A behavioral approach to emotional intelligence

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Competencies as a behavioral approach to emotional intelligence

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Abstract

Purpose – Development of competencies needed to be effective managers and leaders requires research and theory that can drive future scholarship and application. This introductory essay to this special issue of *JMD* seeks to focus on competencies in organizations in Europe and a broader conceptualization of emotional intelligence.

Design/methodology/approach – Competencies are defined and an overview is provided for the papers that will follow with original research on competencies, their link to performance in various occupations, and their development.

Findings – Emotional, social and cognitive intelligence competencies predict effectiveness in professional, management and leadership roles in many sectors of society. It addition, these competencies can be developed in adults.

Research limitations/implications – As an introductory essay, the paper lays the foundation for the following papers in this issue.

Practical implications – Competencies needed in order to be effective can be developed.

Originality/value – Despite widespread application, there are few published studies of the empirical link between competencies and performance. There are even fewer published studies showing that they can be developed. The special issue will add to both literatures. There is widespread confusion as to the definition of emotional intelligence; the paper offers some clarification.

Keywords Emotional intelligence, Management development, Assessment

Paper type Conceptual paper

The drive for effectiveness in organizations fuels the quest for understanding the talent and capability of the people that create or determine effectiveness. Of the many ways to address this need, competency research and applications arrived in 1970 and spread. It built upon earlier work on skills, abilities, and cognitive intelligence (Campbell *et al.*, 1970) and preceded the work on emotional and social intelligence (Salovey and Mayer, 1990; Goleman, 1998, 2006). Currently, the emotional and social intelligence competencies account for a substantial and important amount of the variance in predicting or understanding performance in competency studies (Boyatzis, 2008).

This special issue of the *Journal of Management Development* (i.e. *JMD*) is intended to add to the research literature on the link between competencies and performance, as well as the literature on the development of competencies. Last year, a special issue of *JMD* appeared in February, 2008, reporting a series of original, empirical studies with the same aim. But all of those studies occurred in the US. In an attempt to examine the multicultural context of competencies, this issue is a collection of original studies from organizations in Europe. In this introductory article, the theoretical groundwork for understanding competencies and competencies as a behavioral approach to emotional intelligence (now referred to as emotional and social intelligence) will be made.

Competencies and performance

The concept of competency-based human resources has gone from a new technique to a common practice in the 36 years since David McClelland (1973) first proposed them as a critical differentiator of performance in publication. Today, almost every organization with more than 300 people uses some form of competency-based human resource management. Major consulting companies, such as The Hay Group, Development Dimensions International, and Personnel Decisions Incorporated and thousands of small consulting firms and independent consultants have become worldwide practitioners of competency assessment and development.

Competency research emanated from universities, in particular Harvard and later Boston University (with David McClelland), Columbia (with Warner Burke), University of Minnesota (with Marv Dunnette), Henley Management College (with Victor Dulewicz), and Case Western Reserve (with Richard Boyatzis, David Kolb, Don Wolfe, Diana Bilimoria, and Melvin Smith). Even with these university sources of research, for the most part, the academic and applied research literature has trailed application. This has resulted in continued skepticism on the part of many academics and some professionals, and less guidance to practitioners from on-going research than is helpful. Some of this is due to the observation that many of the competency validation studies have been done by consultants who have little patience for the laborious process of documenting and getting the results published even though the validation studies were done with great rigor.

What is a competency?

A competency is defined as a capability or ability (Boyatzis, 1982, 2008; McClelland, 1973, 1985). It is a set of related but different sets of behavior organized around an underlying construct called the "intent." The behaviors are alternate manifestations of the intent, as appropriate in various situations or times.

For example, listening to someone and asking him or her questions are several behaviors. A person can demonstrate these behaviors for multiple reasons or to various intended ends. A person can ask questions and listen to someone to ingratiate him or herself or to appear interested, thereby gaining standing in the other person's view. Or a person can ask questions and listen to someone because he or she is interested in understanding this other person, his or her priorities, or thoughts in a situation. The latter we would call a demonstration of empathy. The underlying intent is to understand the person. Meanwhile, the former underlying reason for the questions is to gain standing or impact in the person's view, elements of what we may call demonstration of influence. Similarly, the underlying intent of a more subtle competency like emotional self-awareness is self-insight and self-understanding.

This construction of competencies as requiring both action (i.e. a set of alternate behaviors varying according to the situation) and intent called for measurement methods that allowed for assessment of both the presence of the behavior and inference of the intent. In the first 20 years of this research, the competencies were documented from behavioral work samples, videotapes of simulations, or direct observation.

To identify, define and clarify each competency, an inductive method was used. Work performance or effectiveness criteria were developed for any job studies. A sample of outstanding or superior performers was identified. Another sample of "average" or "poor" performers was also identified from the remaining population depending on the objectives of the study. The criterion sampling was crucial for this inductive method to work. While work output data was best, like sales, profits, waste reduction, or new products launched, often jobs need something else.

