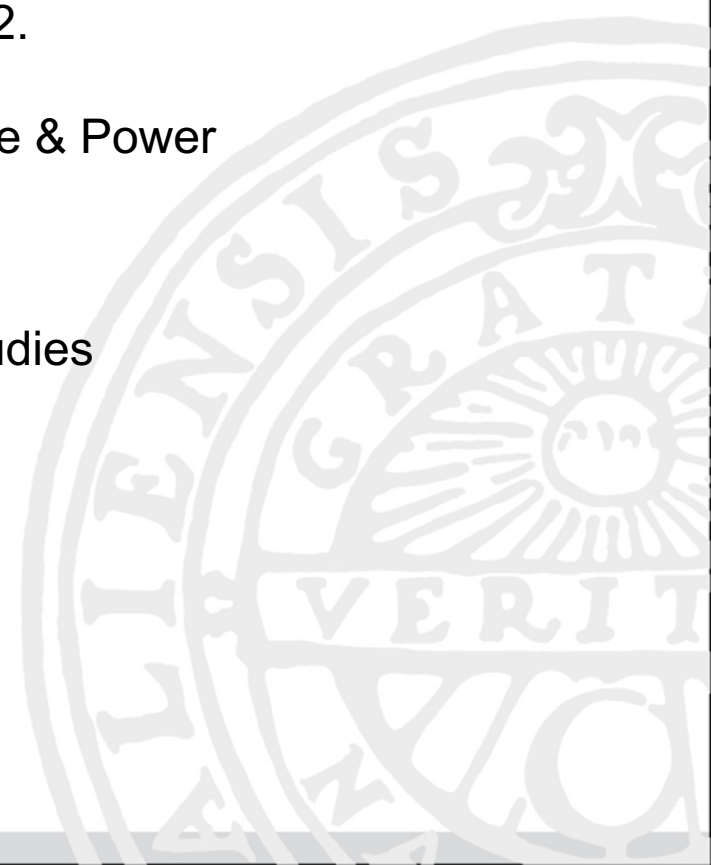# Doctoral Course Management, Organisation, ICT.

Meeting 5, June 9, 2022.

Digital Transformation/ Change & Power

Jan Lindvall

Department of Business Studies

Uppsala university

Agenda, approx.

10.15 – 11 Overview

11-12 Small group discussion: Power in organisations

13 -   Presentations

Digital **Transformation**/ changes

"The lessons we've learned from studying thousands of companies over our careers is that while technology creates options, success depends on how people take advantage of these options. The success of a venture rarely turns on how much technology it can access, but on **how its people *use* that technology,** and on what values they imbue in the organisation."

McAfee & Brynjolfsson (2017, p 330) in *Machine, Platform, Crowd. Harnessing our Digital Future.*

Voluntary *use*

Research Article

Voluntary use of information technology: an analysis and synthesis of the literature

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H Tsai, Information Technology Management, Cedarville University, 251 N. Main Street, Cedarville, OH 45314, USA.

Abstract
Voluntariness is recognized as an important influence on individual and collective technology acceptance. We conducted a comprehensive review of this literature and identified a rich set of voluntariness concepts and methods of operationalization. However, while considerable empirical evidence is reported in the literature, our review also revealed inconsistent results concerning the relationship between voluntariness and other concepts. Against that backdrop, we synthesized the literature into three types of voluntariness – perceived, intended and realizable voluntariness (RVOL), and showed how prior literature had not adequately accounted for RVOL. Moreover, we examined the multiple mechanisms that influence voluntariness and created a model to describe how to advance new knowledge about the important relationships among the three types of voluntariness and between voluntariness and user behavior. We argue that these concepts and relationships may help advance our knowledge of how a new technology is used individually and collectively in organizations.

