

THEORETICAL FRAMEWORKS FOR COMPETENCY IN COGNITIVELY IMPAIRED ELDERLY ADULTS

JENNIFER MOYE*

*Veterans Affairs Medical Center and
Harvard Medical School*

ABSTRACT: *Determinations of a cognitively impaired elderly adult's competency to make decisions about self-care, property-care, and medical-care occur in clinical and legal domains, and obligate clinicians or the state to intervene in the interest of protecting the individual or society. Traditionally, competency assessments utilize expert opinion based on neuropsychological testing, functional evaluation, and competency guidelines and scales. These assessments have implications for an individual's autonomy and present significant challenges to the evaluator. Validated construct definitions and assessment techniques are needed to advance knowledge and practice. In this article, current methods and problems of competency evaluations are reviewed. From this, a construct validation approach to the problem is described. Next, three theoretical frameworks related to ontological perspectives for competency constructs are presented to illustrate different ways of conceptualizing competency. These theoretical frameworks can be used to identify assumptions and organize approaches to assessment and research, and are presented as starting points to organize future research and practice.*

INTRODUCTION

Competency assessments have been increasingly used to make determinations about elderly individuals' abilities to undertake a broad range self-determined activities. Unlike severely demented or psychiatrically ill individuals, for whom competency disabilities may be striking and range across multiple domains, competency assessments in moderately impaired and diagnostically complicated elderly are bound to be more

**Direct all correspondence to: Jennifer Moyer, Psychology Service 116B, Brockton/West Roxbury VAMC, 940 Belmont St., Brockton, MA 02401.*

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complex, involving component disabilities and competing concerns. Validated theory and assessment techniques, which link clinical and legal definitions of competency for this population, are needed to guide research and assessment. The absence of such a framework in the face of ongoing competency assessments, represents a serious deficiency in our knowledge and clinical practice.

The term "competency" in its most basic sense, means an individual has adequate capacity for self-determination within a situation. A decision of incompetency means an individual has been ascribed a status of insufficiency that is perceived to jeopardize the individual or society (Grisso 1986). The main categories of criminal competencies are competency to stand trial, to waive miranda rights, and to assume criminal responsibility. The main categories of civil competencies involve determination of parental capacity (child custody), self-care or property care capacity (guardianship or conservatorship), and the capacity to consent to medical treatment (Grisso 1986). The components of civil competencies tend to be less well understood and are more discretionary, and therefore present certain challenges in their determination. Technically, civil competencies are controlled by statute or case law and judicial determination, but are often completed in clinical settings under clinician determination. In judicial settings, clinician recommendations often provide the foundation for judgement (Gutheil and Appelbaum 1982). Causes of cognitive impairment in elderly adults which may raise competency questions include dementia and other neurologic syndromes, as well as multiple co-morbidities with neurologic sequelae (Caplan 1985). Although not a specific focus of this article it is expected that competency impairments secondary to psychiatric conditions (Bursztajn, Harding, Gutheil, and Brodsky 1991), would also be captured in the frameworks presented.

The purpose of this article is to present a review and conceptual framework for organizing approaches to competency in the elderly. Specifically, current methods of and problems with competency assessments are reviewed; second, an argument for a construct validation approach to the problem is presented; third, three ways of conceptualizing competency constructs and the implications of these conceptualizations for assessment and research are described. It is hoped this review and argument clarify the assumptions and implications of different approaches and will be useful as a starting point for organizing future research and practice. The discussion of competency is limited in scope to focus on the assessment of civil competencies in cognitively impaired elderly, namely self-care, property-care, and consent to treatment. In this article competency is approached as a psycho-legal construct. This approach has several noteworthy assumptions. First, as a *construct*, it is assumed that the meaning of competency is most clearly defined via a theoretical conceptualization, and validated via construct validation methodologies. Second, as a *psycho-legal* construct, it is assumed that it is possible and preferable to link psychosocial and legal definitions of the construct, which then guide both clinical and legal interventions.

LITERATURE REVIEW

Context for Competency Evaluations in Cognitively Impaired Elderly

Over the last century, advances in medical care have extended human life expectancy by thirty to forty years. As life expectancy has increased, so has the proportion of elderly

adults living with medical conditions which place them at risk for varying degrees of cognitive impairment (Hayslip and Panek 1989). Clinical and legal assessments of competency, once reserved for seriously medically and psychiatrically ill, are now being applied to elderly adults to clarify capabilities to undertake a broad range of decisions (Qualls and Verstaag 1991). As such, the construct of competency has now been extended in clinical discourses about older adults to encompass a range of decisions in the face of medical, neurologic, and psychiatric diagnoses (Dubler 1987).

There are significant implications of competency assessments. First and foremost, competency determinations may result in restriction of an individual's civil liberties. At the core of an incompetency judgement is the loss of autonomy, at least to some aspect of one's life. Autonomy is considered a first order principle in ethics, and a fundamental concept in American jurisprudence (Robertson 1985). It is worth pointing out that these limitations can occur as a result of clinical and legal assessments. Clinical assessments of competency, or capacity, although not legally binding, can be just as restricting as legal judgements because the vulnerable position of the elder. As an example, clinical assessments of competency to drive may result in clinical interventions such as limitations to driving, insistence on having a navigator present, hiding the keys or car, or disabling the car (Odenheimer 1993).