For many management and staff jobs, nominations were developed to add to any output measures available. Nominations were collected from multiple perspectives: from boss's (i.e. people in jobs one or two levels about the target job being studied); from peers which included the people who would be in the eventual sample; and subordinates. Nominations have been shown to be better predictors of performance than ratings or performance appraisal results (Luthans *et al.*, 1988). Typical, three or more sources of effectiveness are collected to obtain a consensual determination of distinctively effective people. The nomination forms are quite simple. A the top of a page is a statement like, "List the names of any marketing manager in our company who you see as outstanding in their performance. If you believe no one is outstanding, then leave the sheet blank, but please return it in the self-addressed stamped envelope." During the era of paper (pre-email and internet data collection), the forms were color coded so that the returned, anonymous forms could be identified as to source.

In most competency studies, the sample of "outstanding" or "superior" performers is developed people are identified by multiple individuals from each of multiple sources of nominations and output data or morale climate scores (Boyatzis, 1982, 2008; Spencer and Spencer, 1993). They are typically the top 5-7 percent of the population. For an extreme case design, the contrasting sample of "average" performers are a random sample selected from all of those job incumbents who have received no nominations from any source and are on the bottom 20 percent percentile of any output measure or climate moral scores. This means that they did not even nominate themselves on the peer forms. This sample was often about 50 percent of the population. The remaining incumbents often had some nominations from some sources but not others and were not included in the extreme case samples. In other competency validation studies, the output and/or nomination criteria were collected and analyzed against competency data for everyone with continuous statistics. This was easier once 360, informant-based surveys were used rather than the behavioral event interview, direct observation, or videotapes of simulations.

To collect the behavioral data, a modification of the critical incident interview (Flanagan, 1954) was adapted using the inquiry sequence from the Thematic Apperception Test and the focus on specific events in one's life from the biodata method (Dailey, 1971). The method, called the behavioral event interview (BEI), is a semi-structured interview in which the respondent is asked to recall recent, specific events in which he or she felt effective (Boyatzis, 1982; Spencer and Spencer, 1993).

Once the person recalls an event, he or she is guided through telling the story of the event with a basic set of four questions:

(1) What led up to the situation?

(2) Who said or did what to whom?

(3) What did you say or do next? What were you thinking and feeling?

(4) What was the outcome or result of the event?

The contention that these interviews were getting an accurate recording of the person's behavior (and internal thoughts while doing it), came from multiple sources. First, the critical incident methodology is well established to record behavioral details of events. Second, autobiographical research (Rubin, 1986) has shown the accuracy of recall of events is increased dramatically when the events are: recent; have a high valence or saliency to the person; and the recall involves specific actions. Third, by keeping the events recent and of high saliency (i.e. effective or ineffective), and to solicit action details by the interview protocol were believed to maximize accuracy. The interviewers were trained with repeated practice, supervision and review of audiotapes. They were trained to ask for behavioral details and occasional ask what the person was thinking or feeling. All of these conditions were incorporated into the BEI.
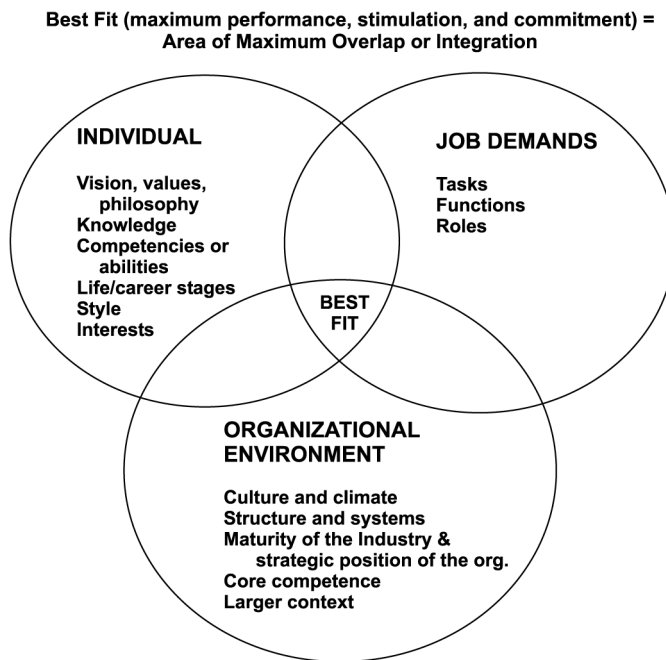
The responses are audio taped and transcribed and interpreted using a thematic analysis process (Boyatzis, 1998). Thematic analysis is a process for "coding" raw, qualitative information, whether in written, video or audio form. Through the use of a "codebook" articulating specific themes and how to identify them, the researcher is able to convert open-ended responses or unstructured responses and behavior into a set of quantified variables for analysis. The method has been used in numerous studies showing predictive validity of the competencies demonstrated by the person during the events as coded from the interviews (Boyatzis, 1982; Spencer and Spencer, 1993; McClelland, 1998).

Later, informant assessment through 360 or assessment center and simulations coded by reliable "experts" are essential. The articles in this special issue will show results using both interviews and 360 informant surveys, both extreme case and continuous variation validation studies.

Because the competencies are derived from performance inductively, they reflected effective job performance. Since they were identified and articulated in terms of the actions and intent, they are a behavioral approach to a person's talent.

