiment with new products and services" or "We increase economies of scale in existing markets" (Jansen et al., 2012, p. 1292-93)). However, although such activities are different, they may or may not be in conflict. For example, some management practices and processes, such as quality or control systems, may be categorized as belonging to exploitation, but it does not necessarily imply that they impede exploration. Similarly, learning processes may be categorized as belonging to exploration, but may in fact also be beneficial for exploitation (Farjoun, 2010; Craig, 1995).

Essentially, a lack of operationalization (and empirical measurement) of the degree of conflict in functional demands means that an element in the causal chain remains unsubstantiated. It remains unclear why two or more demands or requirements are in conflict in the first place, and the extent to which they are in conflict (if one assumes that it is not a binary but a continuous relationship between them). Subsequently, it also becomes difficult to evaluate the performance outcomes of conflicting demands. This is problematical for strategic management and organizational theory, because there is already considerable uncertainty about the causality with regards to the linkages between external demands, the strategies or goals that are adopted by firms, choices with regards to organizational design, and performance effects (cf. Child, 1984). There is inconclusive empirical support even for some of the most popular

management and organizational theories (Arend, 2006; Carter & Hodgson, 2006; Hill, 1988; L. Donaldson, 1995; Pfeffer, 1997).

A lack of operationalization also weakens the prescriptions that we can derive from the research. The majority of managers will probably agree that one should try to avoid strategies that are conflicting, or avoid merging firms or sub-units with "negative synergy". But they may find it difficult, without clear criteria, to identify exactly when and how strategies or organizational designs actually contain such conflicts. The most well-known management tools do not seem to include this consideration. For example, in the balanced scorecard methodology (Kaplan & Norton, 1996), there is a tool (called Strategy Maps) for visualizing the linkages between strategies, goals and KPIs. However, it does not include a technique for identifying which goals or KPIs that may be in conflict. Similarly, a well-known framework for organization design, the so-called Star model (Galbraith & Kates, 2007), emphasizes the need for alignment between strategy, structure and processes in an organization, but does not contain guidelines for dealing with conflicting strategies, or criteria for separating sub-units that have mandates that are incompatible with each other.

The absence of operationalization (that may be developed into prescriptions, such as diagnostic tools with decision criteria) may lead managers to ignore or underestimate conflicting functional demands. On the other hand, without operationalization and measurement of the concept, there is also the possibility that one may *overstate* the existence and prevalence of conflicting functional demands. Within organizational theory, two different approaches - institutional theory (Scott, 1995) and resource dependency theory (Pfeffer & Salancik, 1978) - rely on the argument that organizations must meet the interests of different interest groups, and

that these are frequently incompatible with each other. However, Donaldson (1995) argued that authors in these fields have exaggerated the problem. He pointed out that the result of one of the key studies (Friedlander & Pickle, 1968), which Pfeffer & Salancik (1978) cited in support of their argument, actually suggested that members of different stakeholder groups do *not* have conflicting interests and actually *share* interests to a great extent.

The question is thus how we can operationalize functional conflict and analyze the concept more explicitly, both in a practice setting (e.g., when formulating a strategy or designing an organization) and in theory development and testing. Two main issues need to be considered: The definition of the concept and the measurement approach.

## PROPOSED APPROACH

**Definition**

Within the contingency school in organizational theory (L. Donaldson, 2001), it has been fairly common to relate external demands directly to organizational structure (e.g., Egelhoff, 1982) (the relationship marked c) in Figure 1). For our present purposes, however, it is necessary to introduce an intermediate level, or domain, between external demands on the one hand, and structure or practices, on the other. This domain is that of *functions,* or functional requirements, to borrow a term from engineering. A function is here defined as *a desired outcome.* An "outcome" is the product of an individual's or a system's actions (Ackoff & Emery, 1972). At the firm level, functions may be viewed as an operationalization of the firm's mission, but they may also be expressed in other ways (e.g., in the form of strategies, goals, etc.). Similarly, at the

sub-unit level, the function of a sub-unit can often be derived by considering the sub-unit's

purpose, mission, or mandate (e.g., "provide customer service", "manufacture high quality

products", or "ensure compliance to policies and regulations"). In order to perform the functions,

on needs a structure. In engineering, structure as defined here is equivalent to "design

parameters" (Suh, 1990). In the present context, a structure may be an organization (or a sub-unit

within an organization) and/or management practices/processes.


_ _ _ _ _ _ _ _ _ _ _ _ _ _


Insert Figure 1 about here


_ _ _ _ _ _ _ _ _ _ _ _ _ _


As pointed out by Gresov & Drazin (1997), structure does not equate to function:

External demands dictate the functions that an organization must perform (the relationship

marked a) in Figure 1), but not the specific structure (the relationship marked c) in Figure 1). The

reason is the possibility of equifinality, which implies that the same set of functions may be

satisfied in different ways (the relationship marked b) in Figure 1). As an illustration, all banks

need to manage risk, including assessing the creditworthiness of borrowers (i.e., credit risk).

Hence this is a required function that must be performed in order to run a bank successfully. Yet

different banks have allocated the responsibility for making credit decisions differently. In the

European market, for example, most banks require centralized approval of major credit

decisions. But one bank, Handelsbanken, has succeeded with an organizational model where 95% of credit decisions are taken at the local level (e.g., by a branch manager) (Nicholls, 2011). Even for more traditional banks, there is considerable variation with regards to the processes used for evaluating creditworthiness and the allocation of responsibility for such decisions (Treacy, 1998).

A functional conflict exists when there are two or more functions, and when efforts to satisfy one of the functions (e.g., the implementation of certain organization designs or management practices) will negatively affect the ability to satisfy the other function(s), and vice versa (Suh, 2001)[v]. This situation is illustrated in Figure 2a, which shows two hypothetical functions of a multinational technology firm that delivers complex products to customers. We assume that the firm consists of two types of organizational units: global products units (responsible for product development and manufacturing) and country subsidiaries (responsible for sales in their respective markets). The two functions may be negatively related if the firm has a traditional, integrated product architecture. Attempts at fulfilling function 1 - "Minimize product development and manufacturing costs" – may then compromise the ability to satisfy function 2 – "Adapt products and processes to local customer needs". This may occur if efforts at minimizing costs globally leads to the removal of product features that are necessary to win business in some regions, or, conversely, if attempts at satisfying customer requirements in one particular country or region requires costly changes to products that have been standardized globally.

– – – – – – – – – – – – – –

Insert Figure 2A about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Another example may be the challenge faced by newspapers after they introduced online news sites in addition to the print publications. As explained by Tameling & Broersma (2013), "newspaper journalists suddenly had to serve a new medium with a different rhythm and news cycle, a distinct writing style and format, and a deviating set of norms" (p. 20). A few newspapers ceased their print publications and solely publish online. Yet the majority of newspapers continued with print and online editions. Many of them have followed a "convergence" strategy where one integrated newsroom was supposed to serve both platforms. This may lead to a functional conflict, as illustrated in Figure A. Attempts at fulfilling function 1 - "Publish in-depth, investigative articles for print version of newspaper" – may compromise the ability to satisfy function 2 – "Aggregate fast and free news to newspaper website", as they imply different – and conflicting - journalistic practices.

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Figure 3A about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

**Resolution of conflict**

The introduction of a distinction between function and structure provides a means for

conceptualizing the *resolution* of functional conflict. A functional conflict is usually caused by

competing external demands or contingencies that the organization faces. But it also influenced

by our ability to conceive of innovative ways of designing the organization to fulfill its functions.