Introduction

Table 1 Key features of two major conceptualizations of voluntariness

	Conceptualization	
	Voluntariness as cognition	*Voluntariness as an attribute of the environment*
Definition	Voluntariness is an individual's perception of 'the degree to which use of the innovation is perceived as being voluntary' (Moore and Benbasat, 1991: 195)	Voluntariness is 'a context-dependent freedom in adopting an information system … that stems from a physical context, and is independent of personal biases and points of view' (Wu and Lederer, 2009: 421)
Theoretical Foundation	• Theory of Planned Behavior (Ajzen, 1985) • Kelman's (1958) internalization	• Kelman's (1958) compliance
Operationalization	• PVOL scale: ○ PVOL1: My superiors expect me to use the system. ○ PVOL2: My use of the system is voluntary (as opposed to required by my superiors or job description). ○ PVOL3+: My boss does not require me to use the system. ○ PVOL4+: Although it might be helpful, using the system is certainly not compulsory in my job.+ short form	• Measured with a question (Hartwick and Barki, 1994) • Judged by researchers (Igbaria *et al.*, 1997; Lee *et al.*, 2006) • Confirmed with the PVOL scale (Venkatesh and Davis, 2000) • EBVOL scale (Wu and Lederer, 2009) ○ EBVOL1: The survey participants' superiors/ professors expect them to use the system. ○ EBVOL2: The survey participants' use of the system is voluntary (as opposed to being required by their superiors/professors or job/ program description). ○ EBVOL3: The survey participants' boss/ professor does not require them to use the system. ○ EBVOL4: Although it might be helpful, using the system is certainly not compulsory in the survey participants' job/program.
Influence and Example	Predictor of: • PCIs (Moore, 1989) • Current use (Agarwal and Prasad, 1997) • Intention to adopt (Plouffe *et al.*, 2001) • PBC (Benham and Raymond, 1996) • Infusion (Hester, 2010)	Predictor of: • Relative advantage (Speier and Venkatesh, 2002) Moderator in: • TAM (Wu and Lederer, 2009; Ramayah, 2010) • SN-usage intention (Venkatesh *et al.*, 2003) • SN-utilization (Staples and Seddon, 2004)

Technology Acceptance Model

Journal of the Association for Information Systems

JAIS

The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift.

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Abstract:
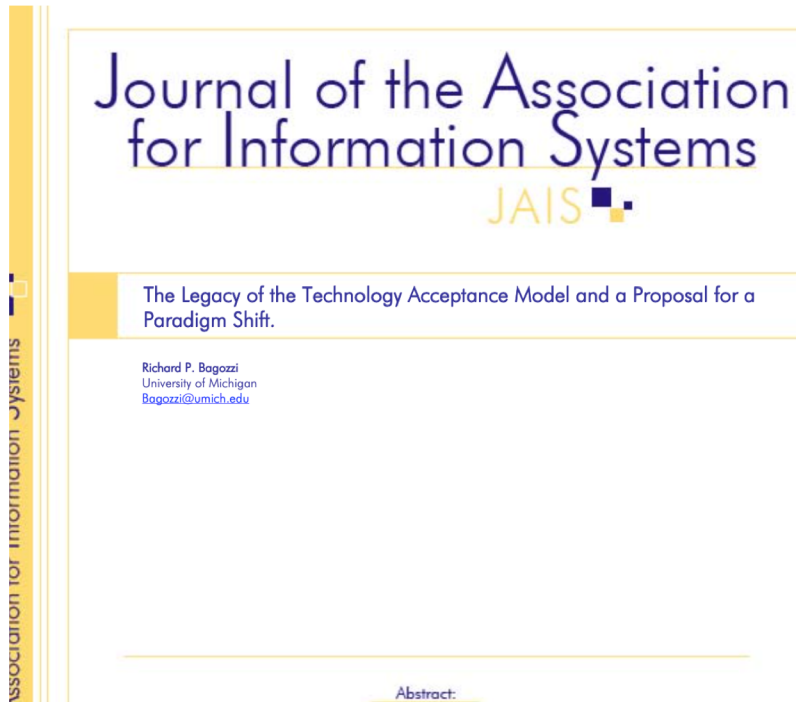
- TAM has stood the test of time by being the leading model for nearly two decades and earning many commentaries and the focus of this special journal issue. In sum, the importance and impact of TAM are impressive.

- The main strength of TAM is its parsimony: intentions to use a technology influence usage behavior, and perceived usefulness (PU) and perceived ease of use (PEU) determine intentions to use.

Mandatory use

User response to mandatory IT use: a coping theory perspective

Anol Bhattacherjee[a], Christopher J. Davis[b], Amy J. Connolly[c] and Neset Hikmet[d]

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ABSTRACT

The introduction of a new information technology (IT) into a workplace often engenders a wide range of responses among users. These responses encompass a variety of emotions, such as excitement, indifference, skepticism, and fear, and behaviors, such as user engagement, avoidance, and workarounds, that are often manifested concurrently in the same work environment. We present a taxonomy of these responses in the context of mandated IT use by classifying user responses as engaged, compliant, reluctant, or deviant. Using a coping theoretic lens, we offer seven propositions to describe the causal factors and processes that drive specific IT user responses and how such responses might change over time. A qualitative analysis of 47 interviews of 42 physicians at a large community hospital over an 8-year period provides support for our taxonomy and propositions. The study's key contributions are that it conceptualizes different types of user responses that may emerge in mandatory IT use settings, elaborates the key drivers of and processes underlying these diverse responses, and suggests how those behaviors may change over time with changes in the coping process.

