

# A Corpus-Based Study on Mapping Principles of Metaphors in Politics

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## Abstract

This study proposes a corpus-based method to generate Mapping Principle of metaphors. In particular, Ahrens's (2002) Mapping Principle in the Conceptual Mapping Model (CM model) is simply based on the native speakers' intuition instead of analyzing it from huge linguistic data. In order to provide more convincing evidence to support the CM model, we adopt the corpus method to extract out the metaphorical expressions in politics from the Academic Sinica Balanced Corpus. We analyze the correspondences existing within the source-target domain pairings and generate Mapping Principle based on the salient meanings in these linguistic expressions. We adopt this method to examine the mapping principles of five metaphors: POLITICS IS BUILDING, POLITICS IS A JOURNEY, POLITICS IS A PLAY, POLITICS IS A COMPETITION and POLITICS IS SPORT. This corpus-based method can provide a more convincing way to generate Mapping Principle at the linguistic level than the original one (Ahrens 2002).

## 1. Introduction

Lakoff and Johnson (1980) have proposed that metaphors are understood through the mapping from the concrete domain, i.e. the source domain, to the abstract domain, i.e. the target domain. For instance, the linguistic expression "You are wasting my time" is understood via mapping the MONEY domain to the TIME domain. However, the mapping principles between domains are not clearly defined. They do not explain how the mapping principles are generated and what constraints are governed.

Ahrens (2002) has proposed Conceptual Mapping Model to supplement the limit of Lakoff (1993) Contemporary Theory of Metaphors. She analyzes the lexical correspondences existing between a source and target domain in terms of "entities", "qualities" and "functions". Within this model, the underlying reasons for mapping can be generated based on the real linguistic data, so-called Mapping Principles.

One of the advantages is that her model can clearly point out that the inference exists between the source and target domains (Ahrens 2002: 275). The mapping principles are generated at the linguistic level by analyzing the expressions of conventional metaphors in a systematic method. In particular, she collects the metaphor examples from the native speakers' intuition, groups the metaphors into the source domains, analyzes them in terms of entity, quality and function based on the real world knowledge, and finally analyzes the mapping principles between the source and target domains. For instance, this model generates the mapping principle for IDEA IS BUILDING as "idea is understood as building because buildings involve a physical structure and ideas involve an abstract structure".

Another advantage is that this model proposes a Mapping Principle Constraint to explain why a target domain selects different source domains (Ahrens 2002: 279). The constraint proposes that a target domain will select only source domains that involve unique mapping principles. For example, IDEA can be mapped to the following domains, BUILDING, FOOD, COMMODITY, and INFANT. IDEA has different reasons to select these four source domains. IDEA selects the source domain of BUILDING to borrow the notion of structure; IDEA uses FOOD as the source domain to borrow conceptualization of intake and digestion; it chooses the source domain of COMMODITY to express the concepts of value and marketing; it uses the source domain of INFANT to borrow the concept of birthing process.

However, there is a problem for the method to generate the Mapping Principle in this model. The Conceptual Mapping Model (CM Model) lacks evidence to support whether Mapping Principle can really reflect the correspondences existing between the source and target domains. Even though the linguistic data this model uses for generating a Mapping Principle are collected from native speakers' intuition, the method how to collect the data

is not very clear. In particular, are the data collected from questionnaires or from interviews? How many speakers participated in the production task? In order to revise the weakness in the method applied by the Mapping Principle, Ahrens, Chung and Huang (2003) and Chung, Ahrens, and Huang (2003) have proposed a corpora-based operational definition for Mapping Principle. They examine 2000 random examples of "economy" (*jingji*) and generate Mapping principle based frequency in corpus. In addition, they integrate their Conceptual Mapping Model with SUMO to restrict the mapping principles.

This study follows the same methodology of Ahrens et al (2003) to examine *zhengzhi* "politics" in Mandarin. In particular, this study uses a quantitative method to explore the Mapping Principles. Instead of the linguistic expressions generated from native speakers' intuition, we use a corpus approach to collect linguistic materials. We analyze the mapping principles between the target domain POLITICS and the different source domains by extracting the metaphorical expressions in politics from the Academic Sinica Balanced Corpus, which can provide huge data of real language usages. In addition, based on the quantitative information, we can observe what are the salient and frequent mapping principles and determine what the potential mapping principle are generated. Section two will discuss how we adopt the corpus-based method to investigate the mapping principles of metaphors in politics.

