

PrimaVera Working Paper Series



UNIVERSITEIT VAN AMSTERDAM

PrimaVera Working Paper 2007-18

Objectivist by default: why information management needs a new foundation

Ard Huizing

July 2007

Category: academic

University of Amsterdam
Department of Information Management
Roetersstraat 11
1018 WB Amsterdam
<http://primavera.fee.uva.nl>

Copyright ©2007 by the Universiteit van Amsterdam

All rights reserved. No part of this article may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the authors.

Objectivist by default: why information management needs a new foundation

Ard Huizing

University of Amsterdam Business School

The Netherlands

Abstract

In this paper, I illustrate how closely information management is rooted in the philosophical tradition of objectivism. I then address my second goal which is to probe the question of whether or not objectivism provides a sound and solid foundation for information management. With these goals in mind, I first explain what objectivism is for which I extend this philosophical tradition with microeconomics, one of its most influential elaborations. I subsequently illustrate how deeply information management and the adjacent field of knowledge management have been affected by objectivist thinking. Objectivism has determined the domain, rationale, definition and goal that are commonly ascribed to information and knowledge management as well as the definitions of their core concepts information, knowledge, communication and learning. Moreover, information and knowledge management show a deep appreciation for the market form of organizing, as suggested by microeconomics. Being an influential theory means that the underlying theoretical assumptions get internalized into people's belief systems, which can then become an established ideology. As a result, these assumptions help frame what the organizational challenges are and how to manage them. Summarizing this paper, Table 1 therefore, includes the objectivist and related economic assumptions upon which information management has been built. Finally, I return to the foundation question. With objectivist economics, information management has chosen a theoretical basis that has ironically proven to be incapable of dealing with the very core of its existence: *information*. Stigler's 1961 observation still applies: "[Information] occupies a slum dwelling in the town of economics" (in Babe, 1994: 49). Objectivism and economics are and will remain helpful in information management, but need to be complemented by subjectivist theories that seek their contribution in the problems objectivism and economics cannot solve (see the next PrimaVera paper).

INDEX

1. What Is Objectivism?	4
2. The Transactional Edifice of Microeconomics	7
3. The Logic behind Objectification	8
4. Conceptual Implications: Information Management’s Domain, Rationale, Definition and Goal... 9	
5. Organizational Implications: What the Market Metaphor Highlights and Hides..... 11	
6. Economics’ strongest and weakest quality	15
7. The Future of Objectivism	15
8. Discussion and Conclusions: A Sound Foundation?	17
References	22

1. What Is Objectivism?

Objectivism is by far the dominant world view in Western culture. I use objectivism as an umbrella term for all of those schools of thought and theories that are based upon the idea that for knowledge development, we should view the world as consisting of distinct objects that can and should be separated from their originators and users. Building on a long tradition of rationalist and empiricist theory construction, this idea is deeply entrenched in sciences such as economics, computer science, mathematics and sociology as well as in business disciplines like accountancy and financial management. It also governs large parts of information management and the adjacent fields of knowledge and learning, both in theory and in practice. Information management is objectivist by default.

In a general sense, objectivism is associated with “scientific truth, rationality, precision, fairness, and impartiality” (Lakoff & Johnson, 1980: 189). Objectivists claim that human behavior is determined by forces in the external world. People, however, cannot control these external forces and find them difficult to comprehend. They should therefore be supported with knowledge to help them master their environment, which would lead to successful performance. Consequently, for developing knowledge relevant to practice, we should be focused on the external aspects of how we understand our worlds.

The world external to individual human beings is thought to be made up of distinct, real objects. These objects are supposed to have *inherent* properties, implying that objects are not affected by the way we think of them or how we use them. A rose is a rose is a rose, regardless of how someone perceives it, if at all. Objects live on their own, immune to our subjective thoughts, feelings and emotions. They have fixed meanings that can be known by investigating their inherent properties. Roses have thorns, distinctive smells and other fixed properties that together define our interactions with and understandings of this flower category. Once these properties are fully understood, true and lasting knowledge has been gained.

Building theory upon the inherent properties of information and knowledge is an approach favored in the relevant literatures (Shapiro & Varian, 1999 and Boisot, 1998, respectively). Commonly the reasoning is that traditional theories have been developed for the industrial age that aim to support organizations in managing physical goods. Information and knowledge, however, have properties characteristically deviating from those of physical goods. Typical examples of such idiosyncratic properties implicating management and organization are, for instance, that information can easily be copied perfectly at minimal costs or that knowledge can appreciate with use. Understanding these inherent and objective properties and structuring them into a framework of abstracted cause and effect relationships create theory that guides organizations in the information or knowledge society. The related implication for information management is that its identity could be built upon such distinct expert knowledge. It is what could set information management apart as a value adding business function.

Hence, we can better understand our external environment by exploring and abstracting the inherent properties of the objects in it and using the knowledge thus gained to determine our relationships to the objects. In objectivism, knowledge consists of discrete and abstracted granules of understanding representing objective realities and learning is a step-by-step process directed towards the constant refinement of these factual representations. Clearly delineating objects' inherent properties and understanding how these properties relate to each other is considered to be the gateway to knowledge and to mastery over the environment for those who have that knowledge.

