

# Re-Thinking Habermas's Theory of Communicative Action in Information Systems

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## Abstract

*Habermas's theory of communicative action has made a significant impact on information systems (IS) practice and research. However, the expected benefit to information systems has been lagging due to the existing gap between the theory and IS practice. This paper re-examines the concepts of the theory of communicative action and interprets their meaning for IS in organizational contexts. The theoretical analysis is amplified by illustrative case studies drawn from a retail company. The fruits of our research provide advice for critical empirical analysis of IS in social and political context as well as for IS development informed by critical theory.*

## Keywords

Information in organization, conceptual study, empirical research, case study, changes in workforce, organisational communication, organisational development, organisational culture, participative design, development approaches

## INTRODUCTION

Habermas's (1984, 1987) theory of communicative action (TCA) has made a significant impact on information system research and practice (Lyytinen and Klein, 1985; Klein and Hirschheim, 1991; Lyytinen, 1992; Hirschheim and Klein, 1994; Hirschheim et al., 1996; Cecez-Kecmanovic, 1994; Janson and Brown, 1997; Ngwenyama and Lee, 1997; Myers and Young, 1997; Ngwenyama, 1998; Cecez-Kecmanovic, 1999; Janson and Brown, 1999). However, the application of TCA in information systems (IS) has been criticized for its theoretical opacity and its alleged inability to make practical contributions to IS field (Wilson, 1997). Furthermore, the proponents of TCA in IS have been accused of promoting their own agenda. Moreover the use of TCA in IS suffers from misinterpretations of Habermas's ideas which has interfered with the theory's potential

contribution to the IS field.

Our paper is primarily theoretical but with practical implications. It attempts to advance critical thinking in IS by revealing organizational, social, and political factors and the role of IS in helping to "eliminate the causes of unwarranted alienation and domination and thereby enhance the opportunity for realizing human potential." (Klein and Meyers, 1998). Our paper clarifies Habermas's concept of social action, resolves some of misinterpretations, and furthers the understanding of TCA principles in the field of IS. We appropriate Habermas's TCA and in particular his four types of social action to examine how these can be interpreted in practice and what insights we can obtain from this exercise. We achieve the aforementioned goal by carefully studying Habermas's original writings and by interpreting his theory using four case examples.

Habermas's TCA has much explanatory potential for 'empirically rich' and 'politically acute' IS research and practice which heretofore has not been fully explored. As Forester (1992, p.49) stated, Habermas's analysis of TCA "...can help us empirically to explore just how complex, how contingent, and how rich, social and political actions actually are." TCA's ideas are essential for IS practice because implementing ISs in organizations has social and political consequences (Myers and Young, 1997). To respond to these concerns we shall focus on the four types of social action and their complex interaction within their social milieu. We aim to clarify the meaning of the four social action types in IS and demonstrate the benefits of using these to examine, interpret, and understand the social context and role of IS within it.

The four cases are drawn from a field study of the Colruyt company which is among the largest retail chains in Belgium. The study was conducted during the 1992 through 1994 period and uses large numbers of company and Union documents, and in-depth semi-structured interviews with the company founder, as well as ten other employees at all levels of management (Janson and Brown, 1997).

The paper is arranged as follows. Section two introduces the basic concepts of Habermas's TCA. Section three examines the four cases from the perspective of TCA. In section four we discuss the interpretation and implication of social actions for IS practice. Finally, section five presents our concluding remarks.