Table 1. A taxonomy of user responses.

User response	Emotional response	Behavioral response	Similar categories from prior research
Engaged	Passionate and/or enthusiastic about IT use	Uses IT beyond required use (e.g., remote login from home)	Emergent use (Saga & Zmud, 1994)
	Wanting to discover new features about IT	Experiments with IT	Innovative use (Li et al., 2013)
	A sense of ownership of the IT	Modifies work procedures to optimize the use of IT and/or modifies IT to optimize work	Trying to innovate using IT (Ahuja & Thatcher, 2005)
Compliant	Generally positive about IT, but views IT use as less rewarding	IT use is purposeful but mechanistic	Standardized use (Saga & Zmud, 1994)
	IT seen as a necessity and nothing more	Little or no innovation	Routine use (Li et al., 2013)
		No customization of IT	
Reluctant	Fear of or reservations about IT	Uses IT only to 'meet quotas' or comply with mandates	Passive resistance (Lapointe & Beaudry, 2014)
	IT seen as a distraction from work	Occasional disengagement from IT use and training	Resigned use (Lapointe & Beaudry, 2014)
	Low expectations of IT	Tendency to fall back to old ways of work	
Deviant	IT believed to be an affront/challenge to work and autonomy	IT nonuse or use of 'proxies'	Active/aggressive resistance (Lapointe & Beaudry, 2014)
	Desire to disown IT	Use of workarounds	
		Voices opposition to IT	
		Dissuades IT use among peers	
		Employs delaying tactics	
		Undermines or sabotages IT implementation	

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The Model – how to cope

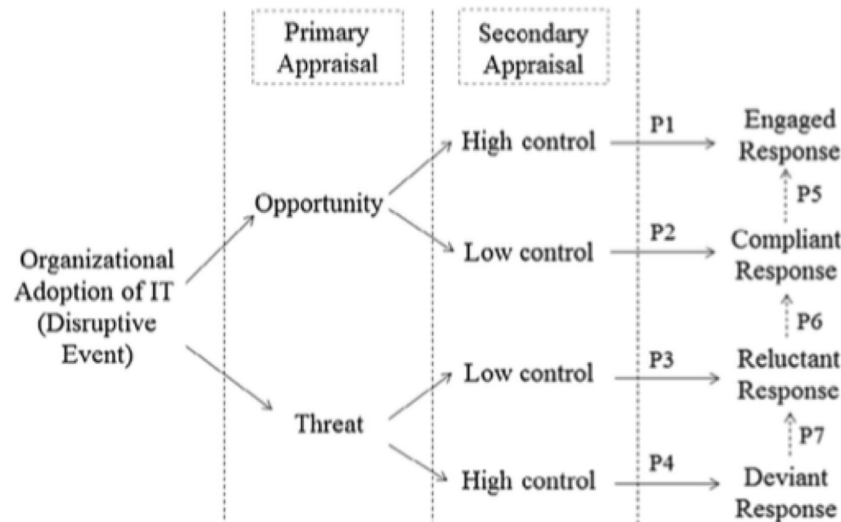EUROPEAN JOURNAL OF INFORMATION SYSTEMS 401

Figure 1. Coping responses to mandated IT use.
Adapted from Beaudry & Pinsonneault, 2005; Lazarus & Folkman, 1984.

whereby users cannot fully exploit the IT, threat apprais-

A Tripple Take – System Implementation

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Hospital – Professional Bureaucracy

Table 2 Elements of the Professional Bureaucracy and Their Relationships with the Emergence and Adoption of Innovations