Moreover, since knowledge in objectivism is factual, objective and fixed, it is transferable to others by means of communication. Through communication, the fixed meanings of objects are transferred from an active sender to a passive receiver, a view on communication that is known as the conduit metaphor (Bryant, 2007). In this view, the main source of communication failure is human subjectivity. Communication failures might occur when the sender has used inaccurate language or when the receiver was unaware of the exact meaning of the language used and subsequently misinterpreted the message.

In objectivism, subjectivity is also to be suspected for other reasons. Because successful performance in the external environment is fully dependent upon it, knowledge creation cannot be left to individual people, prone as they are to human error instigated by personal and cultural biases, prejudices and other subjective limitations. The only real knowledge is considered to be objective, rational knowledge, for which we need science's drive towards precision and timeless truths. Science allows us to abstract experiential knowledge from practice in such a way that ultimately correct, general and definitive accounts of reality can be given that are objectively, universally and unconditionally true. People can be objective, but only if they use clear and precise language consisting of words with fixed meanings, which match the reality that is being described. Science provides us with such language. Moreover, scientific methodologies allow us to present the resulting models of rational behavior as prescriptive theories that tell us how to be successful in the external environment. This positivist view on science, methodology and knowledge is also prevalent in the information and knowledge literatures.

Finally, objectivity is preferred over subjectivity, because it helps to rise above personal judgments, illusions and errors and, in that way, advances fairness and impartiality in human relationships. A management development program with promotion criteria clear to all those involved is a typical example of such intentions.

Table 1 includes the points just made about objectivism. It also summarizes the remainder of this chapter with the intention to depict the deeper structure of objectivism and objectivist information management.

Table 1 Pinpointing Objectivism

Objectivism's Transactional Edifice
<p><i>Definitions</i></p> <ol style="list-style-type: none">1 Information and knowledge are granules of understanding representing objective realities.2 Learning is a step-by-step process directed towards the constant refinement of objective representations.3 Communication is the transfer of granules of understanding from a sender to a receiver.
<p><i>Information (and knowledge) management</i></p> <ol style="list-style-type: none">1 The domain of information (knowledge) management is the information (knowledge) supply side, culminating in the moment of truth.2 The rationale of information (knowledge) management is promoting unfettered information (knowledge) exchange.3 The goal of information (knowledge) management is getting the right information (knowledge) in the right form to the right person at the right time.4 Information (knowledge) management is the gathering, refining, storing, preserving and dissemination of information (knowledge).
<p><i>Organizing principles</i></p> <ol style="list-style-type: none">1 Shape information and knowledge exchange as a market and create effective mechanisms to fully exploit the market's self-organizing capacity.2 Maximize participation, discourage erection of entry barriers, and promote competition among participants.3 Commoditize information and knowledge to render economic power.
<p><i>Core assumptions in objectivism</i></p> <ol style="list-style-type: none">1 Human behavior is determined by forces in the external world.2 People cannot control these external forces and find them difficult to comprehend.3 People should therefore be provided with truthful knowledge to help them master their environment.4 Mastery over the environment leads to successful performance.5 For developing relevant knowledge, we should focus on these external aspects of understanding.6 Understanding is dependent on truth.7 The environment consists of distinct objects that exist independently of human cognition and use.8 People understand the environment when they have knowledge of these objects.9 Such knowledge is developed by studying objects' inherent properties.

- 10 These inherent properties can be objectively known through codification and abstraction.
- 11 Objects' inherent properties are fixed and objective; meanings are therefore also fixed and objective.
- 12 The only real and truthful knowledge is disembodied, abstracted and objective.
- 13 Only positivist science produces real, truthful knowledge and reliable, prescriptive theory.
- 14 Objectivity promotes fairness and impartiality in social matters.

Additional assumptions in microeconomics

- 1 Successful performance is defined by its economic value.
- 2 Efficient exchange maximizes economic value.
- 3 Hence, efficient exchange at the moment of truth should be the focal point of attention.
- 4 Transactions stand on their own, implying that context, time and people's identities, values and beliefs are irrelevant for theory and practice.
- 5 People are economically rational and maximize their personal welfare.
- 6 Competition among large numbers of non-hierarchical participants enhances market efficiency.
- 7 Maximizing economic value requires commoditization of information and knowledge.
- 8 Commoditization enables measurement of performance and management control.
- 9 ICT is a neutral medium.

2. The Transactional Edifice of Microeconomics

As a philosophical tradition, objectivism directly affects our views on information management, and also indirectly through more mature, paradigmatically advanced sciences from which well-developed ideas and theories are imported. In the relatively young field of information management, many references are made to neoclassical microeconomics, which is a highly influential application of this philosophical tradition. Deconstructing these references can show us what objectivist information management is and what it is not.

The influence of neoclassical economics can be read from a number of metaphors pervasive in information management: information exchange, information transfer, information use and information management itself, among others, while similar metaphors are also common in knowledge management. The core idea imitated is that we should take the transaction of objects as the focal point of attention in building relevant theory. A transaction or exchange is understood as “a voluntary agreement involving the offer of any sort of present, continuing, or future utility in exchange for utilities of any sort offered in return” (Weber in Woolsey Biggart and Delbridge, 2004: 31).

