

FINDING ARGUMENTS IN ARTICLES

This chapter will argue for the usefulness of Argumentative Inquiry by providing some examples of argument in articles.

Space limitations, and the inability to provide the full articles rather limit the opportunities. Therefore, the compromise will be to present an abstract of the article, taken from the original article, in order to provide some indication of how the author has tried to convince. A summary will be provided for each article in an attempt to identify: 1) the object under study; 2) the concern over that object; 3) the argument (conclusion); 4) the types of supporting evidence; 5) the supporting evidence; 6) the implications claimed; and 7) some reflections on the convincingness of the conclusion.

Example 1

Hansen, M. T., 1999, The Search-Transfer Problem: The Role Of Weak Ties In Sharing Knowledge Across Organization Subunits, *Administrative Science Quarterly*, March, Vol. 44, No. 1

Extracts

This paper combines the concept of weak ties from social network research and the notion of complex knowledge to explain the role of weak ties in sharing knowledge across organization subunits in a multiunit organization. I use a network study of 120 new-product development projects undertaken by 41 divisions in a large electronics company to examine the task of developing new products in the least amount of time. Findings show that weak interunit ties help a project team search for useful knowledge in other subunits but impede the transfer of complex knowledge, which tends to require a strong tie between the two parties to a transfer. Having weak interunit ties speeds up projects when knowledge is not complex but slows them down when the knowledge to be transferred is highly complex.

Why are some subunits in an organization able to share knowledge among themselves whereas others are not? Addressing this question, organization scholars have analyzed factors that inhibit knowledge sharing among subunits, in particular, the lack of direct relationships and extensive communication between people from different subunits (e.g., Lawrence and Lorsch, 1967; Galbraith, 1973; Allen, 1977). More recently, two other lines of research have addressed the topic of knowledge sharing among people in an organization. In the product innovation literature, the argument is often made that close and frequent interactions between research and development (R&D) and other functions, teams, and operational subunits lead to project effectiveness because of the timely integration of knowledge across organizational boundaries (e.g., Clark and Fujimoto, 1991; LeonardBarton and Sinha, 1993; Henderson and Cockburn, 1994; Eisenhardt and Tabrizi, 1995; Szulanski, 1996). In this literature, efficient knowledge sharing is typically characterized by tight coupling between people from different organization subunits...

...Some social network scholars, however, provide a different argument. According to the weak-tie theory originally advanced by Granovetter (1973), distant and infrequent relationships (i.e., weak ties) are efficient for knowledge sharing because they provide access to novel information by bridging otherwise disconnected groups and individuals in an organization. Strong ties, in contrast, are likely to lead to redundant information because they tend to occur among a small group of actors in which everyone knows what the others know...

...The question thus arises whether it is strong or weak relationships between people in different organizational subunits that lead to efficient knowledge sharing among them. The discrepancy between the different arguments about the effects of relationship strength on knowledge sharing that are proposed in the product innovation literature and the weak tie perspective may be partly due to different foci...

Research Method

1) Selecting Product Development Projects

...54 [projects] had incurred a transfer event involving another division (i.e., the project managers reported that they had obtained software, hardware, and/or technical and market know-how or information from another division on the survey list).

Also note the project 'success' was measured using "number of months" in proportion to the budget dollars for a particular project.

2) Survey Questions

a) Inter-unit Tie Weakness

1. How frequently do (did) people in your division interact with this division (on average over the past two years)?

[0 = once a day, 1 = twice a week, 2 = once a week, 3 = twice a month, 4 = once a month, 5 = once every 2nd month, 6 = once every 3 months.]

2. How close is (was) the working relationship between your division and this division?

[0 = "Very close, practically like being in the same work group," 3 = "Somewhat close, like discussing and solving issues together," 6 = "Distant, like an arm's-length delivery of the input".]

b) Non-codified Knowledge

1. How well documented was the knowledge that your team leveraged from this division? Consider all the knowledge.

[0 = It was very well documented, 3 = It was somewhat well documented, 6 = It was not well documented.]

2. Was all this knowledge sufficiently explained to your team in writing (in code comments, written reports, manuals, e-mails, faxes, etc.)?