The anchor for understanding which behaviors and which intent is relevant in a situation emerges from predicting effectiveness. The construction of the specific competency is a matter of relating different behaviors that are considered alternate manifestations of the same underlying construct. But they are organized primarily or more accurately initially, by the similarity of the consequence of the use of these behaviors in social or work settings.

A theory of performance is the basis for the concept of competency. The theory used in this approach is a basic contingency theory, as shown in Figure 1. Maximum performance is believed to occur when the person's capability or talent is consistent with the needs of the job demands and the organizational environment (Boyatzis, 1982). The person's talent is described by his or her: values, vision, and personal philosophy; knowledge; competencies; life and career stage; interests; and style. Job demands can be

Best Fit (maximum performance, stimulation, and commitment) = Area of Maximum Overlap or Integration

INDIVIDUAL

Vision, values, philosophy
Knowledge
Competencies or abilities
Life/career stages
Style
Interests

JOB DEMANDS

Tasks
Functions
Roles

BEST FIT

ORGANIZATIONAL ENVIRONMENT

Culture and climate
Structure and systems
Maturity of the Industry & strategic position of the org.
Core competence
Larger context

Source: Boyatzis (1982, 2008)

Figure 1.
Theory of action and job performance

described by the role responsibilities and tasks needed to be performed. Aspects of the organizational environment that are predicted to have important impact on the demonstration of competencies and/or the design of the jobs an roles include: culture and climate; structure and systems; maturity of the industry and strategic positioning within it; and aspects of the economic, political, social, environmental, and religious milieu surrounding the organization. The four of the five other articles in this special issue are competency validation studies in four different types of professional occupations.

Research published over the last 30 years or so shows us that outstanding leaders, managers, advanced professionals and people in key jobs, from sales to bank tellers, appear to require three clusters of behavioral habits as threshold abilities and three clusters of competencies as distinguishing outstanding performance. The threshold clusters of competencies are:

(1) expertise and experience;

(2) knowledge (i.e. declarative, procedural, functional and meta-cognitive); and

(3) an assortment of basic cognitive competencies, such as memory and deductive reasoning.

There are three clusters of competencies that differentiate outstanding from average performers in many countries of the world (Bray *et al.*, 1974; Boyatzis, 1982; Kotter, 1982; Thornton and Byham, 1982; Luthans *et al.*, 1988; Howard and Bray, 1988; Campbell *et al.*, 1970; Spencer and Spencer, 1993; Goleman, 1998; Goleman *et al.*, 2002; Rosier, 1994;

Boyatzis, 2008; Hopkins and Bilimoria, 2008; Koman and Wolff, 2008; Dreyfus, 2008; Williams, 2008; Sternberg, 1996; and the other papers in this issue). They are:

(1) *Cognitive competencies*, such as systems thinking and pattern recognition.

(2) *Emotional intelligence competencies*, including self-awareness and self-management competencies, such as emotional self-awareness and emotional self-control.

(3) *Social intelligence competencies*, including social awareness and relationship management competencies, such as empathy and teamwork.

Competencies can be considered to be a behavioral approach to emotional, social, and cognitive intelligence. They are defined in the list below, as used in the ESCI and ESCI-U. To understand this, their empirical development must be understood in greater detail (Boyatzis and Goleman, 1996; Boyatzis *et al.*, 2001, 2007):

(1) *Emotional intelligence competencies*:

- *Self-awareness* cluster concerns knowing one's internal states, preferences, resources, and intuitions. The self-awareness cluster contains one competency:

  – Emotional self-awareness: recognizing one's emotions and their effects.

- *Self-management* cluster refers to managing one's internal states, impulses, and resources. The self-management cluster contains four competencies:

  – *Emotional self-control*: keeping disruptive emotions and impulses in check.

  – *Adaptability*: flexibility in handling change.

  – *Achievement orientation*: striving to improve or meeting a standard of excellence.

  – *Positive outlook*: seeing the positive aspects of things and the future.

(2) *Social intelligence competencies*:

- *Social awareness* cluster refers to how people handle relationships and awareness of others' feelings, needs, and concerns. The social awareness cluster contains two competencies:

  – *Empathy*: sensing others' feelings and perspectives, and taking an active interest in their concerns.

  – *Organizational awareness*: reading a group's emotional currents and power relationships.

- *Relationship management* cluster concerns the skill or adeptness at inducing desirable responses in others. The cluster contains five competencies:

  – *Coach and mentor*: sensing others' development needs and bolstering their abilities.

  – *Inspirational leadership*: inspiring and guiding individuals and groups.

  – *Influence*: wielding effective tactics for persuasion.

  – *Conflict management*: negotiating and resolving disagreements.

  – *Teamwork*: working with others toward shared goals. Creating group synergy in pursuing collective goals.

(3) *Cognitive intelligence competencies* (in the ESCI – University version only):

- • *Systems thinking*: perceiving multiple causal relationships in understanding phenomena or events.

- • *Pattern recognition*: perceiving themes or patterns in seemingly random items, events, or phenomena.

