

CRANFIELD UNIVERSITY

LINDA FLORIO

**APPLICATIONS OF CONSTRUCTIVE DEVELOPMENTAL THEORY
TO THE STUDIES OF LEADERSHIP DEVELOPMENT:
A SYSTEMATIC REVIEW**

SCHOOL OF MANAGEMENT

MRES DISSERTATION

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of Research**

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ABSTRACT

Purpose. The purpose of this dissertation is to present three main outcomes of the systematic review undertaken:

- A synthesis of extant literature on leadership development from the angle of constructive developmental theory.
- A review of the two approaches in constructive developmental theory most widely used in conjunction with studies of leadership development.
- An integrative framework of the process and context of leadership development from the constructive developmental perspective. In exploring the directions of further inquiry, the framework is applied to the development of a transformational style of leadership in the settings of executive leadership development initiatives.

Method. The systematic review method (Denyer and Tranfield, 2006; Tranfield et al., 2003) was followed to the end of locating and evaluating relevant evidential information. Synthesis of evidence was carried out with the method of realist synthesis (Pawson et al., 2004).

Findings.

- A transformational style of leadership includes aspects deemed crucial in most management positions in today's organizations (McCauley et al., 2006a; Kegan, 1994; Zaccaro and Banks, 2004a; Bass, 2007). In approaching the subject of leadership development, an emphasis was put on the transformational style of leadership.
- The field of leadership development lacks a base definition of the process and context of leadership development. The field also suffers from scarce alignment of theory, practice and empirical research. Overall, there is little consensus on how leadership is developed.
- Three decades of research in constructive developmental theory have evidenced a link between leadership development and adult development.

Constructive developmental theory proposes a dynamic view of leadership and a model of process and context of leadership development.

- A framework is proposed that integrates the evidential information reviewed. The framework is tentatively applied to the development of a transformational style of leadership in the settings of executive leadership initiatives.

SUMMARY

Aspects of leadership deemed crucial in today's organizations include the ability to navigate relationships, harmonize the interests of different stakeholders, metabolize more and more complex realities and support development in individuals and organizations. A transformational style of leadership is increasingly in demand in organizations (Zaccaro and Banks, 2004a; Day et al., 2004). According to constructive developmental theorist Torbert, a *transformational style of leadership* revolves around two fundamental processes: the autonomous revisiting of operating assumptions and a collaborative approach. Consensus on these two characteristics converges from different fields (Argyris, 1991; Mezirow, 1991; Bass, 1985). This paper's section on transformational leadership provides a historical survey of the concept of transformational leadership; the survey traces the evolution of the concept to Bass' construct and of Torbert's definition.

In the field of *leadership development* there is a generalized lack of consensus around the process and context of leadership development. Generally, there is very little alignment between theory, practice and empirical research. In the last three decades, constructive-developmental theory has addressed the question of how leadership may be developed: a link between adult and leadership development has been illuminated by empirical research. Constructive developmental theory proposes a dynamic view of leadership and a model of the process and context of leadership development.

The process of leadership development is found to be centered on action inquiry, the increasingly autonomous revisiting of operating assumptions (Torbert, 2004). The context of leadership development is, at its broadest, the whole of a person's social experience: the workplace and leadership development initiatives can then be seen as subsets of this broader context. Context has been found to serve functions critical to the developmental process (Kegan, 1994). A framework that

integrates constructive-developmental theory's ideas on the process and content of leadership development is presented in this thesis. The framework is tentatively applied to the development of a transformational style of leadership in the settings of executive leadership development initiatives.

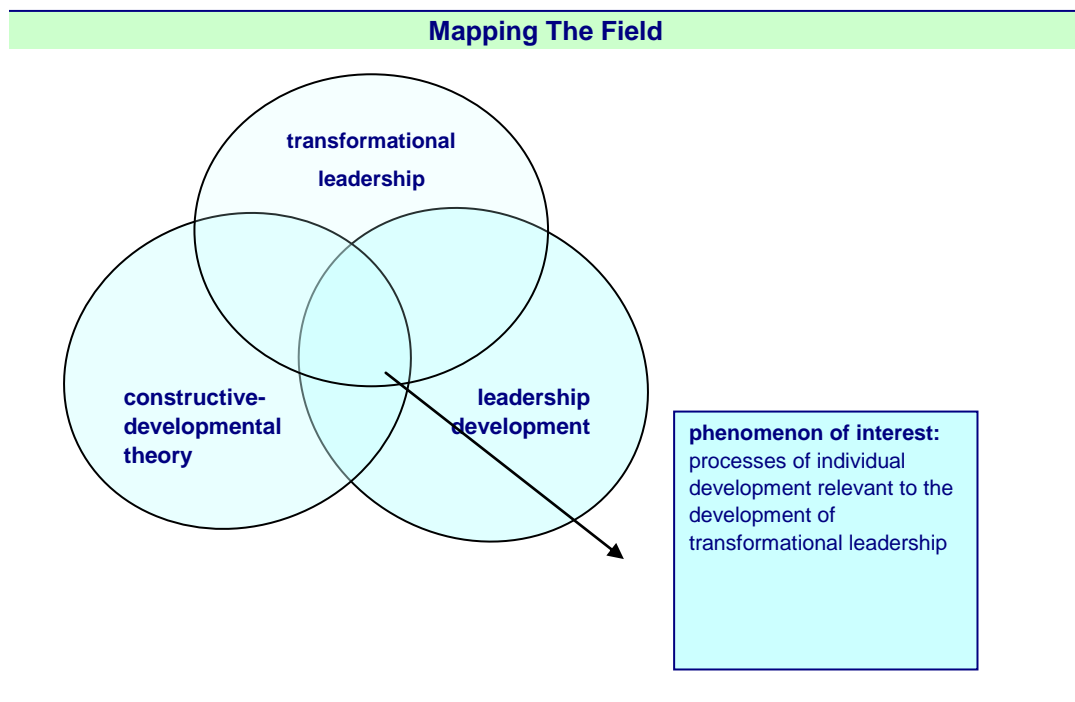
The systematic review has produced the evidence to answer both the questions formed at the beginning of the process. The first question revolved around approaches and methods in constructive-developmental theory. The second question revolved around contributions of constructive developmental theory to leadership development. The systematic review has focused on the work of the two scholars who have generated the most influential contributions in the field of leadership development: Robert Kegan (1982, 1994, 2001), at the Harvard Graduate School of Education, and William R. Torbert (1987, 1991, 2004) at the Boston College E. Carroll School of Management.

In the first chapter of this dissertation, I locate the topic of the inquiry in the areas of literature under the scope of the review: transformational leadership, leadership development and constructive developmental theory. In the second chapter I present the protocol that guided the systematic review process. In the third chapter I provide both a descriptive overview and a thematic analysis of review findings. In the fourth and last chapter, I present the synthesis of inferences drawn from extant literature and an integrative framework of the process and context of leadership development. Implications for further research, limitations and learning points are also discussed in this conclusive part.

I. SCOPING STUDY: LOCATING THE FIELD OF INQUIRY

The underlying research aim is to study what aspects of leadership development initiatives may be critical in supporting executives through the transformational process described by constructive-developmental theory. The phenomenon of interest is the set of processes of adult development interlinked with the development of a transformational style of leadership. This phenomenon lies at the intersection of three fields of inquiry: *transformational leadership*, *leadership development* and *constructive developmental theory* (Figure 1). The context in scope is that of executive leadership development initiatives.

Figure 1: Mapping the field



The leadership literature includes extensive consideration of the transformational aspect of leadership. A transformational style of leadership is recognized as instrumental to effective visioning, strategizing and to the functioning and development of organizations. A question still pending is how transformational leadership may be developed. In the section on transformational leadership, I first

present the definition of *transformational leadership* inferred from Torbert's constructive-developmental approach; then, I present a historical survey of transformational leadership and discuss the current characterization of the construct.

In the *leadership development* field there is currently little alignment between theory, leadership practice and empirical research. Also, there is no convergence on a base definition of the process and context of leadership development. In the section on leadership development, I introduce a definition of the process and context of leadership development derived from the work of constructive-developmental theorists Robert Kegan's and William Torbert's. In the conclusion, I present what are currently the points of consensus in the field of leadership development.

Constructive-developmental theory (from here hence referred to as CD theory) posits that human development and the development of leadership are inextricably linked. Human development proceeds beyond childhood, along with successive, more encompassing, ways of meaning making. Relevant to leadership, these qualitatively different ways of meaning making translate into action logics that guide interpersonal behavior. Ultimately, a logic of self-reflection and autonomous self-authoring of meaning making supports the expression of a transformational style of leadership. In the section on constructive-developmental theory I review the theory's origins and basic tenets; I then introduce the approaches of Kegan and Torbert.

I.A Transformational Leadership

Transformational leadership focuses on one essential aspects of leadership: the aspect that encircles relational and charismatic qualities and supports renewal in people and organizations. In this section I first discuss the salience of transformational leadership for different organizational processes. Then, I present a definition of transformational leadership based on the work of Torbert and other CD theorists. After a brief historical survey of evolution of the concept of transformational leadership, I discuss how Torbert's characterization of the concept is positioned relative to Bass' transformational leadership.

I.A.1 Importance of transformational leadership

A transformational style of leadership is increasingly sought after as a source of competitive advantage (McCauley et al., 2006a; Kegan, 1994; Zaccaro and Banks, 2004a; Bass, 2007; Day et al., 2004; Torbert, 2004; Rooke and Torbert, 2005; Harris and Cole, 2007). Aspects of leadership deemed crucial in today's organizations include the ability to navigate relationships, harmonize the interests of different stakeholders, metabolize more and more complex realities and support development in individuals and organizations (McCauley et al. 2006).

The concept of transformational leadership has far reaching roots in the literature on leadership and became notorious with the work of Bass (1985). A wealth of studies, including those based on Bass' construct, has supplied evidence of the relationship between a transformational style of leadership and variety of organizational outcomes and processes. In this section, I consider leadership effectiveness, organizational culture and organizational development.

Leadership effectiveness. A transformational style of leadership is "more highly correlated with outcomes in *effectiveness* and satisfaction of colleagues"(Bass 1995, p. 475). Studies have lent support to the idea that transformational

leadership is more strongly related than other styles of leadership to some other leadership outcomes; for example, group productivity (Lowe, et al., in McCauley et al. 2006), effective visioning and leading change (Day et al., 2004; Gordon and Yukl, 2004).

Organizational culture. Gordon and Yukl (2004) equate *organizational culture* to the very medium of transformational leadership: through culture, transformational leadership can impact organizational performance. Zaccaro and Banks (2004a) argue that developing leader competencies in visioning and managing change is conducive to creating a learning culture within an organization. Cascio notes that in an increasingly “networked, interdependent, culturally diverse organizations require transformational leadership to bring out [...] in followers [...] their creativity, imagination, and best efforts” (in Bass, 1999 p. 211).

Organizational development. Other scholars have identified transformational leadership as the vessel of *organizational development*: “Increasingly, leadership development efforts are expected to play key roles in organizations’ attempts to enhance their competitiveness and transform themselves and their cultures” (Harris and Cole 2007, pp.774-793). Again, Zaccaro and Banks argue that leadership and organizational development are, in fact, one (Zaccaro and Banks, 2004a).

Despite the validity and importance recognized to transformational leadership, to date a lot remains uncertain about how transformational leadership may be developed: more research is needed to understand “what thought processes are involved when a leader attempts to be more transformational” (Bass, 1996).

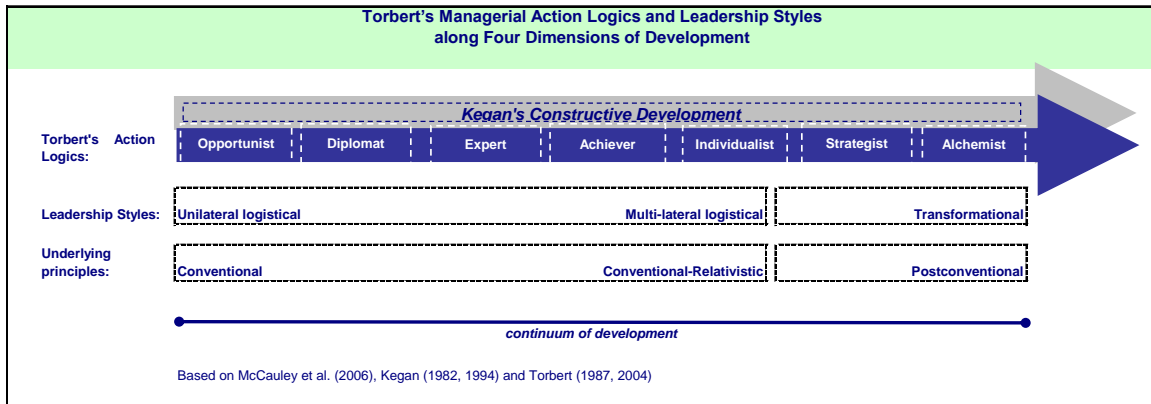
1.A.2 Transformational leadership in CD theory

From a CD perspective, different leadership styles are most effective to the ends of different organizational accomplishments. There seems to be one key characteristic underlying the effective expression of the different leadership styles: the willingness to make a difference in one's context and consistently with one's attitudes. This is, in essence, Torbert's definition of leadership.

The transformational style of leadership is seen to revolve around two fundamental aspects: the autonomous revisiting of operating assumptions and a collaborative approach to transformation (Torbert 2004). Transformational leadership is equated to the engagement in an ongoing renewal of self, relationships and organizations. CD theory's characterization of transformational leadership builds on pre-existing theories of leadership and learning. Leadership scholar Bass has centered his construct of transformational leadership around the constant revisiting of operating assumptions (1985). In the learning literature, Argyris connects transformational leadership to the revisiting of own and others' 'theories in use' (1991) (double and third loop learning). Mezirow concurs (1991), asserting that transformation can only take place with the revisiting of underlying assumptions (premise reflection).

CD theory explains the progressive development of leadership styles with the parallel development of underlying operating assumptions. Torbert's transformational style of leadership then finds its place in a dynamic framework of leadership styles (Figure 2). Operating assumptions (Torbert's 'action logics') initially rely on conventional or relativistic principles; later, they tend to employ autonomous and post-conventional principles. In parallel, leadership styles progress from placing an emphasis on organization (logistical style) to engaging with the continuous development of sustainable processes across systems (transformational style).

Figure 2: Torbert's Managerial Action Logics and Leadership Styles

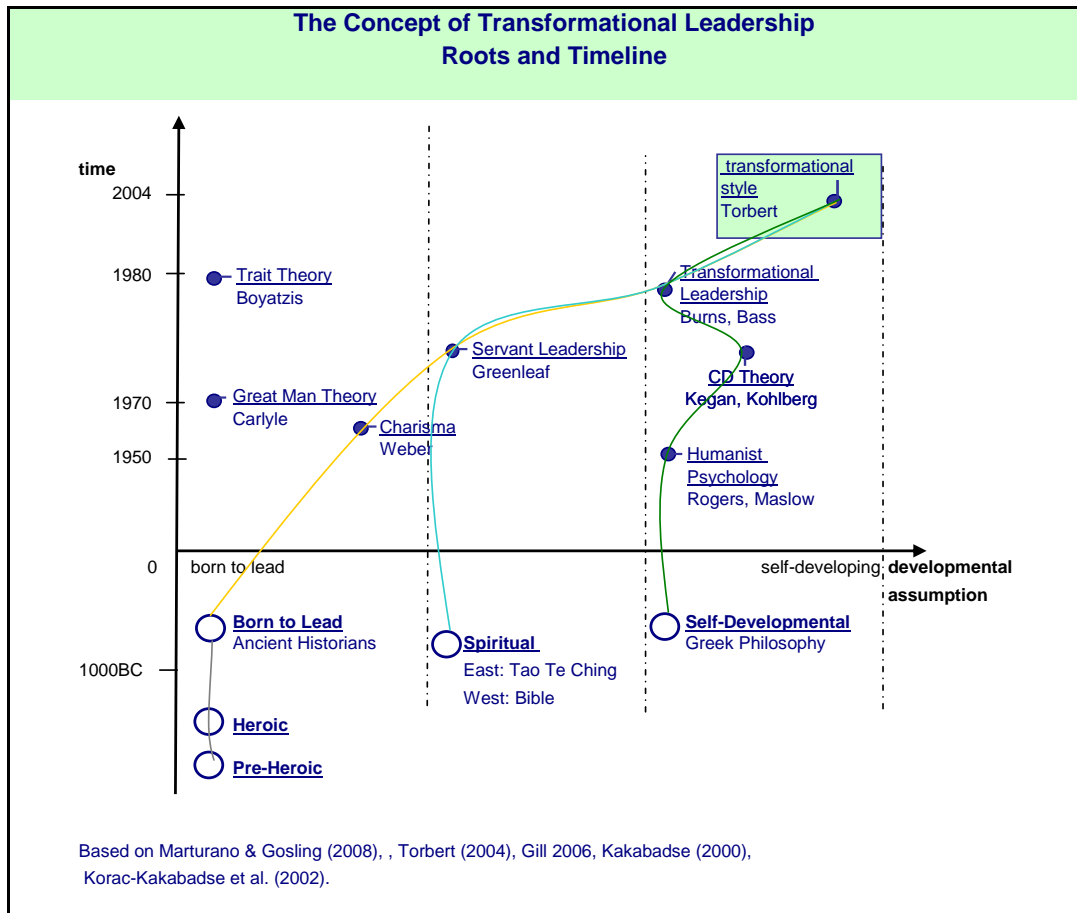


A transformational style of leadership, based on the more encompassing post-conventional action logics, is most effective to the ends of strategic planning, visioning and re-visioning; also, to the ends of carrying out initiatives of organizational development. Within transformational leadership, Torbert identifies two successive expressions: the ability to facilitate transformation is developed first, along with the 'Strategist' logic. The ability to envision and originate transformation is developed in a second moment, along with the 'Alchemist' logic.

1.A.3 Transformational leadership: a historical survey

The formation of the transformational leadership construct is a fairly recent phenomenon: behind it, there is a far-reaching and vividly debated literature. This survey traces threads of thought relevant to transformational leadership back to three major strands of leadership literature: the born to lead (Kakabadse, 2000), the spiritual (Korac-Kakabadse et al., 2002) and the self-developmental (Kakabadse, 2000). The diagram in figure 3 traces the development of the concept of transformational leadership through time. In the diagram, two dimensions (time and developmental assumption) are used to position the concept of transformational leadership relative to other leadership constructs.

Figure 3: The Concept of Transformational Leadership: Roots and Timeline



Pre-heroic to Heroic. The pre-heroic phase of leadership relays a rather non-transformational archetype of leader: ancient, hunting-based societies relied on elder leaders acted as safeguards of social continuity rather than sources of renewal (Keegan 1988 in Kakabadse 2000). The transformational aspect of leadership was first brought to the forefront in the immediately succeeding phase: literature on heroic leadership voices the fascination of early historians' with the deeds and charisma of extraordinary leaders such as Alexander the Great or Julius Caesar, figures capable of mobilizing masses to the pursuit of their vision. This was also the origin of the born-to-lead strand of leadership literature, discussed in the following section.

The born to lead tradition. This view picks up on early accounts of heroic leadership that attributed exceptional qualities to a rare sort of individuals, most frequently men. Such exceptional qualities were traced to a variety of sources: as examples, lineage in the Egyptian empire or divine anointing in the Hebrew tradition (Harter, 2008). Out of their exceptional endowment, these rare individuals would draw the charisma, and often the right, to influence others. It was only in twentieth century that the effort to arrive at a comprehensive definition of charisma was undertaken: Weber described charisma as magnetic influence over others, held in virtue of the exceptional behavior an individual is capable of (Jones, 2008; Marturano and Arsenault, 2008):

Charisma is a
“certain quality of an individual personality of which
he is considered extraordinary and
treated as endowed with supernatural, superhuman
or at least specifically exceptional powers or qualities”
(Weber 1968 in Marturano and Arsenault, 2008)

Weber’s work linked charisma to behavior and personality; ideas on the origin of charisma, however, remained vague. Nietzsche, who drew from Weber’s notion of charisma, thought that charisma may arise from the heroic commitment to some mystical standard (Harter, 2008). Nietzsche famously originated the romantic ideal of the born-to-lead man: the *Urbemensch*. This view carried on in Carlyle’s great man theory (1969) and was to lay the basis for Boyatzis’ trait theory of leadership (Levine, 2008).

Two aspects underscored in this strand of literature were later imported in the concept of transformational leadership. First, the belief that one individual can make a significant difference. Second, the intuition that charisma arises, at least in part, from an individual’s personal commitment to higher values (Kouzes and Posner, 2002). Where transformational leadership takes a distinct stand, is in the degree to which it allows for the consideration of the role of others, whether collaborators or subordinates. Heroic leadership tends to emphasize the greatness of one individual; at times, his or her success over others.

Transformational leadership rather implies an attitude of humility (Bass 1985). Transformational leadership describes a leader that is warm and socially concerned; a leader who operates by encouraging collaboration in the day to day reality (Torbert in McCauley 2006). Transformational leadership: "involves collaborative relationships that lead to collective action grounded in the shared values of people who work together to effect positive change" (House and Aditya in Gill 2006). Transformational leadership does not attribute greatness and infallibility to individuals.

The spiritual tradition. The link between spirituality and charismatic leadership is highlighted in the earliest religious works known to us: not surprisingly, as the dimension of charisma implies a strong component of emotion-based influence (Popper and Mayseless, 2007). In the West, The Christian tradition has carried forward the figure of a leader-shepherd figure: at the same time humble and firm, he inspires people to live a moral life and guides them towards salvation. Early mentions can be found in the Bible (1st millennium BC) and the Philokalia (300 AD) (Kadloubovsky and Palmer, 1969, Korac-Kakabadse et al., 2002; Rost, 2008). Within Eastern philosophies, the Taoist tradition projects an ideal of leadership based on self-awareness, balance and harmony (Lao Tse's Tao Te Ching, dated around 600 BC). In the contemporary leadership literature, the Eastern and Western traditions merged for example in the idea of servant leadership: Greenleaf was the first to formalize a definition of servant-leader,

"one who goes ahead to guide the way [...] with the conscience that one wants to serve, to serve first."