[0 = All of it was, 3 = Half of it was, 6 = None of it was.]

3. What type of knowledge came from this division?

[0 = Mainly reports, manuals, documents, self-explanatory software, etc., 3 = Half know-how and half reports/documents, 6 = Mainly personal practical know-how, tricks of the trade.]

Review

Argument Elements	"Extracts" and Comments
The object under study?	"...sharing [complex] knowledge across organization subunits".
The concern?	"...distant and infrequent relationships" (i.e., weak ties) versus "close and frequent interactions" (i.e., strong ties).
The argument (conclusion)?	"that weak inter-unit ties help a project team search for useful knowledge in other subunits but impede the transfer of complex knowledge".
Supporting evidence?	1) Reasoning supported by the literature: Using 'expert witnesses' like Granovetter (1973), (e.g., Clark and Fujimoto, 1991; LeonardBarton and Sinha, 1993; Henderson and Cockburn, 1994; Eisenhardt and Tabrizi, 1995; Szulanski, 1996) the author demonstrates that the weak vs strong debate on social networks can be resolved by saying that it depends on the complexity of the knowledge being shared. 2) From Empirics: A correlation was made between the completion rate of projects against the strength of social ties; the knowledge complexity was also provided.
Evidence "Topics"	While not provided above, the literature evidence is sub headed: Network Search and The Transfer Problem. The variables used in the correlation empirics are: Project Completion Time (success); Inter Unit Tie Weakness; Non-codified Knowledge; and Dependent Knowledge (if shared software needed technical support).
Alternative Arguments Provided?	Yes. "The question thus arises whether it is strong or weak relationships between people in different organizational subunits that lead to efficient knowledge sharing among them".
Falsifiable?	Yes, although the argument can only be observed indirectly through cause and effect (correlation), or by asking for experienced people's perceptions. The presence of an alternative argument suggests that it would be possible to disagree with the argument by presenting supporting evidence.
Surprising or novel?	Not really, the opposite argument that weak ties are good for sharing complex knowledge would have been surprising.
Multiple Concerns?	Beyond the concerns of those included in the literature review, no empirics of the possible concerns of the participants were presented, including their response to the findings. Participants were treated as objects not self-conscious experts capable of manipulating the situation.
Is the argument convincing?	The literature, which claimed that there were two views on the usefulness of weak ties, was convincing. The correlation between the measurement of complex variables and the use of intervening variables was contrived and not convincing. Overall, I now feel that weak and strong ties have different uses, but cannot distinguish complex knowledge on the basis of being codified or not. As ever, definitional issues dominate, that is, what is complex knowledge, when does a weak tie become strong?
Reflexivity	I do not know the author except through his explicit codified knowledge stored on an electronic database. Am I a weak tie? Is his article complex knowledge and did we share knowledge?

EXAMPLE 2

Baskerville R. F. 2003, 'Hofstede Never Studied Culture', *Accounting, Organizations and Society*, Vol .28, pp. 1–14.

Extracts

The continuation of accounting research utilising Hofstede's cultural indices suggests an absence of sufficient consideration for the reasons behind the rejection of such a universalist approach in anthropology and sociology.

...This study acknowledges the variety of applications of Hofstede's Culture's Consequences—International Differences in Work-Related Values (1980) (hereafter referred to as Culture's Consequences) in accounting research, and then examines the development of ideas about culture and its quantification by Hofstede, and the theoretical bases for Hofstede's cultural measurements. This review identifies problems such as: (i) the assumption of equating nation with culture (ii) the difficulties of, and limitations on, a quantification of culture represented by cultural dimensions and matrices; and (iii) the status of the observer outside the culture. Possible alternative and multiple explanations of national differences in accounting systems are also described. A further problem is a general lack of confidence in the assumption of stability of cultural differences, considering the twenty years since the 1980 publication of Culture's Consequences. Cultural diffusion and the dynamism of both national and ethnic shifts may be problematic where reification and indexation of culture is concerned.