In microeconomics, objects are scarce and should therefore be used as efficiently as possible, whether they are “dollars, a bowl of whipped cream, available time, or even a reputation for honesty and

skill” (Stigler, 1988: 193). However, most objects can be used in many ways and for different purposes, and can render a plethora of products and services. That possibility presents us with a pivotal organization and management challenge: how can scarce and thus valuable objects be optimally distributed over the alternative ways in which they can be deployed?

The straightforward answer of neoclassical economics is: by using the market form of organization. As expressed in the neoclassical model of the perfect market, transacting objects on markets is the best way of securing optimal distribution, meaning that objects find their most efficient and profitable use through exchange. The relationship established between *efficient distribution* of objects and *market exchange* and then to *economic value realization* epitomizes the transactional edifice of neoclassical economics.

Despite a number of fundamental problems in economics’ transactional edifice, which I will address later in this chapter, the model of the perfect market remains remarkably yet understandably influential. In business literature and practice, the moment of transacting is insightfully called ‘the moment of truth’, implying that it is at this particular instance in time that organizations realize their economic value. All organizational effort, so to speak, is geared towards this value-realizing moment when products and services are transferred *quid pro quo* to customers and clients. It is through efficient exchange that organizations maximize their value added and, hence, their economic growth. Part of this larger picture is the exchange of information and knowledge, which is gaining significance with the development of a post-industrial economy. Information and knowledge are increasingly being considered the principal strategic resources for organizations and societies, and the ability to create and apply them, the core competences for building and sustaining competitive advantage or economic rent. Hence the need to adequately theorize information and knowledge.

3. The Logic behind Objectification

The prospect of value realization and economic growth through efficient exchange explains not only the generally strong appeal of transactional thinking to decision makers in both private and public sectors, but also the logic behind objectification, or codification, as it is called in the knowledge management literature.

Firstly, objectification is needed because exchange entails the conveyance of property rights, which requires legal ownership of that which is being transferred, and legal ownership in turn requires clearly defined objects. As reflected in the adage, ‘possession is nine-tenths of the law’ (Boisot, 1998: 87), the only route open for organizations to claim ownership of information and knowledge in a meaningful way is to turn them into such distinct objects, disembodied from their producers and consumers.

Secondly, the objectification and transactionalization of information and knowledge is justified by the potential of capturing informational economies of scale. Once objectified into unaffiliated documents, files or software, information and knowledge can be replicated and re-used endlessly at minimal additional costs. As a result of this inherent property, the average cost per information or knowledge exchange will be lower for high-frequency transactions; that is, the value of information and knowledge increases as more people use it. Moreover, we often talk about information and knowledge *sharing* instead of exchange, indicating that information and knowledge are retained upon transaction. Unlike physical objects, their consumption does not eliminate them. The economic consequence of these inherent properties is that information and knowledge are more likely to be optimally distributed than physical goods, ideally becoming available to everybody who can put them to productive use. Knowledge management's dictum 'if we only knew what we know' perfectly reflects this ideal of entirely efficient markets.

Thirdly, viewing information and knowledge as distinct and exchangeable objects gives us a clear sense of what it is that needs to be organized, managed and evaluated. Objects can be gathered, stored, refined and distributed, all activities that can be managed and quantitatively measured. Quantification is an absolute requirement for economic modeling and analysis. The consequence of this prevalent view is that the subjectivists' perspective of information and knowledge residing in human minds and relationships that cannot be disembodied into distinct objects is ignored in economics. What cannot be quantified is consistently assumed away.

4. Conceptual Implications: Information Management's Domain, Rationale, Definition and Goal

The objectivist-economic considerations mentioned above have helped frame the domain, rationale, definition and goal commonly ascribed to information management. Following economics creates a 'natural' distinction between the 'information supply side' and the 'information demand side', mediated by the moment of truth. It also contributes to a distinct preference for the information supply side, for a number of reasons.

As described in the previous section, the business need to maximize economic value urges the objectification and transactionalization of information and knowledge. The logic behind objectification furthermore drives attention towards exploiting what we have or know rather than towards exploring what we do not have or understand. In objectivist information management, therefore, the focus is on resolving supply side issues, such as objectifying available information and knowledge, storing the resulting information and knowledge objects independently from subjectivity of producers and consumers, and improving their availability and accessibility to enhance information and knowledge distribution. Generally, there is little concern for what people actually do with information and for how creative and

dynamic learning processes may result in innovation and the creation of new knowledge. The objectivist default is: information use is not our business! Information management might help fix the objective meanings of relevant words by such means as thesauri, taxonomies and data committees, but beyond that, the information demand side is viewed as the concern of others or is seen as relatively unproblematic. This perspective on information management is reinforced by the conduit metaphor of communication and by economists assuming prices to be the quantitative expressions of the utility buyers and sellers subjectively attach to products and services.

Moreover, the introduction of information and communication technology mediating human interaction has also been a contributing factor to information management specializing on the supply side. In economics, ICT is seen as a neutral medium that transports information objects from the supply to the demand side. It helps in objectifying practice, for instance by reducing the cost of information replication and re-use, and in transactionalizing information objects by paving electronic roads between information suppliers and users. By its very nature, ICT aids in enhancing the availability and accessibility of information and knowledge and contributes little towards making sense of the messages conveyed. Moreover, the complexity of technology as such and of applying it successfully into organizational contexts has contributed to a technology-driven approach to information management. As a next logical step in the ever-increasing division of labor that is so important for economic growth, ICT has become its own domain of expertise.