Although it may be statistically rare, it is possible to imagine that managers sometimes are able

to develop organizational designs that *reconcile* conflicting functions, without resorting to

compromises or trade-offs (i.e., that allow the organization to fully satisfy two functions that

were previously considered to be in conflict) (Ackoff, 1999; Ackoff & Emery, 1972). As

mentioned above, a multinational technology firm may have struggled with the balance between

global versus local focus, as illustrated in Figure 2a. But there are technical solutions, combined

with new organizational designs, that may make it possible to reconcile this conflict. The two

functions may be fulfilled simultaneously, if the firm implements a modular product architecture.

A modular product architecture specifies standard component interfaces that are not allowed to

change during a certain period (Sanchez & Mahoney, 1996). It allows a firm to combine

flexibility (mixing and matching components into new configurations) with efficiency (by re-

using standard components).  It may also enable an organizational structure that centralizes

19

architectural decisions yet preserves the ability of local units to configure products in

collaboration with its customers (ibid.) (see Figure 2B).


_ _ _ _ _ _ _ _ _ _ _ _ _ _


Insert Figure 2B about here


_ _ _ _ _ _ _ _ _ _ _ _ _ _


For newspapers, one strategy that may remove (or at least lessen) the functional conflict

described above is "de-convergence". As an example, in 2011 the Dutch newspaper *de*

*Volkskrant* dismantled the integrated newsroom and created one newsroom for the print edition,

and another newsroom for the online edition of the newspaper. The newspaper journalists were

told to focus on quality journalism while the online journalists were expected to produce as many

news stories as fast as possible, often using external sources including blogs and social media

(Tameling & Broersma, 2013) (Figure 3B)[vi].

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Figure 3B about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

**Proposed operationalization**

In the field of engineering, Suh (1990) has proposed that functional conflict (or what he termed "coupling") can be documented by means of a "design matrix" like the one shown in Table 2a and 2b. To construct the matrix, one first identifies the main functions of a system and the main design parameters (i.e., organizational units, roles, processes, etc.) corresponding to each function (Worren, 2014). One then considers whether each function (or functional requirement) is independent or not. The key question, following the definition above, is whether efforts can be taken to fulfill the function in question, without negatively impacting the ability to fulfill other functions. The ideal, according to Suh, is to have an "uncoupled" matrix – one where there is a 1:1 relationships between functions and design parameters, and no off-diagonal marks (Table 2b). In the organization design context, this means that each unit in an organization can take measures to fulfill its main function (or mission/mandate) without negatively affecting the ability of other sub-units to fulfill their main functions.

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Table 2A about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Table 2B about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

**Level of analysis**

The concept of functional conflict as defined here is derived from general systems theory (Ackoff, 1971) and is independent of the level of analysis. Instead of considering the entire organization, one may consider the sub-units within the organization, such as divisions or business units. As an example, Markides & Chu (1999) studied 136 divisions within Taiwanese firms, and found that 97 of the divisions faced "strategic ambiguity", defined as a situation where they are facing conflicting demands (p. 9). One may also consider functional conflict at the project level (e.g., in considering different project requirements related to time, quality, and cost) (e.g., Levitt et al., 1999) or at the individual level (e.g., in considering the multiple demands faced by an employee who must serve two or more customers with different requirements, or who reports to two or more managers in a matrix organization) (Rizzo, 1970).

**Negative versus positive relationships**

Although this framework originated within the engineering sciences (Suh, 1990, 2001), it may be adopted as a tool to document functional conflicts in organizations. However, one aspect of this approach that may not be transferrable to the social sciences is the fact that it only considers negative relationships (i.e., conflict): The opposite, namely a positive or synergistic relationship between two functions, is not considered[vii]. When analyzing social systems, it might be necessary to conceptualize the relationship between two functions as a continuum, and allow for the possibility of positive relationships between functions (as in Wind & Mahajan, 1985). In other words, the key question is *to what extent* a given design parameter (an organizational design or management practice) contributes to fulfill a given function. This leads to a modification of the design matrix proposed by Suh (1990) (as illustrated in Table 3) (See the appendix for details regarding the procedure that may be followed to produce such a matrix).

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Table 3 about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

**Types of data**

As with many other constructs, functional conflict may be assessed in two different ways, either using internal, perceptual assessments, or by using external, objective data. In both cases,

23

the first step would be to identify a set of functions based on, for example, the mission and strategy of an organization, or a description of the mandate of a sub-unit. One would then identify the main design parameters (i.e., the organizational designs and management practices that have been implemented to fulfil the functions).

In an internal assessment, one would tap managers' perceptions regarding the degree of functional conflict, by using a questionnaire and asking them to consider how each of the design parameters contribute to each of the functions (negatively or positively) (cf. the Appendix). We would expect to find some degree of variation among managers in their ratings. But the degree of consensus with regards to the ratings is itself an important variable, which may be the basis for an intervention. If there is little consensus, it may help explain, for example, the stance of different managers with regards to proposed organizational changes (e.g., some may perceive a conflict between two functions performed by a unit, and subsequently favor a proposal to split the unit in two smaller units. Others may oppose such a change, because they do not perceive there to be a conflict).

The other main alternative is to collect "objective" data. This is particularly relevant in an organization re-design context, if managers are uncertain about whether a certain combination of sub-units is feasible or not. One illustration, from the author's own experience, is a small IT firm that develops software packages, provides user support, and corrects technical errors in the software. In 2015, this firm reviewed its organizational structure, including the grouping of the different teams. One question that arose in this process was how the team that handles incidents (i.e., minor technical issues with a known solution) should be organized. It consisted of only three people and it was considered too small to be organized as a stand-alone unit (most of the

teams had 6 to 10 members). It could be integrated with the "problem management" team that handles more complex technical problems (which requires the development of a new solution). But it could also be merged with the customer support team, which handles the incoming calls and provides guidance to users. In terms of work process interdependencies, the incident team was moderately strongly connected to both of the two other teams, so it was unclear which of the teams it should be integrated with. From our perspective here, the question was whether there was a functional conflict between the incident handling team and customer support team, or between the incident handling team and the technical problem solving team. This firm inferred the answer by comparing the experience from similar firms that had tried either of the main design options that were available. The literature on the design of IT organizations strongly advised against combining incident handling with problem management, as these two units have conflicting priorities (i.e.,, conflicting functions)(Bon, 2008). Incident handling needs to provide urgent response to restore services, while effective problem resolution requires more in-depth and time consuming investigation. The risk is that problem resolution activities will be de-prioritized (as they are less urgent) in a unit that is responsible for both incident handling and problem resolution. Consequently, the firm chose to merge the incident handling team with the customer support team.

**Aggregation of data to form overall assessment**

For most organizations, there will be a handful of top level functions that can be decomposed to lower level functions, corresponding to sub-units within the organization. When decomposing a higher-level function into lower-level functions, one may find that some lower

level functions corresponding to two or more units within an organization are positively related, while others are negatively related. The functions of a professional services firm (such as the "Big Four" advisory firms) with both auditing and consulting units may illustrate this. There is a probably a positive relationship between the functions of each of these units with regards to branding, as the two units may both benefit from the firm's overall marketing efforts. However, there is potentially a negative relationship with regards to sales, as the consulting unit is generally prohibited from performing large or business-critical projects for audit clients (and vice versa). We may assume that managers' overall evaluation of synergy between units in a firm like this is related to the number (and criticality) of positive and negative conflicts between lower-level functions.

**Comparison to similar measures**

As stated above, empirical studies frequently fail to include an assessment of the degree of functional conflict. Yet there are a few exceptions. One example is a study of the U.S. health care system (Blair, 1995). The study examined the degree of consistency between the functional demands of quality (e.g., more time with the patient, more goods and services, greater specialization) and cost efficiency (e.g., less patient time, fewer goods and services, more generalization). In the study, medical experts were asked to evaluate the focus of the health care system on a scale from 1: Quality driven to 7: Cost driven. The mean score was 4.1. This result may suggest that the experts recognized an inherent conflict or inconsistency between these two goals (Payne, 2006). However, if one conceptualizes the relationship between two functions as a one-dimensional scale in this manner, one implicitly reduces the solution space: The only

available options are either to prioritize one function or goal ahead of the other, or to find a trade-off. There is no way of representing the possibility of a system re-design that resolves the conflict between the functional demands.