## THE THEORY OF COMMUNICATIVE ACTION

Basic to Habermas's TCA is the three-world concept which is essential for understanding his typology of social actions. Habermas (1984, p.85) explains "...with the choice of specific concept of action we generally make specific 'ontological' assumptions." Habermas defines a three-world concept 'formally' rather than 'materially'. This goes beyond differentiating object domains of nature and culture and derives from "the basic attitudes toward the objective world of what is the case and a basic attitude toward the social world of what can legitimately be expected, what is commanded or ought to be." (Habermas, 1984, p.49)

The objective world is defined as "the totality of what is the case" about which true propositions are possible. A social actor may entertain perceptions and beliefs about entities and states of affairs which agree or disagree with what is the case in the world. Thus, the actor's perceptions and beliefs may be *true* or *false*. An actor may attempt to change an existing state of affairs and can *succeed* or *fail* in doing so. These two rational relations between actor and world are judged according to *truth* and *efficacy* criteria.

The *social world* consists of a "normative context that lays down which interactions belong to legitimate interpersonal relations." (Habermas, 1984, p.88). The social world embodies moral practical knowledge in the form of norms, rules, and values. Rational relation of an actor and the social world is open to objective evaluation according to two 'directions of fit'. First, actions can accord or deviate from existing norms and may be judged according to their *normative rightness*. Second, norms are justified or recognized as legitimate if they embody the values and interests of the social actors. Hence, existing norms are judged in terms of their *legitimacy* and *justification*.

Complementary to the objective and social worlds, which are external to an actor, Habermas defines an internal or *subjective world*, which is defined "as the totality of subjective experiences to which the actor has privileged access." (Habermas, 1984, p.100). By uttering experiential sentences, desires and feelings, an actor makes his subjective world known to the listeners who may trust or distrust the actor's *sincerity* and *truthfulness*.

Concerning the three worlds the actor raises three validity claims: 1) a statement is true, i.e., it expresses what is the case in the world, and a directive is successful in bringing about a desired state of affairs; 2) a statement is right with respect to existing norms and the existing norms are legitimate with respect to values; and 3) subjected experiences, desires, and feelings are truthfully expressed. The three-world concept forms a reference system which is assumed by the actors in social interactions. The three worlds and the rational relations of actors to these world determine a framework within which the classes of social actions are defined.

Habermas introduced additional concepts to classify social actions: an *orientation to success* and an *orientation to reaching understanding*. An orientation to success implies that actors are primarily interested in achieving a desired state of affairs in the objective world. To achieve his goals the actor selects means expected to be successful in a given situation. In contrast, social actors oriented to reaching understanding seek a communicatively reached agreement by relating to the objective, social, and subjective worlds. It is important to note that Habermas makes explicitly clear that actors oriented to reaching understanding are pursuing their own goals as well. However the actors harmonize their plans of action based on normative agreement and a common definition of the situation.

Actions oriented to success where the actor refers to the objective world are called *teleological actions*. When actors relate to the world in order to achieve their goals by manipulating and controlling objects and flows in their environment (which may include material, financial or other entities and states of affairs, as well as other social actors) the action is called *instrumental*. By using technical rules, actors calculate alternative means and select the one that maximises their chances of achieving the desired goal.

A teleological action is called *strategic action* when the actor pursues her goal by influencing the behaviour of other actors (opponents) following rules of rational choice. In this case the objective world to which the actor refers includes other social actors who are perceived not as objects (like in instrumental action) but as rational opponents and players in the 'game'. Both instrumental and strategic actions are typical examples of *cognitive-instrumental rationality* of actors "capable of gaining knowledge about a contingent environment and putting it into effective use in intelligently adapting to and manipulating this environment." (McCarthy, 1984, p. xi).

By introducing actions oriented to reaching understanding (while still aimed to achieve goals) Habermas broadens the perspective of social interaction. He defines *normatively regulated action* as action by which actors interact as members of a group, in their social roles, where they refer to the objective and social worlds. These actions are assessed based on their normative rightness and legitimacy.

Communicative action denotes interaction of social actors oriented to reaching understanding, in which they relate simultaneously to the objective, social and subjective worlds. They come to understanding with one another by negotiating definitions of a situation, argumentation and cooperative interpretation of events, goals, values and norms, and by sharing their subjective experiences, desires and feelings. Communicative action is successful to the degree that agreement is cooperatively achieved and that individual plans of action are coordinated. Communicative action exemplifies the concept of *communicative rationality* inherent in human speech, which denotes a communicative practice characterized by actors obligation to give reasons for or against validity claims raised, to challenge, accept or reject claims of others on the bases of the better arguments.