Competencies as behavioral manifestations of emotional intelligence

Emotional intelligence and social intelligence (i.e. EI and SI) are convenient phrases with which to focus attention on the underlying emotional and social components of human talent. While the earliest psychologist to explore the related concept of "social intelligence" (Thorndike in the 1920s and 1930s, cf. Goleman, 1995, 2006) offered the idea as a single concept, more recent psychologists have appreciated its complexity and described it in terms of multiple capabilities (Bar-On, 1992, 1997; Goleman, 1998; Saarni, 1988). Sharma (2008) reviews the history beginning with Spinoza and other philosophers before getting to Thorndike. Gardner (1983) conceptualized this arena as constituting intrapersonal and interpersonal intelligence – two of the seven intelligences. Salovey and Mayer (1990) first used the expression "emotional intelligence" and described it in terms of four domains: perceiving, using, understanding and managing emotions. Other conceptualizations have used labels such as "practical intelligence" and "successful intelligence" (Sternberg, 1996), which often blend the capabilities described by other psychologists with cognitive abilities and anchor the concepts around the consequence of the person's behavior, notably success or effectiveness. The major themes of criticism of the EI concept is found in Matthews *et al.* (2002), but they often confused the theoretical distinctions and the measurement issues.

The major theories and measures of EI from the literature are shown in Table I, in a comparison extending the work of Fernández-Berrocal and Extremera (2006). They have been organized around three conceptual/methodological themes: EI ability measures and models; EI behavior methods and models; and self-perception methods and models.

Mayer *et al.*'s (1999) three standards for "an intelligence" are:

(1) It should reflect a "mental performance rather than preferred ways of behaving" (pp. 269-270).

(2) Tests of it should show positive correlation with other forms of intelligence.

(3) The measures should increase with experience and age.

Different interpretations of "intelligence" are offered in the literature. For example, Petrides and Furnham proposed difference between trait and ability EI (see Guillen *et al.*, n.d.): Trait EI is closer to the personality realm. Ability EI new realm. Boyatzis and Sala (2004) claimed that to be classified as an "intelligence," the concept should be:

- • Behaviorally observable.

- • Related to biological and in particular neural-endocrine functioning. That is, each cluster should be differentiated as to the type of neural circuitry and endocrine system involved.

- • Related to life and job outcomes.

Theoretical basis	Authors	Measurement distinctions
Ability	Mayer, Solavey and Caruso	MSCEIT – direct performance assessment of emotional processing, some scenarios testing; confusion on scoring between consensus and expert scoring models (Mayer *et al.*, 1999; Salovey and Mayer, 1997)
	Schutte *et al.*	Self-report measure based on Mayer, Salovey, and Caruso model (Schutte *et al.*, 1998)
Behavioral	Boyatzis and Goleman	ESCI-360, functional approach inductively derived from effective performance, called competencies (more outcome-oriented and realistic in real settings) (Boyatzis and Goleman, 1996; Wolff, 2005, 2008)
	Bar-On	EQ-i: 360, although originally a self-report, the 360 was introduced in 1997 (see placement later in this table) (Bar-On, 1997)
	Dulewicz *et al.*	EIQ, a 360 of competencies (Dulewicz *et al.*, 2003)
	Bradbury	EQA, a 360 skill assessment modeled after Goleman and Boyatzis model (Bradbury and Su, 2006)
Internal (self) perception	Bar-On	EQ-i, originally a self-report, internally process-driven model (more psychological than others), but now more behavioral in its 360 form (Bar-On, 1997)
	Schutte *et al.*	Self-assessment based on Mayer-Salovey-Caruso model (Schutte *et al.*, 1998)
	Wong and Law	WLEIS, a self-assessment based on the MSCEIT model (Law *et al.*, 2004)
	Petrides and Furnham	TEIQue, a self-assessment of trait EI based on a content analysis of major models (Petrides and Furnham, 2000, 2001, 2003)

Table I.
Comparison of major theories or measures of emotional intelligence

- Sufficiently different from other personality constructs that the concept adds value to understanding the human personality and behavior.
- The measures of the concept, as a psychological construct, should satisfy the basic criteria for a sound measure, that is show convergent and discriminant validity (Campbell and Fiske, 1959).

The Mayer, Caruso, and Salovey criterion #3 will be related to our third, fourth, and fifth criteria somewhat. But their first and second criteria claim that because EI is an "intelligence," it should correlate with measures of cognitive intelligence.

As a theory of emotional intelligence, we believe that there should be a link to neural (or possibly neuro-endocrine) functioning. If the theory claims that there are multiple components of this emotional intelligence, then these different components should have different neuro-endocrine pathways. This first proposed criteria is more specific than the Mayer *et al.* (1999) first and second criteria. The construct should actually be able to predict neural and endocrine (i.e. hormonal) patterns within the individual. Regarding the rationale for including criterion #2 (i.e. job and life outcomes), the American Psychological Association's Task Force on Intelligence (American

Psychological Association Public Affairs Office, 1997) reported that predicting real life outcomes is an important part of the standard against which we should judge an intelligence. It then went on to add that there should be a consensus within a field as to the definition. Although the consensus is lacking in the field regarding emotional intelligence at this time, the link between EI and SI competencies and real life outcomes is in fact testable.

