LEADERSHIP IN REAL TIME: A MODEL OF FIVE LEVELS OF ATTRIBUTES NEEDED BY A PROJECT MANAGER IN ERP IMPLEMENTATIONS

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Abstract

The characteristics and organizational impact of an Enterprise Resource Planning (ERP) Implementation Project requires highly professional Project Manager skills and attributes. Some may be learned or bought but the more important skills need to be part of the Project Manager's personal makeup. Coaching, mentoring and leadership skills (and beyond) help the Project Manager to take right decisions as even unknown-unknown situations arise during the implementation. This paper contributes to identifying the qualities that the Project Sponsor and Steering Committee should be looking for when they select a Project Manager and draws a parallel with Parse (Human Becomings) nursing theory research and practice.

Keywords: ERP (Enterprise Resource Planning), Project Management, Situational Leadership, Leadership in Real Time, Caring, Holism.

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Introduction

ERP Project Implementation does not have to be a hit or miss affair. But for many companies and organizations it has been a painful process and if the criteria of on time, on budget and with required functionality are applied failures and challenges still outnumber successes (Johnson, 2001)

Newell *et al* in a paper presented at OKLC 2003 mention that many organizations do not realize the hoped-for benefits and point to examples of disastrous failures.

Some reasons may be as follows:

- ERP implementation projects are important in scope: they provide an integrated system and a shared database for the management of finance, logistics and manufacturing. Nowadays companies and organizations are looking also to manage their supply chain and customer relations through the medium of ERP (or interfaces with SCM and CRM solutions). In addition they wish to take advantage of web technology. ERP is as much an Enterprise Project as an I.T. platform. Sumner (1999) identified these projects as often representing the single largest investment in an information system project in the history of the companies that implement them.

- A phase of ERP implementation includes Business Process Reengineering (BPR) (Hammer and Champy, 1993; Hammer, 1996) and this can run roughshod over traditional ways of doing business, hierarchy and functional department silos. BPR in the context of an ERP Implementation has the normal constraints of local Legal, Fiscal and Business Practice but also (if there is a wish to avoid customization) how the ERP solution functions in standard.

- ERP implementation projects can mobilize several multi-disciplinary User and I.T. experts from within, and external to the company/organization. 10, 20, or 30 persons involved in a multinational Core Team and 10, 20, or 30 persons involved in individual countries in the rollout is not uncommon for a multinational implementation.

- The number of tasks through the project phases is daunting (several hundred tasks in the detailed work breakdown structure is not uncommon), and implementations take several months or even years.

Given this context, it is not surprising that a Project Manager's role goes beyond using Microsoft Project and the Gantt chart. Skills need to include coaching, mentoring, leadership. And even perhaps new and novel approaches to take into account the dimension of the transformation sought.

In recent years ERP Editors have contributed to implementation methodology, an example would be Accelerated SAP (ASAP). Dolmetsch et al document four successful implementations of SAP R/3 using ASAP (Dolmetsch *et al*, 1998). Another example would be One Methodology of J D EDWARDS.

More recently there is also research into vendor neutral initiatives such as using Object Oriented Mapping Methods to accelerate the implementation process (Arinze and Anandarajan, 2003). In this example the aim is to translate user requirements into parameter choices for ERP software and to avoid unnecessary customization.

The Standish Group (which does not address particularly ERP but I.T. projects in general) in their updates of the CHAOS report (1995) suggest that there has been a slight improvement in the percentage of successful projects, mainly due to projects being over shorter duration and point to Project Management as being a factor now near the top of the list of success factors (see *figure 1* which shows an extract: the top five success factors). (Johnson, 2001)