Consequently, economic reasoning stimulates information management to choose the supply and exchange of information as its *domain* of expertise and the promotion of this exchange by helping to remove any barrier that prevents information from flowing as freely as possible as its *rationale*. In theory and practice, therefore, information management is generally *described* in terms of acquiring, refining, storing, preserving and disseminating informational representations of practice and its *goal* is described as getting the right representations in the right form to the right person at the right time (Gurbaxani and Whang, 1991). These attributes of information management can be clearly recognized in ICT or IS-driven approaches to information management. What happens with the information after it has been disseminated is occasionally included in the definition of information management (Wilson, 1997), but often this aspect is ignored or minimized. Acquiring, refining, storing and preserving information are information management processes which relate to the objectification of reality, and disseminating information relates to market mechanisms optimizing the distribution of the resulting information objects.

The observations made regarding information management in the previous paragraph also apply to knowledge management. Knowledge management is often defined in the same terms as information management, and is attributed a similar domain of expertise, rationale and goal (Davenport & Prusak, 1998). The same erosion of notions can be discerned in practice, when a bookstore is suddenly called a

‘knowledge shop’ or a database with frequently asked questions an ‘interactive knowledge center’. Precisely because of this identical emphasis on the objectification and economic value of knowledge, knowledge management cannot be anything else than information management and vice versa. How could a knowledge object be different from an information object or, for that matter, a data object? In objectivism, ‘data’, ‘information’ and ‘knowledge’ can and are used interchangeably.

5. Organizational Implications: What the Market Metaphor Highlights and Hides

Apart from the conceptual implications for information management’s domain, rationale, definition and goal, building information management’s identity upon economics’ transactional edifice has considerable implications for organization theory and management practice. Transactions need to be organized, one way or another. The objectivist view that information and knowledge can be separated from its generators and users into transferable objects determines how transactions can be best organized, managed and evaluated.

Neoclassical orthodoxy favors the market form of social organization, which can be applied to organizations’ external transactions with, for instance, suppliers or customers as well as to their internal transactions. The assumptions upon which the neoclassical model of the perfect market rests reflect the organizing principles involved and, in that way, also those assumptions and principles that are hidden. I will apply these assumptions and principles to information and knowledge management under three headings: 1) create effective market mechanisms, 2) maximize participation and 3) commoditize information and knowledge.

The promise of economics is: the more closely information and knowledge management adhere to the neoclassical assumptions and the organizing principles implied, the more perfect the established information and knowledge markets will be, and the more efficiently information and knowledge will be distributed. This appealing promise, however, obscures other aspects of reality that have been effectively wished away in economics’ drive towards theoretical rigor. Once captured by economics’ attractiveness, these other aspects of reality run the risk of getting ignored or downplayed, in theory as well as in practice. It is precisely at this point that the theory of the perfect market can become a market ideology. As will be illustrated in the next chapter of this book, the very same aspects of reality hidden in objectivism and economics are the ones emphasized in subjectivism.

Create Effective Market Mechanisms

The marvel of markets (Hayek, 1945) is that they are self-organizing, once effective market mechanisms are in place. In theory, these market mechanisms ensure that every bit of information or knowledge necessary for decision making will be available at the right moment, which in turn allows people to be

seen as fully rational agents regardless of their computational and cognitive limitations. The assumptions in neoclassical orthodoxy have been designed in such a way that prices contain all information and knowledge for transactions to take place efficiently. All that people need to know to efficiently transact is the price of the object at hand. The price is the market's information system; the 'invisible hand' will take care of the rest. The perfect information and communication assumption furthermore entails that any relevant change on the market is instantly reflected in a price change, which is immediately communicated to and processed by all market parties.

In the field of information and knowledge, however, prices are often absent, which turns the intrinsic and extrinsic motivations of people to share their information and knowledge with others into a core organization issue. If prices are unknown, why would anybody consider sharing information or knowledge? Extending the neoclassical assumption that rational people always maximize their self-interests and personal welfare, this issue can be solved by assuming that rational people will readily objectify and exchange their information and knowledge through market mechanisms other than price if they expect to be proportionately rewarded with tangible or intangible returns such as pay, promotions and bonuses or reputation, respect and prestige. Google and the many social networking sites available such as LinkedIn exemplify how deeply the market metaphor can inform the shaping of information and knowledge exchange.

The transactional edifice of neoclassical economics is built upon other assumptions as well. Economics' methodological individualism (Babe, 1994) suggests that both people and transactions can be seen as anonymous and independent atoms, which add up to nothing more than the sum of their parts. People pursue their own individual goals, driven by self-interest, each to themselves. Their identities are unimportant and their relationships need not become personal, because each transaction stands on its own for which, if needed, alternative exchange partners are readily found in our competitive markets. Moreover, anonymous exchange relationships do not require values and beliefs to be shared. Exchange partners, so to speak, do not have to be friends for transactions to be successfully accomplished.

The organizing messages implied in these neoclassical assumptions are that people's self-interested drive to maximize their individual welfare should be explicitly addressed when establishing an information or knowledge market. Create effective market mechanisms, observe how self-organizing information providers and users find each other, and adjust the mechanisms, if and when that seems appropriate. Information or knowledge management in this sense is manipulating people's behavior by carefully addressing their self-interests.