At the individual level, functional conflict is similar to the concept of *role conflict,* as defined as in Rizzo et al. (1970), who emphasized that role conflict is due to incompatibility between different requirements or expectations toward a role. Unlike the method proposed here, the questionnaire that they developed did not identify the actual requirements, but only captured respondents' own experience in relation to these requirements (e.g., "I work on under incompatible policies or guidelines"; "I operate with two or more groups who operate quite differently") (Rizzo, 1970 #63, p. 156`) (similar items are also used in more recent studies {e.g., see Wong et al., 2007)).

Functional conflict also overlaps somewhat with the concept of *goal conflict or goal incongruity[viii]*. In a study of project managers, Levitt et al. (1999) developed a methodology for measuring the conflicts between project goals. They first asked project managers to list their goals (typical goals were: "Staying within budget", "Striving for high task quality." "Completing tasks on time"). Each participant was then asked to rank the importance of different goals related to their project in order of priority. The level of goal incongruity was calculated by summing the absolute differences between the different rankings made by the participants.

The methodologies used by Blair et al. (1995) and Levitt et al. (1999) differ from the one proposed here in that they do not distinguish between function and structure: Goal conflicts are viewed as inherent in the goals themselves. In contrast, the key assumption here is that functional conflict is due to an interdependency *between* the functions (ends) one the one hand, and the

organizational structures or practices aimed at fulfilling the functions (the means) on the other

(cf. Figure 1)(Suh, 2001). Or, put differently, there are no inherent feature of the functions or

goals *themselves* that make them conflict. Note in the example above (Figure 2a and 2b, and 3a

and 3b) that the wording of the functions is *identical* in both cases (with and without a functional

conflict). The key assumption is that functional conflict is caused by the design of the structure

(the design parameters) and not the functions per se. Consequently, a redesign may, in principle,

remove the functional conflict, without necessitating an adjustment of the functions themselves.

**Limitations**

The proposed approach for operationalizing functional conflicts should confer several

benefits. A couple of limitations should also be acknowledged, however.  This article has

addressed conceptual aspects, and the psychometric properties of the proposed method remains

to be studied (but I discuss briefly how the measure could be validated below.) We should also

note that there are slightly different ways of framing the issue, which in turn may affect the

results. In Figure 4 some possible items are shown that may be used in a questionnaire. The

sentences are phrased in the present tense. Yet this is only one out of several possibilities. One

could ask about past experience ("What has typically occurred?") or about the future ("What do

you think will occur?"). One may also construct alternative scales that ask for probability

assessments ("What do you think is the probability that function A will have a negative effect on

function B?").

Another limitation is that that the proposed approach may be best suited for small scale research, such as case studies of single organizations or perhaps a small set of organizations. I have argued that the degree of functional conflict is related to the interdependencies between the particular design parameters chosen to fulfill *firm-specific* functions. So rather than assuming *a priori* that some functions are in conflict, one has to identify the particular functions in each organization, and then consider how the organization has been designed to fulfill these functions. This is probably best done by conducting interviews with members of the organization, but such interviews may be supplemented with an electronic survey to a larger number of respondents within the organization, using items such as the ones shown in Figure 4.

## DISCUSSION

The operationalization and measurement of functional conflict may contribute to better theory development and testing, as well as to improvements in managerial practice, in particular, organization design and performance management processes.

**Implications for research**

The introduction of a method to assess functional conflict may allow the testing of alternative explanations for several phenomena.

In strategic management, the effects of diversification on firm performance has been one of the most important research topics for several decades. A particular area of focus has been the

effects of *related versus non-related* diversification (i.e., expansion into either similar or dissimilar domains compared to the firm's current business or capabilities). Although it is expected that related diversification is superior to unrelated diversification, the substantial body of research that has been produced has not been conclusive (Shayne Gary, 2005). The main research strategy has been to measure the degree of relatedness between two business areas or firms, typically by asking managers to rate how different the two business areas or firms are with respect to customers, products, work processes, and the like (e.g., Pehrsson, 2006). However, from the perspective advanced in this paper, relatedness (or "positive synergies") should not be considered in isolation, but compared to the opposing force of functional conflict ("negative synergies"). It may be the case that two business areas or firms that are highly related, as defined by strategy scholars, still represent conflicting functions (as in the example cited above of Bank of America and Merill Lynch) (also see Shaver, 2006).

There is a similar implication for research related to broad versus focused business strategies (Huckman & Zinner, 2008). At the very least, functional conflict is a potential moderating variable that may influence the relationship between the degree of focus in business strategies and firm performance. One may also go one step further and hypothesize that it is not the degree of focus per se that matters, but the presence or absence of functional conflict (between strategies and actions taken to implement the strategies). Based on this hypothesis, one would, contrary to current theorizing, expect to find that firms with broad strategies sometimes outperform firms with narrow strategies, as long as the firms with broad strategies are able to avoid functional conflict (e.g., if the divisions or business areas within the firms are able to

realize their particular strategies without negatively affecting other divisions or business areas of the firms).

In the literature on organization design, one of the most well known design principles is that of grouping interdependent roles in order to minimize coordination costs (Thompson, 1967; Tushman & Nadler, 1978). This leads to the prediction that organizations with sub-units where most of the task interdependencies are contained *within* sub-unit boundaries will achieve higher productivity than organizations where most of the task interdependencies are *between* sub-units (Kilmann, 1983). The approach that I have presented implies that we should modify this hypothesis and also consider the effect of functional conflict. Hence a revised prediction would be that organizations with sub-units that are grouped according to work process interdependencies will achieve higher productivity (due to lower coordination costs) compared to those that are not, but that this relationship will only hold where there is low level of conflict between the functions (i.e., missions, mandates or goals) of the different sub-units in question.

Finally, the concept of functional conflict suggests a need for modification in how we operationalize and measure ambidexterity. Rather than defining ambidexterity as the ability to "do two different things simultaneously" (O'Reilly & Tushman, 2013, p. 15), it may be defined as the ability to reconcile two conflicting functions. This requires that one recognizes the conceptual difference between function and structure (Gresov & Drazin, 1997), or between what Farjoun (2010) called outcomes and mechanisms. Instead of simply categorizing management practices as related to either exploration or exploitation, the implication of the approach that I have proposed is that we need to evaluate the extent to which different management practices contribute to exploitation and exploitation, and to what extent they are in conflict. The degree of

conflict between these functions may vary between firms, so the assessment should probably be done by managers within the firms being studied.

**Implications for practice**

The method presented here may also be used by practitioners (e.g., consultants). Tools for assessing functional conflict may be included in the diagnostic phase of organizational re-design processes. In a typical reorganization, one is searching for combinations of roles or sub-units that may benefit from being organized together (e.g., in the same business area) due to relatedness (e.g., due to common skills or work process interdependencies). Although it is important to achieve such positive synergies, it is equally important to avoid functional conflict (e.g., by separating those sub-units that have mandates that conflict with each other). The modified design matrix (Table 3) is a tool that may be used to illustrate positive as well as negative relationships between roles and sub-units, and thus provide a rationale for such grouping decisions.