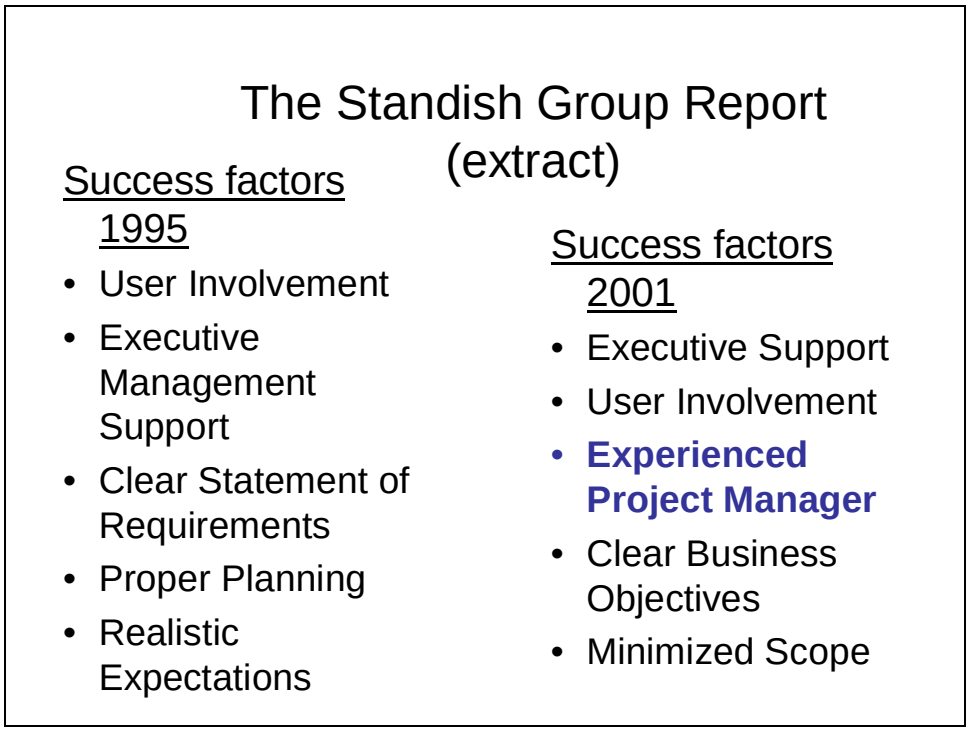

***Fig. 1**: Top five success factors, I.T. projects studied by The Standish Group, original study 1995, update 2001.*

This elevation of the success factor of Experienced Project Manager is worth exploring. It is interesting as a success factor in that it suggests that in the person of the Project Manager lies an important indicator of success challenge or failure of the project.

Research into Critical Success Factors (CSFs) concerning Information Systems projects in general, or more recently speaking particularly to ERP projects, has been thorough and is ongoing. Esteves and Pastor (2001) have listed a number of writers and their publications who have contributed to knowledge about critical success factors.

The nature of these projects is also evolving : from ERP implementations we moved to Enterprise or Enterprise-Wide Systems implementations / version upgrades. In the new business paradigm we are likely to go to catch-all solutions and version upgrades with increasing stakeholders inside and outside the organization (ERP + SCM + CRM + Web Technology + appropriate logistics to support 7/7, 24/24).

In parallel ERP Editors, those who will survive, are targeting small and medium size as well as large and multinational companies/organizations and widening the vertical sectors they address.

In this paper we are not listing new CSFs, but rather describing more clearly one CSF which has come to the surface : Project Manager and the importance of this role.

1. A parallel with Parse's theory.

In looking at modern day silver bullets that need to be in the Project Manager's arsenal, it is suggested that Peopleware could be enhanced by a parallel drawn with the research work of Professor Dr. Rosemarie Rizzo PARSE of Loyola University Chicago. Human Becomings and Illuminations has greatly contributed to the theory, research and practice of nursing. For our comparison purposes we look only at some of the precepts and consequences for the practitioner (see *figure 2*). The bibliography includes more detailed discussion of the theories behind.

