Kindred Spirits: The Influence of Cognitive Frame Similarity on Contingency Planning in Strategic Alliances

Marvin Hanisch,
Univ. of Passau

Lorenz Graf-Vlachy,
Univ. of Passau

Carolin Häussler,
Univ. of Passau

Andreas König,
Univ. of Passau

Theresa Cho,
Seoul Nat. Univ.

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Overview

1. Research Question
2. Theoretical Model and Hypotheses
3. Methodology
4. Results
5. Discussion
1. RESEARCH QUESTION
Contingency planning is central to strategic alliances because it makes partnerships more reliable and predictable

Strategic alliance contracts

See Mayer and Bercovitz, 2008
However, alliance partners frequently rely on the prospect of future “good faith” negotiations to deal with contingencies.

The use of good faith in contingency provisions

“In the event of any alleged or threatened infringement by a Third Party […], the Parties will confer in good faith as to how to address such infringement.”

Excerpt from alliance agreement between a pharmaceutical company and a biotechnology firm

“The term ‘good faith’ is often referred to, but less often defined. It can be difficult to know exactly what is meant by the term in any given situation.”

Parker et al., 2016
2. THEORETICAL MODEL AND HYPOTHESES
Extant research hints at a trade-off involved in contingency planning – but is essentially silent on how organizations make it!

Disadvantages and advantages of “good faith” contingency planning

**Disadvantages of “good faith”**
- Not clearly defined, creates interpretive uncertainty (Parker et al., 2016)
- Can lead to costly conflicts later on (Richter, 2016)

**Advantages of “good faith”**
- Increases flexibility
- Decreases upfront contracting costs (Crocker & Reynolds, 1993)

What determines how firms make this trade-off and, in turn, how much they rely on “good faith”?
We argue that partners with similar cognitive frames are more likely to reach an agreement on contingencies in good faith

Cognitive frame similarity and good faith

- **Cognitive frames** are schemas of interpretation that are shared among organizational members and direct and guide their attention, information processing, decision making, and actions (Cornelissen and Werner 2014, Goffman 1986, Kaplan 2011)

- Alliance partners with **high cognitive frame similarity** are more likely to interpret contingencies in similar ways because their respective sensemaking processes are more similar (Weber & Mayer, 2014)

- Thus, it is reasonable for alliance partners to deal with contingencies in good faith rather than attempting to formulate explicit contractual remedies ex ante

Alliance partners with higher cognitive frame similarity are more likely to rely on “good faith” in contingency planning
The effect of cognitive frame similarity on the use of “good faith” is strengthened by uncertainty and weakened by experience

Hypotheses model

- Cognitive Frame Similarity
- Technological Uncertainty
- Alliance Experience
- Contingency Planning in Good Faith

Hypotheses:
- H1(+) Cognitive Frame Similarity → Technological Uncertainty
- H2(+) Technological Uncertainty → Contingency Planning in Good Faith
- H3(-) Alliance Experience → Contingency Planning in Good Faith
3. METHODOLOGY
To measure “good faith” contingency planning, we count the number of “good faith” clauses in each alliance contract.

Construct operationalization: “Good faith” contingency planning

Measure development

- No extant measure available
- Decided to identify and count number of “good faith” clauses in contract
- Developed coding scheme with legal experts

Measurement process in sample

- Used two trained coders
- Manually coded 8,892 clauses in 843 alliance contracts
- Excluded irrelevant cases of “good faith”
We develop a measure of cognitive frame similarity based on organizations’ mission statements

Construct operationalization: Cognitive frame similarity

- Cognitive frames are reflected in the words that organization members use and codified in artifacts (Cho & Hambrick, 2006; Huff, 1990)
- We use mission statements because they …
  - … describe organizations’ philosophy and priorities (Babnik et al., 2014, Campbell & Yeung, 1991)
  - … reflect stable, agreed-upon, cognitive orientations shared by entire organization (Alegre et al., 2018)
  - … direct interpretations and actions of organizational members (Shapiro & Naughton, 2015)
- We content-analyze 1,686 mission statements and determine the similarity of these documents (Duriau et al., 2007)

![Cognitive Frame Similarity](https://example.com/cognitive-frame-similarity)

\[
\frac{1}{f} \times \sum_{j=1}^{f} \frac{\sum_{i=1}^{n_j} x_{ij} y_{ij}}{\sqrt{\sum_{i=1}^{n_j} x_{ij}^2} \sqrt{\sum_{i=1}^{n_j} y_{ij}^2}}
\]

**Manual qualitative analysis:** Identify frames

**Computer-aided text analysis:** Identify and count frame-related words

**Calculation of similarity:** Cosine similarity of mission statements
We measure the moderators in line with prior literature

Construct operationalization: Technological uncertainty and alliance experience

**Transactional Uncertainty**

- Binary indicator of “Early Stage” of focal R&D project
  - 1 if preclinical stage
  - 0 if molecule clinically tested or approved
  (Ozmel et al. 2017)

**Alliance Experience**

- Sum of number of alliances each organization had entered before entering focal alliance (logged)
  (Hoang & Rothaermel, 2005)
We control for a host of potentially confounding variables

Control variables

Transaction cost econ. controls
- **Technological overlap** (spillover concerns): Jaffe’s (1986) patent-similarity measure (Reuer & Devarakonda, 2016; Sampson, 2007)
- **Deal size** (relationship-specific investments): Sum of upfront and maximum milestones payments (logged) (Reuer & Devarakonda, 2016)
- **Prior ties** (frequency of exchange): Binary indicator of prior alliance between partners (Reuer & Ariño, 2007; Reuer & Devarakonda, 2016; Sampson, 2007)
- **Level of interdependence**: Share of activities performed jointly by partners of total number of activities defined in contract (Pisano, 1991)
- **Partner asymmetry**: Difference in partners’ number of employees divided by number of employees of larger partner (Lavie et al., 2012)
- **Equity stakes**: Binary indicator of overlap in equity ownership (Reuer & Ariño, 2007)
- **Cross-border alliance**: Binary indicator of international alliance (Reuer & Devarakonda, 2016)
- **Biotech-biotech alliance**: Binary indicator of both partners’ biotech status (Reuer & Devarakonda, 2016)
- **Contract length**: Total number of words in contract
- **Year dummies** (Reuer & Devarakonda, 2016)
- **Firm fixed-effects** (only in robustness checks)

Alliance controls

Time and firm controls
4. RESULTS
Regression estimates support our theoretical predications

Empirical results

Cognitive Frame Similarity

Technological Uncertainty

Alliance Experience

Contingency Planning in Good Faith

H1(+) ✓
H2(+) ✓
H3(-) ✓
5. DISCUSSION
We contribute to theory and practice and open up opportunities for future research

Contributions and opportunities for research

**Contributions to theory and method**
- We highlight socio-cognitive aspects of inter-organizational relations
- We introduce cognitive frame similarity and demonstrate its effect on contingency planning
- We offer an operationalization of cognitive frame similarity and a measure of “good faith” contingency planning

**Practical implications**
- Consequential contracting decisions may be (unconsciously) made based on (perceived) cognitive similarity – a dangerous strategy if you cannot afford to lose the legal battle!

**Limitations and future research**
- Study micro-processes within individuals/teams
- Explicitly account for cultural aspects
- Research earlier and later stages of alliance process
REFERENCES


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