(Greenleaf in Hamilton, 2008)

Servant leadership is still in search of both a formal definition and empirical support (Ciulla 2008); however, it has been recognized a transformational energy and a place of importance in future research on leadership (Bass in Hamilton, 2008).

Transformational leadership and servant leadership share an others-oriented focus and the idea of an aim towards higher end values. Burns, the first theorist of transformational leadership, posed that leader and followers may participate to a system “to assist each other’s improvement in all facets of life” (Burns, 1978). However, servant leadership seeks to explicitly set the moral orientation and end goals of the leadership process. In contrast, transformational leadership leaves room for end goals to be constructed by the participants in the process: transformational leadership operates by “aligning the followers’ self-interests in development with the interests of the group, organization or society” (Bass, 1996). Servant and transformational leadership differ in a second basic way: servant leadership puts more emphasis on support and collaboration than it does on performance and attainment of organizational goals. Transformational leadership focuses on the goals of the organization as well as the goals of individuals.

The self-developmental tradition. The self-developmental tradition has focused on the cultivation of virtue and moral character as the basis for the development of charismatic leadership. This tradition, similarly to the spiritual tradition, is receptive of the Taoist and Buddhist focus on self-awareness. Long-reaching in history, the self-developmental strand is rooted in Greek philosophy: Socrates wrote on self-examination and quest for meaning; Plato on the practices for the development of enlightened leadership (Kakabadse, 2000; Marturano and Arsenault, 2008). The influence of these ancient thinkers was to re-emerge much later in psychology, in the humanist current started by Rogers and Maslow (1951; 1954). Maslow’s hierarchy of needs explains individual’s development as the striving towards self-actualization and the progressive satisfaction of needs of higher orders. In psychology, this tradition progressed with the work of developmental theorist Piaget (1954) and, later on, with that of constructive-developmental theorists. In leadership studies, this set the basis for the construct of transformational leadership. Burns, the father of transformational leadership, highlighted the connection between leadership and self-development: “Maslow’s

pyramid should be extended upwards to go beyond one's self-oriented concerns" (Burns in Bass 1996, p.475). The advocated extension would capture a stage where an individual actively supports others in the pursuit of their actualization. The connection between transformational leadership and adult development began to be exposed with Burns, who explicitly linked his work to that of constructive-developmental theorist Kohlberg (Price, 2008).

Underlying the self-developmental line of thought is the idea that a person leads out of the values he or she cultivates (Kouzes and Pousner, 2002). Also, that charisma is a result of personal commitment to self-development. This readily prompts a moral interrogative: where is the line between influence and manipulation? Between the pursuit of self-serving goals and that of organizational objectives? Between the pursuit of constructive and destructive goals? A standing argument of critics is that, independently of its degree of altruism, transformational leadership can at any point in time be used for ethical or unethical ends (Price, 2008). Some have not so convincingly argued that transformational leadership is ethical by definition (in Ciulla 2008). Bass's response to the debate around leadership and morality is a distinction between pseudo-transformational leaders, likely to be narcissistic and in pursuit of self-interest, and authentic transformational leaders, those who "identify the core values and unifying purposes of the organization and its members, liberate their human potential, foster pluralistic leadership and effective, satisfied followers" (1996, p.211). In positioning within this debate, other leadership theorists have chosen to develop constructs of leadership that are narrower and more defined as to their moral orientation (Socialized Leadership, Popper 2006; Servant Leadership, Greenleaf 1970; or, in negative, Toxic Leadership, Walton, 2008).

A personal consideration is that moral responsibility lies ultimately with the individual and not in a leadership construct. Being an ethical leader is likely to be the result of exercising leadership with a great degree of "self-knowledge and discipline" (Ciulla 2008, p.60). Transporting these thoughts onto leadership

development, the role of leadership development initiatives today can't realistically be that of instilling ethical leadership. Rather, leadership development might help managers to construct their ethics, by providing them with "opportunities for rich and comprehensive feedback, the enhancement of self-awareness, time to reflect on the quality of their personal and professional relationships" (Van Velsor and Ascalon, 2008).

The construct of transformational leadership. Burns (1978) was the first to identify and define, within a larger domain of leadership, the leadership function that he named "Transforming Leadership":

"one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality"
(Burns in Rost, 2008)

This definition established three focal points about transformational leadership: it is relational in nature, it brings about a transformation of all involved and it gives the impulse towards attainment of higher personal and social purposes.

Inspired by Burns' work, Bass was soon after to refine the definition of what he termed transformational leadership. Bass did so by identifying and testing empirically four key processes of transformational leadership (Bass, 1996; Gill): *individualized consideration, intellectual stimulation, inspirational motivation and idealized influence.*

- *Individualized consideration:* the leader discerns and respects the values and developmental aims of other people. The leader discerns the objectives of the organization and engages in harmonizing the pursuits of both individuals and the organization.
- *Intellectual stimulation:* the leader creates opportunities to question current logics and practices. The leader embraces and advocates opportunities for improvement.

- *Inspirational motivation*: the leader, through clarity of vision and empathy, encourage individuals to surpass difficulties on the uneasy path of personal and organizational change.
- *Idealized influence*: the leader motivates by role-modeling and projecting confidence and a positive outlook.

Transformational Leadership was never intended by Bass as a construct exhaustive of all that leadership is or should be: in his Full-Range Leadership theory, Bass also identifies Transactional Leadership, the complementary construct. Bass identified transformational and transactional leadership as two distinct, equally essential aspects of leadership: he concluded that “the best leaders are both transformational and transactional” (Bass 1996, p.474). It is context that, at any point in time, suggests “whether the leadership philosophy adopted is one of a more transformational or transactional nature (Kakabadse 2000, p.15).

Contrasting transformational with transactional leadership offers one more angle to better understand both:

Transactional leadership “involves contingent reinforcement. Followers are motivated by the leaders' promises, praise, and rewards, or they are corrected by negative feedback, reproof, threats, or disciplinary actions. The leaders react to whether the followers carry out what the leaders and followers have “transacted” to do.”
(Bass, 1999)

Transactional leadership then focuses on means, while transformational leadership focuses on end values; the former reciprocates a reward for services, while the latter motivates with vision (Bass 1996). Transactional leadership takes care of the management of objectives and organization of resources; transformational leadership of strategizing, visioning and of renewal in organizations. A closer view on the attributes and of transformational and transactional leadership helps illustrating the different functions served by the two styles (Figure 4, from Kakabadse and Kakabadse, 2000).

Figure 4: Distinguishing transformational from transactional leadership (Kakabadse and Kakabadse 2000)

<i>Tracking leadership for the third millennium</i>		
7		
Table 1. Distinguishing transformational from transactional leadership.		
Attributes	Transformational	Transactional
Approach	Innovative (creates opportunity, imagines new areas to explore)	Balance of operations
Interaction	Personal in their orientation to group members	Role-bounded
Focus	Focus on vision, values, expectations and context	Focus on control, production and results
Influence	Within and outside the construct of structure and their immediate jurisdiction	Within the designated group
Motivates through	Volitional activity, emotion, offering suggestions	Formal authority mechanisms
Use	Influence (power)	Control
Values	Cooperation, unity, equality, justice and fairness in addition to efficiency and effectiveness	Coordination, efficiency and effectiveness
Communicate	Indirectly and directly, give overlapping and ambiguous assignment	Directly giving clear direction, solitary assignment
Represents	Direction in history	Process
Oriented towards	Ends	Means
Is	Philosopher	Technologist
Has	Transforming	Transactional impact
Role	Discretionary	Prescribed
Main tasks	Defines and communicates goals, motivates	Implements goal, referees, coaches
Thinking time-frame	Futuristic (tomorrow and the day after)	Current (yesterday's output and today's problems)
Thinking context	Global	Local
Main direction	Renewal	Maintenance

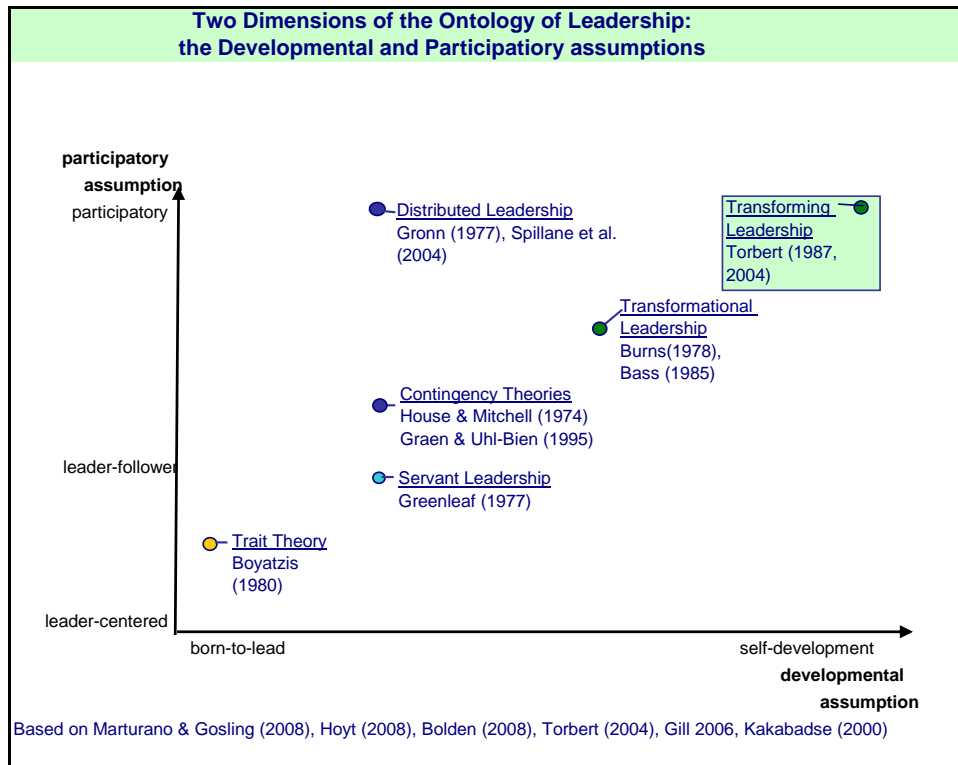
Taken from Kakabadse and Kakabadse (1999, p. 6).

The constructs of the Full-Range Leadership Theory have been validated through empirical work, as shown in a meta-analysis of 87 relevant studies (Gill 2006). Research also supported that Full-Range Leadership Theory holds cross-culturally: empirical research conducted in India, Italy, Canada, New Zealand, Japan, Singapore, Sweden and elsewhere has provided strong evidence that this model of leadership “overall holds up as having considerable universal potential” (Bass 1996, p.731). Research has identified and measured several manifestations of transformational leadership; it is now looking to explain its underlying processes (Gordon and Yukl, 2004).

I.A.4 Conclusions

Many agree that a transformational style of leadership is increasingly sought after as a source of competitive advantage. Torbert, within the CD approach, has developed a characterization of the transformational style of leadership which accentuates both its developmental and collaborative nature. In order to demonstrate the relative position of Torbert’s concept of transformational leadership, the diagram in Figure 5 arranges different leadership theories along two ontological dimensions. The developmental dimension ranges from the ‘born to lead’ assumption to the ‘self-developing’ assumption. The participatory dimension ranges from the leader-centered to a participatory understanding of leadership.

Figure 5: Two Dimensions of the Ontology of Leadership



I. B Leadership development: process and context

An increasing number of leadership scholars today recognizes that effective leadership development initiatives offer cascading effects that are positive for organizations (Allen, 2008; Coglise and Scandura in Murphy and Riggio, 2003). However, few initiatives are explicit about which type of leadership they intend to develop, creating an objective obstacle to tracking program effectiveness. From the constructive-developmental angle, Palus and Drath (1994) defend the usefulness of well-designed programs, which can and do prompt development by providing “significant experiential lessons that cause a temporary disequilibrium” in the meaning making system of participants (in McCauley p.641).

I.B.1 The process of leadership development

“Little is known about the process of leadership” is Day and O’Connor’s introduction to ‘The Future of Leadership Development’, a review of the state of the art in the field (in Murphy and Riggio, 2003). Avolio (in Allen 2008, p.101) comments that leadership development is still a “black box”. Torbert has addressed this gap from the constructive developmental angle: he has come to equate leadership development with the increasingly autonomous practice of ‘action inquiry’. Action inquiry entails bringing to awareness deeply held operating assumption; once in the radar of self-awareness, assumptions can be reflected upon and revisited. Action inquiry can be prompted by external inputs (feedback). With practice, action inquiry can become a self-initiated practice The practice of action inquiry is discussed in further detail in this paper in the section on findings.

I.B.2 The context of leadership development

Context has been recognized an important role in any change or development initiative (Pettigrew et al., 2001). Recent reflections around leadership development relate it to adult development; thus, they see leadership

development as embedded in the experience of a whole life span (Day, 2000; McCauley et al., 2006c; Wilber, 2000). According to Kegan (1982, 1994), the context of leadership development is, at its broadest, the whole range of social situations surrounding an individual: these situations may include family, intimate relationships, friendships, school and the workplace. Development is prompted by events that cannot be explained in light of current understanding; hence, the impulse to develop a new level of understanding. The importance of the surrounding social context is such that it can boost or halt development: development has been found to be hindered by duress or unsupportive environments. This understanding of context is described in psychology as the 'holding environment'. Leadership development initiatives and organizational climate, two subsets of context relevant to leadership, are discussed next.

1.B.2.a Leadership development initiatives

Two main questions arise when facing this domain of knowledge: how to attempt a systematic categorization of leadership development initiatives? Is there any consensus on the benefits? Both questions represent a challenge because of the little alignment between theory and practice in the leadership development field (Murphy and Riggio, 2003). The varied offer of leadership development initiatives includes (McCauley et al., 2006a; Rooke and Torbert, 2005; Allen, 2008):

- Classroom based instruction
(both traditional business curricula and innovative courses)
- Action Learning
- Games and Simulations
- Coaching and mentoring
- Outdoor Education
- Developmental Assignments, incl. rotational programs
- 360 Degrees Feedback
- Personal development plans

- Assessment centers and instruments
- Job Rotation

Palus and Drath (1994) proposed to differentiate between training and developmental initiatives: training programs focus on delivering business skills, while development programs focus on stimulating an individual's questioning and stretching of his or her current understanding. Day (2000) proposed a distinction between leader and leadership development: some initiatives develop human capital (leader development), others develop social capital (leadership development). Both Day's leader and leadership development fit Palus and Drath's definition of 'developmental programs': developing human capital involves stretching a person's understanding of his or her own awareness and style; developing social capital involves stretching a person's understanding of how to relate to others. These categorizations are theoretically useful; however, they don't offer a lot of support in the attempt the systematization of existing leadership development initiatives: there is too often little clarity around the developmental aims of specific initiatives, which commonly adopt a blend of methods and terminology.

1.B.2.b Organizational Climate

Organizational climate is another area of context potentially affecting leadership development. Development is hindered by "a zero-defect attitude within the organization, unsupportive supervisors, stretch assignments that are not sufficiently challenging, and the lack of mentoring and coaching" (Zaccaro and Banks, 2004a). In contrast, development is supported by a blame-free environment, mentoring and coaching, within communities of practice and through stretch assignments in alignment with organizational development goals (McCauley et al., 2006a; Drath and Palus, 1994; Drath and Van Velsor, 2006). The invitation to organizations is to align organizational processes with leadership development initiatives (Allen, 2008; Zaccaro and Banks, 2004b). To exemplify, 360 degree feedback ratings as a basis for leadership development

are really valid only if the organization climate is one of trust (Conger and Toegel in Murphy and Riggio, 2003).

I.B.2.c Conclusions

To date, executive leadership development still is less understood than it is practiced or discussed. The following are points of consensus in the field:

- leadership development, when effective, offers cascading effects that are positive for organizations (Allen, 2008; Murphy and Riggio, 2003; Day, 2000)
- very little of the leadership development literature or practice are grounded in empirically based, scientific research (Day and O'Connor in Murphy and Riggio, 2003).
- theories of adult development have the potential to explain the process of leadership development (McCauley et al., 2006a; Allen, 2008; Mumford and Manley in Murphy and Riggio, 2003)
- the field would benefit from more dialogue between scholars and practitioners (Schriesheim in Murphy and Riggio, 2003; Zaccaro and Horn, 2003)

I.C Constructive-developmental theory

I.C.1 Origins of constructive developmental theory

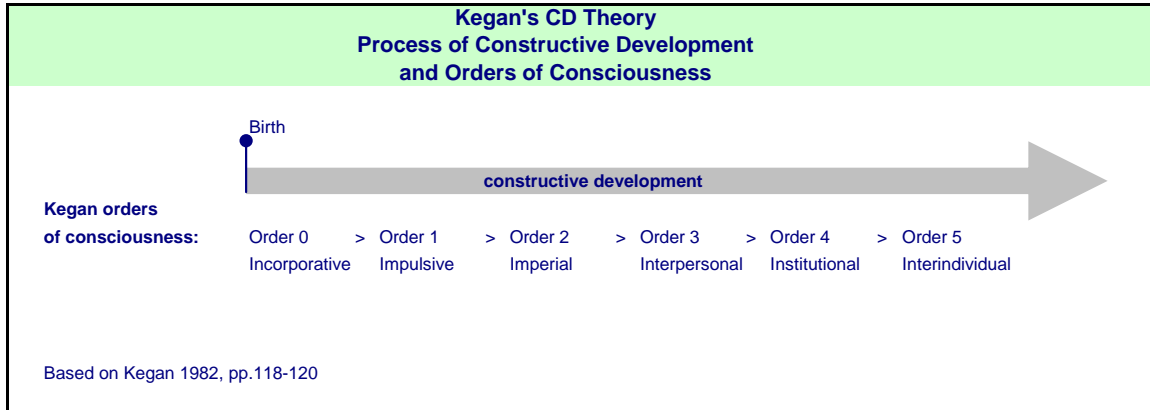
The roots of constructive-developmental theory are in psychology, in the humanist strand started by Rogers (1951) and Maslow (1954). Its foundations lay in the work of psychologist Jean Piaget's on "genetic epistemology" (1954). Genetic epistemology means, literally, the genesis of people's understandings about themselves and the world. Piaget looked at how different ways of understanding, or meaning making, are generated and developed throughout a lifespan. Piaget believed that, in time, people's meaning making evolves in qualitatively different ways. At every successive developmental order, a more encompassing understanding transcends that of the prior order. As this process takes place, new interpretations about the self, relationships and reality become possible. In Piaget's view, it is this very progression in epistemology (*how* a person knows, rather than how much knowledge a person accumulates) that underlies the full actualization of a person's potential.

On these foundations, psychologist Robert Kegan elaborated the theory of life-span development known as *constructive-developmental* (1982). The term developmental asserts that there is an aspect of psychosocial growth generally experienced by all individuals and which proceeds with recognizable patterns (the *developmental* assumption). The term constructive sets the focus on a person's meaning-making, the lens through which reality is interpreted and constructed (the *constructive* assumption).

Kegan explains that, while people overall do develop in personal and idiosyncratic ways, at any point in time they also tend to refer to one of six different fundamental ways of making meaning of reality. This succession highlights six progressive developmental orders, or *orders of consciousness*. These orders do not necessarily depend on biological age: variable spans of time are employed by different people, in different circumstance, to fully develop a

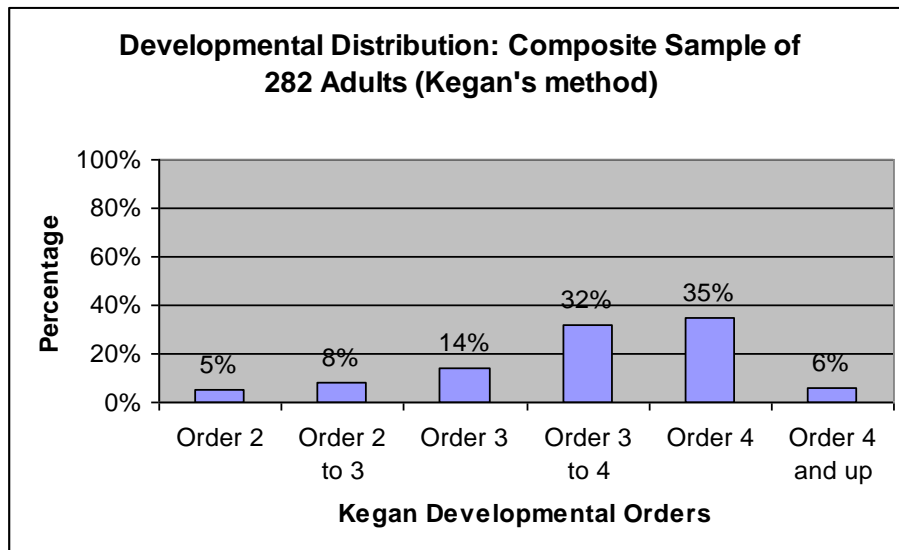
specific order of consciousness. Figure 6 is a diagram illustrative of the constructive developmental process described by Kegan.

Figure 6: Kegan's Constructive Development and Orders of Consciousness



Kegan emphasizes that the purpose of CD theory is not to assess or evaluate orders; rather, to understand the constructive developmental experience and support people as they undergo transformations. Constructive development is not a necessary process: in CD theory it is thought that whether progression occurs or not is ultimately a matter of individual freedom. In any case, aspects of the surrounding context can be critically supportive or unsupportive of constructive development. Context serves a critical support function because of the inherent difficulty of constructive development: transformation amounts to a 're-drawing' of the self where both cognitive and emotional processes are involved (Torbert, 2004). Studies carried out in CD theory have drawn a picture of what the typical distribution of adults among orders of consciousness may be (Figure 7): 87% of adults in the studies operate from order three or beyond; the great majority (67%) was found between order three and order four. A minority (6%) was found to develop beyond order four. Kegan's says it is rare to see people developing beyond order four—and never before their forties (1994).