Hence, neoclassical orthodoxy provides a static equilibrium model characterized by supply and demand forces that ignores any influence of context, time and immaterial values such as imagination, creativity or trust on people, relationships and transactions. The focus is entirely on the objects being

discretely transacted, here and now, which is *the* aspect of reality the market metaphor exposes and emphasizes. What it hides are the relationships between people engaged in exchange, their history and future, their affiliations with the objects exchanged, the interaction of which the exchange of objects is just a part, the context in which transactions take place and the dynamics of the organizational processes involved. Economics is a science of nouns, not of verbs. It deals with static objects rather than with dynamic subjects, with information, not in-forming; with knowledge, not with knowing or learning.

Maximize Participation

Another assumption of neoclassical economics is that for markets to be efficient, they should consist of large numbers of transacting actors, none of whom has sufficient economic or political power to exert influence over the other. Ideally, there are no entry barriers either, so that all who wish can actually join. Large numbers of providers and users are furthermore needed to promote competition among as many information and knowledge sources as possible. The more people participate in competition, the more information and knowledge are generated and used, the more efficient information and knowledge will be distributed, and the higher the likelihood that they will be put to their most productive uses.

The implications for management and organization are straightforward: for information or knowledge management actions taken or technologies implemented, we should maximize the availability, accessibility and use of information and knowledge by attracting as many participants as possible and by avoiding creation of any entry barriers.

This is the economists' way of presenting markets as non-hierarchical and powerless institutions, where everybody can and should find whatever one is looking for. Praising intranets or virtual community, for instance, for their capacity to cross vertical and horizontal organizational boundaries clearly hinges on this element of the market metaphor, as does the alleged social nature of wikis and other social software tools. Moreover, all these instruments express the belief that group consensus on the basis of free exchange discloses a more *objective* and thus more *accurate* analysis of reality than any individual ever could. 'Crowds' are assumed to be unconditionally wiser than any single expert could wish to hope for. What this supposed non-hierarchical 'wisdom of crowds' conceals is that all kinds of monopolies and power structures are at work in all information and knowledge ecologies. It also hides the fact that the participation of more people or availability of more information may not necessarily translate into higher-quality decisions or superior knowledge creation (Choo 2007). More is not always better.

Commoditize information and knowledge

Finally, neoclassical economics tells us that, sooner or later, everything of economic value will be commoditized. Commodities are standardized, homogeneous goods, meaning that each copy is physically identical to the other. Such standardization permits counting and measurement, which is needed to set equilibrium prices for the relevant commodities. It also allows quantitative evaluation of performance and value realized, which adds to economics' theoretical and practical attractiveness. Commoditization furthermore entails that the identities of the exchange parties and their relationships can be considered irrelevant for economic analysis, because if goods are homogeneous, it does not matter who the buyer or seller is. Under these conditions, the price is the only factor remaining in deciding with whom to trade. Moreover, these conditions allow parties to transactions to be treated as mere producers or consumers, anonymous atoms who do not interact with each other in any other way than by exchanging standardized objects. Finally, commoditization enables organizations to be maximally streamlined, with optimized business processes supported by ICT enhancing organizational efficiency.

Commoditization renders economic power, which also applies to information and knowledge. Ceasing informational economies of scale is possible only to the extent that information and knowledge are turned into standardized objects. Think for instance of best practices stored in a database or seeing information and knowledge as re-usable intellectual capital (Stewart, 1998). Objectivists focus on extracting information and knowledge from people through standardization and centralization processes to transform them into disembodied, de-contextualized commodities. Such standardization and centralization turns information and knowledge into economic values that can be hierarchically controlled 'from above' and measured in quantitative terms. Commoditization enables that, for example, information management's contribution to organizations can be evaluated in terms of its storing and processing capacity. Interestingly, contributions to the information supply side are easier to quantify than those to the demand side, which adds to information management's inclination to specialize on the supply side as its sole domain of expertise.

Economics' strong emphasis on value realization and measurement giving a clear sense of what and how to organize for the moment of truth makes it relatively easy to sell to management and other decision makers (Bonifacio *et al.*, 2004). That clear-cut virtue, however, comes at a price. The market metaphor hides the inability of economics to talk about informational content instead of the 'hardware' through which that information is distributed (Babe, 1994). This inability is caused by the impossibility of quantifying the economic value of informational content, which obstructs economic modeling and is, thus, excluded from the economist's mind. That is, it is true that information is increasingly commoditized into tradable objects such as books, software, mp3-files, or screens full of bits. However, their price is based on the technology to store, distribute and transmit these objects rather than on the

informational value for their users. *Ceteris paribus*, a book that results in a major breakthrough in one's intellectual development has the same price as the one that was bought but never read. Moreover, the same book can be highly valuable for one reader, but worthless for another. Put differently, information's value is fully dependent upon the meanings people attach to that information and to the contexts they live in. That makes information subjective rather than objective and heterogeneous instead of homogeneous, implying that there is no fixed relationship between economic value and informational content. When a one-to-one relationship between value and informational content is missing, it is impossible to set equilibrium prices. And without equilibrium prices, the entire neoclassical edifice collapses.