The significance of the levels of citation of Hofstede can be assessed against benchmarks from citation analyses in economics, where a publication dated 1980 is deemed a 'super-classic' if it earns 37.42 citations per annum on average in a 20-year period ([Durden & Ellis, 1993](#)). Culture's Consequences demonstrates an average of 94 citations per annum in the last 18 years. Part of this level of usage appears to reflect efforts of researchers unaware of debates concerning the legitimacy of Hofstede's dimensions; as such, they utilize them afresh with impunity as in [Volkema's](#) study of ethnicity [sic] in negotiations, in which he suggests, "empirical research on culture is a relatively new field" (1999, p. 66).

Sub headings

- *Why were such indices rejected by anthropology and sociology?*
- *The assumption of equating nation states with cultures*
- *The quantification of culture based on numeric dimensions and matrices.*
- *From within or without*
- *Relationship of indices to other national data*

The outcome of this examination suggests that the manner in which Hofstede established the dimensions of culture, and the subsequent reification of "culture" as a variable in cross-national studies in accounting research, led to a misleading dependence on cultural indices as an explanatory variable of differences in accounting practices and behaviour.

Review

Argument Elements	"Extracts" and Comments
The object under study?	<i>"Hofstede's cultural indices"</i> .
The concern?	<i>"universalist approach", ... "the dimensions of culture"</i> .
The argument (conclusion)?	<i>"that the manner in which Hofstede established the dimensions of culture... [has] led to a misleading dependence on cultural indices as an explanatory variable of differences in...practices and behaviour"</i> .
Supporting evidence?	1) Empirics: A citation analysis is provided. Reasoning supported by the literature: <i>"(i) the assumption of equating nation with culture; (ii) the difficulties of, and limitations on, a quantification of culture represented by cultural dimensions and matrices; and (iii) the status of the observer outside the culture. Possible alternative and multiple explanations of national differences in accounting systems are also described...[also] a general lack of confidence in the assumption of stability of cultural differences"</i> .
Evidence "Topics"	Baskerville provides a non comparative citation analysis as evidence that accountants use Hofstede's indices extensively in their cultural empirics. Other <i>sub headings include: Why were such indices rejected by anthropology? The assumption of equating nation states with cultures. The quantification of culture based on numeric dimensions and matrices. From within or without (ethnography), and Relationship of indices to other national data (ie. economic).</i>
Alternative Argument?	While the article mentioned that a 'universal" approach is not supported, it does not present, in detail, a compare and contrast as an alternative to Hofstede's indices. The title says Hofstede was not measuring culture. Then, what did he measure?. One suggestion, gained from a quick look at his book, is that he was measuring psychological attributes of international IBM employees.
Falsifiable?	Baskerville is trying to falsify Hofstede's indices. She does not use any empirics to do so, I am not sure she could, nor that it would be possible to counter her reasoning using empirics. I am tempted to conclude that nothing is falsifiable.
Surprising or novel?	I suspect that few people honestly believed that Hofstede's indices did actually measure culture. Baskerville has merely articulated it with the authority of an ex-Anthropologist.
Multiple Concerns?	Interestingly for an anthropologist, the paper makes no attempt to present empirics relating to the concerns of stakeholders, such as users of the indices. She is trying to establish as a universal fact that the Hofstede is wrong. To some extent, the concerns of the few critics presented in the literature are expressed.
Convincing?	I am, anyway, always suspicious of attempts to quantify (simplify) any complex social situation so, as a rule, I immediately agreed with Baskerville. However, the issue remains: Why do so many journal editors accept research that uses such reductionist measures of culture?
Reflexivity	She complains that a particular tribe (accountants) with a culture of quantifying complex social issues use quantitative cultural indices. Is this not like an anthropologist saying some tribe wear a green headdress in marriage ceremonies and they should not? The question should be: why are they, and how is their belief being reinforced?

EXAMPLE 3

Barley S.R., 1986, 'Technology as an Occasion for Structuring', *Administrative Science Quarterly*, Vol. 31, March, pp. 78–108.