Figure 7: Developmental Distribution in Kegan's Studies



CD theory has been used to study different aspects of development. For example, Perry formed a scheme of ethical and intellectual development during the college years (Taylor and Marienau, 1997). Kohlberg contributed the renowned model of moral development, which later had implications for Burns' and Bass' construct of transformational leadership (1969, in McCauley et al. 2006). Loevinger's framework of ego development has produced the WUSCT personality assessment tool (Washington University Sentence Completion Test), widely used in psychology (1976, in Torbert 1987). Basseches elaborated on developmental order and dialectical thinking (1988, in Taylor and Marienau, 1997). Building on the strong tradition of psychometric assessments in constructive-developmental theory, Kegan and Torbert have developed reliable methods for the assessment of adult development. In his work, Kegan concentrated on the 'problem and process of human development' (1982); he developed a framework of the evolving self and a tool to assess constructive development, the Subject-Object Interview (SOI). Torbert is the scholar that built most directly on Kegan's theoretical base in linking constructive development to managerial action logics and leadership styles. With Cook-Greuter, Torbert developed a different tool for the assessment of constructive development, the

Leadership Development Profile (LDP, developed from Loevinger's WUSCT) (Torbert 1987). Figure 8 illustrates the evolution of CD theory and its branching into leadership studies. Figure 9 depicts the parallel among the constructs developed by the main theorists in CD theory.

Figure 8: CD Theory, Evolution and Branching into leadership studies

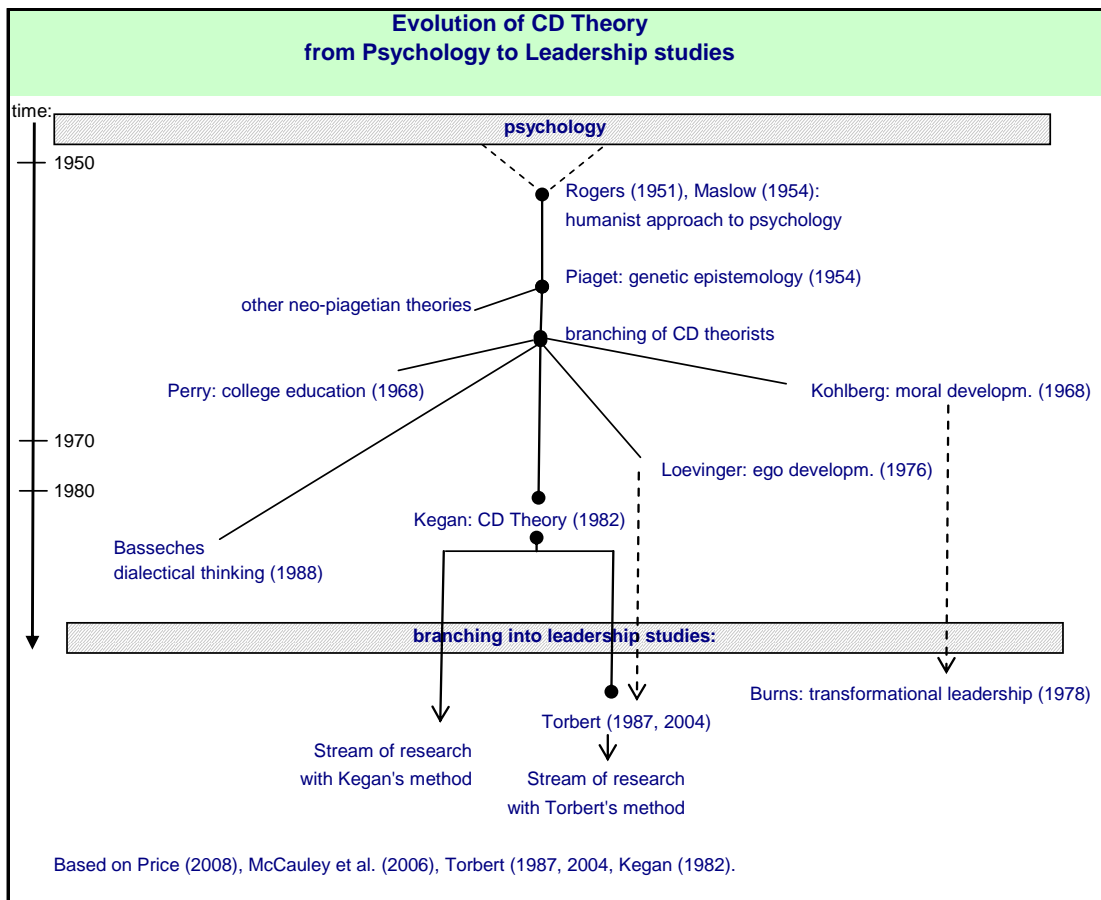


Figure 9: Parallel between the Constructs of CD Theorists

Kegan's Orders of Consciousness compared to Developmental Stages by other CD Theorists (chronological order)						
Piaget (1954)	Sensorimotor	Pre-operational	Concrete operational	Early formal operational	Full formal operational	Post-formal
Loevinger (1976)	Pre-social	Impulsive	Opportunistic	Conformist	Conscientious	Autonomous
Kohlberg (1969)	-	Punishment and obedience orientation	Instrumental orientation	Interpersonal concordance orientation	Social orientation	Principled orientation
Kegan (1982)	Order 0 - Incorporative	Order 1 - Impulsive	Order 2 - Imperial	Order 3 - Interpersonal	Order 4 - Institutional	Order 5 - Interindividual
Torbert (1987, 2004)	-	-	-	Opportunist / Diplomat	Expert / Achiever / Individualist	Strategist / Alchemist

Adapted and expanded from Kegan 1982, p.86.

The aggregate of research from the CD approach has validated the theory that human development progresses beyond childhood and with important, recognizable patterns. Relevant to leadership, it has highlighted a relationship between developmental order and a number of important processes in social and organizational settings; for example, the handling of ethical dilemmas (based on Kohlberg 1969), decision making styles (various in McCauley et al., 2006a), managerial effectiveness (Merron et al., 1987) and organizational development initiatives (Rooke and Torbert, 1998a). The scholarly work of Kohlberg, Kegan and Torbert relates most directly to studies on leadership (McCauley et al. 2006). However, Kohlberg's model focuses on the narrower topic of moral reasoning, and is not fine tuned to observe transitions in later developmental orders (McCauley et al. 2006). Hence, in exploring the linkages between CD theory and leadership, I have chosen to focus on the contributions of Kegan and Torbert.

1.C.2 Constructive development: meaning making about the self

CD theory focuses on the fundamental process of meaning making about the self. Kegan describes how in each successive phase a person acquires a new awareness of what the self is versus what it is not. Gradually, aspects that were at first defining of the self (for example, the self *IS* its interests and desires; the self *IS* its relationships) become things that the self *HAS* (for example the self

HAS interests and desires; the self *HAS* relationships). Kegan describes this shift as a shift from subject to object: what was first 'me' is now 'mine'. At any point in time all that is subject defines us, thus escapes our awareness. Conversely, what is object is there for us to see, reflect upon and –importantly- change.

According to Kegan, the impulse for development arises when a person's current meaning-making is challenged, for example by the occurrence of some external event that puzzles the current logic. Development occurs when a person forms a more encompassing logic that allows to reframe and surpass a dilemma. Kegan's theory recognizes that constructive development is an ongoing process, but it suggests that phases of relative stability are identifiable, where a given system of meaning organizes "our thinking, feeling and acting over a wide range of human functioning" (Kegan, 1980b). Figure 10 shows, for each of Kegan's orders, the main defining characteristics of identity and the related patterns of meaning making.

Figure 10: Evolving Orders of Consciousness and Meaning Making

		Kegan's CD Theory Orders of Consciousness and Meaning Making				
		Order 0 - Incorporative (0-2)	Order 1- Impulsive Imperial (2-6)	Order 2 - Imperial (6-15)	Order 3 - Interpersonal (15-24)	Order 4 - Institutional (24-40)
Age (indicative)						
IDENTITY						
Subject: (ontology: what one IS)	Reflexes;	Impulses, perceptions;	Needs, interests, wishes;	The interpersonal, mutuality	Self-organization, identity, ideology	Inter-individuality, interpenetrability of self systems
Object: (epistemology: what one HAS)	None	Reflexes;	Prior, plus: impulses, perceptions;	Prior, plus: needs, interests, wishes;	Prior, plus: the interpersonal, mutuality	Prior, plus: self-organization, identity, ideology
MEANING MAKING ABOUT						
Relationships:	Others and physical world undifferentiated from self.	Others, differentiated from self, take the shape of own needs and projections.	Others are distinct and different. Others still seen as helpers/blockers of own pursuits.	Others valued as connection, as opportunity of mutuality.	Others appreciated in their diversity and autonomy.	Others are also independent systems; multilateral value can be sought by collaborating.
Values:	(none yet: survival)	Ego-centric	Instrumental	Conforming	Autonomously chosen, situational	Self-authored; self-reflexivity
Own available functions:	Dependency	Self-concept	Self-sufficiency	Empathy	Loyalty	Sharing, Intimacy

Based on Kegan 1982, 1994

1.C.3 Relevance of meaning making to leadership

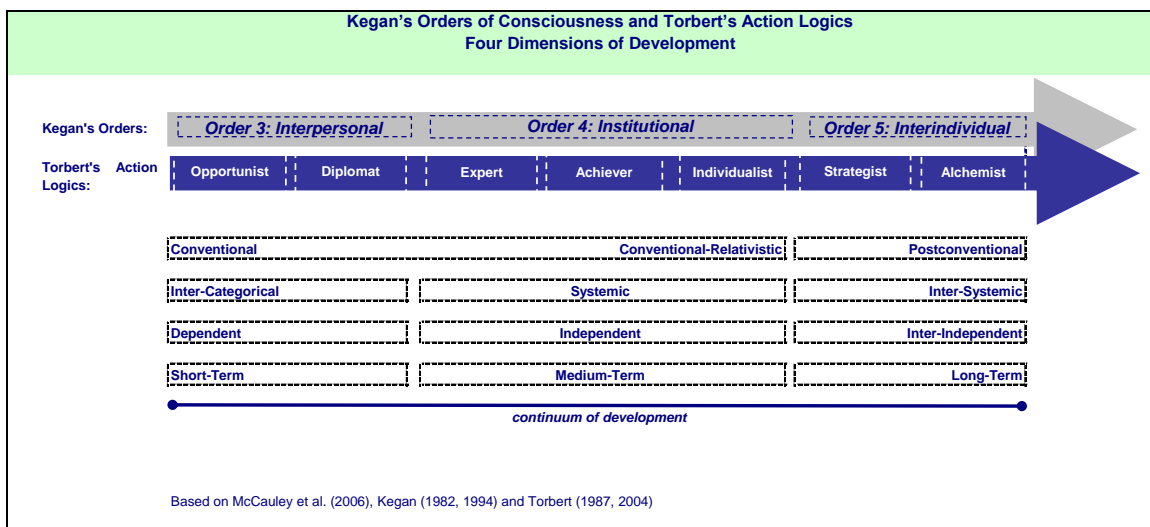
McCauley et al. (2006) say of CD theory that it “has the potential to act as an integrative framework“ in the field of leadership and leadership development “because it deals with [...] the generation and development of meaning for individuals and social systems“ (p. 650). Meaning making is the *ongoing* cognitive and emotional process whereby a person *creates* the organizing principles that will serve as basis for *interpretations* and *actions* (Argyris and Schön, 1978) (Argyris and Schön, 1978; Schwandt, 2005) . The process of meaning making is *ongoing*: individuals are always engaged in referring new experiences to existing organizing principles (CD theory’s developmental assumption). It is creative because, by referring personal meaning to experience, it constructs a person’s reality (CD theory’s constructive assumption). Meaning making constructs reality in two main ways: it is both a lens to *interpret* reality and a guide to *action*. Both ways are of immediate relevance to organizational life, as recognized by scholars of different traditions. In the camp of organization theory, Weick (1995) describes how ‘sensemaking’, the interface between the individual and the organization, determines decision making. In the management learning literature, Argyris (1978, 2001) illustrates how people’s ‘theories in use’ guide behavior. In the field of learning, the constructivist Mezirow (1991) advocates that only reflection on own meaning making can bring about perspective and behavioral change. Torbert (1987) describes how ‘action logics’ influence leadership styles. In the next section the processes of meaning making that are under the magnifying lens of CD theory are discussed in greater detail.

1.C.4 Kegan’s orders of consciousness and Torbert’s action logics

Kegan focused on constructive development in general and identified six successive orders of consciousness. Grounding work in Kegan’s framework, Torbert later focused on the development of managerial action logics. Torbert concentrated only on the last three of Kegan’s orders, the most relevant to adult

professionals. Within each order, Torbert has identified two 'sub-orders'. In addition, he has identified a transitional 'sub-order' that bridges Kegan's fourth and fifth orders. Each of Torbert's sub-orders carries the name of the action logic that describes it. Figure 11 introduces Torbert's action logics in correspondence of Kegan's developmental orders. This illustration also introduces four dimensions, inferred from Kegan's and Torbert's work, along which the development of managerial action logics has been found to occur.

Figure 11: Kegan's Orders of Consciousness and Torbert's Action Logics



Development was found to occur along four dimension salient for leadership:

- *conventional to post-conventional*: describes the relationship of a person's action logic to external sources of norms of conduct (Torbert 2004).
- *Inter-categorical to inter-systemic*: emphasizes the scope of a person's construction of reality (Kegan 1994).
- *Dependent to inter-independent*, captures the relationship to other people (Kegan, 1982; McCauley et al., 2006b).
- The fourth and last dimension is that of *short to long term time* orientation (Torbert 2004).

In summary, with the passage from the third to the fourth and fifth orders of consciousness, increasingly encompassing action logics are developed that include:

- More autonomously created principles; more diversified and complex views (*conventional to post-conventional*).
- More transformational approach to own views, to relationships and to systems and organizations (*dependent to inter-independent*).
- More collaborative interactions with others for the creation of multi-systemic value across groups and organizations (*From inter-categorical to inter-systemic*).
- A broader time-frame (*from a short-term to long-term*).

A more detailed coverage of the process of development of managerial action logics and the related leadership styles follows in the section on findings.

II. REVIEW PROTOCOL

II.A About the Systematic Review

II.A.1 Systematic review objectives

I intend to employ the Systematic Review process to the end of locating and evaluating all relevant evidential information and produce a quality synthesis. If during the Scoping Study I have gained a better understanding of the research gap and formed my review questions, during the Systematic Review I want to refine a view of the narrower issue and develop a well-informed research question. I believe I can effectively build a contribution only on the basis of a comprehensive coverage of the evidence base and a rigorous process. According to the Cochrane Handbook for Systematic Reviews (Higgins and Green), it is particularly crucial for qualitative research to proceed from extant literature to “define and refine the question, and to ensure the review includes appropriate studies and addresses important outcomes” (section 20.2.2). In this section, I first present my mapping of the field together with my review questions, then the systematic review protocol.

II.A.2 Systematic review questions

The phenomenon of interest is the set of processes of adult development interlinked with the development of a transformational style of leadership. This phenomenon lies at the intersection of three fields of inquiry: transformational leadership, leadership development and constructive developmental theory (Figure 1). The questions guiding the review will be:

R1: In constructive-developmental theory, what are the different approaches to studying these processes of developmental movement?

R1a: What methods have been used in each different approach?

R1b: How do these different approaches compare and contrast? What are the strengths, weaknesses and implications of using each?

R2: How has the work done in constructive-developmental theory helped understanding leadership development?

R2a. Where and how has constructive developmental theory been applied in leadership development initiatives?

II.B Review Protocol

II.B.1 Why a review protocol?

I see the protocol as an indispensable part of the toolkit to engage in the Systematic Review. Light (1984) so defines the purpose of a protocol: “publication of a protocol for a review prior to knowledge of the available studies reduces the impact of review authors’ biases, promotes transparency of methods and processes, reduces the potential for duplication, and allows peer review of the planned methods” (in the Cochrane Handbook for Systematic Reviews 2008, 2.1). In my experience so far I have grown more aware and appreciative of several specific ways I can benefit from a well balanced structured approach:

- Better focus while zooming in into progressively narrower areas of literature (supported by review questions and relevance criteria)
- Better focus in analyzing studies and extracting data (supported by review questions and quality appraisal criteria)
- Minimization of side-tracking and bias as I commit to the use of systematic methods (supported by review protocol in general, action plan and consultation panel)
- Systematization of material extracted, journalizing of inclusion/exclusion decisions. Basis for progress assessment by the consultation panel and myself (supported by Data Extraction Template and Reading Journal Entry and Quality Appraisal Form’)

- Objectivity in assessing progress and delays alike (supported by the action plan)
- Minimization of the uncertainty of the process (supported by review protocol in general)
- Retrospective view on the PhD journey (supported by my PhD diary)

I've come to realize that an excessively structured approach poses to me two main pitfalls: occasionally, it restricts my view of alternative methods or emerging ideas; also, in my personal experience, exceeding in structure may reduce the extent to which I can routinely reassess the validity of my approach. I have developed a Systematic Review Protocol in order to capture all the benefits of structure; at the same time, in order to avoid what are for me the pitfalls of too rigid an approach, I intend to allow along the way for changes assessed as reasonable in consultation with the review panel members. Lastly, I keep a personal PhD diary: it helps me to refer back to spontaneous notes and observations and to recognize patterns in my reflection journey. When in doubt about any specific aspect of the Systematic Review that I can't foresee now, I intend to refer to the guidance of the designated expert on my consultation panel and to the available literature. Among the sources on systematic literature reviews there are: The Cochrane Handbook for Systematic Reviews (2008), guidelines by the Centre for Reviews and Dissemination at the University of York, and publications by Denyer et al. (2006), Tranfield et al. (2003) and Smart and Dixon-Woods et al.(2006) (2006).

II.B.2 Components of the review protocol

The following components of the Review Protocol are reviewed in detail in the next sections:

- Consultation Panel
- Systematic Review Action Plan
- Evidence Resources and Database Search Strategy

- Inclusion/Exclusion: relevance and quality
- Data Extraction
- Synthesis

II.B.3 Consultation panel

Throughout the Systematic Review process I intend to seek the guidance of a panel of experts on both the subject matter and the process of review of evidence. The consultation panel (Table 1) is composed by my supervisor, one internal advisor, one advisor on the review process and one advisor on literature search.

Table 1: Consultation Panel

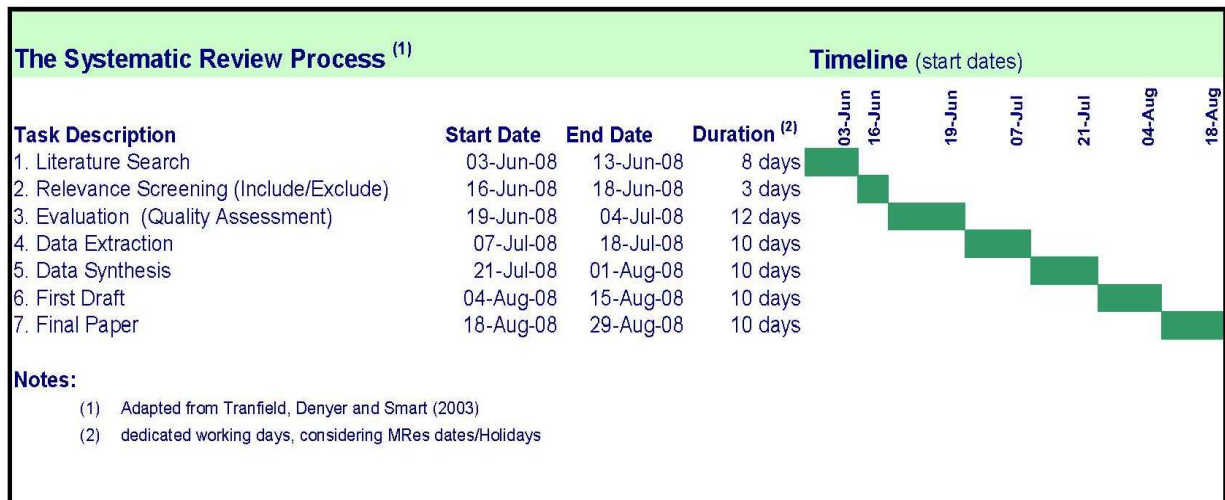
Person	Organization	Role
Prof. Andrew Kakabadse	Cranfield School of Management	Supervisor
Dr. Donna Ladkin	Cranfield School of Management	Internal Advisor
Dr. David Denyer	Cranfield School of Management	Advisor on review process
Ms. Heather Woodfield	Cranfield University Library Services	Advisor for literature search

I intend to refer to the guidance of my consultation panel for orientation while I navigate the literature: by alerting me to my blind spots, the experts on the panel can help me reduce bias and any wandering in unfruitful directions. In future, representation on the consultation panel may grow to include expertise outside Cranfield.

II.B.4 Systematic review action plan

I have arranged the main steps of the systematic review process in an action plan (Figure 12): this helps me visualize the timeframe for each step and provides me with an objective criterion to assess progress and delays.

Figure 12: Systematic Review Action Plan



II.B.5 Evidence resources and database search strategy

In this section I present what resources I intend to refer to in identifying extant literature on my topic during the review process.

Databases and database search strategy

In searching for academic papers and journal articles: I intend to refer to the following databases:

- ABI/INFORM Global: database covering scholarly literature on a broad range of management topics.
- EBSCO Business Source Premier: database covering scholarly literature on a broad range of management topics.
- ERIC (Educational Resources Information Center maintained by the U.S. Department of Education): database covering scholarly literature on education.
- PsycINFO: database covering scholarly literature in the field of psychology.

In accord with Tranfield et al.'s thought that “a systematic search begins with the identification of keywords and search terms, which are built from the scoping study, the literature and discussions within the review team” (Tranfield et al., 2003), I have identified the following keywords (Table 2) and strings (Table 3).