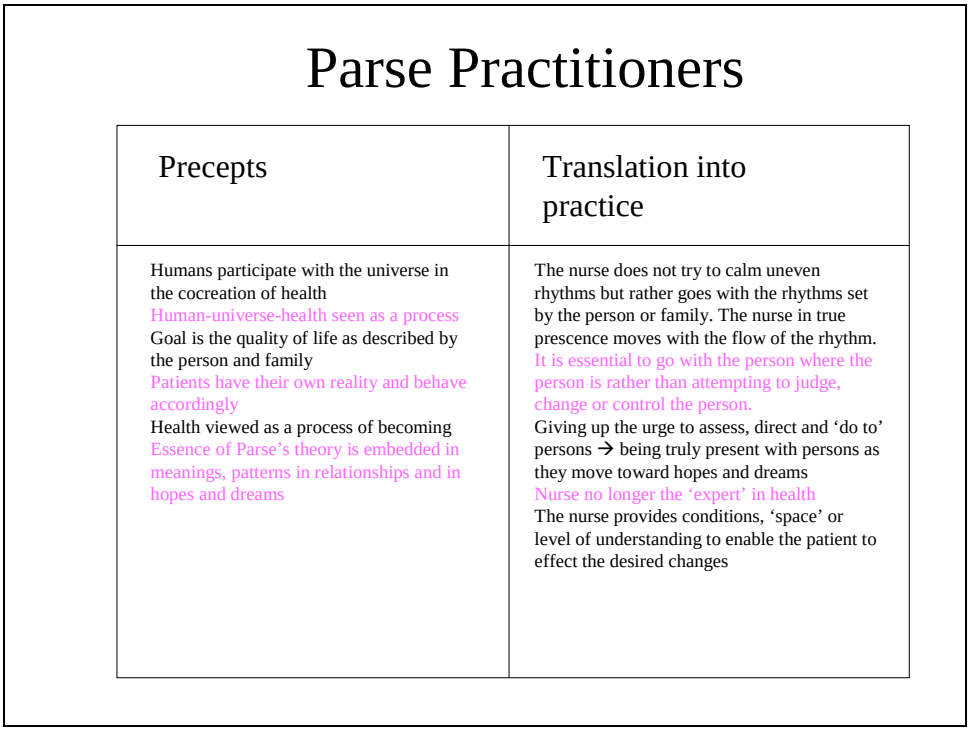

***Fig. 2**: Examples of Parse theory and practice.*

In literature review concerning nursing theory we see descriptions of the profession of nursing which may find an echo in the problems of ERP Implementation Project Management. Rose *et al* (1995) argues that nursing should not be seen as a hard science and that fundamentally it is about caring, nurturing and things that cannot be measured objectively. The concentration on only the hard science aspects leads to dysfunction or an incomplete view of the profession:

> 'We tend to see the high technology, all the machines, and it seems to give us permission to neglect all the personal things.' (Rose *et al*, 1995)

Wilkes (1991) suggests that the uniqueness of the world of nursing stands on its appreciation of caring and holism.

In the ERP implementation context, there is also a tendance to concentrate on the technical aspects – the hardware and software rather than the peopleware and the impermanence that the solution brings to existing structures, processes and prior ways of doing business. Even the team charged with the implementation is impermanent, coming together for the purposes of the project and then dispersing. This impermanence and the necessity to prepare for continuous change requires transformational leadership.

One research question is has ERP implementation been categorized as a hard science to the detriment of project success? This paper begins to explore this, concentrating on the attributes of Project Manager.

2. Examples of parallels, Purse practice and Peopleware in the context of ERP Implementation

Peopleware

For Software Development, what has been termed **People**ware (as opposed to **Soft**ware or **Hard**ware) is one of the silver bullets, and the most important. (Brooks, 1987; Yourdon, 1993; Yourdon, 1996). Yourdon's list of silver bullets are:

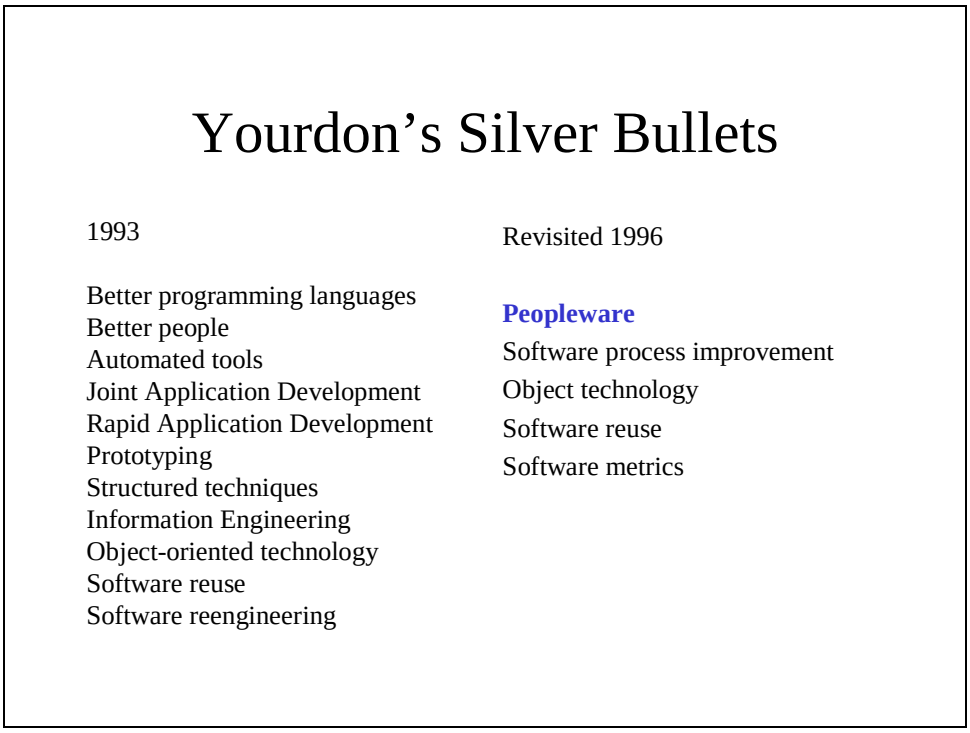

***Fig. 3** : Yourdon's list of Silver Bullets*

With ERP, the Silver Bullets still apply today but some may be of more interest to the ERP Editor than the Implementation Team. For example for the Implementation team Coding may be minimised if the standard ERP solution covers most needs. Bullets such as Software Reuse and Software Metrics may be correspondingly less in evidence. On the other hand there are new silver bullets which are pertinent, for example ERP Editor methodologies and templates to accelerate implementation and help orientate choices among parameter settings.

In this paper, we examine for Peopleware the subset of attributes for the ERP Implementation Project Manager and we borrow from PARSE theory (Parse being a leading nursing theorist) to add a maturity level (Caring, Holism).

As for nursing, caring and holism need to characterise also ERP Implementation Project Management.

Reasons why we have to go beyond Coaching, Mentoring, Leadership, Knowledge Management and towards Caring and Holism include:

1. Project Actors drawn from the I.T. and Key User communities often have to combine their project role with a role in maintaining the business operations for the life of the project. Backfill staff may be provided but any critical event in day-to-day operations is likely to require their attention. At the same time as milestones are reached the project workload also can intensify. The commitment asked of these project actors goes beyond any contractual obligation or 'normal' working day. External consultants also can be stressed by the need to resolve showstopper issues quickly and may have the added complication of travel, hotel, change of culture and language (if they have come from abroad) etc.

2. An ERP Project Implementation and the Business Process Reengineering that may accompany it creates a climate of change. This adds to stress (positive and negative) as actors manage the change. Actors may be worried about the implications for themselves: new jobs created, old jobs no longer critical, changes in formal and informal structure and power.

3. The Project Manager is surrounded by peers. He or she cannot be expert in all the fields germane to the project and is more in the role of Knowledge Broker than Knowledge Expert (Edvinsson, 2003). For a multinational implementation there may be a virtual community of actors with different expertise, culture, language, time zones etc. Some may be colleagues, some may be persons brought in from outside the company / organization. There is a diversity in skills, age, socio-economic group etc. You may have a team where contributors are in their twenties, with qualifications that are five or six years post-compulsory education and at the same time key users in their fifties with twenty-five years plus hands-on experience.

4. The overall context : company loyalty is difficult to obtain :

   - when a modern career is likely to include 6 career changes in a lifetime (OECD 1994),

   - when upper management are often shown to have little loyalty to their employees – measures such as reengineering, downsizing, cavalier approach to hiring/firing.

   - Where the media highlight fat cat packages with little (apparent) correlation with performance, pension disappointments, cases such as Enron / Arthur Andersen and Worldcom.

   Is there any place in this Information or Knowledge Age for care of the employee or revering the employee at all ?

   Or as Viviane Forrester says in her seminal essay *L'Horreur Economique :*

   > '…why should this caste take into account those crowds of unconscious people, who insist, insanely, to occupy concrete worlds, established, situated, where to hammer nails, to tighten screws, to carry things, to file things, to calculate things, to get involved in everything, to act like flies around a mesh, with their slowness in keeping with their body constraints, with their obvious efforts, with their timings and rhythms already outdated; not to speak of their lives, their children, their health, their lodgings, their food, their salaries, their sexuality, their illnesses, their leisure time, their rights [1] ?' (Forrester, 1996)

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[1] Pourquoi cette caste tiendrait-elle compte des foules d'inconscients qui insistent, maniaques, pour occuper des périmètres concrets, établis, situés, où taper sur des clous, visser des vis, porter des machins, classer des choses, calculer des trucs, se mêler de tout, jouer les mouches du coche, avec des circuits lents à la mesure du corps, des efforts patents, des chronologies et des tempos déjà passés aux oubliettes et puis leurs vies, leurs enfants, leur santé, leurs logements, leurs nourritures, leurs rémunérations, leurs sexes, leurs maladies, leurs loisirs, leurs droits ?