The method described here may also be used in strategy implementation and performance management processes where goals and KPIs are identified. Typically, goals are formulated without an analysis of their interrelationships, or they are simply assumed to be mutually reinforcing. The "management by objectives" (MBO) system was criticized for precisely this reason, and Barton (1981) suggested the need for a new approach that he called "management by conflicting objectives" (MBCO). Unfortunately, it seems like the more modern Balanced Scorecard approach (Kaplan & Norton, 1996) suffers from the same weakness: It does include a

tool called the Strategy map to visualize interrelationships between goals, but this tool is only supposed to show positive interrelationships. However, it should be possible to modify this tool and also add other tools (e.g., the design matrix shown in Table 2a and 2b) that can aid in the identification and evaluation of conflicting goals and KPIs.

More broadly, the approach advocated here may also be relevant for other types of strategic decision making processes. Premature commitment to a specific solution, and the lack of attention to (multiple) requirements have been consistently shown to increase the probability of decision errors (Nutt, 2002). The method described in this article involves the explicit definition of functions (requirements) and the subsequent analysis of interrelationships between functions. One would expect that this method should improve the formulation of the decision problem in the initial stage of the process and lead to a more systematic evaluation of solution alternatives (Baer et al., 2013) (Nutt & Backoff, 1993).

**Directions for future research**

Future research may further refine the approach proposed here, and in particular, validate the measurement method that has been proposed. It would be of interest, for example, to compare perceptual and objective data (cf. Starbuck & Mezias, 1996). Based on the existing literature, we would expect some degree of discrepancy. The literature on mergers and acquisitions suggests that managers tend to overestimate synergies and underestimate the existence of functional conflict. Yet as mentioned above, there may also be situations where managers overestimate the degree of functional conflict. One may study such assessments over

time, and consider whether perceptual assessments of functional conflict at one point predict actual occurrence of functional conflict later. This may be relevant, for example, in a situation where two firms are considering merging, and managers make judgments about the degree of "synergy" with regards various aspects of their firms (cf. Shaver, 2006). After the merger has been completed and one has started integrating the two firms, one may collect objective data (i.e., about realized synergies) and compare to the perceptual data collected before the merger.

At the firm and business unit level, the degree of functional conflict may sometimes depend on the external market environment. If we return to the example of the professional services firm described above, we may assume that the key function for the audit business is to "maximize audit revenues" and that the key function for the consulting business is to "maximize consulting revenues". These functions may not be in conflict when the market is still developing; as there are plenty of potential clients to market and sell to. However, the two functions may start to conflict as the market matures; then there will be fewer potential clients for the consulting business to approach that are not already clients of the audit business of the firm, and vice versa.

Another issue is the interaction between the aspiration level implied by the functions and the degree of functional conflict. In psychological studies of individual level performance, one has investigated the degree of conflict between two performance goals (e.g., related to quantity versus quality) in laboratory problem solving tasks. A key finding is that there is not necessarily a conflict between quantity and quality when subjects are assigned easy goals, but that there is a conflict when subjects are assigned difficult goals (Gilliland & Landis, 1992). One would expect a similar result at the organizational level: Most organizations, or sub-units, would be able to simply *perform* two functions at the same time (e.g., "manage quality" and "manage volume").

The functional conflict usually arises when the ambition level is increased and the functions are defined more stringently (e.g., "optimize quality" and "maximize volume"). Consequently, it is important to consider the best wording when interviewing managers or constructing a questionnaire: One may not detect a latent functional conflict if the functions are formulated as activities, but they might be identified if one formulates functions as (ambitious) outcomes [ix].

## CONCLUSION

Conflicting functional demands is a key concept that underlies much of the reasoning in both strategic management and organizational theory. Yet despite its importance, it has rarely been operationalized. Building on the work of Suh (2001) and Gresov & Drazin (1997), this paper has proposed a definition of the concept and a measurement method. If included in empirical research, functional conflict may serve as an independent variable or a moderator variable, depending on the hypothesis being tested, and allow more precise causal inferences. The method described her may also be utilized by practitioners. It may contribute to improvements in organization design processes, and decision making more broadly, by helping managers identify conflicting functions and minimize combinations of strategies or organizational units that are incompatible.

**REFERENCES**

Ackoff, R. (1971). Towards a system of systems concepts. *Management Science, 17*(11), 661-
671.

Ackoff, R. (1999). Re-Creating the Corporation: A design of organizations for the 21st century.
New York: Oxford University Press.

Ackoff, R., & Emery, F. (1972). On Purposeful Systems: An Interdisciplinary Analysis of
Individual and Social Behavior as a System of Purposeful Events. Chicago: Aldine-
Atherton.

Arend, R. J. (2006). Tests of the resource-based view: do the empirics have any clothes?
*Strategic Organization, 4*(4), 409-421.

Baer, M., Dirks, K. T., & Nickerson, J. A. (2013). Microfoundations of strategic problem
formulation. *Strategic Management Journal, 34*(2), 197-214.

Bartlett, C. A., & Ghoshal, S. (2000). *Transnational management: Text, cases, and readings in
cross-border management* (3rd ed. ed.). Boston: Irwin McGraw-Hill.

Barton, R. F. (1981). An MCDM Approach for Resolving Goal Conflict in MBO. *Academy of
Management Review, 6*(2), 231-241.

Birkinshaw, J., & Gibson, C. (2004). Building Ambidexterity Into an Organization. *MIT Sloan
Management Review*(Summer), 47-55.

Blair, J. D., Fottler, M. D. , Paolino, A. R. & Rotarius, T. M. . (1995). *Medical Group Practices
Face the Uncertain Future: Challenges, Opportunities and Strategies.* Englewood, CO.:
Center for Research in Ambulatory Health Care Administration.

Bon, J. v. e. (2008). *IT Service Management - Global Best Practices* (Vol. 1). Hogeweg,

    Netherlands: Van Haren Publishing.

Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity:

    dimensions, contingencies, and synergistic effects. *Organization Science, 20*(4), 781.

Carter, R., & Hodgson, G. M. (2006). The impact of empirical tests of transaction cost

    economics on the debate on the nature of the firm. *Strategic Management Journal, 27*(5),

    461-476.

Chakravarthy, B., & White, R. (2002). Strategy Process: Forming, Implementing and Changing

    Strategies. In A. Pettigrew, H. Thomas, & R. Whittington (Eds.), *Handbook of Strategy*

    *and Management*. UK: Sage.

Child, J. (1984). Organization: A guide to problems and practice. In  (2nd ed. ed.). London: Paul

    Chapman.

Child, J., & Rodrigues, S. (2003). Corporate Governance and New Organizational Forms: Issues

    of Double and Multiple Agency. *Journal of Management and Governance, 7*(4), 337-360.

Craig, T. (1995). Achieving Innovation Through Bureaucracy: Lessons from the Japanese

    Brewing Industry. *California Management Review*(Fall), 8-36.

Crawford, B., Soto, R., de la Barra, C. L., Crawford, K., & Olguín, E. (2014). Agile Software

    Teams Can Use Conflict to Create a Better Products. In C. Stephanidis (Ed.), *HCI*

    *International 2014 - Posters' Extended Abstracts: International Conference, HCI*

    *International 2014, Heraklion, Crete, Greece, June 22-27, 2014. Proceedings, Part I* (pp.

    24-29). Cham: Springer International Publishing.

Day, G. S. (2006). Aligning the organization with the market. *MIT Sloan Management Review, 48*(1), 41.

Day, G. (2015). Successfully managing conflict. In Day, G. & Leggat, S. G., (2015). *Leading and managing in health services: An Australasian perspective*. Port Melbourne, VIC, Australia Cambridge University Press

DiMaggio, P. J., & Powell, W. W. (1991). *The New institutionalism in organizational analysis*. Chicago: University of Chicago Press.

Donaldson, L. (1995). American anti-management theories of organization: A critique of paradigm proliferation (Vol. vol. 25). Cambridge: Cambridge University Press.

Donaldson, L. (2001). *The contingency theory of organizations*. Thousand Oaks, Calif.: Sage Publications.