Table 2: Keywords for Database Search

	Keywords	Rationale
(1)	constructive develop*, develop, neo* piagetian	Focus on the approach of constructive developmental theory
(2)	Kegan, Torbert, Kohlberg	Author name search (main authors).
(3)	leadership, leadership develop*, adult	Focus studies of leadership and leadership development

Table 3: Search Strings

Search strings	Rationale
(1); (2);	<p>R1: In constructive-developmental theory, what are the different approaches to studying these processes of developmental movement?</p> <p>R1a: What methods have been used in each different approach?</p> <p>R1b: How do these different approaches compare and contrast? What are the strengths, weaknesses and implications of using each?</p>
(1) AND (2); (1) AND (3);	<p>R2: How has the work done in constructive-developmental theory helped understanding leadership development?</p> <p>R2a. Where and how has constructive developmental theory been applied in leadership development initiatives?</p>

Conference and Working Papers

Conference and working papers are particularly important to capture most recent lines of evolution in thought. Conference and working papers can be recruited via university's and conference's websites. International conference submissions are made available online by the British Library (http://catalogue.bl.uk/F/?func=file&file_name=login-bl-list) while international theses are available on the ProQuest Dissertations & Theses (PQDT) database (Mollen, 2007).

Other Journals

I intend to include journals that I might identify as relevant but are not cited in the databases listed here. I am aware that the standards of rigor set by a journal affect the quality of the publications hosted: I'm going to only look at journals with a rating of two stars or higher.

Books

Leadership is a large field in the literature; landmark books on leadership and leadership development are useful to cover the fundamentals and to identify the boundaries of arguments. I am aware that I need to exercise careful judgment in using books, as books may be less up to date or not rigorous by academic standards.

Informational interviews and personal requests to researchers, practitioners and executives

I've already found it invaluable in several instances to engage in conversation with experts in the field. I've been prompted by my supervisor into the helpful reflection that direct interaction seems to be an important way of learning for me: in metabolizing the feedback of experts I often find important clues that I then use in reframing my thoughts; also, I discover sources of bias that were previously invisible to me. Thanks to their in-depth knowledge and direct experience, knowledgeable scholars and practitioners may be able to point out contributions

that I shouldn't miss or refer me to other experts I may want to enquire with. I think it is important to engage in conversation with practitioners: it ensures that my thinking stays relevant to the true nature of the practical side of the issue I'm studying. While scholars have built a solid platform of theory, practitioners on the field have developed as close as possible a sense of the response by executives through programs: research would greatly benefit from consolidating these two valuable sources of knowledge (Zaccaro and Horn, 2003; McCauley, 2006). Lastly, I think that continued conversation directly with executives engaged in developing their leadership is important in discerning a key perspective other than mine in understanding the phenomenon of personal development (I've had the opportunity to inquire with executives during my MRes qualitative assignment).

Cross-referencing

I use cross-referencing to identify key authors in a given field and foundational contributions to an argument; also, to follow the evolution of a particular thought in the literature.

Other electronic resources

I use the Social Sciences Citation Index and harzing.com to track most cited and most authoritative authors. Also, I run preliminary searches on Google Scholar: I find it useful in locating literature since it has less restrictive filters and it researches entire sentences.

II.B.6 Inclusion/Exclusion: relevance and quality

It is of importance to me personally and professionally to build the review and, subsequently, my research, on the basis of information that is relevant, rigorous and up-to-date. I want to ensure that the time and energy I devote to the review

are well invested: I will be screening studies first for relevance and then and for quality.

Relevance

In Table 4, I articulate my criteria for assessing relevance: for each criterion, I identify the specifics and the decision rationale.

Table 4: Relevance criteria for inclusion/exclusion

Criteria	Specifics	Decision & Rationale
Topic	Text: Constructive-Developmental Theory Context: Leadership Development	Does the material address: <ul style="list-style-type: none"> - Adult meaning-making about self and self in relation to others, specifically in the independent and inter-independent stage? Or: the shift from the first to the second? - Leadership development initiatives (and features thereof) built around reflection, self-discovery and realization of the multiplicity of existing perspectives? <p>Exclude if a study does not directly address at least one of these two areas, specifically in the sense here highlighted.</p>
Method	Quantitative and qualitative	Include. I don't want to lay restrictions about the method. A lot of knowledge around leadership and developmental constructs has been developed with quantitative methods. At the same time, the needed new impulse to leadership and leadership research is likely to come from the use of qualitative methods (McCauley 2006). Also, it would be unwise and limiting to exclude studies based on method at a stage where I am still considering what method will best suit my research.
Nature of research	Theoretical Empirical Practitioner	Include. I believe it is important that I come to discern where is the edge of current understanding of leadership development in light of constructive-developmental theory of stages of meaning-making. Include. Empirical studies will be especially informative in considerations around method. Studies conducted in the context of leadership development programs have proved valuable in the past in terms of both theory-building and practical implications (Torbert in McCauley 2006). Exclude.
Time		Exclude studies before 1980. This date marks the start of contributions to leadership studies by constructive-developmental theory (Kegan 1980). Naturally, in cases where I'm looking for grounding of arguments, I should be prepared to refer all the way back to original authors.
Geographic Area	Any	Include. At this stage I want to remain open in terms of geographic area: I want to identify the leadership development initiative based on its founding frameworks, objectives and demographics of participants (rather than based on geographic location).

Type of leadership development initiative		Exclude any that is not relevant to the transformational experience described here (initiatives not built around reflection, self-discovery and realization of the multiplicity of existing perspectives).
Language	English	Include. The vast majority of contributions in this area are made in English.

Quality

In developing my quality appraisal instrument (Figure 13), I've adapted from the Academy of Management Reviewers Guidelines (2008) and the guidelines by CASP's (Critical Appraisal Skill Programme, Public Health Resource Unit England 2006). I've centered my instrument around the Academy of Management Reviewers' Guidelines because it's the tool I've so far worked most effectively with: I find it inclusive (accommodates for use on theoretical and empirical, quantitative and qualitative studies) and concise (focuses on critical aspects, without limiting further analysis). From the CASP's guidelines, I took the idea of a first screening step: I'll be first asking myself whether the study demonstrates a clear research question and a sound, rigorous approach. If the study passes this first screening I'll then proceed to evaluating quality in its main aspects as illustrated in Figure 7 (Reading Journal Entry and Quality Appraisal Form). As far as decision rules are concerned, I've reasoned that not all criteria have the same weight. In fact, the fundamental purpose of quality appraisal is to assess "a study's internal validity and the degree to which its design, conduct and analysis have minimized biases or errors" (Tranfield, Denyer, Smart 2003, p.215). I will include a study if I assess that the quality level is at least adequate on the leading questions in each area (theory, method, findings, contribution; see leading questions, marked in bold). While I wouldn't want to include a study that has omitted a significant part of extant literature in building its foundation (see question 1a in Figure 13), I may want to include a study that is adequate in all key aspects but has omitted to mention implications for future research (see question 4d in Figure 13). I've created this tool in excel; I intend to maintain a filing system of the printouts of all entries.

Figure 13a: Reading Journal Entry and Quality Appraisal Form

Reading Journal Entry and Quality Appraisal Form

Entry date: _____

Text Details

Author: _____

Year: _____

Title: _____

Publication (Journal/Book/etc) _____

Other publication details (issue/publisher/etc) _____

Type of work (theoretical/empirical/etc) _____

Quality Appraisal

A. Screening

Screening Decision
 Include if answer to both questions 1 and 2 below is "Yes"

Rationale, additional comments:

1. Research Question
 Is there a clear, focused research question, with a solid motivation behind it?

2. Research Approach
 Is the methodology/approach in line with the research question?

B. Evaluation

S = Superior; A = Adequate; D = Deficient;
 Rationale noted below each response

Evaluation Decision
 Include if the level is judged to be at least adequate in the leading questions (marked in bold) of areas 1 to 4, as identified below

Rationale, additional comments:

1. Theory

1a. Is extant literature appropriately reflected in the submission, or are critical references missing?

1b. Does the work contain a well-developed and articulated theoretical framework?

1c. Do the hypotheses or propositions or research questions logically flow from the theory?

1d. Are the core concepts clearly defined?

Figure 13b: Reading Journal Entry and Quality Appraisal Form

<u>2. Method</u>			
2a. Does the study have internal and external validity?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
2b. Is the data collection method consistent with the research questions? (Quantitative: Are the sample and variables appropriate for the hypotheses?)	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
2c. Are the analytical techniques appropriate and applied appropriately?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
<u>3. Findings</u>			
3a. Are findings relevant to theory and practice? Are implications for the scientific and practice community discussed?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
3b. Are there alternative explanations for the results and, if so, are these adequately controlled for in the analyses?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
<u>4. Contribution</u>			
4a. Does the work make a value-added contribution to existing knowledge?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
4b. Are ethical implications recognized and discussed?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
4c. Are limitations addressed?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D
4d. Are implications for future research discussed?	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> A	<input type="checkbox"/> D

II.B.7 Data extraction

Data extraction tools function with me as memory aids in recalling the content of a study and of prompt reference in locating its provenience. For use to this end, I've shortened and adapted the data extraction form made available to our cohort during the MRes program. Instead of making it an instrument of its own, I've included it in my Reading Journal Entry and Quality Appraisal Form (Figure 14): my rationale is that I don't intend to fill out a full analysis of a relevant text unless it has already passed the quality appraisal; at the same time, I do want to journalize all my decisions around inclusion/exclusion.

The second and, for me, more important function served by data extraction tools is to aid in recollecting where, at the time it was read, the study fit in my thinking and what new connections it helped me establish. My notes on a study normally relate to several aspects (contribution to the review, theory base, framework adopted, method, cross-referencing): they are all important to me but too many for me to organize in a word file, in a way that supports easy consultation at a later date. Early in the second module I've developed an excel-based data extraction template (Figure 14) that I maintain in conjunction with the system of Reading Journal Entry and Quality Appraisal forms (Figure 13). I believe the joint use of these two instruments covers the functions of data-extraction tools recognized as most important: "to reduce human error and bias, systematic reviews employ data-extraction forms" (Tranfield, Denyer, Smart 2003, p.216), and to highlight links to other concepts and emergent themes as well as leaving room for additional notes (Cochrane Handbook for Systematic Reviews 2008).

Figure 14a: Data Extraction Template

A	B	C	D	E	F	G	H	I	J	K	L	M	N
My ref #	Date Read	Area	Year	Author	Institution	Country	Publication	Title	Why Read?	Nature of Research			
7	25/03/2008	Ld D	2003	Zaccaro S.J., Hom Z.N.J.	George Mason University Fairfax VA	USA	Leadership Quarterly, Greenwich: Dec. 2003. Vol. 14, Iss. 6, pg. 769	Leadership theory and practice: Fostering an effective symbiosis	Scoping Study- Leadership and Leadership Development	Theoretical			
8	25/03/2008	Ld	1996	Bass, B.M.	State University of New York at Binghamton	USA	International Journal of Public Administration. New York: Jun 1996. Vol. 19, Iss. 6, pg. 731, 31 pgs	Is there universality in the full range model of leadership?	Scoping Study- Leadership	Theoretical			

Figure 14a: Data Extraction Template

O	P	Q	R	S	T	U
Objectives	Frameworks used	Contribution to Review	Data Collection Method	Data Analysis Method	My Argument: Supports/ Disproves	Quality: Incl/Excl
To highlight barrier to advancement in thinking posed by a divide between theorists and practitioners. To propose way forward.	N/A	Informs on the debate leadership theory vs practice	NA	NA	S	I
Transactional/transformational model: universal?	Full-Range Model of Leadership	Transactional/transformational model holds cross-culturally	NA	NA	S	I

Figure 14a: Data Extraction Template

V	W	X	Y	Z
Limitations / Questions	Cross-Ref	Quotes	Ref. by	Link
refers to both leadership and leadership development but does not distinguish clearly between the two	Day et al., in press. Day, D., Zaccaro, S., & Halpin, S. (Eds.). (in press). Leader development for transforming organizations. Mahwah, NJ: Erlbaum.	"The effective integration of leadership theory and practice needs to be grounded in an ongoing dialogue between researchers and practitioners that respects the values, perspectives, and agendas of each constituency. Such dialogue is often difficult to achieve because researchers and practitioners do not engage each other all that often" (p.)	Database Search	http://www.sciencedirect.com/science?_ob=ArticleURL&uqj=B8V6N4B46X0J&&_user=6803600&_coverDate=12%2F31%2F2003&_rdc=c=1&_fm1=&_orig=search&_sort=4&view=c&_acc=C000010259&_version=1&_urlVersion=0&_urlId=6803600&md5=0af89e477e88af08a1b70342a3a003#oc33
		"Three corollaries are discussed with supportive evidence gathered in studies conducted in India, Italy, Canada, New Zealand, Japan, Singapore, Sweden and elsewhere to document the universality of transactional and transformational leadership. It is concluded that the model of leadership overall holds up as having considerable	Database Search	http://www.informaworld.com/smpb/content-content=a779943699-dp=al?tab=references

II.B.8 Synthesis

I intend to use data synthesis not merely as an accumulation, but rather as well-reasoned integration of the findings identified during the review. During the process of synthesis, I want to develop an enhanced understanding of the current state of the arguments in my area; I envision the outcome of the synthesis to be a solid foundation for my research question and the choice of the most appropriate method. To use Pawson's words, I want to realize "connectivity of inferences" rather than just a "pooling of outcomes" (in Mollen 2007, p.24). I don't expect synthesis to be a trivial task: "there are few areas in which continuous research over a period of years has tackled specific problems in a consistent manner" (Tranfield et al., 2003 p.215); also, research synthesis itself implies the use of a family of methods (Mulrow in Tranfield et al. 2003). Two main methods for research synthesis reviewed by Tranfield et al. (2003) are realist synthesis and meta-synthesis, "two interpretive and inductive methods [...] developed to fill the gap between narrative reviews and meta-analysis" (p.217). I'm thinking I'll want to include and weigh carefully two specific aspects of realist synthesis and meta-synthesis, respectively: on one hand the identification of vital aspects of valid contributions (which entails making sense of why they are vital and in what circumstances they are valid), on the other hand the identification of interpretations (my interpretation versus interpretation by the authors of a study). Both methods, in different ways, proceed to compare and contrast studies: one way to keep track of similarities and difference that I've found effective so far is to record (see data extraction template-column T, Figure 14a) whether they support or disprove the argument that I'm forming.

III. SYSTEMATIC REVIEW FINDINGS

In this chapter I present the findings of the systematic review. The first section includes a descriptive overview of the studies included in the systematic review. The second section analyzes finding by themes of inquiry.

III.A Description of Findings

In this section, a descriptive overview of studies included is provided by: search strategy, geographic area

III.A.1 Search strategy

Studies of constructive development show a variety of titles, depending on the publication or on the emphasis (for example, psychology versus leadership). A blend of strategies was used to maximize coverage of the sources: Table 5 shows a count of studied included in the systematic review by search strategy. One scholarly review (by McCauley et al. 2006) turned out to be a particularly important source of studies: many of the empirical studies in scope are reported in doctoral dissertations and would not be found with regular database search.

Table 5: Studies by Search Strategy

Studies Included in the Systematic Review by Search Strategy	
Journal Articles	
- Database Search	8
- Author Name Search	2
- Cross-referencing	5
- Incl. in a Scholarly Review/Article	14
Total	29
Books	
- Author Name Search	5
- Cross-referencing	2
- Incl. in a Scholarly Review/Article	6
Total	13

III.A.2 Geographic area

The totality of the studies included was carried out in the US. Kegan and Torbert, two scholars that founded the stream of studies on leadership in CD theory, are based out of the Harvard Graduate School of Education and the Boston College respectively.

III.A.3 Nature of Inquiry

Table 6 shows the count of sources by nature of inquiry. Approximately 60% of the journal articles included in the review are based on empirical research. About half of the book sources (books or book chapters) included extensive reference to empirical work. Empirical work was mostly based on qualitative sources of data. Several studies conducted both qualitative and quantitative analysis of the data collected.

Table 6: Studies by Nature of Inquiry

Studies Included in the Systematic Review by Nature of Inquiry	
Journal Articles	
- Empirical	18
- Theoretical	11
Total	29
Books	
- Empirical / Theoretical	6
- Theoretical	7
Total	13

III.A.3 Academic sources

Table 7 shows the count of journal articles included in the review per academic source. Studies came from fifteen different publications. Many of the empirical studies were conducted as part of a doctoral dissertation. These studies have worked with samples of 10 to 58 adults. The overall composite sample: the findings of Kegan and Torbert, reported in top quality journals, rely on a composite sample of 779 adults.

Table 7: Studies by Academic Source

Journal Articles Included in the Systematic Review by Academic Source		
Rating	Academic Journal	Studies
n.a.	Dissertations Abstracts International	8
	The Leadership Quarterly	
4*		4
4*	Harvard Business Review	3
4*	Academy of Management Review	2
	Unpublished master's thesis, University of Georgia Athens	
n.a.		2
	Assessment & Evaluation in Higher Education	
n.a.		1
	Development in the workplace	
n.a.		1
3*	Group and Organization Studies	1
2*	Journal of Applied Behavioral Science	1
	Journal of College Student Development	
n.a.		1
4*	Journal of Management	1
	Journal of Organizational Change Management	
2*		1
3*	Management Learning	1
	Research in Organizational Change and Development	
n.a.		1
	The Personnel and Guidance Journal	
n.a.		1
	Total	29

n.a. = not available

III.A.4 Year of Publication

Table 8 shows the frequency of all studies included in the systematic review per year of publication. Figure 15 shows how the same studies are distributed though the last three decades. Year 1980 marks the beginning of CD theory (Kegan, 1980a). Studies around the scope of this inquiry doubled in the 90s compared to the previous decade. To date, the current decade shows a similar pattern. The interest in adult development from the CD angle has continued with a stable pace; the interest on applications of CD to leadership and leadership development is a common characteristics of the studies of very last few years (six sources are dated between 2004-2007)

Figure 15: Distribution of Sources (across the most recent three decades)

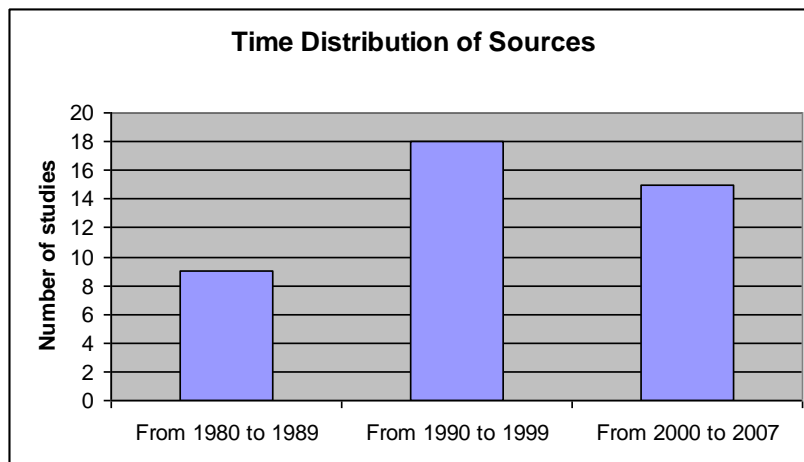


Table 8: Studies by Year of Publication

Studies Included in the Systematic Review by Year of Publication	
<u>Year of Publication</u>	<u>Studies*</u>
2007	1
2006	3
2005	4
2004	3
2003	1
2001	3
1999	1
1998	1
1997	2
1996	1
1995	2
1994	3
1993	1
1992	2
1991	3
1990	2
1988	2
1987	3
1982	2
1980	2
	<hr/>
	42

* Including 29 Journal and 13 Book sources

III.B Thematic Analysis of Findings

The two questions guiding the systematic review concerned, respectively, different approaches in CD theory (R1) and contributions of CD theory to the theory and practice of leadership development (R2). In this section, I present how the evidence reviewed addressed each of the two questions.

III.B.1 Approaches in constructive-developmental theory

The following was the question concerning different approaches in CD theory:

R1: In constructive-developmental theory, what are the different approaches to studying these processes of developmental movement?

R1a: What methods have been used in each different approach?

R1b: How do these different approaches compare and contrast?

What are the strengths, weaknesses and implications of using each?

The approaches of Kegan and Torbert were included in the review. In this section, I first highlight what the two approaches have in common. Then, I discuss the distinguishing characteristics and implications of each. In the later section, I address strengths and weaknesses, specifically in relation to this inquiry, in the discussion section.

III.B.1.a What Kegan's and Torbert's approaches share

Kegan and Torbert's approaches share a strong theoretical base (Torbert 1987; Kegan 1994; McCauley et al. 2006): they move from common ontological and epistemological assumptions. Also they move from the same research paradigm and tradition of psychology. Figure 16 summarizes all of these dimensions.

Figure 16: What Kegan and Torbert's Approaches Share

Kegan's and Torbert's Approaches The Common Theoretical Base		
	Kegan	Torbert
Ontology:	<ul style="list-style-type: none"> - becoming: the developmental assumption; - depth to conceptual realism: <p>there are both subjective experience and universal patterns</p>	<p>reality includes domains of subjective, objective and intersubjective.</p>
Epistemology:	<ul style="list-style-type: none"> - meaning-making: the constructivist assumption; 	
Psychology tradition	<p>Inclusive of:</p> <ul style="list-style-type: none"> - Humanism (Rogers, Maslow) - Developmental approach (Piaget) - Key contributions of psychoanalytic and cognitive approaches <p>Integrates in developmental approach:</p> <ul style="list-style-type: none"> - Cognitive and emotional dimension 	
Research paradigm:	<p>Inclusive of:</p> <ul style="list-style-type: none"> - existential-phenomenological: the subjective experience - critical realism: illuminating universal patterns 	
Research method:	<ul style="list-style-type: none"> - source: qualitative data - analysis: qualitative and quantitative 	
<p>Based on Kegan (1982, 1994), Torbert (1987, 2004) and McCauley et al. (2006).</p>		

Ontology. CD theory builds on an ontology of 'becoming' (versus an ontology of 'being'): human nature is characterized by the unfolding development of meaning making. The theory grounds itself between depth and conceptual realism (Blaikie, 1993). Both Kegan and Torbert view the developmental process as embedded in a set of larger social processes (conceptual realism). Both scholars highlight that there are aspects of the developmental process that are objectively measurable and some that aren't (depth realism). Torbert makes explicit reference to three domains of reality: the subjective, the inter-subjective and the objective. One implication of this ontological stand for leadership development is that people are believed to be naturally embarked in the voyage of personal

development: this suggests that the role of external initiatives can be most accurately described as that of context, which can support rather than hinder the process (Kegan 1994).