Extracts

Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments

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New medical imaging devices, such as the CT scanner, have begun to challenge traditional role relations among radiologists and radiological technologists. Under some conditions, these technologies may actually alter the organizational and occupational structure of radiological work. However, current theories of technology and organizational form are insensitive to the potential number of structural variations implicit in role-based change. This paper expands recent sociological thought on the link between institution and action to outline a theory of how technology might occasion different organizational structures by altering institutionalized roles and patterns of interaction. In so doing, technology is treated as a social rather than a physical object, and structure is conceptualized as a process rather than an entity. The implications of the theory are illustrated by showing how identical CT scanners occasioned similar structuring processes in two radiology departments and yet led to divergent forms of organization. The data suggest that to understand how technologies alter organizational structures researchers may need to integrate the study of social action and the study of social form.♦

From the standpoint of social science, organizational theorists could hardly pose a more plausible thesis than that technology shapes organizational structure. Anthropologists, sociologists, historians, and economists have repeatedly shown that technologies transform societies by altering customary modes and relations of production. Since most production in industrial society occurs within formal organizations, when modern technologies alter relations of production they should also, by implication, shift organizational forms (Blau et al., 1976). However, as most investigators admit, after two and a half decades of research our evidence for technology's influence on organizational structure is, at best, confusing and contradictory (Hickson, Pugh, and Pheysey, 1969; Mohr, 1971; Blau et al., 1976; Gerwin, 1981; Fry, 1982).

The research initially focused on documenting traditional radiological practice to establish a comparative base for determining the extent to which the scanners would affirm or modify institutional patterns in the two departments. Historical data on the technical and social organization of the specialty were gathered from published sources and from interviews with senior radiologists at two large medical centers. However, since actual practice in a specific hospital may depart from the occupation's norms and institutions, it was also critical to study traditional operations at each research site. Consequently, I began observation at both Urban and Suburban in June 1982, four months before the scanners began to operate.

Review

Argument Elements	"Extracts" and Comments
The object under study?	"organisational and occupational structure", including "institutional roles and patterns of interaction".
The concern?	New 'technologies'.
The argument (conclusion)?	"that to understand how technologies alter organisational structures researchers may need to integrate the study of social action and the study of social form".
Supporting evidence?	While not shown above, the article draws extensively on the literature to support the argument. It undertakes an in depth case study of the development of two different organisation structures when the same CT scanner is installed at two different radiology departments. Barley attributes the resulting organisational forms to the different personalities involved, and professional skills of the staff involved.
Evidence "Topics"	These are the stages of change identified in the empirics: Discretion, Validation, Questioning, Preference Stating, Usurping Autonomy, Role Reversal, Blaming, Dependence, Countermands, Usurping Controls, Direction Seeking, Unexpected Criticism, Accusatory Questioning, Independence, Exclusion...
Alternative Argument?	No alternative argument is presented. Implicit is the alternative, that is, the negative that technology has no effect on organisational structure or job skills. An obvious alternative is that certain structures and role allocations are attracted by certain technologies. An alternative is that certain structures are more able to absorb new technologies without needing to change.
Falsifiable?	It would seem hard to find empirical evidence that new technologies do not alter organisational structures and job skills. Maybe certain strategic organisational roles are less affected by technology, for example vision and motivation.
Surprising or novel?	The argument is not surprising, but it was not intended to be, rather it is an empirical confirmation.
Multiple Concerns?	The concerns of those involved directly in the changes caused by the new CT scanner are carefully documented. The concerns of the vendors or the senior management of the hospitals are silent. Barley is presenting a social re-construction of the organisation as a result of participants concerns.
Convincing?	I found the evidence convincing, partly because it matched my own experiences and partly because I could hear the words of participants in context. I felt the data had been carefully recorded and reported under carefully constructed 'Topics'.