For organizations who want to manage the future as an asset (Edvinsson, 2003), Caring and Holism in this (generally uncaring) context does make sense and may be part of the answer to attracting and retaining brilliant staff. This implies being truly present and attentive to actors: aware of their role in the workplace and on the project but also, if they need / ask for it, support for example in their roles as spouse, parent, child.

If there are 10, 20, or 30 actors on a project and the project duration is several months/years the likelihood is that at some point in time one or other of the actors will have a crisis or major stressor event. (Death, Divorce, Accident/Injury, Illness either of the actor or a dependent / loved one). It is therefore vital that the Project Manager be proactive even for unknown-unknown situations. Contingency planning should include 'What happens if x, y or z (and including myself) are no longer able to work on the project's advancement?' Using Parse theory it is important to listen to the person concerned and provide the conditions, 'space' or level of understanding to enable the person to effect the desired change. For example, a key user who has a serious illness to contend with in the family may prefer to continue working but from home and in their own time. Or they may require a leave of absence. The Project Manager needs to adapt accordingly and with the user management approval provide concrete help.

There are project phases where the workload can become intensive either for an individual or for the team. For example a programmer who is working on an interface which is taking longer than foreseen and creating a bottleneck. Or for the whole team at a critical phase such as build up to the Go Live date and the days afterwards as they try to stabilize the new system. The Project Manager needs to be very much in support – providing meals, taxis, prioritising of issue resolution with Management, making sure that no one person is over tired, etc. Besides the ethical and moral constraints there are also legal obligations for the Employer. Working all hours of day and night for the project can have cause and effect with accidents.

Leif Edvinsson (2003) suggests that 20 % of health is related to architecture, 'your third skin' For a holistic approach, the Project Manager needs to ensure that the environment and facilities are conducive to nurture a prototype or opportunity space (Edvinsson's illustration was a coffee shop terrace type meeting place of minds where you can hardly hear yourself think for the brainstorming of brilliant ideas …)

3. What are the attributes that the Project Sponsor and the Steering Committee should be looking for as they select the Project Manager ?

In figure 4, we incorporate the parallel we have drawn with nursing theory placing Caring, Holism as the highest level. We use a framework similar to the Software Engineering Institute (SEI), Carnegie Mellon University/ Mitre Corporation/ Watts Humphrey **Capability Maturity Model** and recent model: People Capability Maturity Model® (P-CMM®), Version 2 (Marchewka, 2003).

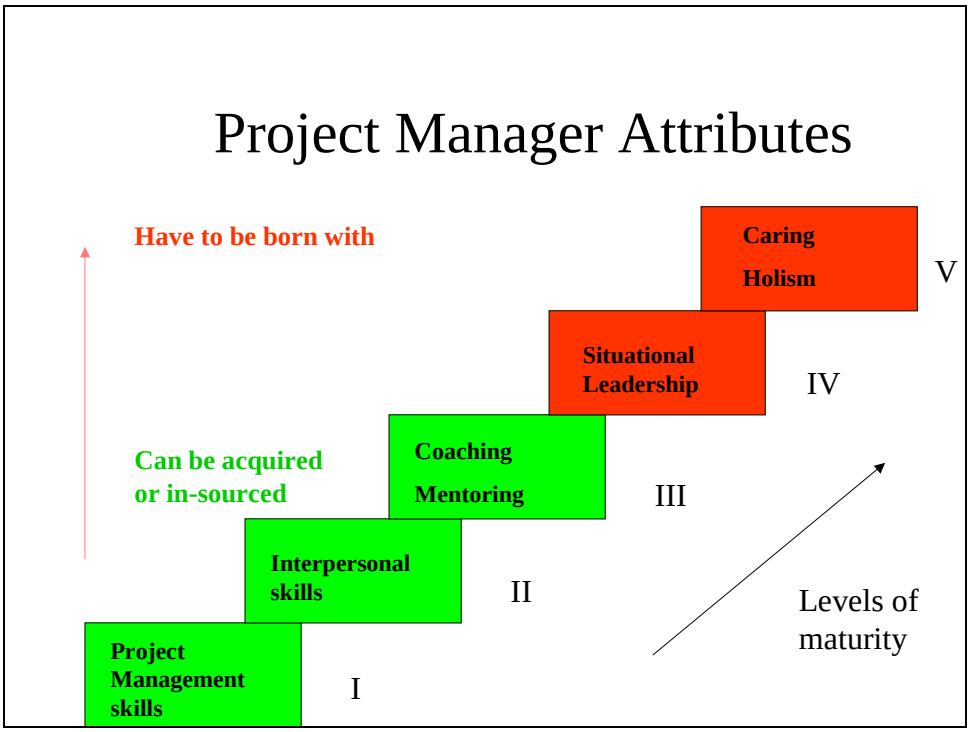

***Fig. 4**: Project Manager Attributes Model to include level V inspired by Parse theory*

Project Management skills

These include lessons that have been learnt from Software Development Life Cycle Methodologies and from Engineering.