Epistemology. The constructivist epistemological assumption is made very explicit in CD theory: people creatively construct reality through the distinctively human process of meaning making. However, the epistemology of CD theory preserves a part of rationalism (consistently with the ontological assumptions of conceptual realism): there are common patterns in the development of psychosocial processes which can be observed objectively. One implication for leadership development is to see it as interlinked with the development of meaning-making: if leadership is expressed through action and action is guided by meaning-making, then meaning-making is central to leadership.

Research paradigm. In Kegan's words (1980), CD theory moves from an existential-phenomenological approach: the theory keeps in the forefront the subjective experience of people undergoing developmental transformation. From the CD angle, understanding what a person goes through while undergoing a transformation is the key to understanding how to best offer support. At the same time, CD theory aims to surpass the limitation of a purely existential-phenomenological approach: hence the interest in identifying significant patterns in the development of all individual. The most direct implication for empirical research is that different methods are needed, often in combination, to capture what happens in the different domains of reality in scope: the subjective, inter-subjective and objective (Torbert 2004).

Traditions of psychology. CD theory stems most directly from the humanist approach to psychology: hence the emphasis on subjectivity of meaning and on human actualization through development. Kegan (1980) underscores how CD theory is also receptive of key contributions of psychoanalytic and cognitive approaches: two approaches that have built the foundations ego and cognitive development. The approach of CD theory can be distinguished because it broadens the scope from the humanist concern for needs to meaning; it extends the psychoanalytic focus on child development to adult development; it combines

the cognitive with the emotional dimension. The implication for leadership studies is to see leadership development as linked to a process of holistic development that includes personal meaning, cognition and emotion.

In addition to the commonalities identified above, the work of both scholars moves from the same understanding of the process of constructive development and is based on the same framework of successive developmental orders of consciousness (Kegan, Torbert). Moving from a common theoretical base, Kegan and Torbert, have made each a distinct contribution, presented in the following sections. For each author, I cover the main phenomenon of interest, research methods and main contributions. Figure 17 outlines the content of the next part.

Figure 17: Distinct Approaches and contributions of Kegan and Torbert

	Kegan	Torbert
APPROACH:		
Phenomenon of interest:	the process of constructive development	development of managerial logics
Assesment of constructive development:	Subject-Object Interview (SOI)	Leadership Development Profile (LDP)
Other data sources:		In-depth interviews; scholarly biographies and autobiographies; organizational development cases;
CONTRIBUTIONS:		
to CD theory:	patterns in constructive development (1982, 1994)	patterns in development of managerial action logics (1987, 2004)
to Leadership:	how to deal with immunity to change (2001)	developmental model integrative of a span of effective leadership styles (1987, 2004)
	the language of leadership (2001)	link with organizational development (2004)
to Leadership Development:	leadership development initiatives as context of leadership development (1994, 2001)	action inquiry as the process of leadership development (1987, 2004)
Based on Kegan (1982, 1994, 2001), Torbert (1987, 2004) and McCauley et al. (2006).		

III.B.1.b Kegan's model of the evolving self

Phenomenon of interest: constructive development. In Kegan's research, the focus is set on the very process of constructive development. Kegan's describes this process as the attainment of successive orders of balance in meaning-making in the perpetual tension between differentiating one's own identity and maintaining a sense of connectedness to others. The emphasis, Kegan stresses, in on the 'problem and process' of development rather than on measurable

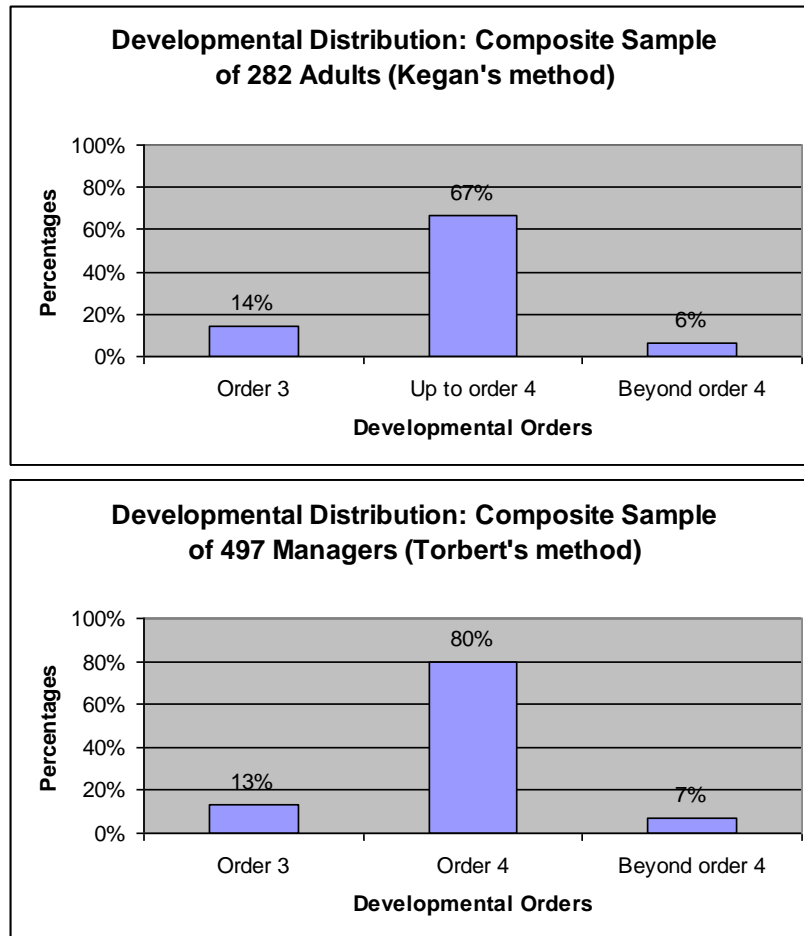
stages of development. 'Stages' are only there to mark development. Kegan chooses the term 'orders of consciousness', instead of stages, because it underscores that limitations surpassed with development are not limitations of a person, but rather as limitations of a transitory system of meaning making.

Research methods. Kegan set out to gather empirical proof of constructive development and of recognizable patterns within it. In order to assess constructive development, Kegan developed the Subject-Object Interview (SOI). The SOI is a semi-structured interview in which a person is asked to talk about recent significant life events. Four to seven experiences are generally included in the interview. The interviewer's aim is to elicit the most complex level at which the person can make sense of these events (Lahey et al., 1988, in Kegan 1994 and McCauley et al. 2006). In order to prompt the recall of life events significant to the individual, 10 index cards with emotionally laden stimulus words (for example: "sad", "success", "anxious", "important to me") are shown to the person. 'Scorable bits' are identified in the person's description of the event: scorable bits are specific passages that reveal the underlying meaning-making structure. In addition to the six fully formed orders of consciousness, four transition points can be identified in between any two adjacent orders. A conclusion can be reached about the 'order of consciousness' most prevalent in the person's meaning making. The SOI has been widely used; it has proved to have adequate levels of test-retest reliability (.82) and interrater agreement (.75 to .90) as well as construct validity (McCauley et al 2006, p. 639). The administration of the SOI requires training and its use has been found to be "highly demanding" in terms of time and costs (McCauley et al., 2006c; Bartone et al., 2007).

Contribution to CD theory. The core of Kegan's contribution is to have illuminated a universal process on-going across all individuals. Kegan's review of several studies that employed the SOI over a composite sample of 282 adults (67% women, 33% men), highlights a clear pattern in developmental distribution: the majority of adults was found to operate between orders three and four; the individuals found moving beyond the fourth order were a minority. Figure 18

shows the developmental distribution in Kegan's composite sample as compared to the developmental distribution in Torbert's composite sample.

Figure 18: Developmental Distribution – Kegan's and Torbert's Samples Compared.



Other studies validated the existence of constructive development and the pattern of developmental distribution. Lahey et al. 1988 (in Kegan, 1994) employed the SOI to interview 22 adults over a 4-years longitudinal study, with an additional follow up 5 years later; they found a similar developmental distribution, as well as consistency in the meaning-making manifested by persons operating at the same order. Also in this case up to 60% of adults appeared to never have fully developed order four. Baxter and Magolda (Lewis et al., 2005) and Kitchener (1994, in Lewis et al., 2005) applied the SOI to a study of college students and were able to assess significant developmental change

during college years (in Lewis et al. 2005). Bartone et al. (2007) worked consistently with 32 military officer cadets at West Point through the college years. They were able to observe, from first to last college year, a clear forward trend in constructive development. In the sample, three increased by 28% from second to fourth year. Cadets scoring at order four increased from 0% in the first year to 19% in the fourth year. Similar patterns were exhibited by a sample of 20 college students (non-military) in a control group (Lewis et al. 2005). Lastly, the whole of the studies conducted with Torbert's method (see next section) confirm the same developmental patterns in a composite sample of approximately 500 adult professionals (Kegan 1994). Again, 58% of the adult professionals were not found to reach the fourth order. Table 7 summarizes the studies included in the systematic review which contributed to highlight the common pattern of constructive development.

Table 7 –Are there progressive phases of constructive development and are they measurable reliably? Summary of Empirical Evidence

Are there progressive phases of constructive development and are they measurable reliably? Summary of empirical evidence								
Authors	Year	Supports		Why? (realist synthesis)	Notes on Significance	Description of study	Kegan Orders in sample	Method
		YES	NO					
OVERALL	1980-2008	✓		Clear forward trend in constructive development over time;	Kegan's and Torbert's methods: both interrater and test-retest reliability beyond 80%		2,3,4,5	Kegan's and Torbert's
Kegan (1994)	various	✓		Consistent developmental distribution in adults	SOI: 83% interrater reliability within one scoring step (corresponding to approx. 1/4 of whole stage)	composite sample, 282 adults (67% women, 33% men)	2,3,4,4 to 5	Kegan's
Torbert (2004)	various	✓		Confirmation of the developmental distribution observed with Kegan's method	Adequate levels of test-retest reliability (82%), interrater agreement (75 to 90%) and construct validity. Random sampling procedures.	composite sample, 497 managers	3,4,5	Kegan's
Bartone et al.	2007	✓		Clear forward trend in constructive development over the college years. in the sample, order 3 scoring cadets increased by 28% from second to fourth year. Order 4 scoring cadets went from 0 in the first year to 19% in the fourth year.	SOI: 83% interrater reliability within one scoring step (corresponding to approx. 1/4 of whole stage)	32 military officer cadets at West Point; longitudinal study from first to last college year;	2,3,4	Kegan's
Lewis et al.	2005	✓		Both the sample at USMA (Bartone et al. 2007) and a non-military sample displayed patterns of constructive development.	Sample in non-military settings was selected to be similar to USMA sample, especially for engagement in leadership activities.	20 college students (non-military)	2,3,4	Kegan's
King and Kitchener (in Lewis et al. 2005)	1994	✓		Significant assessed developmental change during college years	Reported significant in the review; limited to college years.	college students	n.a.	Kegan's
Baxter and Magolda (in Lewis et al. 2005)	1992	✓		Significant assessed developmental change during college years	Reported significant in the review; limited to college years.	college students	n.a.	Kegan's
Lahey et al. 1988 (in Kegan 1994)	1988	✓		Consistently observed developmental distribution and progression; consistency within orders. Around 50% to 66% of the adult population at any point in time appear to not have reached the fourth order (pp. 190-191)	SOI: 83% interrater reliability within one scoring step (corresponding to approx. 1/4 of whole stage)	22 adults, each interviewed twice. Longitudinal study over 4 years, with a follow up 5 years later.	2,3,4,4 to 5	Kegan's

Contribution to leadership: immunity to change and the language of leadership.

Two key implications for transformational leadership relate to immunity to change and to the language of leadership. In 'The Real Reason People Won't Change' (Lahey et al., 1988), Kegan and Lahey reflect on the difficulties encountered by managers in attaining behavioral changes (in themselves or others). When inertia cannot be blamed on a lack of communication or shared commitment, what might explain 'immunity to change'? The authors point at unconscious 'competing commitments', deeply held assumptions that stand in contradiction with the change initiative. Kegan and Lahey argue that leadership that wants to bring about change has to go through encouraging others to discover and revisit of hidden assumptions.

In 'How the way we talk can change the way we work' (2001), Kegan and Lahey assert that the medium of leadership is language. The authors describe the language most representative of each developmental order: they invite the recognition that a person's internal and social language contribute to the construction of organizational reality. Hence they propose that the effectiveness of transformational leadership would be enhanced by the conscious development of the appropriate language.

Contribution to leadership development: the curriculum and role of leadership development. Two are also the implications of Kegan's work that relate to leadership development: the first revolve around the necessity of a developmental curriculum that effectively supports the demands of today's leadership roles. The second identifies what role leadership development initiatives might have in the development of leadership.

In 'In Over Our Heads' (1994), Kegan argues that the mental demands implicit in today's 'postmodern life' are beyond the order of adult development effectively supported by society as a whole (including family customs, educational

initiatives, organizational settings). Kegan describes the demands imposed on people in partnering, parenting, work, conflict management, leadership and knowledge creation. Generally, Kegan argues these demands require people to develop a post-conventional logic: the self-regenerating, more nuanced and encompassing meaning-making identified by CD theory. Kegan asserts that most of leadership positions today would require individuals to operate on the basis of a post-conventional logic: yet Kegan's research shows that most adults never develop this type of logic. Kegan notes that no curriculum exists as of yet that addresses this aspect of adult development. Indeed, the very notion that psychosocial growth continues during adult life is still often not accepted. Generally, there is a low level of support to individual psychosocial growth after the age of maturity; many jobs and educational programs are designed in a way that actually restrains the development of less conventional action logics (Kegan 1994). Kegan's suggestion is that the development of a post-conventional logic becomes a central concern in the curriculum of adult and leadership development.

'The Evolving Self' (1982), Kegan argues that people are naturally embarked in their personal journey of development. In this process, life experiences provide the natural stimulus to development and people provide the natural context for development. In Kegan, context serves three essential functions: confirmation, contradiction and continuity (discussed in detail in the section on findings around leadership development). Designing developmental initiatives that implement these three functions might deliver programs of greater impact.

III.B.1.b Torbert's model: management action logics and action inquiry

Phenomenon of interest: managerial action logics. In Torbert's research, the focus is set on the development of managerial action logics. This corresponds, in Kegan's terms, to the development of systems of meaning making guiding the actions of adult professionals in organizational settings. The emphasis is on how meaning making translates into action, hence the term action logics. Torbert's

describe the development of action logics as the mastering of successive managerial logics, each building on the blocks of prior logics. Torbert's research on managerial logics has highlighted the link to behavior: every action logic gives rise to a predominant managerial style. Each managerial style has its characteristic points of strength and weaknesses. Torbert stresses that all action logics are necessary: both for effective management and because they are the building blocks of future, more comprehensive, understandings.

Research methods. The aim in Torbert's research has been to find evidence of a natural progression in managerial logics, to understand how progression to later logics is attained and to describe the functioning of every logic. Torbert describes three domains of his investigation: the objective (are there different, successive action logics?), the subjective (how does the individual develop successive logics?) and the inter-subjective (what are the implications of every logic for the social dynamics in organizational settings?). Torbert argues that this three-fold research aim requires the interweaving of research methods. A purely empirical-positivist approach would be greatly limiting: it would restrain the scope to just the portion of reality that is objectively measurable. To the quantitative analysis of objective measures, Torbert adds qualitative analysis of rich data collected in interviews and logs. Sources of data in Torbert's research include: assessments of action logics; in-depth interviews; scholarly biographies and autobiographies; cases of organizational development. Torbert stresses that the significance of scholarly autobiographies lies not much in the quantity of information they convey, but rather in the quality: the way things are relayed describes the meaning making at work. The method used to assess action logics is the LDP (Leadership Development Profile), developed in collaboration with Cook-Greuter on the basis of Loevinger's WUSCT (Washington University Sentence Completion Test). Cook-Greuter, originally trained at Loevinger's workshops at WU, has been an administrator of the WUSCT for over 20 years. Torbert lists five ways in which the LDP has added to the WUSCT. First, it has included independent validation with work-related items. Then, it has developed scoring rules for later action logics. The LDP has adopted a less evaluative

terminology (logics versus stages or orders). Also, it has linked to external validity, by predicting differences in performance. Lastly, the LDP has found additional validation in its own outcomes: an increasing number of manager at each successive logic invited feedback. The LDP is administrated by asking participants to complete a series of sentence stems, each describing a scenario. In the administration of the LDP, every item is scored separately and a protocol is followed to determine quality of statistically derived scores. Overall scores are compared to ranges describing the different logics. The LDP has been found to have an interrater agreement of 80% or higher. Importantly, the LDP has obtained results virtually identical to those obtained with Kegan's more work intensive method (the SOI).

Torbert also discusses how his research is inevitably action science, for reasons that relate both to the role of the researcher and to that of the participants. The researcher is likely to be involved, as consultant or coach, in the specific initiative of individual, team or organizational development that sets the stage for the research. Importantly, the researcher's ongoing development of own action logics enters the process studied. On the participants' side, the practice involved in the development of action logics (action inquiry, see later section) makes every participant also partly a researcher. Torbert explicitly bases his approach on Argyris' action science: in action science, consultant-researchers can help individuals see their 'taken-for granted theories' and redesign their actions (Argyris, 1991). According to Torbert, the wise, scholarly rigorous interweaving of methods allows to reliably study a phenomenon interweaved in the objective, subjective and inter-subjective domains of reality.

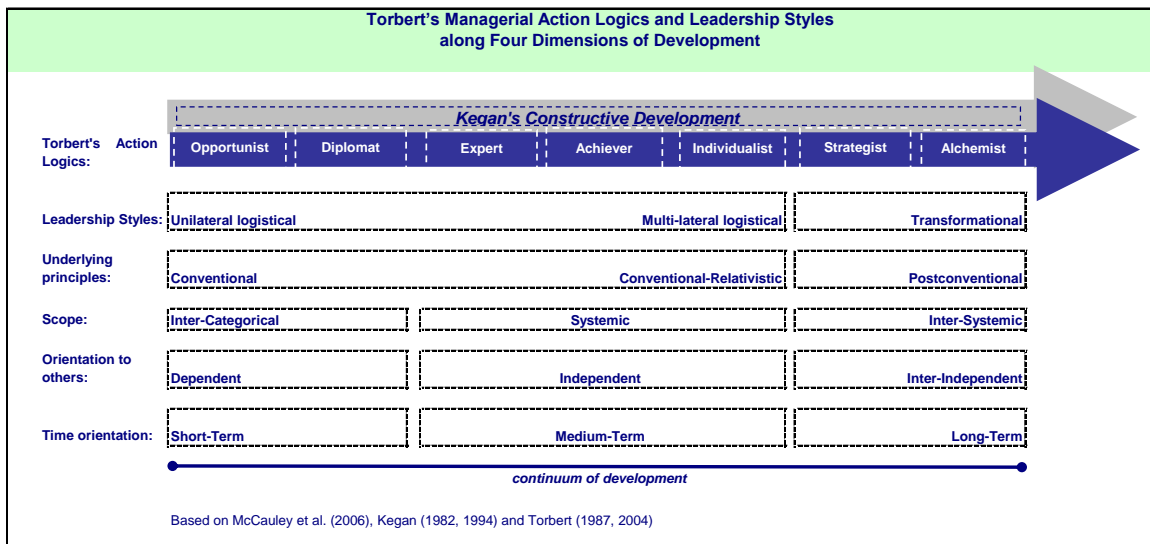
Contribution to CD theory: validation and application to leadership.

Torbert's work on action logics has lent support to Kegan's findings on adult constructive development: a composite sample of n=497 has shown a distribution virtually identical to that identified by Kegan's SOI. Other researchers have used Torbert's LDP and found a similar pattern of development.

As discussed next, a second key contribution by Torbert was to give CD theory an application in the field of leadership. Torbert's emphasis on the forward push of the developmental process has also to shift the focus from the 'problem' (immunity to change) to the 'solution' (practices that enable development).

Contribution to leadership: a dynamic understanding of transformational leadership. A major contribution by Torbert is to have found empirical support to a dynamic view of leadership (the section on leadership development details evidential support to this claim). The theory sees leadership along developmental lines: it explains that in time and through experience, people develop different action logics that determine different leadership styles. Figure 19 re-proposes CD theory's dynamic view of leadership. Broadly, earlier action logics rely on conventional principles and logistical authority; later action logics shape their own post-conventional principles and support the expression of a transformational style of leadership.

Figure 19: Torbert's Managerial Action Logics and Leadership Styles

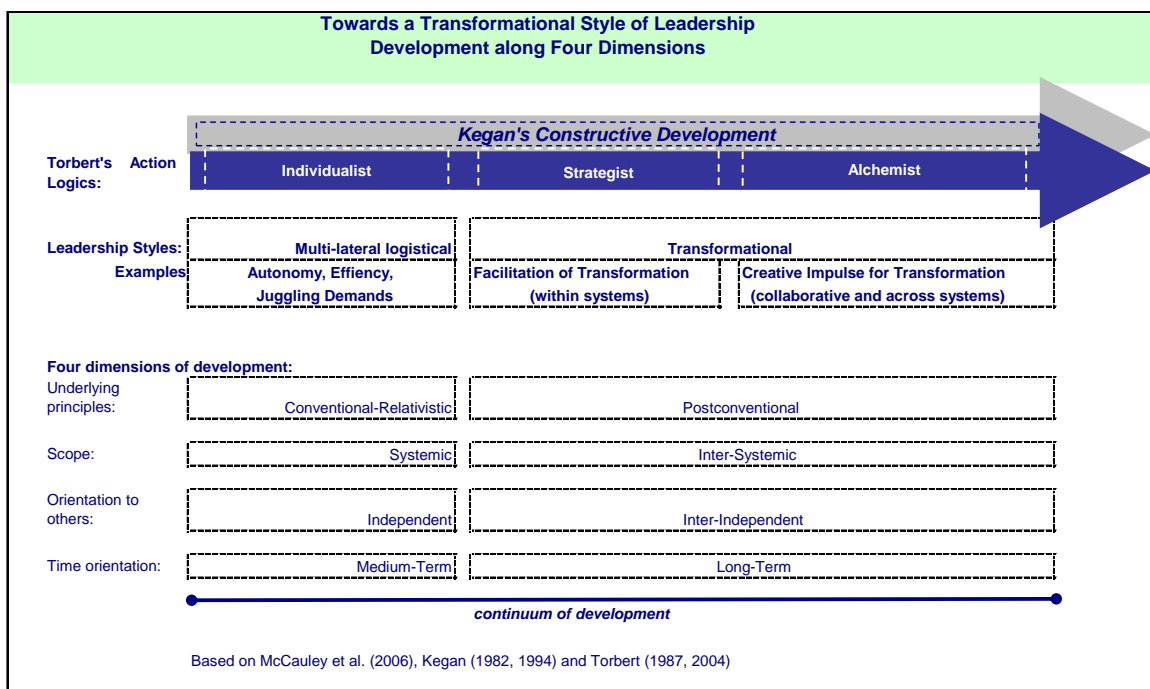


In the following discussion, the focus is narrowed on the transition to post conventional logics and a transformational style of leadership. First, this transition

is described along the four dimensions identified earlier in the scoping study. Then, the action logics and leadership styles immediately before and after this transition are presented in detail.