Reflexivity	The article, like Darwin's theory of evolution, does not only attempt to generalise from its own empirics, but it argues that each situation is unique. The contribution to knowledge is in terms of better appreciating the 'theory' that new technology alters organisational structure in ways dependent on the situation (history, culture, personalities...). However, you are left with the 'so-what' question. Saying that technology alters structures hardly leaves managers with any advice on what to do, except expect change. No rule of thumb, actionable knowledge or heuristic etc has been formed.
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Example 4

MARKUS M. L, 1994, 'Finding a Happy Medium: Explaining the Negative Effects of Electronic Communication on Social Life at Work', *ACM Transactions on Information Systems*, Vol. 12, No. 2, April 1994, pp. 119–149

Extracts

...The sometimes observed negative social effects of electronic communication technology are often attributed to the characteristics of the technology itself. Electronic mail, for instance, filters out personal and social cues and provides new capabilities not found in traditional media, and it has been argued that these factors have consequences such as "flaming" and depersonalization. Alternative theoretical perspectives on the impacts of information technology suggest that our ability to explain these outcomes might be enhanced by attending to users' intentional choices about how to use technology and to the unpredictable technology usage patterns that emerge when users interact with the technology and each other. These alternative perspectives are examined in the context of an exploratory case study of a complex organization in which electronic mail was heavily used. Users were found to select email deliberately when they wished to avoid unwanted social interactions. At the same time, they actively took steps to avoid negative outcomes, such as depersonalization of their relationships with subordinates. However, despite their well-intentioned efforts, some negative social effects did occur that cannot entirely be attributed to the technological characteristics of electronic communication. Instead, they appear to be ironic side effects of users' thoughtful efforts to use email effectively. These results suggest the value of according a prominent role in explanations of technology impacts to users' intended and unintended technology uses. The results also imply that negative social effects from using electronic communication technology may not prove easy to eradicate, despite technological developments such as multimedia integration, and despite efforts to train users in the best email "etiquette"...

...It is now well known that, for all its benefits, electronic communication holds risks for social life at work: it can often result in misinterpretations, angry and uninhibited exchanges, and feelings of isolation or depersonalization among its users [Kiesler et al. 1984; Sproull and Kiesler 1986]. These effects are often attributed to the technological characteristics of electronic media, such as their limited ability to transmit the gestures, tones of voice, and eye movements that people use to regulate their interactions in face-to-face communication [Culnan and Markus 1987]. Consequently, communicators via the electronic media are frequently urged to use these technologies in "appropriate" ways, whether this means attending to "ethics and etiquette" [Shapiro and Anderson 1985] or avoiding these media for certain types of communication [Lengel and Daft 1988]...

...The belief that the negative social effects of electronic communication are caused by technological characteristics is an optimistic theory. It suggests the cheerful prospect that the risks will diminish as technology becomes more advanced. The hope is that progress toward the integration of voice, text, and video will soon succeed in personalizing electronic communication, allowing users to relax their guard against outcomes both undesirable and undesired. On the other hand, what if the negative outcomes result, not from the technology itself, but from how people use it? If so, multimedia integration may change the outcomes, but not necessarily for the better. And what if the negative outcomes occur despite people's best efforts to avert them through such prophylactic behaviors as thinking twice before pushing "send"? If so, the consequences of using electronic communication, both good and ill, may be here to stay...

...These "what if" questions reflect potentially distinct alternatives to the theory that ascribes social consequences, negative or positive, to the technological characteristics of electronic communication media. The first alternative argues that social outcomes, both positive and negative, can be attributed to the intentions of the users. This theory suggests that, to ensure positive outcomes, users must not only know the rules of proper email etiquette, but also be motivated to achieve socially desirable outcomes. Yet, this motivation may be lacking when socially desirable outcomes conflict with private motives...

...The second alternative theory argues that the outcomes of technology use are inherently unpredictable and may not reflect either the true possibilities of the technology or the users' deliberate goals. This theory suggests that negative social consequences from the use of electronic media may not prove tractable despite concerted efforts at technical and social engineering...