6. Economics' strongest and weakest quality

In summary, highlighting economic value to be successful in competitive environments is arguably both the strongest and the weakest quality of economics and the market metaphor. It determines their attractiveness for organizations and societies as well as their most fundamental shortcoming. The attractiveness of economics comes from its consistent view of the world resulting in non-conflictive expectations and clear 'how to' implications for organizational practice. Missing a measuring standard, however, the main shortcoming of economics is that the effects of information upon people's perceptions, values, cognitive schemas or relationships are beyond its reach. Informational content defies valuation, quantification and commoditization, as opposed to the information objects carrying this content. The easy response of information management would be to concentrate on the information or knowledge supply side where this shortcoming is least felt, and ignore the demand side. As noted previously, that is exactly what often happens in and with information management, in theory and in practice. Framing it this way, however, robs information management of half of its potential identity.

7. The Future of Objectivism

The objectivist-economic view on information, knowledge and communication can be traced back to the times when modern bureaucracies - nation states and corporations - were erected. Faced with more complex entities to govern and control, the politicians, administrators and managers of the day increasingly needed 'statistics' (Capurro and Hjørland, 2003), abstracted information visualized in the form of objectified reports, graphs, charts and models. As a result, the pre-modern notion of information as *in-formation* giving form or shape to the human mind was gradually being replaced by information as 'structured data' (Boland, 1987) representing intangible realities too large to be directly experienced by people's senses. Information became an objective object, separated from human experiences and minds. Arguably the most profound implication of bureaucratization is that decisions of 'life and death'

(Douglas, 1986) are made on the basis of such disembodied information. Nowadays enabled by ICT, our lives are increasingly subjected to objectification – as civilians, patients, customers, employees and so on - on which basis institutional decisions are taken for us. In *this* sense, ICT helps to connect, but also to disconnect.

In current times, the objectification of information and knowledge is gaining even more significance, mainly due to marketization, globalization and digitization to which it is recursively related. Exemplary in this regard is the inclusion of all kinds of knowledge products into the framework of the World Trade Organization through the General Agreement on Trade in Services. Induced by the logic of objectification, the idea behind this legally binding agreement is that knowledge is a *commodity like any other product*, which should be traded freely around the world while protecting the intellectual property rights of their owners. Ideas and knowledge are increasingly seen as if they are tradable objects, the effects of which are spread globally by modern communication.

Another consequence of the economic transformations mentioned is that human interaction and communication become more transaction-based. “The culture of the new capitalism is attuned to singular events, one-off transactions, interventions” (Sennett, 2007: 178). The growing importance of bonuses for specific accomplishments in the remuneration policy for top managers perfectly reflects this trend. The same policy applies to their most important advisors such as merchant bankers assisting in mergers and takeovers and to lower echelons of managers. Consequently, the view that organizations are long term co-operations between capital, labor and management is increasingly being substituted by a short term perspective stressing shareholder value.

Another example of the shift towards a more transaction-based culture is the emergence of ‘network sociality’ (Wittel, 2001). Due to the new economic conditions, working practices are increasingly typified by a high degree of specialization, rapid knowledge development, short-term projects, relentless changes caused by sequences of mergers and acquisitions, and decreasing job security resulting from disappearing life-time employment. In such situations where flexibility is needed (Beck, 1992), people organize themselves in ever-broader, ICT-mediated networks that are characterized by fleeting forms of cooperation, weak social ties and the exchange of ephemeral information to keep abreast of new developments. Network sociality stands for the commoditization of social relationships that arises from viewing ‘the other’ pre-dominantly as a social capital tool to enhance one’s own personal market value.

So, the future of objectivism looks bright. Despite its shortcomings, it remains helpful in explaining and guiding real-world phenomena. The many concerns of global economic developments expressed in academic literature, popular press and daily newspaper, however, put the future of objectivism in a controversial perspective. Objectivity can promote fairness and impartiality in human

relationships, because it makes us less dependent on the whims of subjectivity. Choo (2007), for instance, illustrates how information management can help reduce such subjectivity in organizations.

Objectivist approaches, however, can also be unfair, inhuman and dangerous (Lakoff and Johnson, 1980). Core to the current economic transformations is that ever larger parts of our private and organizational lives get objectified, stored in databases, and managed as such. Think of search engines commoditizing our search profiles or of customer relationship management systems. Objectivist practices can become unfair, inhuman and dangerous when such objectifications are taken as objective, non-negotiable truths rather than what they truly are – incomplete and sometimes inaccurate representations of reality. Objectivism is focused on the *external* world in order to better understand how to operate successfully in the environment, an aspiration also commendable for information management. Emphasizing impersonal relations of cause and effect, however, this philosophical tradition neglects the *internal* aspects of how people understand and subsequently shape their lives. In that sense, objectivism and information management that is solely based upon this world view can result in losing touch with reality.

8. Discussion and Conclusions: A Sound Foundation?

So far I have illustrated how deeply information management has been influenced by objectivism and economics, in theory and practice. Both will keep on exerting their influence, also because university curricula throughout the world sustain the objectivist images of information and knowledge. Nevertheless, the question begs to be posed: does objectivism provide a sound and solid basis for information management? The answer to this question depends upon which of the four economic images of information and knowledge we are observing: 1) as free goods, 2) as other tangible, physical goods, 3) as idiosyncratic products and 4) as idiosyncratic resources or assets.