Development of post-conventional action logics and a transformational style of leadership. This transition is now analyzed in depth in terms of the four dimensions of development identified earlier (Figure 20).

Figure 20: Towards a Transformational Style of Leadership—Four Dimensions of Development



- *First dimension: towards post-conventional principles.* The implication for leadership is a progression in emphasis from autonomy in one's function to pro-active involvement with initiatives of change. At the stage immediately preceding the post-conventional, the central defining aspect of the self is its own self-organizing ability and ideology. Principles of meaning making are chosen autonomously and tend to be context-dependent; principles are still sourced from the pool of norms available in the social context. At this time loyalty to own ideology is valued over

conformity with the surrounding context. Starting from *post-conventional* phase, the central defining aspect of the self is self-authorship: the ability to originally create and revisit own principles of meaning making (or action logics). At this point, the multiple possibilities in constructing reality and continuous renewal become fully appreciated.

- *Second dimension: towards an inter-systemic scope.* The implication for leadership is the broadening of scope from one's development to include the development of systems and across scales. At the stage immediately preceding the post-conventional, the assumption is that other persons and organizations are distinct self-organizing system. At the post-conventional stage the assumption is that other persons, individually or collaboratively, are also capable of self-authorship. Reality appears made of "dynamic, mutually-transforming systems" (McCauley et al. 2006, p.638). There is an increasing awareness of the different orders at which other people operate and an interest in inter-systemic value creation.
- *Third dimension: towards inter-independency.* The implication for leadership is an increasing reliance on internal authority; at the same time, an increasing appreciation of contrasting views and feedback. At the stage immediately preceding the post-conventional, the judgment of others has already shifted into the realm of the objective: it can be acknowledged and reflected upon at a distance. It follows that at this order actions are rather guided by loyalty to espoused principles and fit with a personal plan. Following through personal choices when others are in disagreement is now more comfortable. At the post-conventional stage, the greater awareness of own and other's action logics gives rise to a new confidence in one's own autonomy. It is now conceivable to welcome differing points of view without a sense of threat to one's identity. Value is placed on the development of sustainable relationships that are of value to multiple stakeholders, thus on shared framing of issues. Feedback is no longer

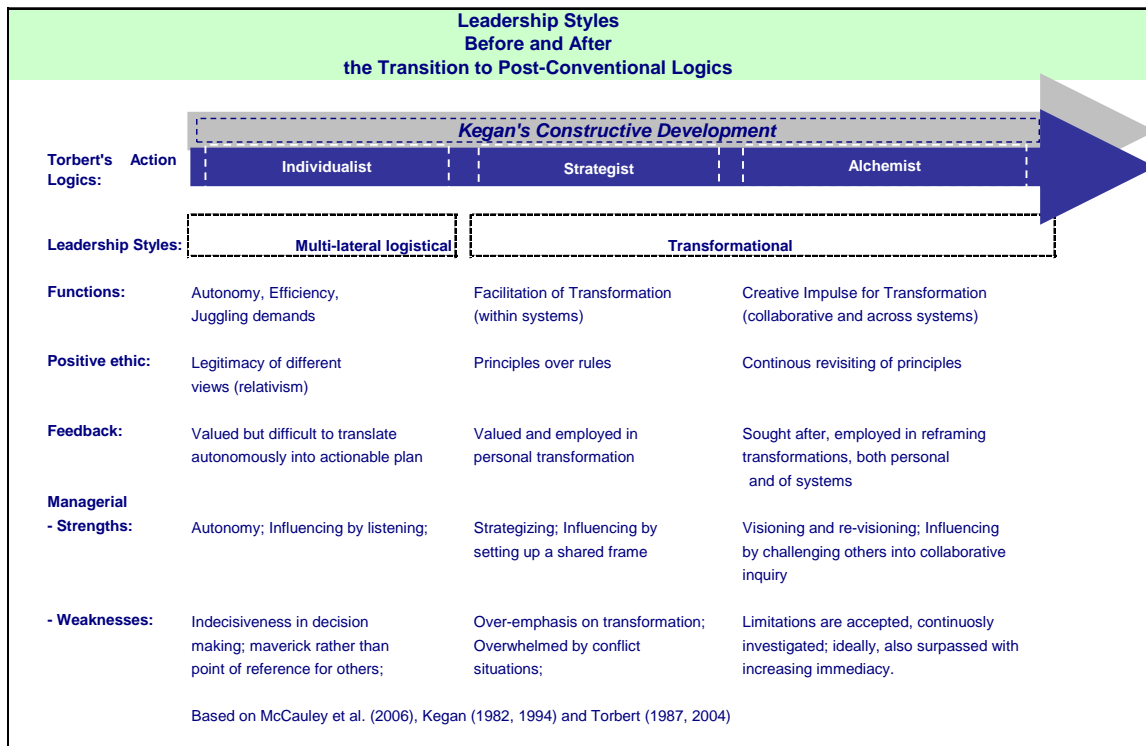
perceived as uncomfortable; rather, it is sought out and integrated in the development of self, others and organizations.

- *Fourth dimension: towards a long-term time orientation.* . The implication for leadership is the broadening of the horizon of change initiatives taken into consideration. At the stage immediately preceding the post-conventional, there is a medium term orientation. Action logics at this stage typically emphasize a moderate forward looking approach, for example the medium-term vision necessary to pursue the goals set in a pre-established plan of action. At the post-conventional stage, the focus shifts on the framing of sustainable relationship, on reciprocal transformation and on the creation of sustainable, inter-systemic value. Correspondingly, the time orientation stretches to a longer term compared to that experienced earlier.

Action logics and leadership styles before and after the transition to post-conventional logics.

To better highlight the link between action logics and leadership styles, this section illustrates the phase just before and the two phases after the transition to a post-conventional logic. These phases take the name of the corresponding action logics identified by Torbert: respectively, the 'Individualist', the 'Strategist' and the 'Alchemist'. For each phase, typical manifestations of the different leadership styles are also presented: they relate to functions served, positive ethic, attitude to feedback and managerial strengths and weaknesses. These manifestation are supported by the body of studies in leadership and CD theory (the section on leadership development details the evidential support).

Figure 21: Leadership Styles (before and after the transition to post-conventional logics)



As shown in Figure 21 the progression towards post conventional logics proceeds in parallel with that of an increasingly transformational style of leadership. However, how does this interlinked progression take place? Torbert's basic argument is that two specific processes characterize a logic of 'transformative power': the autonomous revisiting of operating assumptions and a collaborative approach to framing transformations. This argument has found support in Torbert's studies. A question raised by the review, however, is whether this argument is supported anywhere else in the literature. Overall, the answer is yes (Figure 22). Scholars of leadership (Bass 1985 and 1996), learning (Argyris 1978; Mezirow 1991) and CD theory (Kegan 1982; Torbert 2004), all converge on the point that true 'transformation' is that enabled by autonomous, conscious and self-reflexive revisiting of operation assumptions. Transformation, so defined, is then distinct from developmental change attained by adaptation. As to a collaborative approach, as discussed in the scoping study section on transformational leadership, Bass implicitly recognizes a collaborative dimension to transformational leadership.

Figure 22: A review of the significance of post-conventional logics for a transformational style of leadership

A Review of the Significance of Post-Conventional logics for Transformational Leadership					
Torbert's Action Logics:	Opportunist Diplomat Expert Achiever	>	Individualist	>	Strategist Alchemist
Leadership Styles	Logistical (unilateral to multilateral)		>	Transformational	
Principles	Conventional		>	Post-conventional	
TORBERT (2004) Approach to Transformation of self and systems	X		X		advocates, facilitates initiates, negotiates participation
BASS (1985): Transformational Leadership					
Individualized Consideration	X		✓		✓ ✓
Idealized Influence	X		X		✓ ✓
Intellectual Stimulation	X		X		X ✓
Inspirational Motivation	X		X		X ✓
ARGYRIS (1978): Learning					
First Loop	✓		✓		✓ ✓
Second Loop	X		X		✓ ✓
Third Loop	X		X		X ✓
MEZIROW (1991) Learning					
Self-reflexive transformational learning	X		X		✓ ✓

Based on McCauley et al. (2006), Torbert (2004, 1987), Kegan (1994, 1982), Schwandt (2005), Mezirow (1991, in Schwandt 2005), Argyris (2001), Bass (1985, in Gill 2006);

Contribution to leadership development. Action inquiry as the process of leadership development.

A fundamental contribution by Torbert to leadership development is his proposed a definition of what the leadership development process is. Moving from the basic tenets of CD theory, Torbert identified a main practice of constructive development, which he termed action inquiry. *Action* underscores the link to behavior; *inquiry* the reflection on own action logics. Action inquiry takes place through two main processes:

- a) an individual process: identifying and revising own operating assumptions.
- b) a social process: striving to hold assumptions explicit when interacting with other people.

The first process described goes back to a basic tenet of CD theory: identifying and revising own operating assumptions is the fabric of constructive development. Outside the field of CD theory, the same concept is recognized under different names. Argyris (1978) calls the same process double and tripe-loop learning: the processes responsible of behavioural change. Mezirow (1991) uses the term transformational learning: the very means to the end of 'perspective change'. The second, related, process aims at capturing the potential of every interaction to be an opportunity an opportunity for mutual transformation.

The aims of action inquiry are three. On the individual level cultivating action inquiry is a way to cultivate integrity. On the level of relationships, action inquiry is a way to achieve mutuality. On the organizational leve, action inquiry is a way to integrate sustainability in organizational processes. Through the whole span of development, the increasingly autonomous practice of action inquiry results in the post-conventional logics advocated in CD theory as necessary for a transformational style of leadership.

III.B.2 Leadership Development

The following was the review question concerning contributions of CD theory to leadership development:

R2: How has the work done in constructive-developmental theory helped understanding leadership development?

R2a. Where and how has constructive developmental theory been applied in leadership development initiatives?

During the review of evidence, the analysis of findings concentrated on the themes of four emerging interrogatives relevant to this part of the inquiry:

- a) Does adult constructive development matter for the development of leadership?
- b) Does the constructive-development of post-conventional logics matter for the development of a transformational style of leadership?
- c) Is there a base definition of the process and context of leadership development?
- d) Have there been applications of CD theory to leadership development initiatives? If yes, is there evidence on their effectiveness?

In this section I present a thematic analysis based on these interrogatives.

III.B.2.a Does adult constructive development matter for the development of leadership?

A series of studies, using either Kegan's or Torbert's method, has focused on establishing whether adult constructive development is at all related to development of leadership (see Table for a summary of evidence). Overall the answer is yes.

Table 8a: Does adult constructive development matter for the development of leadership? A summary of evidence.

Does constructive development matter for the development of leadership? Summary of empirical evidence								
Authors	Year	Supports		Why? (realist synthesis)	Dimension of Leadership Observed	Description of study	Kegan Orders in sample	Method
		YES	NO					
OVERALL	1980-2008	✓		Developmental growth predicts leader behavior on a number of dimensions; different leadership styles at different orders can be effective;	Kegan's and Torbert's methods: both interrater and test-retest reliability beyond 80%		2,3,4,5	Kegan's and Torbert's
Bartone et al.	2007	✓		Developmental growth predicts ratings on leadership effectiveness by subordinates and peers	Subordinates: $r=.38, p<.03$ Peers: $r=.30, p<.05$ (Non-parametric correlations)	32 military officer cadets at West Point; longitudinal study from first to last college year;	2,3,4	Kegan's
Strang (in McCauley et al. 2006)	2006	✓		Order of development adds unique variance in predicting mean 360 feedback ratings only in case of ratings by subordinates		58 executives, built on Harris 2005. Unpublished master's thesis University of Georgia Athens.	n.a.	Kegan's
Harris (in McCauley et al. 2006)	2005	✓		Higher order of development predicted higher average ratings on 360 degrees feedback	360 feedback ratings	41 executives; unpublished master's thesis, University of Georgia Athens.	?	Kegan's
Hasegawa (in McCauley et al. 2006)	2004	✓		Higher order of development corresponds to less challenge experienced. Leaders at both orders can be effective (observed: perceived role stress, general effectiveness)	perceived role stress	9 teachers taking peer leadership roles	3,4	Kegan's
Van Velsor and Drath (in McCauley et al. 2006)	2004	✓		Different order of development corresponds to experiencing challenge about different aspects of the leadership role. Leaders at both orders can be effective.	perceived role stress	25 leaders	3,4	Kegan's

Table 8b: Does adult constructive development matter for the development of leadership? A summary of evidence.

Authors	Year	Supports		Why? (realist synthesis)	Dimension of Leadership Observed	Description of study	Kegan Orders in sample	Method
		YES	NO					
Spillet (in McCauley et al. 2006)	1995	✓		Higher order of development corresponds to leadership behavior more centered on delegation, negotiation, constructive handling of conflicts	leader behavior	5 women leaders of college student groups; doctoral research;	3,4	Kegan's
Gammons (in McCauley et al. 2006)	1994		X	No relationship found between order of development and perceived leadership effectiveness in master teachers providing peer leadership.	effectiveness as perceived by peers	Leadership effectiveness rated by peers using the Leader Behavior Description Questionnaire (Stodgill 1970). Doctoral research.	n.a.	Torbert's
Whethersby (in McCauley et al. 2006)	1993	✓		Higher orders of development correspond to more reliance on internal versus external authority, and on more self-knowledge.	reliance on internal versus external authority	A sample of managers	3,4,5	Torbert's
Lewis and Jacobs (in McCauley et al. 2006)	1992	✓		Higher orders of development strongly correlated to cognitive capacity to make effective decisions at higher levels of management.	decision making	Sample of military officers that have successfully completed a battalion command.	3, 4, and 4 to 5 (transitioning)	Kegan's
Bartunek, Gordon Whethersby (in McCauley et al. 2006)	1982	✓		Participants framed problems differently after a management development course based on CD theory and focused on complex understandings. Note: no actual developmental measure taken.	framing of issues	Sample of administrators of a women's religious orde; 10 days full time course; 9 months pre-course readings and logs;	n.a.	Torbert's
Smith (in McCauley et al. 2006)	1980	✓		Higher orders of development correspond to more autonomous decision-making versus enforcing other's decisions with coercive power.	decision making	A sample of managers	n.a.	Torbert's

The tendency in the strand of studies that utilized Kegan's method has been that to seek correlations between developmental orders and leadership effectiveness. Measures of leadership effectiveness used in these studies have varied and included: decision making, leader behavior, 360 feedback ratings, perceived role stress and career advancement. The conclusion generally is that leader operating at different orders can all be effective. This is not surprising in light of

CD theory: as emphasized by Torbert, each action logic can give rise to a different leadership style; each different leadership style is particularly effective to the ends of different organizational accomplishments.

The studies invariably found that managers operating at different orders are not more or less effective; they do, however, engage with different 'projects', or the same 'projects in a different ways. Managers at different orders are effective at decision making, but at different levels of organizational complexity (Lewis and Jacobs 1992, in McCauley et al. 2006); managers at higher orders are more effective whenever more delegation, negotiation and constructive handling of conflicts are required (Spillet 1995, in McCauley et al. 2006). Successful CEOs are found to be at later orders of development than successful middle managers (Eigel 1998 in McCauley et al. 2006). Leaders at different orders of development all experience challenge, just in different areas (Van Velsor and Drath 2004, in McCauley et al. 2006). A study by Hasegawa found that overall less challenge is experienced by managers at later orders (2004, in McCauley et al. 2006). Harris' masters thesis work on a sample of 41 executives (2005, in McCauley et al. 2006) found that higher developmental order predicts higher ratings on 360 feedback. A follow-up study by Strang (2006, in McCauley et al. 2006) specified that higher developmental order adds unique variance in predicting 360 feedback ratings only by subordinates. This seems confirmed in Bartone et al. (2007): in the longitudinal study of 32 military cadets at USMA (US what) it was found that developmental growth predicts ratings on leadership effectiveness by subordinates and peers.

Studies that utilized Torbert's method have focused more directly on the proposition that managers operating different action logics approach tasks differently. This proposition has generally been confirmed throughout Torbert's program of research (with a composite sample of 497 adult professionals). In other studies, it was found that managers operating at higher orders of development tend to engage in more autonomous decision-making (Smith 1980,

in McCauley et al. 2006). Managers operating at higher orders also tend to rely more on internal versus external guidance (Whethersby 1993, in McCauley et al. 2006). After a management development course designed CD theory and focused on complex understandings, participants framed problems differently (Bartunek et al. 1982, in McCauley et al. 2006). As to leadership effectiveness, a study by Gammons (1994, in McCauley et al. 2006) found no relationship found between order of development and perceived leadership effectiveness in master teachers providing peer leadership. The Kegan stream of studies, however, seems to indicate that developmental growth is not a matter of leadership effectiveness.

III.B.2.b Does the constructive-development of post-conventional logics matter for the development of a transformational style of leadership?

Torbert's framework pictures a succession towards post-conventional, self-authored action logics; correspondingly, it draws a path towards a leadership invested in mutually transforming relationships. Overall, the studies included in the review support this idea (Table 9).

Table 9: Does the constructive-development of post-conventional logics matter for the development of a transformational style of leadership? A summary of evidence.

Does constructive development of post-conventional logics matter for the development of transformational leadership? Summary of empirical evidence								
Authors	Year	Supports		Why? (realist synthesis)	Notes on Significance	Description of study	Kegan Orders in sample	Method
		YES	NO					
OVERALL	1980-2008	✓		Clear forward trend in constructive development over time;	Kegan's and Torbert's methods: both interrater and test-retest reliability beyond 80%		2,3,4,5	Kegan's and Torbert's
McCauley et al.	2006	✓		Argument is compelling; more empirical research needed;	Most studies didn't include a significant number of individuals assessed at post-conventional logics.	review	2,3,4,5	Kegan's and Torbert's
Rooke & Torbert	1998	✓		Higher orders of development: more likelihood of successful organizational development initiatives	$r = .42, p < .05$;	10 CEOs, various firm size and industry. 10 years longitudinal study	3, 4, 5	Torbert's
Steeves (in McCauley et al. 2006)	1997	✓		Higher orders of development correspond to more inspirational leadership.	Measure of leadership effectiveness: Multifactor Leadership Questionnaire (Bass & Avolio 1990).	Sample of bank managers. Doctoral research.	3, 4, 5	Torbert's
Mehlretter (in McCauley et al. 2006)	1995		X	No relationship found between order of development and change-oriented leadership as perceived by peers.	Measure of leadership effectiveness: change-oriented leadership as perceived by peers.	A sample of managers	3,4,5	Torbert's
Whethersby (in McCauley et al. 2006)	1993	✓		Higher orders of development correspond to more change-oriented leadership	Measure of change-orientation: managers put more emphasis on their role as change agents.	Analysis of essays of managers on personal leadership model		Torbert's
Fisher and Torbert	1991	✓		Order of development 4 corresponds to influencing by advocating; order of development 5 to influencing by negotiating a shared frame. Order of development 5 corresponds to greater likelihood of second- and third loop learning.	Observed: influencing style; approach to differing views.	17 managers; in-depth interviews;	4, 5	Torbert's
Bushe & Gibbs (in McCauley et al. 2006)	1990	✓		Higher orders of development: higher ratings of change-oriented consulting competence as rated by peers and experts.	relationship is significant (McCauley et al. 2006).	A sample of organizational development consultants	4,5	Torbert's
Hirsch (in McCauley et al. 2006)	1988	✓		Higher orders of development: higher effectiveness measured as effective strategizing and extent of delegating	Measures of effectiveness: extent of delegation; firm capacity and profitability.	A sample of entrepreneurs	3, 4, 5	Torbert's
Fisher, Merron and Torbert	1987	✓		Higher orders of development: more collaborative (versus unilateral) framing in responding to problems.	Observed: qualitative difference in framing problems.	49 MBA graduates; simulated management settings.	4, 5	Torbert's

All studies, with one exception, supported that managers are more likely to exhibit the transformational style of leadership described by Torbert in correspondence of post-conventional logics. Studies have investigated the following dimensions of a transformational style of leadership: leading change, inspiring, influencing and collaborative framing.