Doz, Y. (1986). Strategic management in multinational companies. Oxford: Pergamon Press.

Egelhoff, W. G. (1982). Strategy and Structure in Multinational Corporations: An Information-Processing Approach. *Administrative Science Quarterly, 27*(3), 435-458.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57.

Farjoun, M. (2010). Beyond dualism: Stability and change as a duality. *Academy of Management Review, 35*(2), 202.

Friedlander, F., & Pickle, H. (1968). Components of Effectiveness in Small Organizations. *Administrative Science Quarterly, 13*(2), 289-304.

Galbraith, J. R. (2002). Organizing to Deliver Solutions. *Organizational Dynamics, 31*(2), 194-207.

Galbraith, J. R., & Kates, A. (2007). Designing Your Organization: Using the STAR Model to Solve 5 Critical Design Challenges. Hoboken, NJ: Jossey-Bass.

Ghoshal, S., & Nohria, N. (1993). Horses for Courses: Organizational Forms for Multinational Corporations. *Sloan Management Review, 34*(2), 23-35.

Gilliland, S. W., & Landis, R. S. (1992). Quality and quantity goals in a complex decision task: Strategies and outcomes. *Journal of Applied Psychology, 77*(5), 672-681.

Greenwood, R., Diaz, A. M., & Li, S. X. (2010). The Multiplicity of Institutional Logics and the Heterogeneity of Organizational Responses. *21*(2), 521-539.

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional Complexity and Organizational Responses. *The Academy of Management Annals, 5*(1), 317-371.

Gresov, C. (1989). Exploring fit and misfit with multiple contingencies. *Administrative Science Quarterly, 34*(3), 431.

Gresov, C., & Drazin, R. (1997). Equifinality: Functional equivalence in organization design. *The Academy of Management Review, 22*(2), 403-428.

Harter, J. (2015). Obsolete Annual Reviews: Gallup's Advice. Retrieved from http://www.gallup.com/opinion/gallup/185921/obsolete-annual-reviews-gallup-advice.aspx

Hill, C. W. L. (1988). Differentiation versus Low Cost or Differentiation and Low Cost: A Contingency Framework. *The Academy of Management Review, 13*(3), 401-412.

Huckman, R. S., & Zinner, D. E. (2008). Does focus improve operational performance? Lessons from the management of clinical trials. *Strategic Management Journal, 29*(2), 173-193.

Jansen, J. J. P., Simsek, Z., & Cao, Q. (2012). Ambidexterity and performance in multiunit

contexts: cross-level moderating effects of structural and resource attributes.(Report).

*Strategic Management Journal, 33*(11), 1286-1303.

Jarzabkowski, P., Lê, J. K., & Van de Ven, A. H. (2013). Responding to competing strategic

demands: How organizing, belonging, and performing paradoxes coevolve. *Strategic

Organization, 11*(3), 245-280.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs

and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Johnson, G., Whittington, R., & Scholes, K. (2009). *Fundamentals of strategy*. Essex, UK:

Pearson Education.

Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating Strategy Into

Action*. Boston: Harvard Business Press.

Kilmann, R. H. (1983). The costs of organization structure: Dispelling the myths of independent

divisions and organization-wide decision making. *Accounting, Organizations and

Society, 8*(4), 341-357.

Le Meunier-FitzHugh, K., & Le Meunier-FitzHugh, L. (2015). Cross-Functional Activities - Do

They Really Reduce Inter-Functional Conflict Between Sales and Marketing? In M. C.

Dato-on (Ed.), *The Sustainable Global Marketplace: Proceedings of the 2011 Academy

of Marketing Science (AMS) Annual Conference* (pp. 96-96). Cham: Springer

International Publishing.

Levitt, R. E., Thomsen, J., Christiansen, T. R., Kunz, J. C., Jin, Y., & Nass, C. (1999).

Simulating Project Work Processes and Organizations: Toward a Micro-Contingency

Theory of Organizational Design. *Management Science, 45*(11), 1479-1495.

Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and Performance in

Small-to Medium-Sized Firms: The Pivotal Role of Top Management Team Behavioral

Integration. *Journal of Management, 32*(5), 646-672.

Mahajan, V., & Wind, Y. (1988). Business synergy does not always pay off. *Long Range

Planning, 21*(1), 59-65.

Markides, C., & Chu, W. (1999). Divisional Autonomy and performance in the Differentiated

Network: Evidence from Taiwan. London Business School, working paper.

Mason, R. O., and Mitroff, I.I. (1981). Challenging Strategic Planning Assumptions: Theory,

Cases and Techniques. NY: Wiley.

Nicholls, B. (2011). Banking on tradition. On *Business Quarter*. Sunderland, UK: Room 501

Publishing.

Nutt, P. C. (2002). Why decisions fail : avoiding the blunders and traps that lead to debacles. In

(1st ed. ed.). San Francisco, CA: Berrett-Koehler Publishers.

Nutt, P. C., & Backoff, R. W. (1993). Strategic Issues as Tensions. *Journal of Management

Inquiry, 2*(1), 28-42.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational Ambidexterity: Past, Present, and

Future. *The Academy of Management Perspectives, 27*(4), 324-338.

O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving

the innovator's dilemma. *Research in Organizational Behavior, 28*, 185-206.

Oliver, C. (1991). Strategic Responses to Institutional Processes. *The Academy of Management Review, 16*(1), 145-179.

Pache, A.-C., & Santos, F. (2013). Inside the Hybrid Organization: Selective Coupling as a Response to Competing Institutional Logics. *Academy of Management Journal, 56*(4), 972-1001.

Payne, G. T. (2006). Examining Configurations and Firm Performance in a Suboptimal Equifinality Context. *Organization Science, 17*(6), 756-770.

Pehrsson, A. (2006). Business relatedness and performance: A study of managerial perceptions. *Strategic Management Journal, 27*(3), 265-282.

Pfeffer, J. (1997). New directions for organization theory : problems and prospects. New York: Oxford University Press.

Pfeffer, J., & Salancik, G. R. (1978). The external control of organizations : a resource dependence perspective. New York: Harper & Row.

Popadiuk, S. (2012). Scale for classifying organizations as explorers, exploiters or ambidextrous. *International Journal of Information Management, 32*(1), 75-87.

Porter, M. E. (1980). Competitive strategy : techniques for analyzing industries and competitors. New York: Free Press.

Prahalad, C. K., & Doz, Y. (1987). The multinational mission : balancing local demands and global vision. New York: Free Press.

Rizzo, J. R., House, R. J. & and Lirtzman, S. I. . (1970). Role Conflict and Ambiguity in Complex Organizations. *Administrative Science Quarterly, 15*(2), 150-163.

Sanchez, R., & Mahoney, J. T. (1996). Modularity, flexibility, and knowledge management in product and organization design.(Knowledge and the Firm). *Strategic Management Journal, 17*(SPEISS), 63.

Scott, W. R. (1995). *Organizations: Rational, natural and open systems*. Englewood Cliffs, N.J: Prentice-Hall.

Shaver, J. M. (2006). A Paradox of Synergy: Contagion and Capacity Effects in Mergers and Acquisitions. *The Academy of Management Review, 31*(4), 962-976.

Shayne Gary, M. (2005). Implementation strategy and performance outcomes in related diversification. *Strategic Management Journal, 26*(7), 643-664.

Smith, W. K., Binns, A., & Tushman, M. L. (2010). Complex Business Models: Managing Strategic Paradoxes Simultaneously. *Long Range Planning, 43*(2–3), 448-461.

Starbuck, W. H., & Mezias, J. M. (1996). Opening Pandora's Box: Studying the Accuracy of Managers' Perceptions. *Journal of Organizational Behavior, 17*(2), 99-117.