## 2. Corpora Data

We collect data from Academic Sinica Balanced Corpus (1995), a tagged corpus of over 5 million words of modern Mandarin usage in Taiwan (<http://www.sinica.edu.tw/SinicaCorpus/>). First, we use *zheng4zhi4* "politics" as the searching keyword, and get the 1964 pieces of sentences containing the word *zheng4zhi4* "politics" from the Academic Sinica Balanced Corpus. Following the five steps of Mapping Principle analysis (Ahrens 2002), we extract 142 pieces of metaphorical expressions out of 1964 sentences and then categorize them into nine source domains: BUILDING, BUSINESS, COMPETITION, JOURNEY, OCEAN, PLAY, INVESTMENT, WAR and WEATHER. Only the source-target domain pairings which has more than ten instances are examined in this paper. In this study, we focus on the five metaphors: POLITICS IS BUILDING, POLITICS IS A JOURNEY, POLITICS IS A PLAY, POLITICS IS A COMPETITION, and POLITICS IS SPORT. In Tables 1-5 we show the numbers of sentences of each metaphor, the number of lexical tokens in the source domain for each metaphor in terms of "entity", "quality" and "function", as well as the postulated mapping principles.

For POLITICS IS BUILDING, we can see that all these correspondences between the source domain BUILDING and target domain POLITICS (Table 1) are related to the concept of "structure". A "structure" of a

building should associate with a base/foundation, a stable structure and formation. "Politics" uses the source domain "building" to conceptualize the notion "structure". A building doesn't fall down since it has a good foundation and a well-built/stable structure. Likewise, politics develops well if it has good structure and foundation.

It is worth noting that major of mappings (16 instances out of 19 ones) in the metaphor "politics is building" are related to "entities" of building, instead of "qualities" and "functions". Lakoff and Johnson (1980) mentioned the "ontological metaphors are ways of viewing events, activities, emotions, ideas etc., as entities and substances. Ontological metaphors serve various purposes, and the various kinds of metaphors there are reflect the kinds of purposes served." (Lakoff and Johnson 1980: 25-26). Thus, ontological metaphors can refer to the entity, qualify it, identify a particular aspect of it, see it as a cause, and act with respect to it. However, from the frequencies shown in Table 1, we can observe that all purposes ontological metaphors serve are not equally distributive. In the case, the metaphor POLITICS IS BUILDING puts emphasis on "referring to the structures/ model of building", instead of qualifying the stability of politics, or identifying the concept how to construct politics. Thus, we can generate the mapping principle as (1).

Table 1: POLITICS IS BUILDING (19 instances)

	Metaphor	Frequency
Entities	<i>chu2xing2</i> "a small model"	1
	<i>ji1chu3</i> "base/foundation"	1
	<i>jie2gou4</i> "structure"	11
	<i>gou4tu2</i> "composition"	2
Qualities	<i>wen3ding4</i> "stable"	1
Functions	<i>jian4gou4</i> "to establish"	1
	<i>xing2cheng2</i> "to form"	2

### (1) Mapping principle for POLITICS IS BUILDING

Politics is understood as building because building involves a physical structure and politics involve an abstract structure.

For POLITICS IS A JOURNEY, we can observe that all correspondences between the source and target domains (Table 2) are related to the concept of "traveling through roads/routes". In other words, the trip has starting and ending points; the travelers can stride or retreat on the route; they may encounter obstacles on the way of their trip; the roads can be bumpy. Likewise, "politics" can be conceptualized as a journey because the career of a politician has starting and ending points or because the road to democracy should be bumpy.

The metaphor POLITICS IS A JOURNEY, different from POLITICS IS BUILDING, puts emphasis both on entity (6 instances out of 17 ones) and function (10 instances out of 17 ones). In this case, viewing politics as a journey allow people not only to refer politics to "crossroad", "milestones", "target", "obstacles", etc., but also to point out (motivating) actions "retreat" and "stride" in politics, which are associated with events took place through traveling. Thus, we can generate the mapping principle as (2).

Table 2: POLITICS IS A JOURNEY (17 instances)

	Metaphor	Frequency
Entities	<i>shi2zi4lu4kou3</i> "a crossroad"	1
	<i>mu4biao1</i> "target"	1
	<i>li3cheng2bei1</i> "milestone"	1
	<i>zhang4ai4</i> "obstacles"	1
	<i>zou3xiang4</i> "trend"	1
	<i>dao4lu4</i> "road"	1
Qualities	<i>kan3ke1</i> "bumpy"	1
Functions	<i>zou3shang4</i> "go up"	2
	<i>bu4ru4</i> "go into"	1
	<i>dao4tui4</i> "retreat"	3
	<i>mai4xiang4</i> " stride"	2
	<i>qi4bu4</i> "start to walk"	1
	<i>shang4gui3dao4</i> " "on the track"	1

## (2) Mapping Principle for POLITICS IS A JOURNEY

Politics is understood as a journey because a journey takes a traveler through physical roads/routes and politics takes a party/country/politician through abstract routes.

For POLITICS IS A PLAY, we can observe that all the correspondences between the source and target domains (Table 3) are related to "performance to the public". A play must have players, scripts and platforms. The purpose of a play is to provide performance/shows to entertain audience. Politics can be conceptualized as a play because in politics, politicians as players perform political shows to entertain (serve) their voters/citizens.