Leaders operating from post-conventional logics were found to have a significantly stronger inclination to leading change. In a 10 years longitudinal study of 10 organizational efforts (various firm size and industry), Rooke and Torbert (1998b) found that five initiatives headed by a CEO operating at Kegan order five (post-conventional) and two initiatives headed by a CEO at Kegan order four were successful. All three unsuccessful initiatives were headed by a CEO operating at Kegan order three. A major factor in the success of non-order five CEO's was the reliance on, versus the distancing of, organizational development consultants operating at a higher order. The sample is small, but the relationship significant ($r=.42$, $p<.05$). Earlier, in a study of essays written by executives, Whethersby also found managers operating at higher orders to put more emphasis on their role as agents of cultural change (in McCauley et al. 2006). In 1990, Bushe and Gibbs (in McCauley et al. 2006) worked with a sample of organizational development consultants: consultants at higher orders received significantly higher ratings of change-oriented consulting competence by peers and experts. to change in that were operating at order five. In contrast, Mehlretter didn't find significant relationship between developmental order of 24 managers of a company and "co-worker's perceptions of whether the manager contributed in the organization's transformation in an exemplary way" (in McCauley et al 2006). This last study however raises two interrogatives. First, it only considers one organization: as noted by (ref), measures of feedback from collaborators should be carefully considered in light of the organizational climate. Second, it only relies on the perception of peers at a time of transition where a set of other factors may have entered the perception of the contribution of others.

One study on a sample of bank managers found evidence that higher orders of development correspond to a more inspirational leadership (Steeves 1997, in McCauley et al. 2006). Fisher, Merron and Torbert (1987) found that with higher orders of development, more collaborative rather than unilateral framing and action in relation to problems takes place. In a sample of entrepreneurs, Hirsch (1988, in McCauley et al. 2006) found that managers at later orders were more effective at strategizing and delegating. Finally Fisher and Torbert (1991, in McCauley et al. 2006) had in-depth interviews with 17 managers; they found a tendency in Kegan order four to influence by advocating; in order five (post-conventional) the tendency was to influence by negotiating a shared frame. Also, it was found that managers at order of development five were more likely to complete second-loop learning.

As far as a relationship between CD theory and Bass' constructs of transactional and transformational leadership (1985), Kuhnert and Lewis were the first, in 1987, to suggest the possibility. They argued that of transactional and transformational leaders construct leadership in a qualitatively different way: respectively, based on reciprocity of obligations and on shared value systems. Later, Kuhnert and Lewis also argued that transactional and transformational leaders define effective delegation differently: respectively, as allowing group attainment of goals versus creating developmental opportunities in line with organizational goals (1994). The hypothesis that Bass' transactional leaders are operating at a lower order (order three) than Bass' transformational leaders (order four), was never tested with Kegan's method. The hypothesis was tested in two occasions (Steeves 1997 and Slaten 1999, in McCauley et al. 2006) with Torbert's and Kohlberg's measures: no significant relationship was found between Kegan's orders three and four and scores on Bass' measure of leadership style (MLQ, Multi-factor Leadership Questionnaire). However, Steeves' study is the same one to have found that higher orders correspond to more inspirational leadership (see prior section). Generally, in light of Kegan's and Torbert's theory, a transformational style of leadership would only clearly

emerge only at post-conventional orders: no subject at this order was included in the studies that tested Bass' construct of transformational leadership.

III.B.2.c Is there a base definition of the process and context of leadership development?

The answer to this question is negative: a base definition of the process and context of leadership development is absent from the field. CD theory has formed an accurate description of the process and context of adult development; also, it has suggested how this picture may translate into the field of leadership development. In this section I bring together the parts of Kegan's and Torbert's theories that address the gap on the process and context of leadership development.

The process of leadership development: action inquiry. Torbert identified the practice of action inquiry as the very process of the constructive development of leadership. It is through the increasingly autonomous exercise of action inquiry that one empowers himself or herself to develop beyond conventional logics. Post-conventional logics, according to CD theory, are not only a developmental objective; they also become the mean of continuous, self-authored development. Torbert identified two general processes of action inquiry: the individual and the social process. Torbert also identified two specific practices of action inquiry that support the shift to post-conventional logics and further transformations. allow the attainment of each action logic.

Action Inquiry. Torbert (2004) defines action inquiry as a behavior, both self-assessing and productive. It is self-assessing because it implies revisiting own operating assumptions, ideally in the immediacy of action. It is productive because it translates into adaptive behavior. Action inquiry takes place through two main processes:

- a) an *individual* process: identifying and revising own operating assumptions.

- b) a *social* process: striving to hold assumptions explicit when interacting with other people.

The *individual* process of action inquiry consists in cultivating awareness of the logics that guide our actions. Action inquiry is also the practice of revisiting such logics and changing them when they are no longer adequate. During the whole span of development of conventional logics, values of reference available externally are fundamental ingredients of any forward movement: for example, in passing from the phase of mutuality to the phase of individuality, the foundations of a person's balance shift from values commonly held in the closest social context of reference (family, friends, own national culture), to ideological values the individual chooses to adhere to. In contrast, when a person transitions from conventional to post-conventional logics, values generated internally become the fundamental ingredients of further forward movement. After the mark of post-conventional development, a person engages in self-authoring a personal philosophy. This very shift from the reliance to externally available values of reference to internally created, self-authored values explains the increasing ability of action inquiry to deliver a transformative power: within conventional logics, only first loop learning is possible. Post conventional logics enable second and third loop learning as well. In his description of action inquiry, Torbert's (2004) refers explicitly to Argyris' concepts of single, double and third loop learning. To summarize, single-loop learning involves questioning whether things are 'in compliance': for example, it involves assessing whether a routine is executed according to standard operating procedures, or whether performance is hitting pre-established targets. Double-loop learning involves questioning the underlying purposes of actions: for example, revisiting the principles underlying one's own delegation style or time management habits. Triple-loop learning involves questioning essential principles on which organized groups are based (one's family, one's team, one's organization): for example, challenging the company's vision or culture.

The *social* process of action inquiry can be described as a style of dialogue. Torbert suggests that most productive interactions with others are those where humans remain in control of dialogue instead of becoming controlled by polarizations. Torbert identifies four steps for engaging productively in any dialogue:

- Framing: making explicit upfront the purpose that underlies one's participation to the dialogue.
- Advocating: proposing a course of action that addresses the stated objectives.
- Illustrating: offering an example, to clarify how the proposed course of action would take place.
- Inquiring: about others' response to presented perspectives.

Torbert advocates that mutuality is the critical benefit of an action inquiry based approach to dialogue: once underlying rationales are made explicit are also available for shared re-framing.

Immediacy: the practice of action inquiry supporting the shift to post-conventional logics. 'Immediacy' is one specific practice of action inquiry that, according to Torbert, supports the shift from conventional to post-conventional logics. The main limitation of the late conventional logics is the tendency to a decisional paralysis around relativistic principles: the 'Individualist' of that stage has developed his or her own individuality, and acknowledges in full the legitimacy of other individualities. At first, the attempt is to let all these identities coexist; there is a sense that something else can be done, but the path towards a further understanding remains totally in the dark. Immediacy involves, according to Torbert: pausing to notice one's state (mental, emotional, physical); practicing in describing clearly one's state and views; practicing making one's state and views explicit in interactions with others; noticing when curiosity about other's views takes the place of resisting modification of one's own.

Re-framing: the practice of action inquiry supporting shifts beyond the post-conventional logics. 'Reframing' is one specific practice that supports continuing transformation once post-conventional logics are introduced. The main limitation of the early post-conventional logics is the flip side of a newly found strength: the full awareness of the interplay of influence among different point of views and the ability to fulfill different roles. This might prompt an over-emphasis on influencing others in transformation. To overcome this limitation, the full realization has to come that one's role is limited to setting the stage for transformation and encouraging others to shared re-framing. This realization is facilitated by the practice of reframing: noticing and questioning the familiar starting assumptions that one tends to adopt; fully exploring paradoxes and polarities, challenging oneself to find a logic that breaks them; considering courses of actions one would never really take and reflecting on why.

Validity of action inquiry. The validity of action inquiry as a practice for constructive and leadership development has been supported by the whole of Torbert's research. Empirical studies have included the observation of leadership development and organizational development initiatives: action inquiry was found to have a positive impact on both processes (Rooke and Torbert, 1998b; Torbert et al., 1987). The self-transforming power generated with action inquiry was shown in the increasing proportion of persons at each later action logic that asked for feedback (Torbert 2004).

The context of leadership development. Already in 1982, Kegan theorized that the context of constructive development is, at any point in time, its 'holding environment. The holding environment is the social context surrounding the person. It typically includes the family during early childhood; the school environment during the studies; the web of a person's closer relationships and by the workplace during the adult age. From the CD point of view, initiatives such as executive leadership programs propose themselves as an additional context for constructive development. According to Kegan, a holding environment serves

three critical functions: *confirmation*, *contradiction* and *continuity*. These functions are the same throughout the phases of constructive development; however, they take on a different flavor for transitions to different orders. After describing these three critical functions in general, I discuss how they might support a transition to post-conventional logics.

Three critical functions of a holding environment. *Confirmation* is a 'holding' function: it refers, fundamentally, to comprehending the person undergoing transformation. As discussed, transformation along orders of constructive development is partly uncomfortable. A supportive 'holding environment' is one that empathizes with a person's emotions. Also, it is one that shows a genuine trust that the person has the ability to move forward; this, as opposed to attempts to minimize or relieve discomfort. *Contradiction* equates to 'letting go': context should authentically encourage a person to grow more independent. A key manifestation of contradiction is encouraging an open dialogue: by doing so ideas able to challenge current understanding, the impulse for development, can flow overtly. *Continuity* refers to 'remaining in place': a context is truly helpful when it stays true to itself; possibly well beyond the time when a person ceases to identify with it.

The holding environment for the development of post-conventional logics. Central to this research is the transition to the post-conventional logic that underlies the achievement of a transformational style of leadership. According to Kegan (1982), the ideal context to attain this transition, named culture of self-authorship, functions as follows:

- Confirmation function: acknowledges a person's autonomy in self-definition; empathizes with feelings of disorientation.
- Contradiction function: lets other contexts, including itself, be relativized. This, in recognition of the person's new autonomy in forming a personal ideology.
- Continuity function: remains true to itself and a point of reference to the person that is separating from identification with the context.

The holding environment for development beyond post-conventional logics

According to Kegan, the ideal context for further transformations is named culture of intimacy and functions as follows:

- Confirmation function: accepts a person's looser definition of itself, which now allows for interdependence with others; at the same time recognizes uniqueness of the person and shares an intimacy of thoughts and experiences.
- Contradiction function: engages in the play of continuous renovation.
- Continuity function: continues to share in of mutually transforming interaction.

III.B.2.d Have there been applications of CD theory to leadership development initiatives? If yes, is there evidence on their effectiveness?

This review has found that there are cases where the CD theory has been applied to leadership development initiatives. This is somewhat of an exceptional finding in the field of leadership development, where there is very little alignment of theory and practice. Still, cases are few and not necessarily consistent with each other.

The main applications of CD theory to leadership development initiatives have been:

- Torbert's studies on organizational development; two studies on the MBA program at the Boston College Carroll School of Management.
- The Center for Creative Leadership (CCL) Executive Coaching Framework (Drath and Van Velsor, 2006).
- A study by Bartunek et al. (in McCauley et al. 2006) on a course on framing complex managerial problems.
- Training and consulting initiatives by the consulting branches started by Kegan and Torbert.
- An empirical study published in 2008 by Harris and Kuhnert (Harris and Kuhnert, 2008).

The evidence about Torbert's program of studies is available in the publications of Torbert and colleagues. To date, no empirical has been published about the CCL model for executive coaching; an article by Drath and Van Velsor reports observed strengths and weaknesses about the model. Lastly, there is no trail of evidence on the initiatives delivered by the consulting branches of Kegan's and Torbert's professional groups.

Torbert's program of studies. Torbert's program of studies has been recognized by Kegan (1994) as the only program of studies in leadership development that has consistently applied CD theory to practice and to the methods used to assessed outcomes. Two studies have focused on the impact of features of a leadership development initiative. Both were longitudinal studies on the MBA program at the Boston College Carroll School of Management. In both cases, leadership initiatives were based on action inquiry and assessment was carried out with the LDP tool. The first study (Fisher et al. 1987) included 90 MBA students; from start to finish, only 8/90 students developed post-conventional logics. Interestingly, 7 out of these 8 had committed to extensive involvement with an action inquiry leadership development module (21 versus 9 months). The second study (Torbert and Fisher 1992, in McCauley et al. 2006) compared constructive development from start to finish of a program in two groups of MBA students. One group, composed of 24 students, enrolled in the restructured MBA program that included a leadership development module based on action inquiry. The control group was composed of 165 students enrolled in a regular program. Development to post-conventional logics took place in 22/24 (92%) of participants in the restructured MBA program. In contrast, only 3/165 (2%) of the students in the control group of regular MBAs developed post-conventional logics. The whole of Torbert's studies (see section and table) offers support to the idea that the practice of action inquiry is central to the development of post-conventional leadership.

The CCL's Coaching Framework (Drath and Van Velsor, 2006). The CCL's Coaching Framework is explicitly based on CD theory. The framework blends theoretical and empirical contributions of Kegan and Torbert. Consistently with CD theory, the CCL's Framework is based on *assessment*, *support* (Kegan's confirmation) and *challenge* (Kegan's contradiction). The function of continuity is not considered. Assessment takes place with an adaptation of Kegan's SOI (Subject-Object Interview). Drath and Van Velsor report that both Kegan's SOI and Torbert's LDP are too theoretical and cumbersome to be of prompt application in the context of coaching. A conclusion about the order of development of the executive coachee is reached iterating through working hypotheses formed by the coach. Drath and Van Velsor imply that the accuracy of this assessment should be adequate enough as a basis to develop a plan of action. The emphasis, they argue, is anyways more on forward movement than it is on the assessment of the present order. *Challenge* occurs by assisting the executive in identifying a focal question, a dilemma that can't be solved in light of current ways of thinking; this step is intended to bring to awareness the limitation of the current logic in a way that is most relevant to the individual. *Support* is the commitment by the coaches to sustain the executive throughout the at times uncomfortable process of transformation. A salient point raised by Drath and Van Velsor is that it is crucial that the coach understands the level of complexity at which the executives operate and the level of complexity towards which they are going. In other words, coaching from the CD perspective is effective only if the coaches are themselves embarked on a journey of personal development and have reached past the mark of post-conventional logics. The reported results of the CCL Coaching Framework are in line with what could be predicted from a CD perspective: behavior change, greater self-awareness, learning agility and personal and professional development. In the evaluation of Drath and Van Velsor, the features of the framework that are most beneficial to executives are: the support of someone who can relate to the challenge with whom to talk about experiences and issues (the confirmation function) and engaging in the process of forming and using the focal question (the contradiction function). However,

there is no scientific proof of either the role served by the features of this framework or its outcomes.

Bartunek et al. (1982). A study published in ref by Bartunek et al. (in McCauley et al. 2006) on a course on framing complex managerial problems. After the course, participants were found to frame problems in a qualitatively different way. In this older study, no assessment of developmental order or growth was made.

Consulting. Kegan and Lahey are the founders of the consulting firm MINDS AT WORK™ (<http://www.mindsatwork.com/>). Consultants provide diagnostic and change management advising services, based on the CD approach, to organizations in the US and in Europe. Workshops for senior management and change consultants and a virtual learning community are also available through MINDS AT WORK™. Training on the SOI assessment tool is available through the Harvard School of Education. Torbert has licensed the use of his framework to Harthill (<http://www.harthill.co.uk/>) a consulting firm that provides services aimed at building capability of individuals, teams and organizations. The leadership development portion is based on assessment, coaching and mentoring and training workshops all based on Torbert's tools. Training on the LDP assessment tool is also available via Harthill.

There is no trail of evidence on the initiatives delivered by the consulting enterprises that employ either Kegan's or Torbert's approach

Harris and Kuhnert (2008). An empirical study published in 2008 by Harris and Kuhnert (Harris and Kuhnert, 2008). found that Kegan's developmental order predicted leadership effectiveness (360 feedback) in a range of leadership competencies, including those for visioning and change. This study is the first of its kind and was just found by the reviewer. It will be analyzed in details in the next steps of the inquiry.

IV. SYNTHESIS AND DISCUSSION

IV.A Synthesis

IV.A.1 On the method of the synthesis

The fields of leadership and leadership development both include a multitude of approaches, constructs and methods. Leadership development suffers from a lack of alignment between theory, application and empirical research. CD theory investigates, on multiple levels, the subjective, inter-subjective and objective domains of reality. The three fields share a focus on quintessentially social and interactive processes. Accumulation of evidence has proved a less than fit approach for the demanding task of gathering evidence in such highly variegated domains of inquiry. The need has been to make judgments “at the level of the inference and not the study” and draw useful inferences from “studies that supply multiple inferences on the basis of research strategies of diverse quality”, as described by Pawson (2004, p.33).

The inclusion of sources was guided by the systematic review protocol; the synthesis followed Pawson’s realist synthesis approach, aiming at connectivity of inferences (see Scoping Study chapter). In systematizing information along the process, the patterns emerging from the review of evidence were followed. In reviewing a single piece of work, this meant reflecting on *what* the piece was contributing, *how* and *why*. Asking *what* refers to identifying substantiated findings that may or may have not been the central aim of the study. Asking *how* involves reflection on the validity and significance of the contribution. The question of *why* involves searching an inferential connection between the single study and the rest of the evidence. The interrogatives that guided the thematic analysis of findings and this synthesis emerged by following this process.

The systematic literature review has provided with the raw material to answer both the review questions posed. In this synthesis, I first address the answers to review questions. Then, in the discussion section, I present a framework of the

process and context of leadership development: the framework is as a tool-in-progress for the navigation of the next steps of inquiry.

IV.A.2 Answer to systematic review question R1

The first review question revolved around constructive-developmental theory: more specifically, about gaining a better understanding of the process of constructive development in the different approaches used. The review has identified Kegan's and Torbert's as the approaches most relevant to leadership development. This dissertation has reviewed in detail the theoretical approach of both scholars, highlighting commonalities and differences. Moving from the common theoretical base of CD theory, Kegan has focused on adult constructive development, while Torbert has focused on the implications of adult constructive development for management. Key contributions by Kegan to this inquiry are the illumination of the deep processes of adult constructive development and of the functions served by context in adult development. On the other hand, Torbert has focused on the development of successive, qualitatively different managerial action logics and related leadership styles. Key contributions by Torbert to this inquiry are the main dimensions of the development of managerial action logics and the link between post-conventional logics and a transformational style of leadership. As important was the identification of action inquiry as part of the process of leadership development.

In relation to this inquiry, the strength of Kegan's method is the focus on the functions served by context in adult constructive development. A drawback is the weaker connection with the development of leadership. The strengths of Torbert's method include the link between managerial action logics and the expression of different leadership styles: from the CD angle, it is possible to highlight the general action logics that relate to the expression of a transformational style of leadership. A potential challenge of Torbert approach is the reliance on action inquiry: careful consideration on how to ensure an

adequate degree of confidence in the validity of findings would have to be a key ingredient in a study design involving action research.

Overall, in relation to this inquiry, a symmetry emerged in the strengths and weaknesses of the two approaches: while Kegan has illuminated the functions that may be served by leadership development initiatives (the context), Torbert has illuminated what individual process leadership development should host (the process). In the discussion section I propose a framework integrative of the points of strength of the two aspects.

IV.A.3 Answer to systematic review question R2

The studies included in the systematic review produced a pattern of investigation around three nodal issues in the inquiry:

- whether there is adult constructive development and important patterns in how it unfolds: the overall answer is yes. Successive, qualitatively different orders of fundamental meaning making processes exist and can be assessed reliably.
- whether adult constructive development has implications for leadership: the overall answer is yes. Studies observed relationships between constructive development and a host of different leadership dimensions. The result was to conclude that developmental order is related to different styles of decision-making, delegating, and influencing; also, to the effective engagement with different organizational processes (organizing versus strategizing or leading change).
- whether adult constructive development of post-conventional logics has implications for the development of a transformational style of leadership. Again, overall the answer is yes. The processes of transformational leadership found to be in connection with post-conventional logics are: change-orientation, inspirational effect, negotiation of shared understandings, collaborative inquiry and effective strategizing.

To the question of whether there have been applications of CD theory to leadership development initiatives, the systematic review answers positively; the applications, however, have been few and not consistent in method. The CD approach has been integrated in:

- The MBA curriculum at the Boston College Carroll School of Management. Action inquiry proved to have a significant relationship to the development of the post-conventional logics linked to a transformational style of leadership.
- The CCL's Coaching Framework. Results of this approach are reported promising by Drath and Van Velsor. However, no scholarly study exists around the applications of this framework.
- Bartunek et al.'s (1982) study on a course on framing managerial problems showed that after the course, participants were found to frame problems in a qualitatively different way. However, in this older study no assessment of developmental order was made.
- In the advising and training services offered by the consulting branches of Kegan and Torbert. There is no study on the impact of these initiatives on leadership development.
- An empirical study published in 2008 by Harris and Kuhnert (Harris and Kuhnert, 2008).

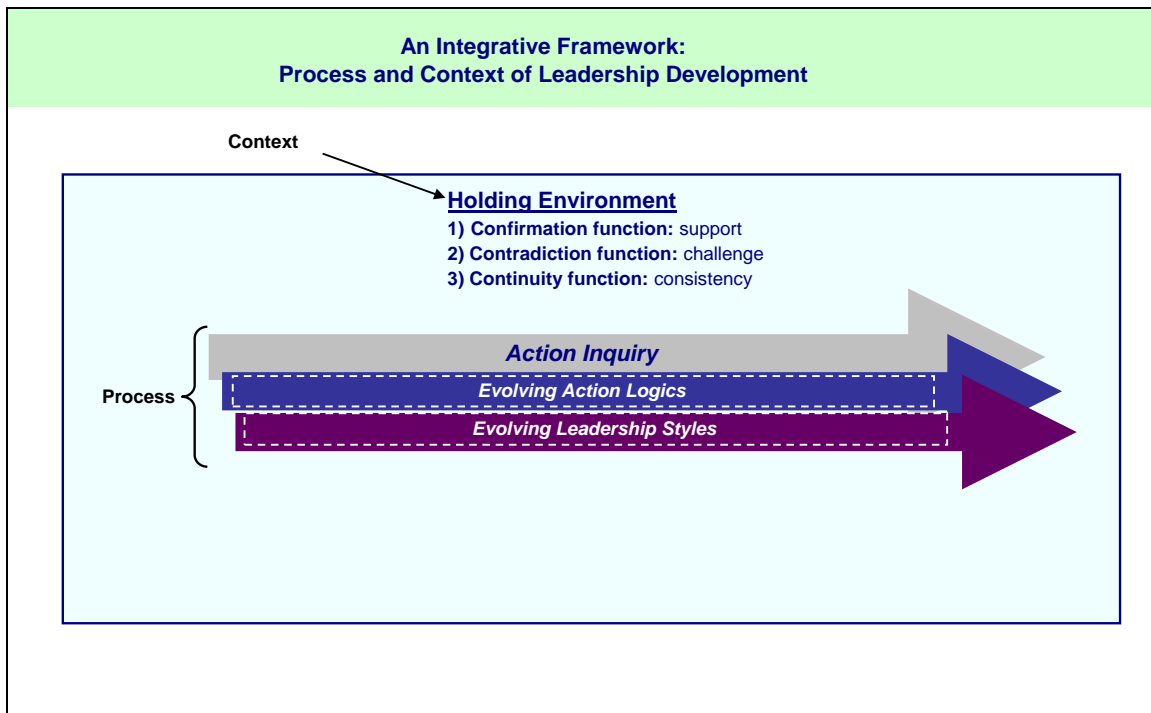
As stressed by McCauley et al. (2006, p.647) 'there is almost no research that examines how training, development or coaching programs impact participants' order of development'; in particular "there has been no research that examines the features of these interventions that support development" (p.642). The approach of CD theory has found empirical support and is reputed as promising to further the understanding of how features of leadership development initiatives may support or augment development (Allen 2008; McCauley et al. 2006; Mumford and Manley, in Murphy and Riggio 2003).