Suh, N. P. (1990). *The principles of design*. New York: Oxford University Press.

Suh, N. P. (2001). *Axiomatic design : advances and applications*. New York: Oxford University Press.

Tameling, K., & Broersma, M. (2013). De-converging the newsroom. *International Communication Gazette, 75*(1), 19-34.

Thompson, J. D. (1967). Organizations in action : social science bases of administrative theory. New York: McGraw-Hill.

Treacy, W. F. (1998). Credit Risk Rating at Large U.S. Banks. *Federal Reserve Bulletin*(November), 897-921.

Tushman, M. L., & Nadler, D. A. (1978). Information Processing as an Integrating Concept in

Organizational Design. *The Academy of Management Review, 3*(3), 613-624.

Van de Ven, A. H., & Ferry, D. L. (1980). *Measuring and assessing organizations*. New York:

Wiley.

Van Sell, M., Brief, A. P., & Schuler, R. S. (1981). Role Conflict and Role Ambiguity:

Integration of the Literature and Directions for Future Research. *Human Relations, 34*(1),

43-71.

Wind, Y., & Mahajan, V. (1985). *Corporate growth through synergy: Concept, measurement

and applications*. Working paper. University of Pennsylvania, Wharton school.

Wong, S. s., Desanctis, G., & Staudenmayer, N. (2007). The Relationship Between Task

Interdependency and Role Stress: A Revisit of the Job Demands–Control Model*.

*Journal of Management Studies, 44*(2), 284-303.

Worren, N. (2014). Exploring the potential of the axiomatic approach for organization design. In

R. Magalhães (Ed.), *Organization Design and Engineering*. Basingstoke: Palgrave

Macmillan.

Worren, N. (2016). Functional analysis of organizational designs. *International Journal of

Organizational Analysis, 24*(5), 774-791.

Yin, X., & Zajac, E. J. (2004). The strategy/governance structure fit relationship: theory and

evidence in franchising arrangements. *Strategic Management Journal, 25*(4), 365-383.

**FOOTNOTES**

---

[i] Other authors in this field have concluded that it is possible to combine the two generic strategies in some markets (see Hill, 1988 for a review).

[ii] Shaver (2006) used the term *contagion* to describe a similar phenomenon.

[iii] There are clearly exceptions, where violations of the single accountability principle does not lead to increasing role conflict (Rizzo, 1970), and today, there is a larger degree of tolerance for organizational designs that include distributed governance and joint accountability. Yet is still natural to expect that role conflict and role ambiguity are related to organizational size and complexity. We also know that the problem persists: A recent Gallup poll among employees in 550 companies showed that only about half of employees strongly agree that they know what is expected of them at work (Harter, 2015).

[iv] An important difference is that authors differ with regard to the possibility of reconciling conflicting demands or requirements. Authors within systems theory have proposed that managers can resolve conflicts by introducing organizational innovation (e.g., Ackoff, 1999). Authors within institutional theory are typically more pessimistic of this possibility (e.g., Oliver, 1991).

[v] One should note that the term "functional conflict" is also used by some authors to denote conflicts between people belonging to different *business functions* (i.e., departments) (Crawford et al., 2014; Le Meunier-FitzHugh & Le Meunier-FitzHugh, 2015; Day, 2015). Unlike these authors, I here address *system* properties related to the design of the organization and do not consider conflicts that are due to individuals' personalities or motives, or conflicts that are due to the culture or values of different departments.

[vi] The introduction of separate newsrooms does not imply complete isolation: Content can still be shared between the two platforms. Nonetheless, while this solution addresses the two conflicting functions that are mentioned in Figure 3A, it may of course create other challenges, such as maintaining a consistent brand across two or more channels (for a more detailed discussion, see Tameling & Broersma, 2013)

[vii] The reasoning is that (initial) positive interaction between two functions can easily become negative. Nam Suh provided the following example: Suppose you want to heat a room and also provide illumination, i.e, two functional requirements. Someone proposed that we use the light bulbs to satisfy both, i.e., heating and illumination. One may argue that you can have more heating if you increase the illumination. Some may say that that is a good thing. But what would you do during the summer time. Turn lights off to lower the room temperature? (Nam Suh, personal communication, October 9, 2013).

[viii] The term *function* as defined here is typically semi-permanent and relates primarily to organizations, sub-units or roles, and not to individuals (although roles are obviously held by individuals). Goals may be assigned to ensure that the function (mandate, mission) of a unit is fulfilled. For example, the function of a sales department may be to maximize sales. The particular goal given to its manager may be to increase sales this year by 10%.

[ix] When developing a survey instrument, one may also consider asking respondents to estimate the probability of a functional conflict, instead of the existence of conflict or degree of conflict (see the appendix).

TABLE 1

Overview of concepts similar to *conflicting functional demands* in different literatures within management, the organizational sciences, and systems theory (The table is continued below).

|  | Author(s) | Concept(s) | Focal point | Unit(s) of analysis |
|---|---|---|---|---|
| Strategic management "positioning school" | Porter (1980) | Inconsistent generic strategies | Cost leadership versus differentiation strategy | Firm or business unit strategies |
| Strategic management "process school" | Nutt (1993) Chakravarthy & White (2002) Mason & Mitroff (1981) | Tensions Goal conflicts Problem interactions | Any kind of contradiction between interests, concerns, goals, etc. | Issues within the organization or between the organization and its environment |
| Institutional theory | Powell and DiMaggio (1991) Pache & Santos (2013) Greenwood et al. (2011) | Competing demands Conflicting logics | Demands (or "pressures"), often associated with different interest groups or stakeholders | The organization of business groups or individual firms/institutions Management practices |
| Contingency theory | Child (1984) Donaldson (2001) Gresov (1989) | Multiple contingencies Conflicting functional demands | External requirements that the organization needs to meet to be effective | The organizational structure of firms or business units |
| Resource dependency theory | Pfeffer & Salancik (1978) | Incompatible demands | Resource acquisition and control | Organizations and sub-units |

TABLE 1 (Continued)

|  | Author(s) | Concept(s) | Focal point | Unit(s) of analysis |
|---|---|---|---|---|
| Ambidexterity | O'Reilly & Tushman (2008)<br><br>Markides & Chu (1999) | Conflicting demands | Choice (or balance) between exploration versus exploitation | The organization and leadership processes in firms or sub-units |
| Agency theory | Jensen (1976)<br>Eisenhardt (1989) | Agency conflict | Delegation of authority from principal to agent | Shareholders vs. managers |
| Role theory | Rizzo et al. (1970) | Role conflict | Effects of role conflict on individual performance and job satisfaction | Role holders |
| International management | Bartlett and Ghoshal (2000)<br><br>Prahalad & Doz (1987) | Competing pressures<br><br>Competing forces | Global integration versus local responsiveness | The organization and leadership processes in multinational corporations |
| Systems theory and engineering | Ackoff & Emery (1972)<br>Suh (1990) | Competing requirements<br><br>Coupling | Contradictions between functional requirements | Systems (products, processes, or organizations) |

TABLE 2A

A design matrix representing a hypothetical, multinational technology firm. The two marks along the diagonal indicate the units' main function (or mandate/mission). The off-diagonal marks represent instances of functional conflict (the same situation as depicted in Figure 2A).

| | Organizational units | |
| --- | --- | --- |
| *Functions* | Global product units | Country subsidiaries |
| Minimize product development and manufacturing costs | X | x |
| Adapt products and processes to local customer requirements | x | X |

TABLE 2B

A design matrix that indicates that the functional conflict (shown in Table 2A) has been removed (this table corresponds to Figure 2B).

| | Organizational units | |
| --- | --- | --- |
| *Functions* | Global product units | Country subsidiaries |
| Minimize product development and manufacturing costs | X | |
| Adapt products and processes to local customer requirements | | X |