Information and knowledge as free goods and as tangible products

In neoclassical economics, information and knowledge are viewed as *free goods* or as any other *tangible product*. The model of the perfect market has been constructed for the industrial age with the primary intention to theorize the transaction of tangible, physical products. There was no need to model information and knowledge as objects of exchange in their own right, simply because information products as we know them today hardly existed. Instead, economists saw information and knowledge as means merely supportive of the exchange of physical goods. Being ‘only’ supportive of exchange, information and knowledge could be assumed to be free goods, which, miraculously given, are unconstrained and non-problematic resources that can be justifiably excluded from economic analysis. Treating information and knowledge alternatively as any other physical product served the same purpose.

By denying information and knowledge a distinctive character and role in economic processes, the price could be assumed to contain all the information economic agents need to know to efficiently coordinate their transactions. In this way, information and knowledge could be discarded without the model of the perfect market losing any of its explanatory power.

These two neoclassical views on information and knowledge lead to a paradoxical situation for information management - by having itself influenced so much by neoclassical economics, its identity is based upon a well-established theory that either denies its economic contribution or sees information management as 'business as usual' not requiring any special attention. When information and knowledge are perceived as free goods, the harsh verdict is that information management cannot add any economic value. Free goods are economically insignificant. And when information and knowledge are regarded as equal to physical products, organizations can do without a specialized information management function. In both cases, the economic value of information, ICT and information management is hard to substantiate and verify, which could explain why so many organizations pursue the trend of outsourcing. Furthermore, should one be tempted to do so, the view on information-as-free-good cannot be easily put aside as irrelevant for information management. As many organizations experience, when present on the internet for instance, information seekers are often not prepared to pay for their information or information services. Information-as-free-good explains the sometimes frantic search for alternative business models.

These economic judgments of information management can be contradicted by questioning their underlying assumptions. If all information needed for decision making would be included in the price, nobody would be willing to invest in the gathering, production and communication of information. A simple observation in the real world, however, is that people, organizations and societies do spend time, energy and money on these informational activities. Moreover, other than in the industrial age, many digital information products such as mp3-files, for example, exist that are sold on markets. Finally, information and knowledge are increasingly seen as the main sources of wealth creation and competitive edge for individuals, organizations and societies.

Consequently, economists have created two new images of information and knowledge that better resemble the real world: information and knowledge as idiosyncratic products and as idiosyncratic resources or assets.

Information and knowledge as idiosyncratic products and idiosyncratic resources or assets

Both views of information and knowledge entail focusing intellectually on the inherent and idiosyncratic properties of information and knowledge that make them behave differently in an economic sense. Deep

expert knowledge of those inherent properties and their implications for practice could provide a sound basis for information management's identity.

However, these relatively new views on information and knowledge also present information management with idiosyncratic problems. As to the view of information-as-idiosyncratic-product, so-called 'information economists' (Shapiro and Varian, 1999) have not succeeded yet in quantifying the informational content of these products. Instead, pricing such products is based upon the technology to store, distribute and convey information objects. A more appropriate name for this branch of economics would therefore be 'information *technology* economics'. Nevertheless, information economics deserves to be included in information management's curriculum. It deals with a part of the digital world that is not captured by other academic disciplines.

In the last economic view, information and knowledge are seen as idiosyncratic resources or assets capable of generating wealth in their own right. Building upon, among others, the knowledge-based view of the firm (Boisot, 1998), the practical implications of the economic differences with physical assets are considered to be so profound that knowledge-intensive organizations need a new theoretical perspective. This assertion is confirmed by Maes (2007) who states that the core of information management is shifting from information systems and technology to the management of information as a business resource. With information and knowledge as the heart of business, the potential value added of information management would become instantly clear.

Nonetheless, the resource view on information and knowledge is not without its own intellectual challenges. Calling information and knowledge a resource or asset symbolically transforms these entities into objects, which biases our understandings of what information and knowledge are and what we can do with them. Due to limited space, I cannot address other recent developments in economics, such as defining information as uncertainty reduction, but that does not change the bottom line: economic reasoning is *always* imbued by the logic of objectification. As a result of this engraved drive to objectify, three core problems arise that relate to objectivism in general and, thus, to all four economic views on information and knowledge.

Three core problems

The first core problem of objectivist economics is that dynamic *processes* are beyond the analytical reach of economics because they do not demand an exclusive focus on the exchange of static objects and they are not required to conform to rigorous quantification requirements. To fit economics' modeling capabilities, information and knowledge 'simply' have to be reduced to that which can be codified and commoditized, complex human communication and interaction to discrete, one-off transactions, and learning to the passive consumption of factual representations. As a result, economics is helpful in

clarifying that knowledge needs to be codified in tradable objects to extract and protect its economic value. It is, however, not helpful in gaining understanding of how people and organizations use and create information and knowledge to shape their everyday life (Kakihara and Sørensen, 2002). Moreover, economics contributes to an artificial and confusing divide between information supply and demand, stressing the first and largely ignoring the latter. Could this divide help explain that so many of us seem to believe that once information has been delivered, it has also been ‘consumed’?