The four types of social actions provide a powerful theoretical framework for examining everyday social interactions within which ISs are imbedded. In order to further clarify the meaning of these theoretical concepts for IS we shall examine four cases in the Colruyt company.

## **THE THEORY OF COMMUNICATIVE ACTION AND INFORMATION SYSTEMS PRACTICE**

### **The Colruyt Company**

The Colruyt company started in 1965 as a single food discount store - a revolutionary concept for Belgium at the time. Competing on price and product differentiation is the essence of the company's strategy. Mr. Colruyt had clear philosophical views on the type of company he wanted to be part of. His major philosophical views stem from his boyhood in Catholic Belgium and his Marxist experiences during and immediately after World War II, when he was a member of a communist cell in Paris. Influenced by Catholicism and Marxism in his young age Mr. Colruyt was concerned about the rights of customers, he believed that everyone in his company should participate in corporate life as much as he is able.

From his Marxist experience arose the desire to minimize alienation among his employees. Mr. Colruyt advocated that employees throughout the company should have a significant input into how to perform their daily tasks. He stressed the abolition of monotonous work procedures and he advocated their replacement by IT and other forms of automation. During his Marxist days he learned to argue conflicting world views vigorously. These convictions appear to have led him to focus on the importance of communication and a concern for how people relate and interact with each other.

Thus, since the company's inception upper management has focused on rational discourse, reducing power differences among employees, encouraging personal initiative toward action at all company levels, and emphasizing relations between human rationality and emotionality. After serious debate upper management settled on IT to effectively and efficiently implement meaningful

interpersonal communication. This was in sharp contrast to competitors who introduced IT into already existing organizations, whereas the Colruyt company defined its business around IT (Colruyt, September 1983).

## Action Types and Information Systems

### An Information System to Support Instrumental Action

By engaging in instrumental action, the actor seeks to bring about a desired condition by performing one of a number of possible alternative actions. Being success-oriented and rational, an individual predicts the results of the performance of alternative actions by using causal, probabilistic, or logical relationships. An essential aspect of instrumental action is that it intervenes in an objective world by manipulating and controlling entities, flows, and possibly human beings who are perceived as objects, assuming a position outside the situation. A prerequisite to successful instrumental action is that the actor has an accurate representation of the world he or she controls and a realistic model of the relevant relationships.

As an example consider Colruyt's **optimal inventory replenishment IS** which automatically controls daily replenishment of store inventory. Daily reshelving orders are predicted on an item-by-item basis automatically using historical sales data which are compiled by the checkout IS. The goal is to minimize inventory cost subject to the following constraints: maintain a minimum stock of each item so as to have sufficient items on hand to satisfy customer demand which fluctuates daily depending on season, holiday, week day, weather, and many other factors. Reordering is a typical example of an instrumental action because it deals with the objective world of entities (store items, reorder quantities, replenishment costs, and others) that are subject to manipulation in order to achieve the goal (cost minimization). Its success relies on the accuracy of data and the precision of technical models that calculate optimal decisions. Furthermore, the goal to minimize costs is predescribed and never becomes a topic of discussion during the instrumental action.

### An Information System to Support Strategic Action

Strategic action involves two or more individuals who seek to bring about a desired state of affairs assuming a rational and strategically responding counterpart. By engaging in strategic action each individual adapts his performance in response to the strategic actions of other actors. The important validity claim in this case is accurateness of facts and predictions of the behaviour of other actors. The success of strategic action depends on the actor's knowledge of his opponents, their situation and their behaviour. As pointed out by Habermas (1984, p.85), the concepts underlying strategic action find their expression in decision making models used in economics and sociology.