TABLE 3

A modification of the design matrix shown in Table 2a, where relationships between functions
are scored from -1 (strongly negative) to +1 (strongly positive). See the appendix for details.

| | Organizational units | |
| --- | --- | --- |
| *Functions* | Global product units | Country subsidiaries |
| Minimize product development and manufacturing costs | 1 | - 0.5 |
| Adapt products and processes to local customer requirements | - 0.5 | 1 |

TABLE 4

A hypothetical, initial draft of a design matrix,
showing the functions corresponding to different units

| | Organizational units | |
| --- | --- | --- |
| *Functions* | Global product units | Country subsidiaries |
| Minimize product development and manufacturing costs | X | |
| Adapt products and processes to local customer requirements | | X |

TABLE 5

The final version of the design matrix for a technology firm

incorporating assessments of the degree of positive and negative relationships among functions

| | Organizational units | |
|---|---|---|
| | Global product units | Country subsidiaries |
| *Functions* | | |
| Minimize product development and manufacturing costs | 1 | - 0.5 |
| Adapt products and processes to local customer requirements | - 0.5 | 1 |

Set to 1 by default

From item 2 in survey in Figure 4

From item 1 in survey in Figure 4

FIGURE 1

```
                                        c)
        ┌─────────────────────────────────────────────────────┐
        │                                                     ▼
┌──────────────┐           ┌──────────────┐           ┌──────────────┐
│   External   │    a)     │  Functions   │    b)     │  Structure   │
│  demands/    │  ──────▶  │              │  ──────▶  │ or practices │
│ contingences │           │  («WHAT»)    │           │              │
│              │           │              │           │   («HOW»)    │
└──────────────┘           └──────────────┘           └──────────────┘
```

*Alternative terms:*         *Alternative terms:*         *Alternative terms:*
Customer or market needs     Functional requirements      Design parameters
Functional demands           Mandates                     Organizational design
Environmental demands        Charters                     Organizational structure
External pressures           Missions                     Reporting structure
                             Logics                       Processes
                             Expectations                 Roles

Three different domains related to organization design (Suh, 1990; Worren, 2014).

FIGURE 2A

Hypothetical example from multinational technology firm. The relationship between two functions (or two functional requirements) and design parameters (e.g., organizational models, practices, etc.) when the functions are interdependent (i.e., a functional conflict exists). Efforts at fulfilling Function 1 may negatively affect the ability to fulfill Function 2, and vice versa (indicated with the dotted line).



**Function 1**

*Example*

• Minimize product development and manufacturing costs

**Function 2**

*Example*

• Adapt products and processes to local customer needs

**Design parameter 1**

*Example*

• Global product units that develop a series of stand-alone products; using integrated product designs, combined with simplification of manufacturing processes.

**Design parameter 2**

*Example*

• Country subsidiaries that address local customer needs by requesting global product units to change product specifications and/or develop new products that satisfy local customer needs.
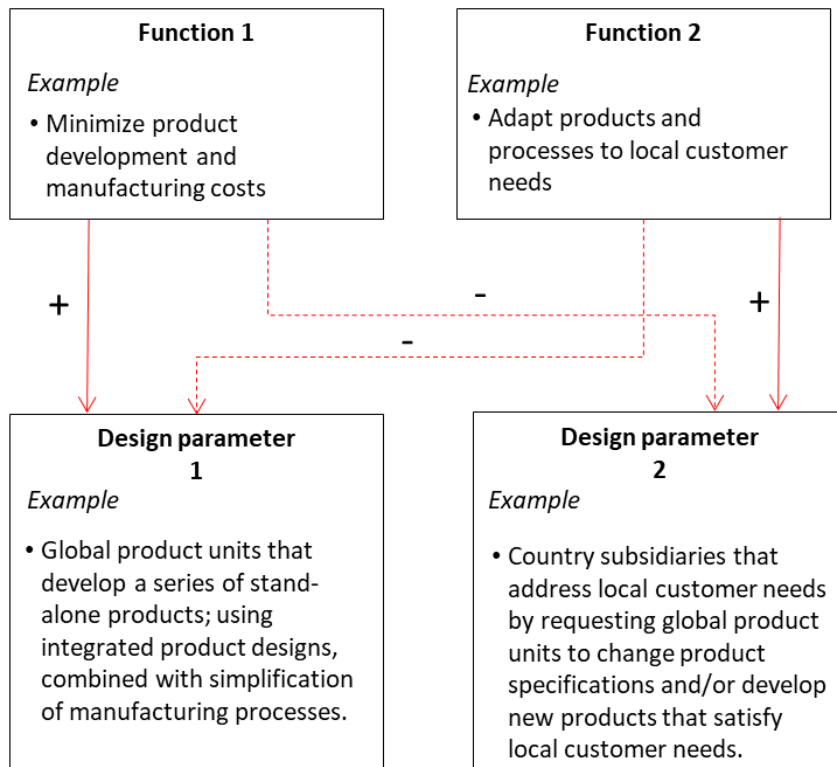
FIGURE 2B

Hypothetical example multinational technology firm. Situation after the functional conflict (illustrated in Figure 2A) has been removed by introducing modular product architectures. Each of the two functions can (within certain tolerances) be fulfilled without negatively affecting the ability to fulfill the other.
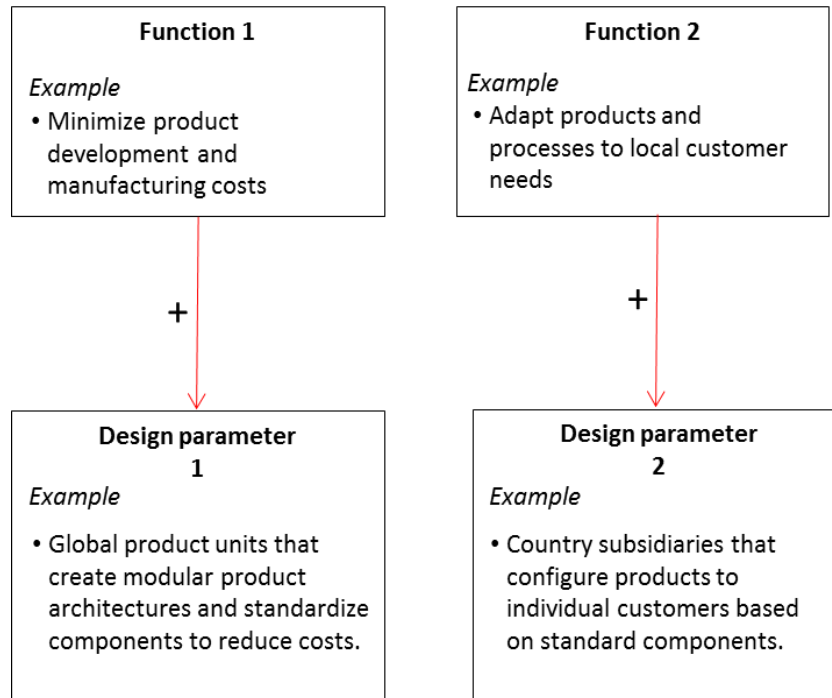
FIGURE 3A

Example from a newspaper (Tameling & Broersma, 2013). The relationship between two functions (or two functional requirements) and a design parameter (When there are two or more functions, yet only one design parameter, there will inevitably be a functional conflict, as indicated.)