*...Table I. Theoretical Perspectives on the Negative Social Effects of Email Use
Explanation of Negative Effects/Perspective Predictions about Behavior...*

Perspective	Explanation of Negative Effects/ Predictions about Behavior
<p>Technological Determinism</p> <p>—Social effects are determined by the characteristics of technology, regardless of users' intentions.</p> <p>—Relevant technological characteristics of electronic media include “cues filtered out” and “new capabilities.”</p>	<p>—Negative outcomes occur when email is used, because email filters out the cues that people need to regulate their social interaction.</p> <p>—Negative outcomes occur when email is used, because email has new capabilities that deregulate or depersonalize social interaction.</p>
<p>Rational Actor</p> <p>—Social effects result from intended human actions within the constraints and enablements afforded by technological characteristics.</p> <p>—People may intend negative outcomes, when private motives differ from socially desirable outcomes.</p> <p>—People may anticipate negative outcomes and take steps to avert them.</p>	<p>—Negative outcomes occur because people occasionally engage in “bad uses” of email. While some bad uses of email may result from ignorance, some maybe deliberate, that is, people may actually intend to bring out negative social effects, such as increased interpersonal distance.</p> <p>—People may know that using email entails the risk of negative social outcomes, because the technology clearly filters out some important social cues. However, using email may also produce benefits that users desire. Therefore, people who use email may take steps to avoid email's potential negative “side effects” on social interaction.</p>
<p>Emergent Process</p> <p>—The effects of technology use result from unpredictable interactions among technological characteristics, users' intentions and behaviors, and social definitions of good and bad uses.</p>	<p>—When negative effects occur, they are often unintended and unanticipated: they may even be the ironic result of actions people take to avoid the potential negative effects of using email,</p>

...Thus, the evidence in [this] case suggests that both the rational actor and the emergent process perspectives are likely to explain (at least partially) any negative social effects observed in other work organizations where electronic communication technologies are widely used...

Response

Argument Elements	“Extracts” and Comments
The object under study?	<i>Negative social effects of email usage.</i>
The concern?	<i>Technological characteristics (emergent process) vs social consequences (rational actor).</i>
The argument (conclusion)?	<i>That both the rational actor and the emergent process perspectives are likely to explain (at least partially) any negative social effects ...where electronic communication technologies are widely used.</i>
Supporting evidence?	<p><i>Reasoning using evidence from the literature that negative social actions are caused by the situation (technology) and people’s awareness of the consequences of their actions.</i></p> <p><i>Empirics in the form of a case study of a complex organization in which electronic mail was heavily used prior to 1994.</i></p>
Evidence “Topics”	Filtering our social cues, technological determinism, emergent processes (side effects of technology), increased connectivity, purposeful behaviour (consequences), negative rational actor.
Alternative Arguments	<i>Markus provides two arguments why people might be socially negative when using email 1) technological characteristics (emergent process) and 2) social consequences (rational actor. This aligns with the ideas mentioned in this book that an argument should preferably be against another argument not merely the negative form of itself (is or is not). She ends up with a synthesis from both, that is, that it is partly due to the technology cutting out social cues and partly due to people using it to be less sociable.</i>
Falsifiable?	I am not sure it would be possible to find empirical evidence to demonstrate that it is either the technology or social behaviour that affects people’s social behaviour. Even technology can be defined as something that changes behaviour.
Surprising or novel?	I am not sure Markus’ argument, or supporting evidence, are surprising or novel. The details of the evidence would have been new however as she was investigating email in 1994.
Multiple Concerns?	In her findings, Markus gives a voice to those who participate, and she presents two ‘perspectives’ (concerns), that is to say the technological ones and the social consequences one.
Convincing?	Given my experiences of people and email, I was easily convinced. The use of quantitative and interview data in a real situation was important to my accepting her findings. An experiment using students (as strangers) would have been less convincing.
Reflexivity	Academic papers have long used a technology (writing and print) to communicate asynchronously, so what is different about email. Well, it is two-way process. With an article, there is no ‘reply’ button. This may be what Markus calls the ‘connectivity’ topic. It is not so much that an article will not go to as many people as an email, but a case of how easy it is for the receiver to respond in person. Articles are carefully worded (eg. Smith seems to be implying that...) to avoid negative social effects, so at least writers should be aware of the dangers.

Therefore In Your PhD

The aim of the examples is to provide some suggestions about the sort of questions you might ask yourself about your research report, or at least with whatever ideas you have to date. The reflexivity is important. Ask yourself if you are taking your own advice. If you say a system should be designed using a particular design approach, then does your research use that design.

References

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