By undertaking strategic action actors refer only to the objective world as Habermas explicitly stated. The actors refer only to something that is the case in a world that from an ontological point of view is the objective world. This essential feature of strategic action however has been often misunderstood (Ngwenyama and Lee, 1997). The confusion arises from the fact that in strategic action two or more actors (opponents) are involved and hence this was interpreted as if they were involved in the social world. While these actors take actions against each other they do not establish interpersonal relationship based on norms and rules and therefore they do not refer to the social world. They in Habermas's words interact indirectly.

An example of strategic action is the strategy of the Colruyt company to offer each item at a price which is 10% lower than the lowest price from the competition. To achieve this the company employs twenty individuals who collect price information in competing stores. Price data on competing stores are recorded in a price discount IS. The system finds the lowest competitor price, computes a 10% discount and prices items in the Colruyt store accordingly.

The Colruyt company's policy to increase market share by guaranteeing its customers discounted prices is strategic action. The company basis its action on the assumption that customers behave rationally i.e. that they choose the store with lowest prices. In fact Mr. Colruyt (1983, p.12) stated: "We [the company] assume that all [our] customers make informed decisions using rational argument based on accurate data." By offering discounted prices the company intends to influence the customer's choice concerning which store to patronize. It should be understood that Colruyt's policy is directed towards other competing stores as well. Colruyt's policy is an example of strategic action carefully calculated relative to the competition's ability to lower prices in turn. The success of this strategic action is proved by Colruyt's increased market share at the expense of the competition.

#### An Information System to Support Normatively Regulated Action

Normatively regulated action is performed by actors, members of a group, who share common values and norms that define their social world. Actors belong to a social world by accepting and justifying common norms and by establishing legitimate interpersonal relations by complying with these norms. Actors undertake normatively regulated action as members of the group and as role-playing subjects. While taking action actors refer to the what is the case in the objective and what is right and legitimate in the social world. Many organisational activities are normatively regulated and follow due process. In normatively regulated action claims to normative rightness can be contested in which case there is usually another round of due process. This type of action has been overlooked by most IS authors who used Habermas's theory.

An illustrative example of IS supporting normatively regulated action is Colruyt's system for decreasing customer waiting times. After completing serving one customer and before starting with the next customer the clerk enters the number of waiting customers in the checkout queue into the IS. This enables the calculation of customer waiting times. At the end of his shift the clerk receives the waiting times of the three customers who experienced the largest waiting time. According to company documents this information is provided to no one else but the clerk. Summarized figures are made available to the store and district managers, and to members of upper management. Our interview with a store manager confirmed that confidentiality of customer waiting time data is indeed a fact. The manager further indicated that while it is technically possible for him to access the data, it would not be easy and would also violate company policy.

The clerks who operate the checkout registers receive regular training which provides them with the necessary skills and motivation for this important task. It is the company's philosophy that employees should be supplied with information which makes self-evaluation possible. According to Mr. Colruyt (April 1984, p.54):

"Enabling the employee to measure his own performance furthers self-appreciation [for a job well done] and

being able to monitor his own performance makes the employee more independent in relation to his surroundings. It is essential that employees receive from their superiors clear and unambiguous ideas concerning the goals which need to be realized. These goals should be based on a consensus between the subordinate and his supervisor. Providing the employee with performance figures helps him to achieve the goals."

The system owners are the members of top management and they use summarized information to decide issues concerning customer service, store clerk training, and store layout. However, in keeping with company policy the information system does spy on individual clerks. The system supports normatively regulated action because it operates based on company privacy norms and rules. The system in effect has a dual purpose: to support top managers in increasing efficiency and improving customer service, as well as selecting groups of checkout clerks for additional training. Because the goals are collaboratively established between the store manager and clerks the system supports action which is oriented towards understanding and is governed by explicit norms and rules, it belongs to the type of normatively regulated action. The actions of managers are judged not only from the point of view efficiency but also by the degree to which they accord with company norms and policies (normative rightness).