Secondly, the emphasis in objectivism on discovering universal truths precludes *context* as a factor important to economics. Once again, information poses insurmountable problems. Economic, not sociological, reasoning is as follows (Babe, 1994). When all suppliers charge the same price for the same good, the price is less informative for buyers than when it is sold at different prices. Hence, the value or meaning of information, here the price, is context-dependent, much to the dismay of mainstream economists.

Thirdly, truth and meanings are relative not only to context, but also to people’s mental frameworks or conceptual systems of how the world works. For both reasons, human beings cannot act differently than to impute their own meanings to information. Hence, it is also possible that different people attach divergent *interpretations* to the same information or that the same person interprets the same information differently when faced with a different context. Economists cannot deal with such divergent sense making behavior. Information is supposed to help bring supply and demand together in an equilibrium price. For information to have such equilibrating effects, however, all economic agents have to interpret it in the same direction (Boisot, 1998). *Without* this crucial assumption, information would become an unpredictable phenomenon that cannot be analyzed or even observed a priori, which would cause the neoclassical edifice to fall apart. *With* this assumption, however, economists exclude a major source of learning and innovation. Once again, relevance is sacrificed for rigor.

Conclusions

In summary, no matter how much progress has been made ever since, Stigler’s 1961 remark still applies: “[Information] occupies a slum dwelling in the town of economics” (in Babe, 1994: 49). One conclusion is that the so-called information or knowledge economy still misses one of its critical cornerstones - an economic theory of information, knowledge and learning. Another – ironic – conclusion is that information management with its choice for objectivism and microeconomics as its foundation has precisely selected a philosophy and theory that are incapable of justifying and grounding the very heart of its existence: information. This conclusion also means that an integrative approach to information management should entail more or something different than ‘the management of information as a

business resource' (Maes, 2007). In the next PrimaVera working paper, I will look for inspiration in subjectivist theories that seek their contribution in the problems objectivism and economics cannot solve.

References

-
- Babe, R.E. (1994), The Place of Information in Economics. In: Babe, R.E.(ed.), *Information and Communication in Economics*, Boston: Kluwer Academic Publishers: 41-67.
- Beck, U. (1992) *Risk Society*. London: Sage Publications.
- Boisot, M.H. (1998), *Knowledge Assets: Securing Competitive Advantage in the Information Economy*, Oxford: Oxford University Press.
- Boland, R.J. (1987), The In-formation of Information Systems. In: R.J. Boland and R.A. Hirschheim (eds.), *Critical Issues in Information Systems Research*, John Wiley & Sons, pp. 363-379.
- Bryant, A. (2007), Information and the CIO, in: Huizing, A. and Vries, E.J. de (2007), *Information Management: Setting the Scene*, Oxford: Elsevier, forthcoming.
- Bonifacio, M., Camussone, P. and Zini, C. (2004), Managing the KM Trade-Off: Knowledge Centralization versus Distribution, *Journal of Universal Computer Science*, Vol. 10, No. 3: 162-175.
- Capurro, R. and Hjørland, B. (2003) The concept of information. Annual Review of Information Science and Technology, in: B. Cronin (ed.), Vol. 37, Chapter 8: 343-411.
- Choo, C.W. (2007), Social Use of Information in Organizational Groups, in: Huizing, A. and Vries, E.J. de (2007), *Information Management: Setting the Scene*, Oxford: Elsevier, forthcoming.
- Davenport, T.H. and L. Prusak (1998), *Working Knowledge*, Boston: Harvard Business School Press.
- Douglas, M. (1986), *How Institutions Think*, London: Routledge.
- Gurbaxani, V. and Whang, S. (1991), The Impact of Information Systems on Organizations and Markets, *Communications of the ACM*, Vol. 34, No. 1: 59-73.
- Hayek, F.A. (1945), The Use of Knowledge in Society, *American Economic Review*, Vol. 35, No. 4: 519-530.
- Kakihara, M. and Sørensen, C. (2002). Exploring Knowledge Emergence: From Chaos to Organizational Knowledge, *Journal of Global Information Technology Management*, Vol. 5, No. 33: 48-66.
- Lakoff, G. and Johnson, M. (1980), *Metaphors We Live By*, Chicago: The University of Chicago Press.
- Maes, R.. (2007), An Integrative Perspective on Information Management, in: Huizing, A. and Vries, E.J. de (2007), *Information Management: Setting the Scene*, Oxford: Elsevier, forthcoming. .
- Sennett, R. (2007), *The Culture of the New Capitalism*, New Haven: Yale University Press.
- Shapiro, C. and H.R. Varian (1999), *Information Rules – A Strategic Guide to the Network Economy*, Boston: Harvard Business School Press.
- Stewart, T.A. (1998), *Intellectual Capital: The New Wealth of Organizations*, Currency.
- Stigler, (1988), *Memoirs of an Unregulated Economist*, New York: Basic Books.

Wilson, T.D. (1997). *Information management: International Encyclopedia of Information and Library Science*. London: Routledge.

Wittel, A. (2001), Toward a Network Sociality, *Theory, Culture & Society*, Vol. 18: 51-76.

Woolsey Biggart, N. and Delbridge, R. (2004) Systems of exchange, *The Academy of Management Review*, Vol. 29, No. 1: 28-49.

Objectivist by default: why information management needs a new foundation