Design parameters	Definition	Professional bureaucracy	Inferred relationship with emergence and/or adoption
Specialization of jobs	Horizontal: division of labor Vertical: degree of separation between performing work and managing it	High horizontal specialization Low vertical specialization	Facilitates emergence (Kimberly and Evanisko 1981, Moch 1976, Aiken and Hage 1971); hinders adoption (Damanpour 1991)
Training and indoctrination	Means of knowledge and skill standardization; usually takes place outside the organization, prior to entering the organization	High training and indoctrination	Facilitates emergence (Pierce and Delbecq 1977); hinders adoption (Damanpour 1991)
Formalization of behavior; bureaucratic/organic	Standardization of work processes through rules, procedures, etc.	Little formalization; bureaucratic	Facilitates emergence (Aiken and Hage 1971, Pierce and Delbecq 1977); hinders adoption (Zaltman et al. 1973)
Grouping	Base by which direct supervision is most affected	Functional grouping by means and by ends	Facilitates emergence and hinders adoption (Baldrige and Burnham 1975)
Unit size	Number of positions or sub-units that are grouped into a single unit	Wide at bottom, narrow elsewhere	No prior study
Planning and control systems	System by which outputs are standardized in the organization	Little planning or control	Hinders adoption (Daft and Becker 1978, Damanpour 1987)
Liaison devices	Means used to encourage mutual adjustment across units	Some liaison devices in administration	Hinders adoption (Aiken and Hage 1971, Ross 1974)
Decentralization	The extent to which power over decision making is dispersed among organizational members	Horizontal and vertical decentralization	Facilitates adoption (Thompson 1965)

Markus's political variant of interaction theory **(PVIT)** (Markus 1983), which is considered a classic in the study of IS in organizations (Lee et al. 2000).

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Figure 1   Analyzing Case 1 Using PVIT
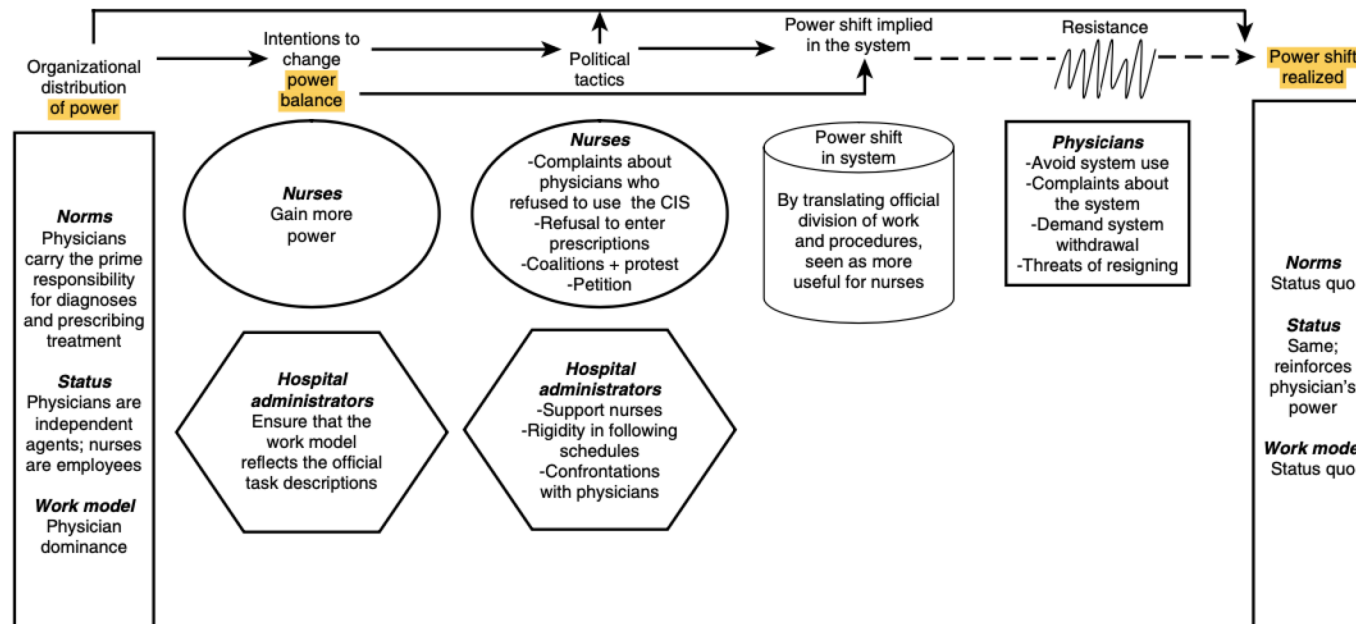
Result: Alternative