While Mayer *et al.* (1999) seem to discard patterns of behavior as irrelevant to their concept of EI, this approach contends that EI and SI should predict behavioral patterns in life and work, as well as the consequences of these patterns in the form of life and work outcomes. This seems a more relevant test of the concept than merely showing a link to experience and age (i.e. as Mayer *et al.*'s (1999) third criterion).

The competency and talent stream of research has focused on explaining and predicting effectiveness in various occupations, often with a primary emphasis on managers and leaders (McClelland, 1973; Bray *et al.*, 1974; Boyatzis, 1982; Luthans *et al.*, 1988; Kotter, 1982; Thornton and Byham, 1982; Spencer and Spencer, 1993). As has been explained earlier in this article, in this competency approach, specific capabilities were identified and validated against effectiveness measures, or, often, inductively discovered and then articulated as competencies.

There may be reasons to label the behavioral approach to EI/SI as something other than an "ingtelligence." For example, they could be called competencies wihtout the additional descriptor. Sternberg (1997) claimed that, "Intelligence comprises the mental abilities necessary for adaptation to, as well as shaping and selection of, any environmental context" (p. 1030). He goes on to claim that intelligence serves two purposes, "external correspondence and internal coherence" (p. 1030). It is precisely the "external," direct consequence to actions in life and work that establishes the competencies as forms of intelligence, whether cognitive, emotional, or social.

An integrated concept of emotional, social, and cognitive intelligence competencies offers more than a convenient framework for describing human dispositions (Boyatzis and Sala, 2004). It offers a theoretical structure for the organization of personality and linking it to a theory of action and job performance. Goleman (1998) defined an "emotional competence" as a "learned capability based on emotional intelligence which results in outstanding performance at work." In other words, if a competency is an "underlying characteristic of the person that leads to or causes effective or superior performance" (Boyatzis, 1982), then building on McClelland's (1973) earlier argument about the limits of traditional views of intelligence:

- an *emotional, intelligence competency* is an ability to recognize, understand, and use emotional information about oneself that leads to or causes effective or superior performance;
- a *social intelligence competency* is the ability to recognize, understand and use emotional information about others that leads to or causes effective or superior performance; and
- a *cognitive intelligence competency* is an ability to think or analyze information and situations that leads to or causes effective or superior performance.

If defined as a single construct, the tendency to believe that more effective people have the vital ingredients for success invites the attribution of a halo effect. For example, person A is effective, therefore she has all of the right stuff, such as brains, savvy, and

style. Like the issue of finding the best "focal point" with which to look at something, the dilemma of finding the best level of detail in defining constructs with which to build a personality theory may ultimately be an issue of which focal point is chosen. The separate competencies, like the clusters, are, we believe, the most helpful focal point for description and study of performance.

The articulation of one overall emotional or social intelligence might be deceptive and suggest a close association with cognitive capability (i.e. traditionally defined "intelligence" or what psychologists often call "g" referring to general cognitive ability) (Davies *et al.*, 1998; Ackerman and Heggestad, 1997). The latter would not only be confusing, but would additionally raise the question as to what one is calling emotional and social intelligence and whether it is nothing more than an element of previously defined intelligence or cognitive ability.

The Emotional Competency Inventory, version 2 (ECI-2) (i.e. the forerunner to the current ESCI) and the closely related university version (ECI-U) showed desired levels of convergent validity in confirmatory factor analyses for both the theoretical clusters (Goleman *et al.*, 2002; Wolff, 2005) and empirical clusters (Boyatzis and Sala, 2004) in studies by Battista (2005) as well as Battista-Foguet *et al.* (n.d.). In addition, a wide variety of validation studies showed strong and consistent validity in predicting or explaining life and job outcomes (Boyatzis and Sala, 2004; Wolff, 2005). This helps to establish this behavioral, competency approach to EI and SI as satisfying the second and fourth criteria cited earlier in this chapter.

The latest version of the ESCI attempts to address the difference between coded behavior from behavioral event interviews and informant based 360 surveys. Construction of the ESCI (i.e. the informant, 360 survey of behavior) dropped the inclusion of all behavioral manifestations found in the earlier indicative validation studies. Some of the items are reflective of the competency, and some are formative, or as they were earlier called, alternate manifestations. To address the lack of context from the 360 informant (that the coded of interviews would have), a statement of the intent was incorporated into each item in the ESCI.

Meanwhile, Guillen *et al.* (n.d.) revealed no statistically significant relationship between personality dimensions as measured by the NEO-PR and EI or SI competencies. Burckle (2000) and Murensky (2000) showed small but significant correlations between selected personality dimensions as measured by the Myers Briggs Type Indicator and selected clusters of EI and SI competencies. These findings suggest that this behavioral, competency approach to EI and SI satisfy the third criteria mentioned earlier in this article.

In contrast, the model of EI offered through the MSCEIT (Mayer *et al.*, 2003) has a total score of a person's EI, two area scores of experiential and strategic, and branches within each area of:

- perceiving (with sub-tests of faces and pictures) and facilitating (with sub-tests of facilitation and sensations); and
- understanding (with subtests of changes and blends) and managing (with subtests of emotional management and emotional relationships).

Although data from studies comparing these tests are under way, conceptually we would expect small correlations between these two different measures. The MSCEIT assesses a person's direct handling of emotions, while the ESCI which is intended to

assess the EI and SI competencies described earlier assesses how the person expresses his or her handling of emotions in life and work settings.