The phases to manage include;

- Analysis,
- Design,
- Coding (in the context of ERP this would be the phases of Conversion, Interface and Modifications (I.T.) in parallel with Set Up Parametering (Key Users)),
- Testing / Validation,
- End User Training.

For each module of the ERP solution to integrate and for each process a detailed work breakdown structure would be prepared. The skills then involve the management of Tasks, Resources, Delays, Budget and the use of a tool such as Microsoft Project.

Interpersonal skills

These include the ability to communicate and to negotiate. It helps that the person has proved himself/herself within the organization for several years. While not necessarily being a Director or Manager, the person would need to participate in the Management Committee. Characteristics would include having personality and being approachable; being equally at ease at all organization levels.

Coaching, mentoring

These are the skills associated with motivating a team. The Project Manager is their champion and their defender. It helps to be a natural leader. But these skills are in support as well as in front.

Certain of the technical experts may have difficulty in expressing themselves to upper management or user management and may need to use the Project Manager as a vehicle for getting important, sometimes unpalatable messages across.

The Project Manager needs to have championship and leadership qualities and skills even if the project is driven by the Project Sponsor / Steering Committee. Brown and Vessey (1999) define these roles of champion and sponsor but indicate that there may be permutations according to the organization / company. Although one person may rise to the surface as more visible and charismatic (Sponsor, Project Manager, Business Leader and/or General Manager) it is in most situations a shared responsibility.

Situational leadership

This is more difficult to learn : the ability to respond correctly even to unknown-unknown situations. In a crisis the spotlight is on the Project Manager's actions and reactions and there is a short timeframe in which to be credible. We term this Leadership in Real Time. It may be a series of independent problems easy to solve one at a time but coming at volume and speed enough to constitute a crisis (an analogy would be a video game), or one crisis.

W. Edwards Deming (1982) stresses the importance of leadership. For example in his fourteen points for Quality he lists as point number seven Institute leadership and in point eleven exhorts us to eliminate trends such as management by works standards (quotas), by objective, by numbers and numerical goals and to instead substitute leadership . Leadership provides added value and is a contributor to Quality.

Sutcliffe (1998) describes research on leadership and style-situation fit but we propose that the swing-back to leader attributes should also include a born-with state: charisma, personality, caring and holism as a constant and part of personal make-up, and then style/situation and task as variables.

Referring to *figure 4*, our definition therefore of Leadership in Real Time includes a combination of level 4 Situational Leadership and level 5 Caring and Holism

In the context we are describing we limit ourselves to Situational Leadership not greatness of leadership in a larger sense. The Project Sponsor and upper management must also show sustained leadership and charisma throughout the project.

Caring, holism

This is the highest level of maturity and arguably cannot be learnt. It is more a gift that you are born with than a learned skill or trade or management style.

In german it is perhaps easier to describe the quality of *verstehen* : the process of empathizing and using one's 'sociological imagination' and the quality of *dasein*[2] : being there. It is at this level that the parallel with the work of Parse seems the most appropriate (for example the notion of 'true presence').

It can be described but is also paradoxically intangible. You know when it works. It is the 'ah-ha' (Edvinsson, 2003) of Project Management in the ERP Implementation context.

What should a Project Sponsor or Steering Committee be looking for at this maturity level? See *figure 5.*

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[2] *verstehen* is often used as 'to understand' and *dasein* as 'to exist'. Here we refer to the philosopher Heideger's use (BUNTING, 1993)

Caring, holism / level 5 /ERP Implementation
Project Manager attributes

What it is not, the tone is not right	Characteristics that suggest it is working	Effect it should have on the project team
Agony Aunt	Approachable	Dynamizing
Bleeding heart liberal	Listener	Motivating
Manipulative	Empathetic	Creation of a prototyping space for problem resolution
Calculating	Instinctive	Good communication
Insincere	Project before self	Synergy
No clear outcome	Character before career	Moving of mountains
Total ≤ sum of parts	Bold and loyal	Commitment, trust, fun