Table 3: POLITICS IS A PLAY (17 instances)

	Metaphor	Frequency
Entities	<i>wu3tai2</i> "platform"	10
	<i>zheng4zhi4 xiu4</i> "political show"	1
	<i>yao4jiao3</i> "leading character"	1
	<i>jue2se4</i> "role"	4
Functions	<i>biao3yan3</i> "performance"	1

All frequencies of mappings are related to the entities in play (16 instances out of 17 ones), suggesting that

the metaphor POLITICS IS A PLAY allows people to conceive politics as a play and make people to refer to "platform" and "role" in play. People are interest in what a role a politician in the political platform. This case does not put emphasis on qualifying politics as a tragedy and comedy or identifying the entertainment functions a play can provide. Thus, we can generate the mapping principle as (3).

### (3) Mapping Principle for POLITICS IS A PLAY

Politics is understood as a play because a play involves players' performance on the platform to the audience and politics involves politicians' performance to the public.

For POLITICS IS A COMPETITION, we can observe that the correspondences in the source-target domain pairings (Table 4) are associated with the concepts of "conflict" and "competition". "Politics" is treated as a competition which is full of fights and conflicts.

Table 4: POLITICS IS A COMPETITION (18 instances)

	Metaphor	Frequency
Qualities	<i>zheng1dou4</i> "conflict"	1
	<i>dou4zheng1</i> "conflict"	8
Functions	<i>jing4zheng1</i> "compete"	5
	<i>dou4zheng1</i> "conflict"	4

The distributions of frequencies show that both qualifies and functions for a competition (both 9 instances out of 18 ones) are emphasized to describe politics. The proportion of mappings suggests that a competition is mapped to politics via qualifying to the property "conflict" and identify to the aspect "competing" involving in politics. Thus, we can postulate the Mapping Principle as (4),

### (4) Mapping Principle for POLITICS IS A COMPETITION

Politics is understood as a competition because a competition is full of physical conflicts and politics is full of political/abstract conflicts.

For POLITICS IS SPORT, we can see that the correspondences in the source-target domain pairings are associated with the notion of "exercising". "Sport" involves physical exercise. "Politics" borrow this notion for being conceptualized as "mental exercising".

Table 5: POLITICS IS SPORT (16 instances)

	Metaphor	Frequency
Entities	<i>jue3li4chang3</i> "a wrestling ring"	1
Functions	<i>yun4dong4</i> "to exercise"	15

In terms of frequencies of each group, the metaphor POLITICS IS SPORT focuses on the mappings related to the "functions" in sport. In other words, this case does not pay attention on qualifying to the "competing" aspect or referring to "golf or tennis", "win/loses", and "rules". Instead, this metaphor emphasizes the conception of "exercising" of political power. Thus, the Mapping Principle can be as (5),

### (5) Mapping Principle for POLITICS IS SPORT

Politics is understood as sport because sport involves physical exercising and politics involves mental exercising.

Through investigating the mapping principles of the five metaphors, we can say that this corpus-based method is better than the original one (Ahrens 2002) in generating mapping principles of metaphors because only this method is able to provide the quantitative information of the correspondence between the source and target domains as well as to determine the salient and significant mappings for each conceptual metaphor.

### 3. Conclusion

This study uses a more convincing and quantitative method to explore how to generate Mapping Principles between source and target domains. Even though Ahrens' (2002) Conceptual Mapping Model has systematic ways to generate Mapping Principles, it is generated from native speakers' intuition, which lacks empirical evidence to support whether it truthfully reflects the correspondences existing between source and target domains in metaphorical expressions. Alternatively, this corpus-based method can provide quantitative way to generate Mapping Principle existing in real usages of metaphorical expressions.

Our method is supported by five metaphor analyses: POLITICS IS BUILDING, POLITICS IS A JOURNEY, POLITICS IS A PLAY, POLITICS IS A COMPETITION and POLITICS IS SPORT. The corpora data show that the underlying reason the target domain of "politics" selects the source domain of "building" to emphasize the concept of "structure"; it selects the source domain of "journey" to emphasize the notion of "traveling through

roads/routes"; it selects the source domain to borrow conceptualization of "performance to the public"; it selects "competition" for emphasizing the notion "conflict"; it selects "sport" as a source domain to emphasize the concept of "exercising".

In the future, we will follow Ahrens et al's (2003) proposal to integrate the Mapping principles with SUMO (i.e. Suggested Upper Merged Ontology) to restrict these mapping principles. In particular, we would like to check the inference rules of the source domains "competition", "war" and "sport" or "business" and "risk" in the political metaphors and try to figure out what mapping principles can be merged or subsumed under particular superordinate domains.

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