**Function 1**

*Example*

• Publish in-depth, investigative articles for print version of newspaper

**Function 2**

*Example*

• Aggregate fast and free news to newspaper website

**+/-**

**Design parameter 1**

*Example*

• Integrated newsroom with journalists who contribute to both print and online version of newspaper
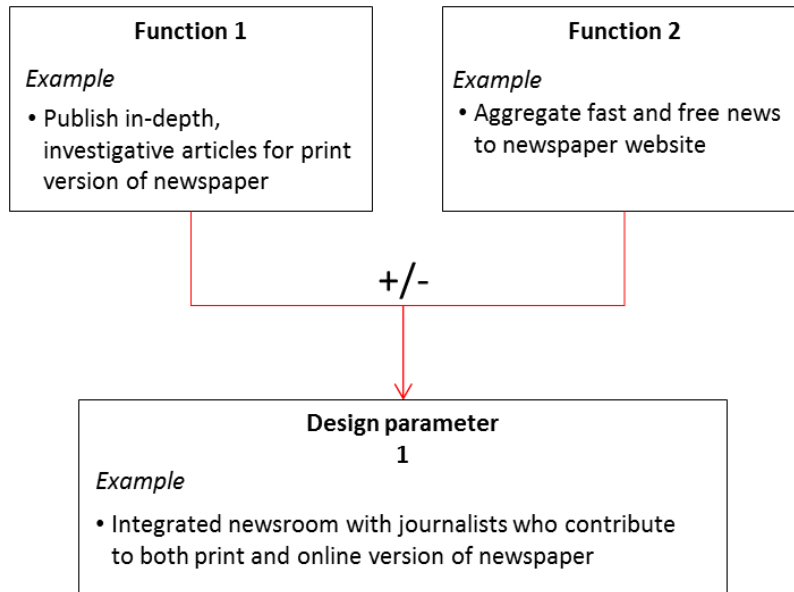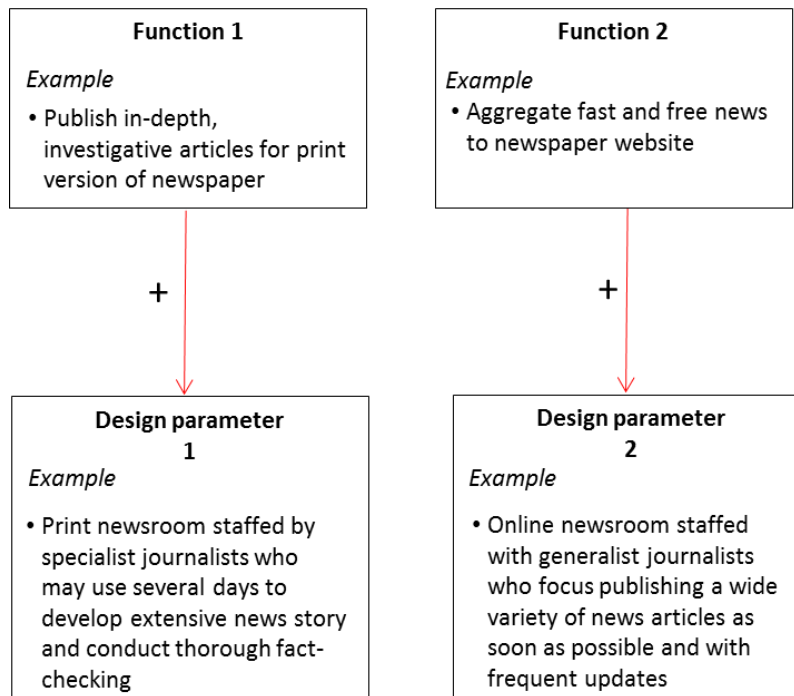
FIGURE 3B

Example from newspaper. Situation after the functional conflict (illustrated in Figure 3A) has been removed by de-converging the newsroom (Tameling & Broersma, 2013).Each of the two functions can be fulfilled without negatively affecting the ability to fulfill the other.



**Function 1**

*Example*

• Publish in-depth, investigative articles for print version of newspaper

**+**

**Design parameter 1**

*Example*

• Print newsroom staffed by specialist journalists who may use several days to develop extensive news story and conduct thorough fact-checking

**Function 2**

*Example*

• Aggregate fast and free news to newspaper website

**+**

**Design parameter 2**

*Example*

• Online newsroom staffed with generalist journalists who focus publishing a wide variety of news articles as soon as possible and with frequent updates

Example from a newspaper. The relationship between two functions (or two functional requirements) and a design parameter. When there is more than one function yet only one design parameter, there will inevitably be a functional conflict, as indicated.

FIGURE 4

Examples of items

1. When the global products units implement measures to minimize product development and manufacturing cost [$FR_1$], what effect does this typically have on the subsidiaries' ability to adapt products and processes to local customer requirements [$FR_2$]?

| It has a strong negative effect | It has a somewhat negative effect | It has no effect | It has a somewhat positive effect | It has a strong positive effect |
|---|---|---|---|---|
| - 1 | - .5 | 0 | .5 | +1 |
| ○ | ○ | ○ | ○ | ○ |

2. When the subsidiaries adapt products and processes to local customer requirements [$FR_2$], what effect does this typically have on the ability of the global product units at HQ to minimize development and manufacturing costs [$FR_1$]?

| It has a strong negative effect | It has a somewhat negative effect | It has no effect | It has a somewhat positive effect | It has a strong positive effect |
|---|---|---|---|---|
| - 1 | - .5 | 0 | .5 | +1 |
| ○ | ○ | ○ | ○ | ○ |

**APPENDIX:**

**SUGGESTED PROCEDURE FOR IDENTIFYING FUNCTIONAL CONFLICT IN AN ORGANIZATION**

In the following, a procedure is outlined that may be followed to identify functional relationships (including potential conflicts). It is here assumed that one gathers information from members of an organization (i.e., collects "perceptual" data), although the logic is similar to method that relies on objective data (from within or outside the organization).

**Step 1.** The first task to is collect information in order to identify the main functions (i.e., organizational or unit mandates/missions) and design parameters (i.e., units, roles, etc.) of an organization or one or more of its sub-units. For example, an interview with the head of a technology firm may begin as follows (because the word "function" may be interpreted as meaning "department" by some practitioners, one may need to use a different word, depending on the context):

- How would you describe your organization's mission?

- What are main sub-units in your organization?

- Could you explain the main role or mandate of each of the main sub-units (or divisions)?

**Step 2**. The second task is to use the information to formulate a set of functions (or functional requirements) for the organization and define the organizational units. For simplicity, let us here re-use the example mentioned in the text (cf. Table 3):

$FR_1$ Minimize product development and manufacturing costs

FR$_2$ Adapt products and processes to local customer requirements

We also use the same organizational units as mentioned in the text:

DP$_1$ Global product units

DP$_2$ Country subsidiaries

With this information, one can construct a design matrix (Table 4). The starting point is to identify which functions correspond to which organizational units, or put differently, identify which organizational units are accountable for fulfilling which function.

– – – – – – – – – – – – – –

Insert Table 4 about here

– – – – – – – – – – – – – –

In practice, there will usually be a much larger set of elements and it will often require a few iterations to gain consensus around a set of statements that stakeholders feel are adequate descriptions of their organizations (see Worren, 2016 for a more complex example from a real organization ).

**Step 3.** The final task is to ask members of the organization to assess the strength of each of the relationships already identified in step 2, and to consider whether there are positive or

negative relationships across the functions. This may be done by making pairwise comparisons between the functions. In a questionnaire, one may use a 5-point scale as shown in Figure 4. By default, the function that corresponds to each unit (because it is formally the unit's mandate or mission) may be assigned a value of 1. Hence when making pairwise comparisons, one only needs to consider how units other than the formally accountable unit may influence the fulfilment of a function (i.e., one evaluates the off-diagonal cells in the design matrix).

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Figure 4 about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _

When averaged across respondents, the data from such a survey may be used to populate the (modified) design matrix shown (Table 5).

_ _ _ _ _ _ _ _ _ _ _ _ _ _

Insert Table 5 about here

_ _ _ _ _ _ _ _ _ _ _ _ _ _