We note that many retail organizations use point-of-sale systems for employee control purposes by collecting data on worker productivity, worker accurateness, and worker honesty (Klein and Alvarez, 1987). This in fact is the concern of company Union members who are critical of the stated system goals. They perceive the system as essentially supporting management's covert strategic action by direct monitoring and constant surveillance. A Union document stated "We do not dare think of the working conditions [of the checkout clerks] when customers are promised to be checked out within some prespecified time period." (Adele et al., 1984, p.77).

It is important to be aware that the system has the potential to be seriously abused. Instead of supporting normatively regulated action the system can also further covert strategic action. However, company norms and regulations have been instituted to prevent such abuse.

### An Information System in Support of Communicative Action

Habermas (1984) defines communicative action as the interaction of social actors pursuing goals by achieving shared understanding and coordinating their plans of action. Shared understanding implies inter-subjective interpretation of aspects of social reality and it occurs when the actors agree on a common understanding of what exists (the objective world of facts, events, and states of affairs), what is right and legitimate (the social world of norms), and what they prefer or desire (the internal worlds of personal experiences and emotions). Truth of facts, rightness of norms and sincerity of expressions are the validity claims assumed by communicative action. Social actors achieve understanding through cooperative interpersonal interpretation of the situation at hand and seek to achieve consensus through rational argumentation. It is important to note that communicative action does not assume a shared goal by the social actors, rather a more realistic situation in which actors pursue their own goals, with potentially divergent interests, by coordinating their plans of action. What distinguishes communicative action from the other action types is that in case of the former the social actors coordinate their actions by cooperative processes of interpretation. Often in IS writings communicative action is seen as solely serving the goal of achieving mutual understanding and consensus. However, as Habermas (1984, p.94) states: "Achieving understanding in language is ...introduced as a mechanism for coordinating action."

An essential requirement for successful communicative action is the satisfaction of the conditions determined by the *ideal speech situation*. These conditions are defined as a communicative practice free from any kind of distortion, any form of coercion and ideology "that excludes all force...except the force of the better argument." (Habermas, 1984, p.25). In practice the above means "that everyone capable of speech and action is entitled to participate, as well as ...that everyone is equally entitled to query any assertion, to introduce new topics, and to express attitudes, needs, and desires." (Cooke, 1997, p.33).

In keeping with the idea that information should be available to anyone, the Colruyt company developed an interactive system for information dissemination (ISID) similar in function to modern groupware packages. The idea for ISID originated with Lengeler (1993) in the early 1980s. He saw the system's potential for meeting the company's desire for open, clear and efficient communication. ISID ensures access to information in effective and efficient ways. Company policy ensures that information about all decisions, actions, and events as well as interoffice correspondence, outbound and inbound communication, and minutes of meetings are captured by ISID. An important system feature is its wide accessibility (80% of the information is accessible to all company members and union stewards, 20% is confidential and access is limited to authorized individuals only). Documents can be retrieved by keywords, authors, and recipients.

We shall now describe how ISID is used in support of communicative action. Anyone can raise a problem and form a team which will seek a solution. Problem specification, composition of an initial group, and defining possible courses of action are communicated to all via ISID. Individuals who were initially not included in the group can join. The policy is that team membership is based on self-selection and that teams are self-managed. These teams are a major vehicle through which many decisions are made based on broad understanding and cooperation. All staff affected by a decision must be notified via ISID in time to contribute to the discussion. ISID offers many opportunities for comment and reflection by both members of the group and those outside it. Reflection and argumentation as practised in Colruyt is key to clarify, contest and provide grounds for the validity claims, which are necessary for communicative action. The team chair does not necessarily make the final decision; neither does the group. The Colruyt company first practised, but eventually abandoned, group decision making. However, group consensus on decisions is still sought. Under the current procedure one individual either volunteers or is nominated by the group to make the final decision. This individual finalizes the decision and communicates it to all affected individuals using ISID. This procedure avoids decisions for which no one feels responsible but links decisions to specific individuals (Colruyt, May 1993).