Lapointe and Rivard: *Triple Take on Information System Implementation*
Organization Science 18(1), pp. 89–107, © 2007 INFORMS
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Figure 4   An Alternate-Template Theory of IS Implementation
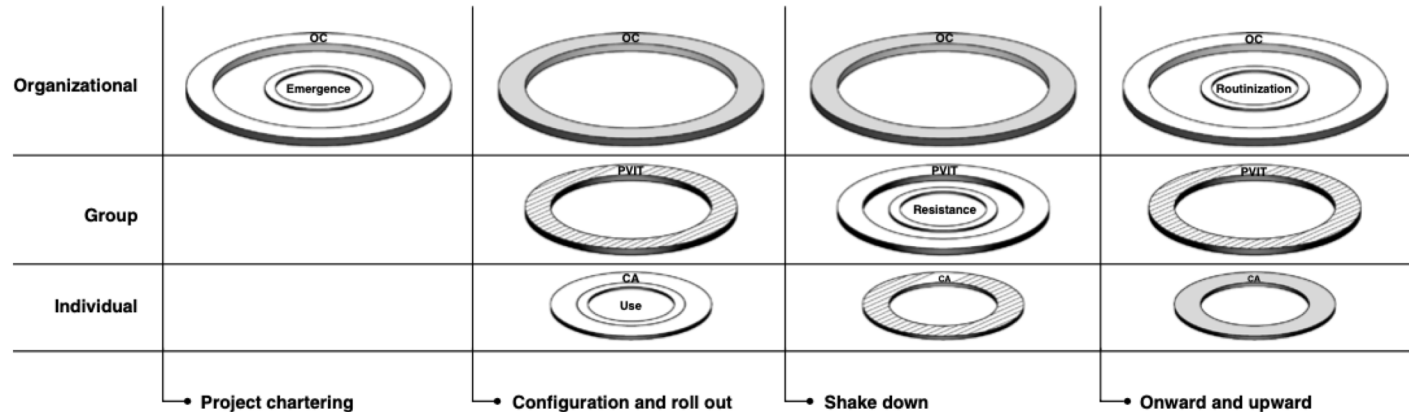
Change/Transformation: **Affordance**

MIS Quarterly

SPECIAL ISSUE: CRITICAL REALISM IN IS RESEARCH

CRITICAL REALISM AND AFFORDANCES: THEORIZING IT-ASSOCIATED ORGANIZATIONAL CHANGE PROCESSES[1]

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Convincing arguments for using critical realism as an underpinning for theories of IT-associated organizational change have appeared in the Information Systems literature. A central task in developing such theories is to uncover the generative mechanisms by which IT is implicated in organizational change processes, but to do so, we must explain how critical realism's concept of generative mechanisms applies in an IS context. Similarly, convincing arguments have been made for using Gibson's (1986) affordance theory from ecological psychology for developing theories of IT-associated organizational change, but this effort has been hampered due to insufficient attention to the ontological status of affordances. In this paper, we argue that affordances are the generative mechanisms we need to specify and explain how affordances are a specific type of generative mechanism. We use the core principles of critical realism to argue how affordances arise in the real domain from the relation between the complex assemblages of organizations and of IT artifacts, how affordances are actualized over time by organizational actors, and how these actualizations lead to the various effects we observe in the empirical domain. After presenting these arguments, we reanalyze two published cases in the literature, those of ACRO and Autoworks, to illustrate how affordance-based theories informed by critical realism enhance our ability to explain IT-associated organizational change. These examples show how researchers using this approach should proceed, and how managers can use these ideas to diagnose and address IT implementation problems.

Keywords: Affordance, critical realism, generative mechanism, organizational change, case study

Affordance & Generative Mechanisms (Volkoff & Strong, 2013)

"Recent IS literature has described affordances as emerging from the **relation between IT systems and organization systems** (Zammuto et al. 2007), and defined them as "**the possibilities** for goal-oriented action afforded to **specified user groups by technical objects**"

Affordance as Generative Mechanisms: In a Situated Practice!

"Thus, researchers seeking to **identify affordances** need to uncover the **immediate concrete outcomes** the actors experienced or expected to experience. Through observation and/or interviews **with questions such** as "what did the technology enable you to do," "what did it make it more difficult to do," "what did you use the technology for," "what happened once you started to use the technology," or "were there things you expected to be able to do that were not in fact possible," **the actual events that allow for retroduction back to the affordances can be uncovered.**"

"Potential" not deterministic or voluntaristic.

"..we define affordances as **the potential** for behaviors associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artifact) and a goal-oriented actor or actors."

…on we have highlighted four aspects of affordances:

- the **potential for action** rather than the action itself,
- their **relational** aspect,
- their **connection** to an immediate concrete outcome resulting from goal-directed behaviours,
- their **application** at multiple levels.

One example: The "Backbone" ERP: Transaction system

Who is disillusioned with ERP?