Because the internal processing of emotions may, in some areas, emerge as consistent behavioral tendencies, there may be correlation between:

- *self-awareness competencies* from the ESCI and the experiential area, in particular the facilitating branch from the MSCEIT;
- *social awareness competencies* from the ESCI and the understanding branch of the strategic area; and
- *relationship management competencies* from the ESCI and the managing branch from the strategic area of the MSCEIT.

Similarly, although the data bearing on this issue are presently being collecting, currently there is no documented relationship among the ESCI competencies and the subscales of the Bar-On's EQ-i (Bar-On, 1992, 1997). Although we believe there will be little correlation between the self-report version of the EQ-i and the Others' views of a person's competencies through the ESCI, there may be substantial correlation among the EQ-i subscales and ESCI when 360 measures of both are compared. This should occur because the behavior being observed by the informants will be seen as similar or related. In particular, the following positive correlations are predicted:

(1) *ESCI competency*:
    - Emotional self-awareness.
    - Influence
    - Empathy.
    - Relationship management cluster.
    - Adaptability.
    - Emotional self-control.
    - Positive outlook.
(2) *EQ-I Subscale*:
    - Emotional self-awareness.
    - Assertiveness.
    - Empathy.
    - Interpersonal relationship.
    - Flexibility.
    - Impulse control.
    - Optimism.

There are eight subscales in the EQ-i that are not expected to associate with ESCI competencies. Similarly, there are six ESCI competencies that are not expected to associate with EQ-i subscales. Since the application of one's EI/SI ability in life and work settings, which we call competencies, it will manifest itself in observed behavior. Therefore, we believe the ESCI generally measures different aspects of EI and SI than the MSCEIT or the EQ-i.

Competencies and a holistic theory of personality
Even though competencies are being described as a behavioral and functional approach to EI, they are part of an integrated, holistic theory of personality. The specification of a competency comes from the personality theory on which this approach is based. McClelland (1951) originally described a theory of personality as comprised of the relationships among a person's unconscious motives, self-schema, and observed behavioral patterns. Boyatzis (1982) offered this scheme as an integrated system diagram that showed concentric circles, with the person's unconscious motives and trait dispositions at the center. These affected, and were affected by, the next expanding circle of the person's values and self-image. The surrounding circle was labeled the skill level. The circle surrounding it included observed, specific behaviors.

The synthesis of Goleman (1995) in developing the concept of emotional intelligence and Goleman (2006) into the concept of social intelligence provided yet another layer to this integrated system view of personality. In particular, Goleman's synthesis introduced the physiological level to this model by relating findings from neuroscience, biology, and medical studies to psychological states and resulting behavior. The result is a personality theory, as shown in Figure 2, that incorporates and predicts the relationship among a person's:

· neural circuits and endocrine (i.e. hormonal) processes;

· unconscious dispositions called motives and traits;
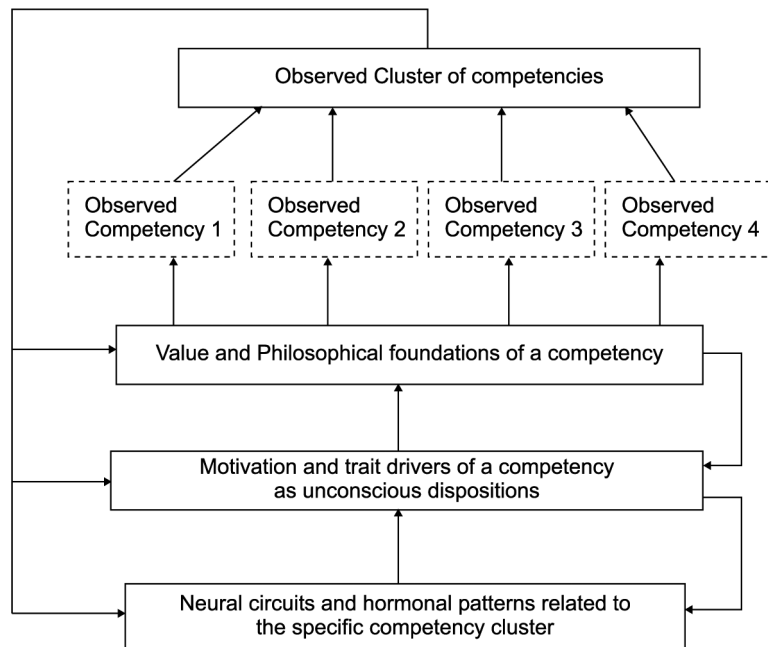
· values and operating philosophy;

Figure 2.
Levels within the personality structure

Source: Boyatzis *et al.* (2000); Boyatzis (2008)

- observed separate competencies; and
- competency clusters.