An interesting example of ISID's use is demonstrated by an incident of communication breakdown. A manager succeeded to subvert the communicative action process, turning it into a strategic action type. By careful timing he managed to complete the process during the absence of a key member of staff on holiday. According to Mr. Colruyt (1993) this was later detected and analyzed from the documentation stored in ISID. The resulting very public discussion left the original decision unaltered, but established that in future, misuse of ISID would be unacceptable. This case exemplifies a real life situation where company members have potentially different goals but seek to realize goals by engaging in communicate action. First the company has created conditions which approximate the ideal speech situation: in-house company training inculcate in individuals communicative competence, the ability of self-reflection, the responsibility to actively participate in discussions, to freely call into question any and all claims, and the ability to reason rationally through proper argumentation. Not only are the validity claims truth, rightness of



action, and sincerity of actors open to refutation but also the underlying values, policies, and assumptions are open to debate. By following these processes the members move towards a shared understanding of the problem situation and reaching consensus regarding possible action plans. Consensus concerning a final decision is not always achievable. The team appoints one person to be decision maker and implementer which is an interesting approach to overcome this difficulty. While a single individual makes the decision, those affected remain involved and capable of influencing the decision and its implementation, thereby ensuring coordination of individual action plans. We find here a practical implementation of the conditions which come close to Habermas's ideal speech situation.

## **DISCUSSION**

TCA provides the theoretical apparatus for exploring and seeing organizations and their processes from a critical perspective. TCA focuses attention on the presence of various interests, which are more or less disclosed and potentially conflicting. Especially important for IS is that the application of TCA enables one to identify who's interests are being advanced by existing systems and whether this is legitimate. Similarly when a new IS is suggested TCA helps one to identify all interested parties and to analyze how the interests of each will be affected (Hirschheim and Klein, 1994). TCA brings into the open underlying assumptions, hidden agendas, covert actions, and it uncovers the often taken for granted interests of privileged groups that are driving the development of IS (Myers and Young, 1997).

The optimal inventory replenishment IS exemplifies a system which supports instrumental action serving a well justified purpose. However examples of IS applications supporting instrumental action do recur where humans are treated as objects or additions to the machine. Many IS applications which are based on operations research methods for the control of movements of trucks or goods are of this type. TCA can serve a role in raising the issues of covert use of IS to support instrumental action that leads to manipulation of individuals, their control and surveillance in the workplace.

The price discount system is an example of an IS supporting strategic action which has a legitimate purpose. The IS furthers the company's interests but at same time it also benefits the customers. Thus, from a societal point of view this is a fair system. TCA helped us to analyze the IS from the point of view of all those affected.

The clerk performance IS described before supports normatively regulated action in a legitimate way. The company's value system and an appreciation for the individual is reflected in the IS design. Such a company policy toward IS development which protects employees is exceptional. However, misuse of the system is still possible. As pointed out by the Union, which had a conflict with the company over this issue, the system can also be used to control and surveil the same person who is led to believe that the system is serving her interests (Adele et al., 1984). Here again an IS designer equipped with TCA will recognize the potential for misuse and may suggest ways to technically prevent its misuse.

ISID is a paradigmatic example of an IS supporting communicative action. The company's owner with his particular philosophy concerning employee roles and their rights for emancipation were driving forces toward the realization of ISID. The system made it technically possible to realize the owner's ideals of employee participation in all aspects of company decision making. This case

also demonstrates that the employment of technology was necessary but not a sufficient condition to achieve effective worker participation. The implementation of ISID also required to render employees communicatively competent by way of special company-sponsored training.