- Business leaders & process owners — Business-driven innovation
- Information users — Fact-based business
- Casual users — User experience simplification
- Traditional power users — Process excellence

Most ERP implementations focus on the needs of transactional power users

We are entering a third era of enterprise IT

We are here

	IT Craftsmanship	IT Industrialization	Digitalization
Focus	Technology	Processes	Business Models
Capabilities	Programming, system management	IT management, service management	Digital leadership
Engagement	Isolated, disengaged internally and externally	Treat colleagues as customers, unengaged with external customers	Treat colleagues as partners, engage external customers
Outputs & outcomes	Sporadic automation and innovation, frequent issues	Services & solutions, efficiency & effectiveness	Digital business innovation, new types of value

Not single and closed. "Open" and in "The Cloud"!
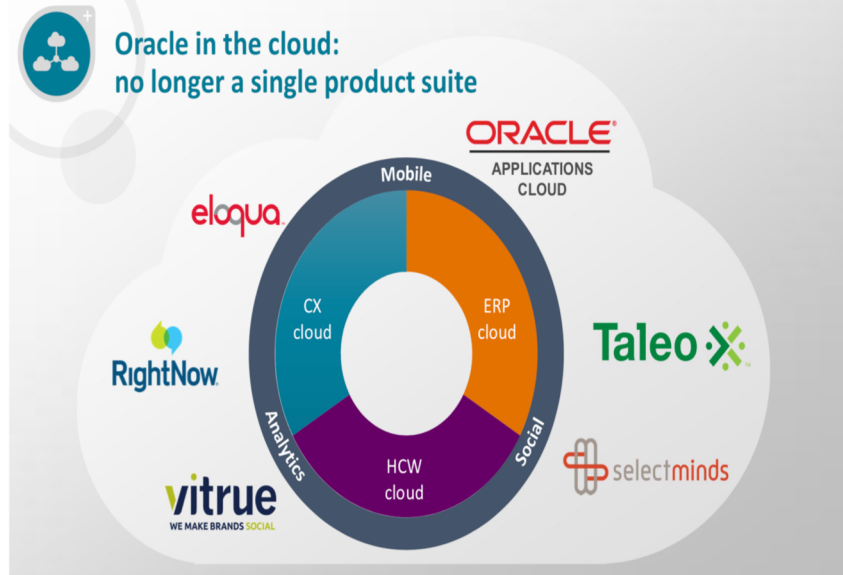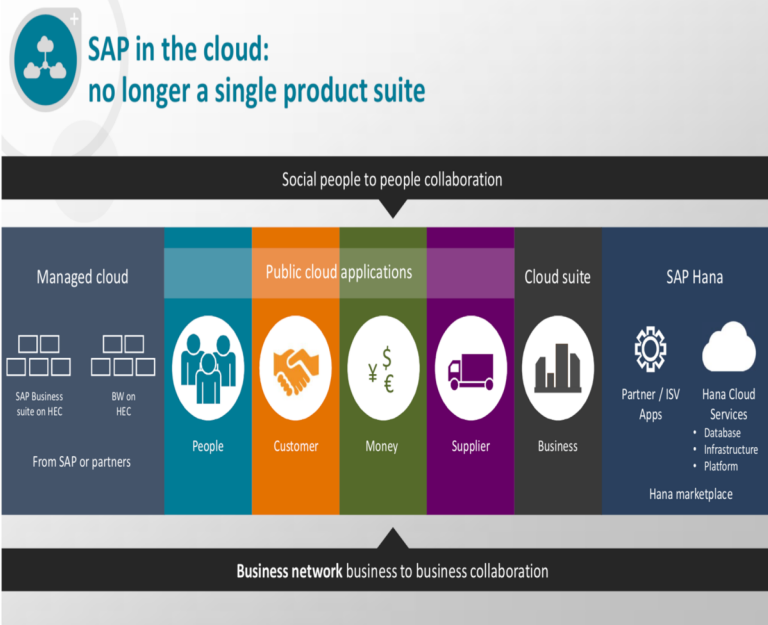
ERP/ES: Many stakeholders – different intentions/expectations – **different power bases**

- Success viewed in **technical terms**.

- Success viewed in **economic, financial or strategic** business terms.

- Success viewed in terms of the **smooth running** of business operations.

- Success as **viewed by** the ERP-adopting organization's managers and/or employees.

- Success as **viewed by** the ERP-adopting organization's customers, suppliers, and investors.