This conceptualization of personality requires a more holistic perspective than is often taken. When integrating the physiological level with the psychological and behavioral levels, a more comprehensive view of the human emerges. The evidence of the causal sequence predicted in this personality theory is emerging but is slow due to the disparate nature of the different fields studying parts of the model. For example, arousal of a person's power motive both causes and is affected by arousal of his or her sympathetic nervous system (i.e. SNS) (Boyatzis *et al.*, 2006). When a person's power motive is aroused, he or she is more likely to show behavior associated with a group of competencies called influence, inspirational leadership, or change catalyst (Winter, 1973; McClelland, 1985). Boyatzis and Sala (2004) showed that these competencies form an empirical cluster of emotional and social intelligence competencies as assessed through the emotional competency inventory and now emotional and social competency inventory (Boyatzis and Goleman, 1996). These competencies are shown more frequently when a person is operating from a Humanistic versus a pragmatic operating philosophy (Boyatzis *et al.*, 2000). When the power motive is aroused along with a person's self-control at the trait level (McClelland and Boyatzis, 1982; McClelland, 1985), the stressful effects of inhibiting one's urges add to the arousal of the SNS. The result is elevated blood pressure and decreased levels of both immunoglobulin A and natural killer cells (i.e. basic indicators of the immune system). Relatively recent research has shown that arousal of the SNS is associated with neural circuits passing predominantly through the Right Prefrontal Cortex (Boyatzis *et al.*, 2006).

Further, it is now the contention of leading researchers in affective neuroscience and genetic expression that experience overtakes genetic dispositions in determining the biological basis of behavior once in adulthood (Williams, 2003). This would suggest that a person's experience, and his or her arousal effects or rewires neural circuits and tendencies to invoke certain neuro-endocrine pathways. This offers support for the observation, or prediction in the proposed personality theory, that use of one's competencies (i.e. behavior in specific settings in life) becomes an arousal that over time creates different dispositions, even at the biological level. Therefore, even the neuro-endcocrine level of functioning can be captured in the definition and measurement of competencies as a form of EI.

Emerging challenges in competency research

Although the field of competency research and applications is now over 40 years old, research uncovers as many questions as it answers. Of the many questions raised by current studies, three stand out as having major relevance for future research and applications: cross cultural validation; tipping points; and development of competencies.

Competencies across cultures

The competency or behavioral approach to EI and SI is derived inductively from performance. As a result, when competency validation studies were first conducted in various countries in the 1970s and early 1980s, it was observed that the same or quite

similar competencies appeared as valid predictors of performance regardless of the country or culture (Spencer and Spencer, 1993). The articles in this special issue should illustrate this. There are a number of comparable studies to those in the 2008 special issue of *JMD*, as shown in Table II.

As you will read in these articles, the same competencies appear regardless of culture and country. In some studies, some of the competencies show more weight and predictive power than others. Further research will help to reveal as to whether these are cultural differences emerging or they are merely the function of specific organizational samples. People conducting competency validation studies in many countries claim that the important, distinguishing competencies tend to be generic (Wolff, 2008).

Cultural relativism would suggest that specific items or certain behaviors may be reflective of the competency in a particular culture, but that other actions may reflect the competency in a different culture. The growing body of research on EI would support the notion of the relationship to performance as universal (see collection of articles on EI in the special issue of *Psicothema*, 2006), more research is needed to test the universality of competencies, the possibility of specific behavioral manifestations being different, and the universality of EI/SI. In the midst of validation studies and the possible conceptual distinctions across cultures, one study has revealed a different challenge in cross-cultural research. The five or seven-point response scale typically used in the US, UK, Latin America and Asia does not seem to be as reliable as an 11-point scale in Europe (Batista-Foguet *et al.*, n.d.). Continued research may uncover other cultural differences in the measurement of competencies and EI/SI.

Tipping points for outstanding performance
A major advancement in understanding the effect of competencies on performance came from catastrophe theory, which is now considered a subset of complexity theory. Instead of only asking the typical question, "Which competencies are needed or necessary for outstanding performance?" David McClelland, in a paper published posthumously in 1998 posed the question, "How often do you need to show a competency to 'tip' you into outstanding performance?" In other words, how frequently should a competency be shown to be sufficient for maximum performance? He reported that Presidents of divisions of a large food company using competencies above the tipping points received significantly higher bonuses, which were proportional to the

Type of job	US samples	This special issue
Naval officers Large company executives	Koman and Wolff (2008) Hopkins and Bilimoria (2008)	Young and Dulewicz (British) Boyatzis and Ratti (Italian); Emmerling, Ryan, Spencer (various European samples) Spencer and Bernhard (Swiss)
Not for profit executives	Dreyfus (2008)	Guillén, Saris and Boyatzis (Spanish), Boyatzis and Ratti (Italian)
Development of competencies	Boyatzis and Saatcioglu, Leonard, Wheeler, and Rhee articles (MBA) (each 2008)	Camuffo, Gerli, Borgo, and Somia (Italian MBA)

Table II.
2008 Special issue of the *Journal of Management Development* on competencies in the twenty-first century and this special issue

profitability of their divisions, as compared to their less profitable peers (McClelland, 1998).

Using this method, Boyatzis (2006) replicated significant findings regarding tipping points in an international consulting firm. The profits from accounts of senior partners were analyzed for seven quarters following assessment of their competencies. Senior partners using competencies above the tipping point more than doubled the operating profits from their accounts as compared to the senior partners below the tipping point. The measure of competencies was the average perceived frequency of use of each competency by others around the senior partner, using a 360-degree competency questionnaire. He showed that this method was superior to a simple median split or continuous analysis of the relationship between the frequency of competencies shown and financial performance of the senior partners, leaders, of this firm.