***Fig. 5**: The fifth level of maturity,*
Caring, Holism as attributes of the ERP Implementation Project Manager

Choosing the right Project Manager

There is only one opportunity for the Project Sponsor and Steering Committee to get their selection right. ERP Implementation Project Management is not a profession we know of as in the sense of a Department Manager of a functional silo. Usually the Project Manager will come from a management position in I.T. or from the User management population. In the modern business paradigm they will join forces with the project team, which will disperse once the project is Live and stable. If they have succeeded well they will be promoted into another management position and may even be groomed for General Management. The project might be what the young (or recently young) wolf or wolverine will cut teeth on before moving to 'greater' challenges. There is likely to be a phenomenon of burnout at the project's conclusion and it is likely to be a career episode rather than a career in itself. This implies that the **Experienced** Project Manager cited in the Standish Group study (JOHNSON, 2001) is not the same as **Experienced Project Manager** : i.e. the experience is likely to have been gained in the I.T. or User Management arena.

At the time when a Project Manager needs to be identified, we suggest that the acid test for selection is:

- how the candidate has acted and reacted in his prior functions,
- how he or she is perceived by his / her peers,
- how he or she answers to questions put concerning simulated project crisis situations and how they would handle them.

- And the candidate's perception of self and self-concept. Lorda and Brown (2001) define self-concept as a broad amalgam of knowledge, experience, self views, possible selves, self relevant goals, that individuals see as self relevant or self descriptive.

  Figure 6 shows how an individual 'acquires' various identities which when activated come to the fore. It is important to have an understanding of how the individual views himself/herself, the various identities dormant or active which his/her socialization is likely to result in. Later in situational leadership the team members will discover the Project Manager's values through actions and project success may be in function of these shown values and the resulting dynamic.

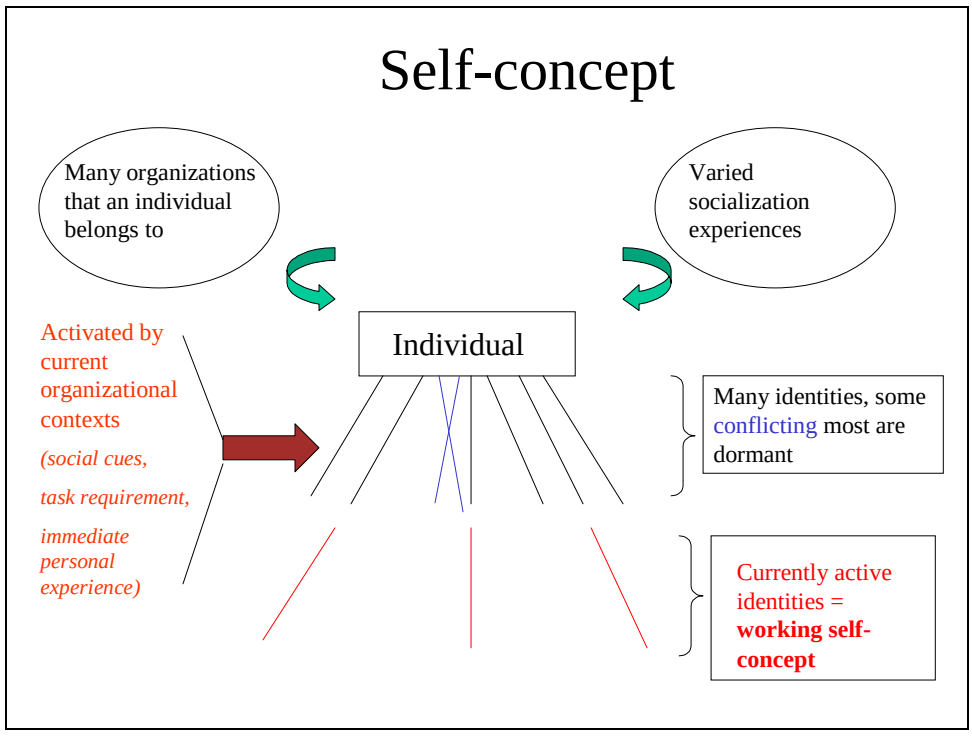

***Fig. 6** : Self-concept. Adapted from Lorda and Brown (2001)*

In the selection process (which may or may not be formal) certain characteristics / attributes need to be in evidence in past performance. Again an analogy can be drawn with advanced nursing theory. Lu Ann Darling (1986), contemporary of Parse, listed these characteristics of a mentor :