The example demonstrates that meaningful communicative action is possible in practice. Although the ideal speech situation can never be realized its concept is useful to critically examine the degree to which it is achieved. Systems like ISID which support information sharing, building mutual understanding, and enabling open public discourse are instruments which improve communicative rationality and enhance the degree to which ideal speech situations can be achieved. ISID supports communicative practice in which of all claims including effectiveness, truth, rightness, legitimacy, truthfulness and sincerity are open to critique and debate.

By achieving consensual agreement participants in the discourse are not expected to create a 'homogeneous' entity as suggested by Wilson (1997, p.200). Achieving consensual agreement concerning the validity claims is always temporal and contingent upon the specific situation. Hence, participants engaged in communicative action are in a process of continuously disputing and resolving validity claims while temporarily agreeing on something. Colruyt, like any other organization, consists of 'individuals with competing-distorting interests, values, and priorities.' However, by engaging in communicative action which is supported by ISID, individuals have a nontrivial possibility to reach a shared understanding of the situation and thereby achieve their own goals by coordinating their plans of action. Our case study shows that communicative action and ISs supporting it are practically achievable and, in fact, quite realistic.

We wish to reiterate what the Colruyt example demonstrates that the achievement of coordination of individual action plans arose from communicative action. This corresponds to Habermas definition of communicative action which somehow has been neglected by IS researchers who suggest that communicative action is exhausted by achieving common understanding and consensus (Ngwenyama and Lee, 1997).

However, the danger of distorted communication is always present. Despite the explicit company policy which guided the implementation and use of ISID distorted communication did occur in the incident we already described. Communicative action can turn into covert strategic action when, for example, an actor creates the false impression that all the validity claims are open to being tested by critical argument (Kunneman, 1986, p.68). If other individuals fail to notice this fact, they will continue with their communicative action. The deceitful actor can successfully perform the strategic action under the guise of communicative action insofar as he is able to hide his true motives from others. As is shown by the mentioned incident ISID helped discover the deceitful action and became an instance of organisational learning.

Our paper has implications for IS research. TCA can provide theoretical models for empirical investigations of the role of IS in organizations which are sensitive to the taken-for-granted assumptions, hidden agendas, interests, and power relations which are all distorting communication. As our four case studies show, TCA has practical use and can be fruitfully implemented to study a variety of IS situations. Our four cases by no means exhaust the opportunities of applying TCA in the IS field. We emphasize that Habermas's theory of communicative action has great and still unrealized potential for empirical social and political research into the role of IS in organizations.

A further importance of TCA is its application to improved understanding of the communicative needs of social actors for analyzing and developing new ISs. By providing the theoretical underpinning for conceiving ISs that contribute to communicative rationality the TCA will help us formulate information systems development methods which will advance emancipatory ideals (Hirschheim and Klein, 1994).

As is evident from the case studies, ISID was successful in supporting communicative action because company personnel possessed communicative competence. Hence, TCA can help define a curriculum for educating IS professionals and users. This suggestion has been incorporated in the Scandinavian approach to IS development (Nygaards, 1979). Cindio et al., (1982, p. 319) also emphasized that "Education of workers, shop stewards and trade union members is seen as a condition for making the negotiation of the computer-based changes in organisations more effective."

## CONCLUSION

We reread Habermas's original writings concerning TCA and interpreted his concepts for the IS field. This endeavour is important considering the critique and the number of misinterpretations of Habermas's concepts in the IS field. Furthermore, by examining four IS cases in complex social and political environments we demonstrated the practical usefulness of TCA concepts for understanding these environments and the subtle ways in which they are transformed by ISs.

To advance the critical project in IS the theory of communicative action has to be developed further in several directions. The methods for critical empirical studies of ISs have to be improved to enable researchers to innovatively and fruitfully build on the foundations laid by Habermas. To succeed in this endeavour we will have to narrow further the existing gap between the theory and its application in IS research and practice. Even though TCA has already been applied to improve methodologies for IS development more work is needed to realize the benefits of TCA in practice.

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