Markus, et al, 2000, Learning from Adopters

ERP – projects: Three different phases
Markus, et al, 2000

(1) the **project phase** during which ERP software is configured and rolled out to the organization,

(2) the **shakedown phase** during which the company makes the transition from 'go live' to 'normal operations'

(3) the **onward and upward phase** during which the company captures the majority of business benefits (if any) from the ERP system and plans the next steps for technology implementation and business improvement.

1. Success in **Project Phase**

Project **cost** relative to budget.

Project completion **time** relative to schedule.

Completed and installed system **functionality** relative to original project scope.

1.1 **Problems** in Project Phase

Project phase problems

The most challenging project phase problems reported by our respondents involved software modifications, system integration, product and implementation consultants and turnover of project personnel.

2. Success in the **shakedown phase**

- **Short-term changes** occurring after system 'go- live' in key business performance indicators such as operating labour costs.

- **Length of time** before **key performance indicators** achieve 'normal' or expected levels.

- **Short-term impacts** on the organization's adopters, suppliers and customers such as average time on hold when placing a telephone order.

2.1 **Problems** in Shakedown phase

Shakedown phase problems

As mentioned earlier during the discussion on 'success', many of our companies experienced negative outcomes during the shakedown phase. Among the outcomes experienced were the following.

(1) Performance problems with the ERP system (and underlying IT infrastructure).
(2) A slow down in business processes.
(3) Errors made by users entering data into the system.
(4) Increased staffing required to cope with slow downs and errors.
(5) A drop in the company's key performance indicators.
(6) Negative impacts on customers and suppliers from an inability to answer their queries and from delayed shipments and payments.
(7) A need for manual procedures for addressing lack of functionality in ERP software.
(8) Data quality problems.
(9) Inadequate management reporting.

3. Success in the **onward and upward phase**

- **Achievement of business results** expected for the ERP project, such as reduced IT operating costs and reduced inventory carrying costs.

- **Ongoing improvements** in business results after the expected results have been achieved.

- **Ease in adopting new ERP releases**, other new ITs, improved business practices, improved decision making, etc., after the ERP system has achieved stable operations.

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3.1 **Problems** in Onward and upward phase

- Unknown business results
- Disappointing business results
- Fragile human capital
- Migration phase problems

What to do? How to reduce/solve? Problems?

In some cases, onward and upward phase problems could have been avoided by taking action during the project phase:

(1) Doing a much better job of end-user training during the project phase.
(2) Starting the project phase with plans for long-term maintenance and migration.
(3) Documenting the reasons for configuration decisions, not just the parameters, so that people not involved in the project phase can get up to speed quickly.
(4) Not disbanding the project team when the project goes live, but instead staffing a competence centre for managing future evolution and learning.

Organizational Challenges

organizational challenges that threaten ERP success. Among such challenges are the following, which were observed in several of our study companies.

(1) Lack of results orientation in the business is a key factor in failure to achieve business results. This is not something that an ERP project team can fix.

(2) A culture resistant to change is another big impediment to ERP success. Project teams can design and execute change management programmes, but senior executives must work to make these efforts a success.

(3) When top managers do not buy in to the goals and plans of the ERP project team, the chances for success are weak. Good project managers can contribute to buy-in by good and frequent communication, but again success requires a concerted effort at the top, before and during the project.

Power & Influence

ACADEMY OF Management

Power in Management and Organization Science

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Abstract

This paper reviews and evaluates the concept of power in management and organization science. In order to organize the extant literature on this topic, we develop a framework that identifies four faces of power (i.e. coercion, manipulation, domination, and subjectification) and four sites of power (i.e. power enacted "in", "through", "over", and "against" organizations). This allows us to evaluate assumptions both shared and contested in the field. Building on the review, the paper then points to potentially novel areas of research that may extend our understandings of organizational power in management and organization science.

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Four Faces of Power

" The first two faces of power—*coercion and manipulation*—can be considered **episodic modes** of influence because they rely upon identifiable acts that shape the behavior of others. *Domination and subjectification* are faces of power that can be considered **systemic** because they mobilize institutional, ideological, and discursive resources to influence organizational activity. As such they are often less visible than overt and explicit acts of power."