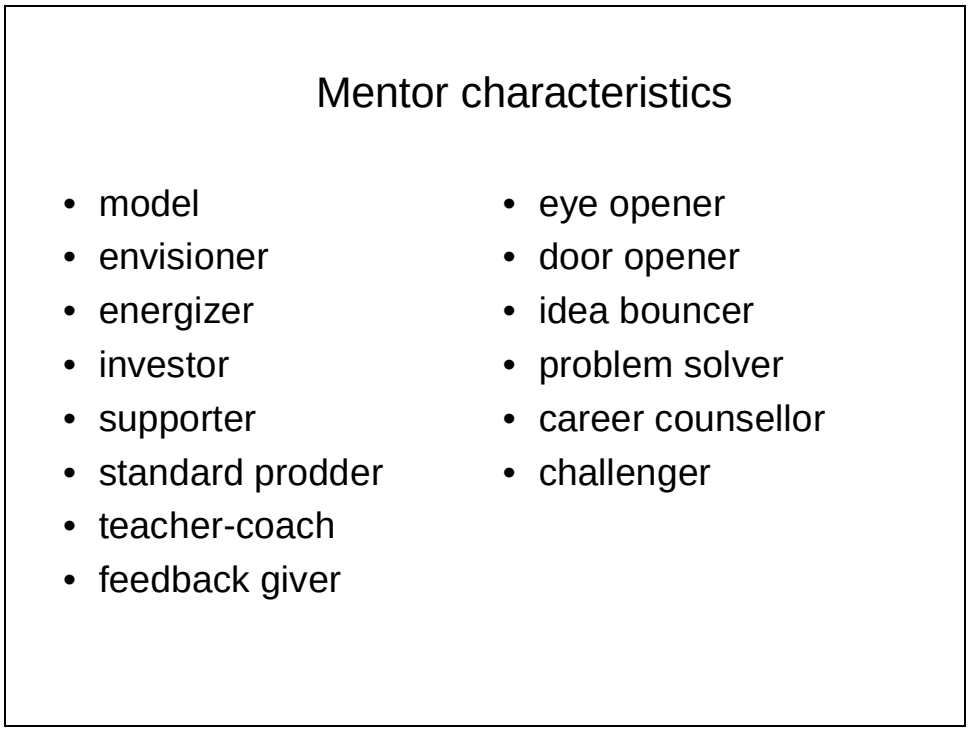

Fig.7 : *Characteristics of a mentor identified by Lu Ann Darling (1986)*

While the characteristics in *figure 7* relate to a mentor/learner and hospital context, again parallels can be drawn with the characteristics of an ERP Implementation Project Manager. At different inflection points during the project the Project Manager will need to be seen as having these roles and attributes. The context however is different in the sense that the relation Project Manager and Team is not of Leader/Follower, Teacher/Learner, Manager/Subordinate; but rather of Facilitator/Team Contributor, Knowledge Broker/Expert.

In summary the choice of the Project Manager should result in an affirmative answer to the question posed by Leif Edvinsson (2003): ‘are they able to ask and listen to what they do not know that they do not know ? ‘

Conclusion

The Project Manager role is recognised as critical to project success. He or she is not necessarily the project champion (the Project Sponsor needs to champion the project). But the Project Manager, for the team and in the day-to-day of the project advancement, is the person who creates the conditions in which I.T. and Key User experts are able to function at their optimum and achieve results and change.
In this paper we have focused on the skill set that the Project Manager needs, to fulfil this role and be an agent of change and transformation. This is expressed in the form of a model and goes from classic Project Management skills through to a natural approach and attitude (gift) of caring and consideration for the actors as whole human beings. To explicate this we have borrowed from nursing theory and in particular the research by Parse. The effect is to factor in human nature and what human sciences can contribute to the (still valid) mechanistic approach to project management discipline.

The object is to go beyond tasks and milestones, cost and time constraints, and allow the project to transform the enterprise. This requires a synergy in the efforts of project actors and all stakeholders. Otherwise the end result is no more than a shared database and an integrated system for Finance/ Distribution/ Manufacturing transactions. This is not the transformation that industry captains are looking for or sufficient a return on their project investment. Presumably they are looking for an optimum functioning from Supplier, through added value provided by their organisation, to their Customer and the resulting business advantage. To get to this goal the Project Sponsor and Project Manager and the team have their work cut out and need to be of a certain calibre and mindset.

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