Knowing the point at which a person's use of a competency tips them into outstanding performance provides vital guidance to managers and leaders. It helps those coaching others know which competencies are the closest to added value in stimulating outstanding performance. The tipping point is sometimes referred to as a trigger point.

The tipping point for each competency would be a function of the organization environment. For example, the manager of an office of a strategy consulting company would have a tipping point of Adaptability at the maximum level. To show sufficient Adaptability to be outstanding, he/she would have to be using it "frequently and consistently." Their business, projects, and clients change each year. They typically have high turnover in consulting staff as well. Meanwhile, the manager of a basic chemical processing plant may have a tipping point of only "occasional or often" of adaptability. The certainty of their product line and predictability of their production processes does not create as much uncertainty as the consulting business. They probably have less turnover in the chemical plant as well, requiring even less adaptation to new staff. Analysis of tipping points should become a standard feature of competency assessment studies in the future.

Boyatzis (2006) also confirmed the earlier argument about the importance of clusters. It was shown that the dramatic increase in profit contributed to the company occurred when senior partners were using an assortment of the competencies from each cluster above the tipping point. It did not seem to matter which of the competencies were being using above the tipping point form each cluster. This allows for the differences in style observed from outstanding leaders while confirming the importance of competencies as predictors of performance.

Can competencies be developed?
One of the benefits of the behavioral approach to EI and SI is that we enter a domain of human talent that can be developed in adulthood. Although the understanding of competencies themselves has been extended, perhaps the most important contributions in the last thirty years, has come about primarily in the last 15 years. The "honeymoon effect" of typical training programs might start with improvement immediately following the program, but within months it drops precipitously (Campbell *et al.*, 1970). Only 15 programs were found in a global search of the literature by the consortium on research on emotional intelligence in organizations to improve emotional intelligence. Most of them showed impact on job outcomes, such as number of new businesses

started, or life outcomes, such as finding a job or satisfaction (Cherniss and Adler, 2000), which are the ultimate purpose of development efforts. But showing an impact on outcomes, while desired, may also blur how the change actually occurs. Furthermore, when a change has been noted, a question about the sustainability of the changes is raised because of the relatively short time periods studied.

The few published studies examining improvement of more than one of these competencies show an overall improvement of about 10 percent in emotional intelligence abilities three to eighteen months following training (Goleman *et al.*, 2002). More recent meta-analytic studies and utility analyses confirm that significant changes can and do occur (Morrow *et al.*, 1997). But they do not show the impact that the level of investment would lead us to expect nor with many types of training. There are, undoubtedly, other studies which were not found and reviewed, or not available through journals and books and, therefore, overlooked. We do not claim this is an exhaustive review, but suggestive of the percentage improvement as a rough approximation of the real impact. This approximation is offered to help in the comparison of relative impact of management training, management education, and self-directed learning.

The results appear no better from standard MBA programs, where there is no attempt to enhance emotional or social intelligence. The best data comes from a research project by the American Assembly of Collegiate Schools of Business. They found that graduating students from two highly ranked business schools behavior, compared to their levels when they began their MBA training, showed only improvements of 2 percent in the skills of emotional intelligence (Boyatzis, 2008). In fact, when students from four other high-ranking MBA programs were assessed on a range of tests and direct behavioral measures, they showed a gain of 4 percent in self-awareness and self-management abilities, but a decrease of 3 percent in social awareness and relationship management (Boyatzis and Saatcioglu, 2008; Boyatzis *et al.*, 2002).

A series of longitudinal studies underway at the Weatherhead School of Management of Case Western Reserve University have shown that people can change on this complex set of emotional and social intelligence competencies that distinguish outstanding performers in management and professions (Boyatzis *et al.*, 2002). And the improvement lasted for years. Behavioral samples showed improvements of 60-70 percent during the one to two years of the full time MBA program, 55-65 percent improvement during the three to five years of the part time MBA program, and then leveling off at about 50 percent improvement five to seven years after entry into the part time MBA program. This was achieved by MBAs taking a course designed on the basis of intentional change theory (Boyatzis, 2001, 2006).

The positive effects of this program were not limited to MBAs. In a longitudinal study of four classes completing the Professional Fellows Program (i.e. an executive education program at the Weatherhead School of Management), Ballou *et al.* (1999) showed that these 45-55 year old professionals and executives improved on self-confidence, leadership, helping, goal setting, and action skills. These were 67 percent of the emotional intelligence competencies assessed in this study.

Concluding thought
The study of competencies opens the door to insights about humans and human talent, and potential applications for their development. Definitions, theory and empirical

research have been reviewed and will be read in the articles in this special issue contending that a behavioral, competency approach to emotional and social intelligence satisfy important criteria as being forms of "intelligence." Extending this into the arena of behavior competencies allows precision in observation, measurement and development of human talent and the realm of emotions. Adults appear to be able to develop competencies so vital to outstanding performance in management, leadership, and many other occupations and professions. But many more challenges remain for future research on competencies to explore, like cross-cultural relevance, tipping points and competency development.

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