Faces of Power

Table 1 Faces of Power

Focus	Faces of power	Description	Theoretical roots	Core mechanisms	Representative studies
Episodic	Coercion	Direct mobilization of power	Dahl (1957)	Formal position	Weber (1947)
				Personality	House (1968)
				Ability to reduce uncertainty	Crozier (1964)
				Possession of valuable resources	Pfeffer and Salanick (1974)
	Manipulation	Attempts to ensure action and discussion occurs within accepted boundaries	Bachrach and Baratz (1963)	Manipulation of rules	Salznick (1949)
				Shaping anticipated results	Gouldner (1970)
				Network positioning	Burt (1995)
				Mobilization of bias	Alexander (1979)
Systemic	Domination	Attempts to make relations of power appear inevitable and natural	Lukes (1974)	Articulating ideology	Alvesson (1987)
				Manufacturing consent	Burawoy (1979)
				Conformity with institutions	Fligstein (1987)
	Subjectification	Attempts to shape sense of self, experiences, and emotions	Foucault (1977)	Disciplinary regimes	Townley (1993)
				Construction of identities	Du Gay (1996)
				Articulation of discourse	Maguire, Lawrence, and Hardy (2004)
				Governmentality	Holmqvist and Maravalias (2011)

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Power: In, Over, Through, Against

Table 2 Intersecting Faces and Sites of Organizational Politics

Faces of power	Politics in organizations	Politics over organizations	Politics through organizations	Politics against organizations
Coercion	Formal authority (Weber, 1947) Bases of power (French & Raven, 1959) Control of sources of uncertainty (Crozier, 1964) Control over valuable resources (Pfeffer & Salanick, 1974)	CEO control over scarce resources (Hambrick, 1981)	Control over resources need by stakeholders (Elg & Johansson, 1997) Organization use of resources to fend off unwanted environmental pressure (Lamburg & Pajunen, 2005)	Social movements mobilize valuable resources to pressure change in firms (McCarthy & Zald, 1977) Undermining existing resource flows (Hiatt, Sine, & Tolbert, 2009)
Manipulation	Position in social networks (Hackman, 1985) Impression management (Maitlis, 2004) Use of storytelling (Humphreys & Brown, 2002)	Use of informal social ties (Allen & Panian, 1982) Informal social manipulation (Westphal, 1998) Sense-making and symbolism (Clark, 2004) Enrolling external agents (Maguire et al., 2004)	Selective information provision (Aplin & Hegarty, 1980) Use of elite networks (Siegel, 2007) Establishing operating principles in new fields (Santos & Eisenhardt, 2009)	Manipulation of political climate (Böhm et al., 2008) Careful management of media image of firm (Carty, 2002) Creation of links with formal institutions (Palazzo & Richter, 2005)

Power: In, Over, Through, Against

Domination	Hegemony (Benschop & Doorewaard, 1998) Use of indeterminacy and autonomy (Sewell, 1998) Depoliticization (Contu & Willmott, 2003) Creating a sense of inevitability (Knights & McCabe, 1997) Incorporation (Guest & King, 2004)	Representation of external forces as immutable pressure (Morgan & Sturdy, 2000) Control by external resources (Pfeffer, 2003) Control by state agencies (Yoo & Less, 2009) Financialization (Davis, 2009) Shaping ideological climate (Vaara & Tienari, 2011)	Elites shaping interests of other actors (Barley, 2010) Shaping lawmaking and regulatory processes (Kerr & Robinson, 2012) Capturing civil society (Levy & Egan, 2003) Fostering strategic ambiguity (Davenport & Leitch, 2005)	Articulation of new ideologies to change industries (Van Bommel & Spicer, 2011) Social movements creating new organizational forms (Hensman, 2003)
Subjectification	Aligning self with the organization (Knights & McCabe, 1998) Articulation of discourses that shape identity (Townley, 1993) Disciplinary mechanisms (Thornborrow & Brown, 2009)	Propagation of new discourses (Spicer & Sewell, 2010) Development of new disciplinary technologies (Oakes, Townley, & Cooper, 1998) Shaping practices of sense-making (Clark & Geppert, 2011)	Constructing novel social identities (Hardy & Phillips, 1999) Development of new legal categories (Benjamin & Goclaw, 2005) Construction of new professional identities (Suddaby & Greenwood, 2005)	Rise of autonomous work settings (Adler, 2001) Resubjectification of organization (Sutherland, Bohm, & Land, in press) Tempered radicalism (Meyerson & Scully, 1995)

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A "meta- summary" of some themes

- Digital Transformation/changes. Business models, Value systems, Processes.

- Different cognitions – cognitive views/mindset acceptance vs resitstance?

- Different analytical levels: individual, group, organisation? Linkages?

- Different focus – voluntary use vs mandatory use?

- Different time periods. Variance vs Process (Mohr,1982).

- Affordance!