IV.B Discussion

IV.B.1 An integrative framework

This framework, considered as a work in progress, aims at incorporating the arguments and inferences, central to this inquiry, that have demonstrated to have evidential support. The purpose of the framework (Figure 23) is to help assessing what questions that remain unanswered around the subject of inquiry.

Figure 23: An Integrative Framework of the Process and Context of Leadership Development in the CD approach



The framework synthesizes the answers to review questions: it integrates relevant theoretical contributions within CD theory as well as those inferences around leadership development applications that have encountered empirical confirmation. In detail:

- The link between adult development and leadership development: the development of action logics underlies the development of different leadership styles.

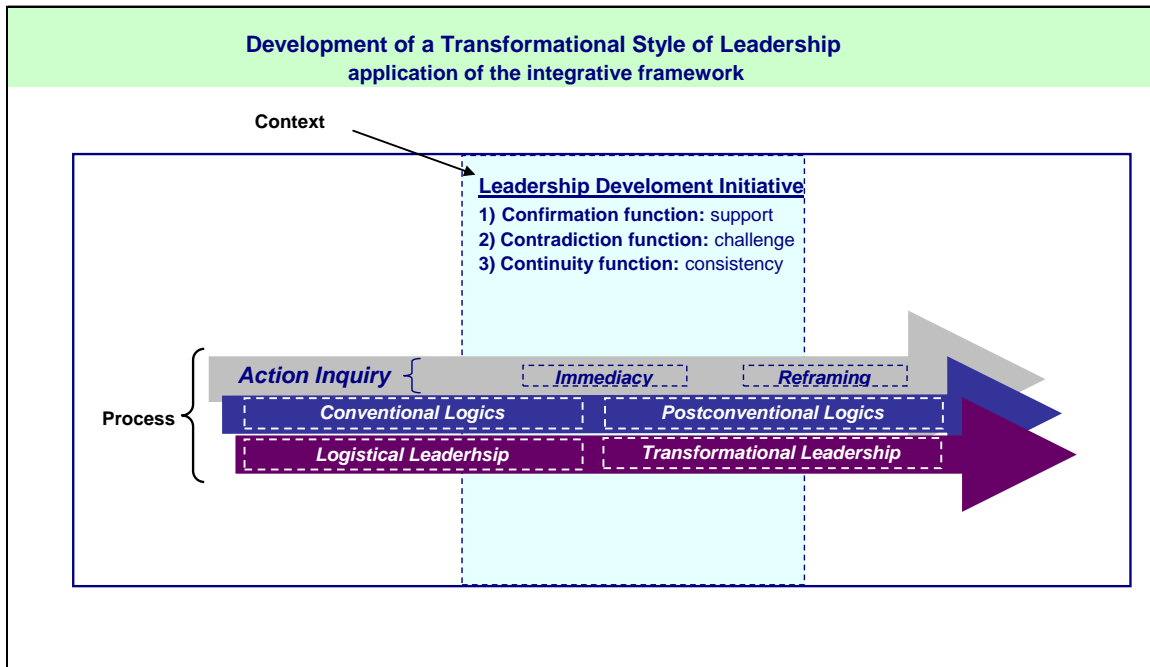
- The understanding that the context of leadership development is the holding environment (social setting) where the developmental process is embedded (Kegan 1994). Also, the understanding that context serves the three main functions of confirmation, contradiction and continuity.
- The understanding that the process of leadership development occurs with practice of action inquiry (Torbert 2004)

This framework, which brings together a large body of evidential information, remains an abstract tool. In the next section, I apply the framework to the process of development of a transformational style of leadership in the context of a leadership development initiative. As a result, I identify those questions that remain unanswered and that will guide further inquiry.

IV.B.2 The inquiry going forward: application of the framework

In figure 24, the integrative framework is tentatively applied to the process of development of a transformational style of leadership, in the context of a leadership development initiative.

Figure 24: Development of a Transformational Style of Leadership—Application of the Integrative Framework



Additional aspects captured in the application of the framework are:

- The link between the development of post-conventional logics and the development of a transformational style of leadership.
- The understanding that leadership development initiatives may serve as a context of leadership development. An implicit proposition is then that leadership development initiatives effectively support the development of successive leadership styles.
- The understanding that there are specific ways to carry out the functions of confirmation, contradiction and continuity that fit the needs of this particular transition.
- The understanding that the shift to post-conventional logics is significantly related to the increasingly autonomous practice of action inquiry (Torbert 2004).
- The understanding that the shift to post-conventional logics is supported by engaging, within action inquiry, in the practice of 'immediacy' identified by Torbert (2004). Also, that further development is supported by engaging, within action inquiry, in the practice of 'reframing' identified by Torbert (2004).

The interrogatives that arise from this application relate to context, process and methods.

Questions related to context:

- 1) Do leadership development initiatives designed with a CD approach effectively support the development successive leadership styles?
- 2) If so, do they actually do so by carrying out the three functions of confirmation, contradiction and continuity identified by Kegan?
- 3) If so, what are the specific ways to carry out these functions that are fit to the needs typical of the transition to post-conventional logics?

Questions related to process:

- 1) In the setting of executive leadership initiatives, does action inquiry significantly relate to the development of post-conventional logics?
- 2) In the setting of executive leadership initiatives, do the specific practices of 'immediacy' and 'reframing' assist in the shifts to and beyond post-conventional logics, respectively?

Questions related to design:

- 1) Are there executive leadership development initiatives that adhere closely to the approach of CD theory? Are they accessible?

Questions related to method:

- 1) Do the available assessment tools fit to the study of these aspects? How do the methods identified during the systematic review allow to integrate measures of leadership for the validation of the study?
- 2) Are there alternative (or integrative) methods that would support the inquiry?

Both sets of questions around context and process to date lay unanswered in the field of leadership development: none of the empirical studies reviewed was carried out in the settings of an executive leadership development initiative. There is some evidence of an affirmative answer to questions 1 and 2 based on the longitudinal studies of the MBA program at Carroll (Torbert, 2004). Torbert's

study could serve as a model to design a study on executive leadership initiatives. An in depth review of these two studies would allow to understand to what extent these questions have been investigated before. Also, it would contribute to the validity check of the framework developed in this synthesis.

The question related to design has only been partially answered during the review. Executive leadership development initiatives based on CD theory are available through Minds At Work and Harthill consulting. Also, through the executive Coaching Framework at the CCL. Going forward, the aim is to verify, through the channels identified during the review, whether there are other initiatives based on the CD approach; also to investigate about access. These channels include the CCL, the Harvard School of Education, The Boston College Carroll School of Management and the consulting firms Minds at work and Harthill.

Questions related to method were partially answered during the review: it is not clear what evaluation the LDP allows of dimensions of leadership. Also, though less cumbersome than the SOI, the LDP is also work intensive and requires preparation. More in-depth research on the LDP tool is needed to ascertain whether its use is conducive and feasible.

IV.B.3 Limitations

Limitations in the use of CD theory. The constructive developmental approach raises the argument of whether a researcher, as much as a facilitator of leadership development initiatives, is in a position to appreciate the level of complexity at which other people are organizing thoughts from. In other words, my current logic may limit my understanding of later logics. If I had to conduct a study on the transition from a relativistic to a post-conventional logic, but had not sufficiently developed a post-conventional logic myself, I would not be able to fully distinguish the difference between the two logics, let alone further shifts. On

the basis of self-reflection, I find that I can relate to aspects of the transition from conventional to relativistic logics and to some aspects of the transition from relativistic to post-conventional logics. In some cases, I can remember with precision both reasons of frustration and welcome moments of progress. I have no knowledge of where that places me in terms of assessment of constructive development. Both methods available, the SOI and the LDP, require the assessment of the trainee and include a protocol to ensure the quality of conclusions drawn from ratings. Further consideration of study designs that entail making sense of later logics calls for reflection on personal preparation and ways to cross check the validity of conclusion (for example cross-scoring with an experienced administrator).

A number of sources reflect over the ethical implications of using a CD approach. Kegan (1982) reminds of the importance of segregating personal beliefs about what could be the 'right' degree of development for others: no personal transformation of somebody else can be deemed necessary. Torbert's rationale for the use of terms 'action logics' and 'action inquiry' is partly to avoid any evaluative connotation of development (2004). In other words, successive orders of development are naturally more encompassing but never 'better' in a moral sense. Taylor and Marienau (1997) warn against making inter- and intra-individual comparisons; also, against drawing fast conclusions about non-growth. This is an important point: first, constructive development to a full order takes time and often several iterations. Second, periods of non-growth might or might not occur because an individual has opted out of growth: decompression phases are natural and needed to settle after a time of intense personal transformation (these are the so called 'temporizing' phase). Also, non-growth or even apparent regression may turn up in times of duress (Torbert 1987). Relevant to field research, Kegan and Lahey (2001) underscore how opening up about one's deep operating assumptions is in itself quite uncomfortable. Undoubtedly, approaching other people in a study on constructive development requires transparency, preparation and sensitiveness from the side of the researcher.

Limitations of the systematic review. A first limitation of this systematic review is imposed by the lack of a clear base definition of what are the process and context of leadership development. Leadership development itself is understood and put to practice in different ways within both the communities of scholars and practitioners. The framework presented here is a tentative, if novel, integration of ideas on the process and context of leadership development derived from CD theory.

A second limitation is due to the narrow focus. Theories other than the constructive developmental were not included. This is partly justified in virtue of the salience of both the constructive and developmental assumptions in matters of leadership development. Theories that lack either assumption don't seem to adequately support this inquiry. Kelly's personal construct theory, a constructive theory that does not focus on development, can serve as a first example. The theory is based on constructive alternativism: the idea that there are many possibilities in the way a person constructs reality. This approach is useful in exploring the whole range of polarities along which one constructs his or her leadership role at a point in time. It might also support the understanding of how extremes of given polarities can be replaced. The theory, however, puts a definite emphasis on the assessment of constructs presently in use: the lack of a developmental perspective hinders the exploration of how qualitatively different ranges of polarities may emerge. Also, it might hinder the study of the development of non-bipolar understandings. Wilber's model of integral development, a developmental theory not strictly focused on constructivism, can serve as a second example. Wilber describes the quadrants of integral, holistic development. This might be of application in studies aimed at understanding links between areas of development. Also, it might support the investigation of the relationship between holistic development and leadership, through "the analysis of individual cases of this leadership pattern and the collective analysis of these cases" (Pauchant 2005, p.211). To practitioners, Wilber's model suggests a design of leadership development initiatives spanning through all quadrants of integral development. However, without the constructive assumptions, the theory

tends to be removed from the subjective experience of development. Additionally, this theory has not yet developed a well-defined framework for the empirical study of integral development, integral leadership development or 'integral leadership'.

The systematic review has identified the work of CD theorists Kegan and Torbert as the most relevant to the processes of adult constructive development related to leadership development. Continued inquiry should nevertheless keep comparing this theoretical framework to alternative theories that will come in scope: in particular, to assess whether there are research methods alternative to those proposed by CD theory that could be as effective, possibly fitter and less costly.

A third limitation of this review arises from the small number of studies available. A number of these studies were based on doctoral research and possibly carried out with limited resources. Studies often included samples of small size. Generally, Torbert supports the strong correlation and high statistical significance (1 to 5%) resulting in his studies, independently of sample size. Torbert however argues that in observing these developmental processes, significance lies in the scholarly rigorous integration of a variety of methods.

IV.B.4 Learning points

Subject matter. One main learning point arises from first-person involvement with the vastness of the leadership field, the fragmentation of the leadership development field and the richness of psychology theories of constructive development—all at the same time. It has been valuable to identify salient dimensions along which to systematize the body of knowledge. Increased practice has been assisting me in forming clearer, more comprehensive pictures of the different topics and in systematizing own thoughts.

The Systematic Review Process. The three main points of learning on the process of systematic review revolved around its management as a project, quality assessment of the sources and data extraction. I find that I originally had an underdeveloped understanding of how to apply principles of project management to the less defined parts of the task. At a first time on a research based project of this size and depth, I found it hard to estimate the time that I would need for each phase. In addition, aspects defining of the structure of the project were only going to emerge after the start of the project (for example, the dimensions for the thematic analysis). Although skeptical that a plan of action could effectively assist in dealing with the more inherently uncertain aspects, I have engaged into making and following one since the first day. Rather than just a way to assess progress, a project plan has served me as a road map: I was able to maintain a view of the unfolding product. What I find now is that preparing a project plan doesn't have to turn a project into a rigid structure: I became more comfortable in iterating more frequently through planning phases, whether to revisit the master plan or define a specific section.

I used to be more hesitant in applying stringent quality inclusion/exclusion criteria. I think originally I didn't want to miss important connections. I found that to focus on the best quality sources is key to an accurate, comprehensive and sound understanding. I have been practicing prioritizing relevant literature based on quality: moving from this base, it is then also easier to spot and evaluate smaller but original connections in other sources.

During the systematic review process, I've learnt a lot more about my own patterns in referring back to data previously extracted. I've always believed in investing in a system to organize and retrieve information at the earliest stage possible of a new task. This time, it was particularly challenging to predict exactly what piece of information I was going to need later and where it would be easiest to locate at a later time. I have been refining my original data extraction system to make it more supportive of my own work. Overall I was satisfied to find that, during the systematic review, I have been addressing developmental objectives that I had identified for myself earlier in the year (project management, academic

writing and systematic use of the sources). I'm confident in the benefits of continued, self-reflexive practice for the ongoing development of skills essential to scientific research.

APPENDIX I – JOURNAL ARTICLES INCLUDED IN THE SYSTEMATIC REVIEW

Figure 25a: Journal Articles Included in the Systematic Review

Year	Authors	Country	Journal Rating	Publication	Title	Nature of Work	Sourcing Strategy
1	2007 Bartone P.T., Scott A.S., Forsythe G.B., Lewis P., Bullis R.C.	USA	4*	The Leadership Quarterly 18 (2007) 490-504	Psychosocial development and leader performance of military officer cadets	Empirical	Database Search
2	2006 McCauley C.D., Drath W.H., Paulus C.J., O'Connor P.M.G., Baker B.A.	USA	4*	The Leadership Quarterly 17 (2006) 634-653	The use of constructive-developmental theory to advance the understanding of leadership	Theoretical	Database Search
3	2006 Strang (in McCauley et al. 2006)	USA	review	Unpublished master's thesis, University of Georgia Athens	Unpublished master's thesis, University of Georgia Athens	Empirical	review
4	2005 Lewis P., Forsythe G.B., Sweeney P., Bartone P., Bullis C., Snook S.	USA	n.a.	Journal of College Student Development, Vol 46 No 4	Identity Development During the College Years: Findings From the West Point Longitudinal Study	Empirical	Database Search
5	2005 Rooke D., Torbert W.R.	USA	4*	Harvard Business Review	Seven Transformations of Leadership review	Theoretical	Author Search
6	2005 Harris (in McCauley et al. 2006)	USA	review	Unpublished master's thesis, University of Georgia Athens	Unpublished master's thesis, University of Georgia Athens	Empirical	review
7	2004 Hasegawa (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	Dissertations Abstracts International review	Empirical	review
8	1991 Argyris	USA	4*	Harvard Business Review	Teaching Smart People how to Learn	Theoretical	Cross-referencing
9	2001 Kegan R., Lahey L.L.	USA	4*	Harvard Business Review	The Real Reason People Won't Change	Theoretical	Cross-referencing
10	2001 Day	USA	4*	The Leadership Quarterly Volume 11, Issue 4, Winter 2000, Pages 581-613	Leadership development: A review in context	Theoretical	Author Search
11	1999 Torbert W.	USA	3*	Management Learning	The Distinctive Questions Developmental Action Inquiry Asks.	Theoretical	Cross-referencing
12	1998 Eigel (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	Dissertations Abstracts International review	Empirical	review
13	1997 Taylor K., Marienau C.	USA	n.a.	Assessment & Evaluation in Higher Education, Vol. 22 No. 2	Constructive-development Theory as a Framework for Assessment in Higher Education	Theoretical	Cross-referencing
14	1997 Steeves (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	Dissertations Abstracts International review	Empirical	review
15	1996 Lowe, Kroek and Sivasubramaniam, 1996, in McCauley et. Al 2006).	USA	review	The Leadership Quarterly	The Leadership Quarterly review	Empirical	review
16	1995 Spillet (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	Dissertations Abstracts International review	Empirical	review

JOURNAL ARTICLES INCLUDED IN THE SYSTEMATIC REVIEW

n.a. = not available

review = included in a scholarly review, published in a journal of rating 3* or higher

Figure 25b: Journal Articles Included in the Systematic Review (Continued)

Year	Authors	Country	Journal Rating	Publication	Title	Nature of Work	Sourcing Strategy
17	1995 Mehlretter (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	review	Empirical	review
18	1994 Gammons (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	review	Empirical	review
19	1993 Whethersby (in McCauley et al. 2006)	USA	review	Development in the workplace	review	Empirical	review
20	1991 Fisher and Torbert (in Torbert 2004 and McCauley et al. 2006)	USA	review	Research in Organizational Change and Development	review	Empirical	Database Search
21	1990 Kuhnert K.W., Russell C.J.	USA	4*	Journal of Management; Sept 1990; 16, 3;	Using Constructive Developmental Theory and Biodata to Bridge the Gap Between Personnel Selection and Leadership	Theoretical	Database Search
22	1990 Bushe & Gibbs (in McCauley et al. 2006)	USA	review	Journal of Applied Behavioral Science	review	Empirical	review
23	1988 Hirsch (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	review	Empirical	review
24	1987 Kuhnert K.W., Lewis P.	USA	4*	Academy of Management. The Academy of Management Review; 12,4;	Transactional and Transformational Leadership: A Constructive/Developmental Analysis	Theoretical	Database Search
25	1987 Fisher D., Merron K., Torbert W.	USA	3*	Group and Organization Studies	Human Development and Managerial Effectiveness	Empirical	Cross-referencing
26	1982 Bartunek, Gordon, Whethersby	USA	review	Academy of Management Review	review	Empirical	review
27	1980 Kegan R.	USA	n.a.	The Personnel and Guidance Journal	Making Meaning: The Constructive-Developmental Approach to Persons and Practice	Theoretical	Database Search
28	1980 Smith (in McCauley et al. 2006)	USA	review	Dissertations Abstracts International	review	Empirical	review
29	2005 Pauchant	USA	2*	Journal of Organizational Change Management Vol. 18 No. 3, 2005 pp. 211-229	Integral leadership: a research proposal.	Theoretical	Database Search

APPENDIX II– BOOKS AND BOOK CHAPTERS INCLUDED IN THE SYSTEMATIC REVIEW

Figure 26: Books and Book Chapters Included in the Systematic Review (Continued)

Year	Authors	Country	Publication	Title	Nature of Work	
1	2006	Drath W., Van Velsor E.	USA	Constructive-development Coaching. In S. Ting & P. Scisco (Eds.), The CCL Handbook of coaching: A guide for the leader coach (pp.312-343)	Theoretical	Cross-referencing
2	2004	Torbert	USA	Action Inquiry	Theoretical	Author Search
3	2003	Murphy and Riggio	USA	The Future of Leadership Development	Theoretical	Cross-referencing
4	1994	Kegan R.	USA	In over our heads. The mental demands of modern life.	Theoretical	Author Search
5	1991	Mezirow (in Schwandt 2005)	USA	review	Theoretical	review
6	1991	Kelly G.A.	USA	The Psychology of Personal Constructs: Clinical Diagnosis and Psychotherapy. Routledge.	Theoretical	Author Search
7	1988	Lahey et al. 1988 (in McCauley et al. 2006; Kegan1994)	USA	A guide to the subject-object interview: Its administration and interpretation	Theoretical / Empirical	review
8	1987	Torbert	USA	Managing the corporate dream	Theoretical / Empirical	Author Search
9	1982	Kegan R.	USA	The evolving self: problem and process in human development	Theoretical / Empirical	Author Search
10	1992	Lewis and Jacobs (in Lewis et al. 2005)	USA	in Strategic Leadership: a multi-organizational perspective (Ed: Phillips & Hunt)	Theoretical / Empirical	Empirical
11	1992	Baxter and Magolda (in Lewis et al. 2005)	USA	Knowing and reasoning in college: gender-related patterns in students' intellectual development.	Theoretical / Empirical	Empirical
12	1994	King and Kitchener (in Lewis et al. 2005)	USA	Developing reflective judgment: understanding and promoting intellectual growth and critical thinking in adolescents and adults	Theoretical / Empirical	review
13	2004	Van Velsor and Drath (in McCauley et al. 2006)	USA	CCL Handbook of Leadership Development	Theoretical	review

V. REFERENCES

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