In addition to limitations on an individual's civil liberties, competency related infringements on autonomy may have serious psychological sequelae. There is striking evidence from a wide range of studies that autonomy and control can be the primary determinant in psychological well-being and a critical variable in physical health for the elderly (Bowsher 1990; Rodin 1986). On the positive side, well conceptualized and explicitly acknowledged competency evaluations could contribute to psychological interventions which assist the individual in compensating for potential losses in independence, while capitalizing on remaining competencies (Baltes and Baltes 1990).

Challenges in Making Competency Determinations

The focus of clinical determinations of competency in cognitively impaired elderly has shifted from general competency judgements to situation-specific or decision-specific competencies (Gutheil and Appelbaum 1982), although in judicial determinations general guardianships are still far more common than limited guardianships (Schmidt 1994). Clinical determinations rely upon an "expert" opinion. In most states, individuals considered qualified experts are doctoral psychologists or physicians with mental illness expertise.

Expert evaluator determinations have limitations. When expert assessments of competency in the elderly have been compared to multidisciplinary assessments, lack of agreement has been found (Kaplan, Strange, and Ahmed 1988; Rutman and Silberfeld 1992). When the results of various assessments disagree, it can be unclear how to integrate data (Macklin 1986). In addition to disagreements between professionals, there is risk for disagreement between the professional and the older adult. It may be difficult for the younger professional to fully appreciate an elderly individual's values, given the elderly individual brings decades of accumulated experience with life and now stands from a late-in-life perspective in regards to the situation (Macklin 1986).

Ethical problems in competency assessments include dual roles and competing obligations. Clinicians involved in adult protective decisions have dual loyalties to clients versus agency-employers (Moody 1987). In addition, concerns for patient safety and professional liability are being balanced with concerns for individual autonomy and choice (Lo 1990). These ethical dilemmas can become even more thorny in the context of extended care facilities, with increasingly complex patient groups and systemic reinforcement for dependency (Baltes 1988; Macklin 1986). Because of the scarcity of empirical support for competency assessments, and the potential significance of such assessments, the lack of standards for competency in cognitively impaired elderly has itself been cited as an ethical issue (Dubler 1987).

Finally, in legal settings, clinical assessments of competencies have been criticized on three grounds: irrelevance, intrusion, and insufficiency (Grisso 1986). Irrelevance concerns clinicians' propensity to cite testimony not relevant to the law's concerns, such as inappropriate generalization from general clinical constructs to specific legal constructs. Intrusion concerns clinicians' inappropriate testimony about the legal question of competency, which has been construed as a question of values. Insufficiency concerns testimony which is not supported by evidence, and in particular the scientific standards of the clinician's discipline. This last criticism is particularly applicable to questions of competency in cognitively impaired elderly, for which there is a limited empirical basis to meet scientific standards.

Assessment Methods for Competency Determinations

Four methods to assist clinicians in competency evaluations are neuropsychological assessment, functional assessment, competency guidelines, and competency scales. Clinicians may rely on these in hopes of enhancing the accuracy and reliability of their determinations. Each assessment method has advantages and disadvantages.

NEUROPSYCHOLOGICAL ASSESSMENT

Neuropsychological assessment consists of standardized tests to comprehensively evaluate functioning in various cognitive areas such as verbal abilities, perceptual and spatial abilities, attention, memory, and executive function (Kolb and Whishaw 1985). There are large numbers of neuropsychological tests available (see for example Anastasi 1988; Lezak 1983). Neuropsychological assessment has been particularly useful with the elderly, and is especially informative about manifestations of neurologic disease in elderly populations (Albert and Moss 1988; Poon 1986). There have been extensive efforts to link neuropsychological tests to specific areas of brain function, so that results of neuropsychological testing are informative about behavior and about brain function. In addition, many neuropsychological tests meet technical standards to enhance the validity of inferences made from test scores.

Advantages to using neuropsychological testing for competency evaluation are several. First competency evaluations typically are determinations about a person's current state, as well as future (predicted) state. Since neuropsychological testing is both psychometrically and neurologically grounded, the evaluator may speak with some confidence about the reliability of test scores and meaning of test scores for future behavior. In addition, a chief focus of competency evaluations has been the

determination of whether a decision a person has made, be it about health-care, finances, or another aspect of their life, is *rational* (Jost 1981). Other foci of competency evaluations are the quality of the person's choice, appreciation, understanding, and reasoning (cf. "guidelines" section of this article). In this sense neuropsychological testing is well suited to evaluate the quality of cognitive processes. Furthermore, confidence in a determination for impaired decision making capacity may be increased when errors are seen on a number of tasks, such as in the course of neuropsychological testing. Disadvantages to neuropsychological testing as applied to competency questions include the lack of empirical information about the relationship between test scores and everyday behavior and between test scores and specific psycho-legal competency questions. Because of the empirical tradition within neuropsychology, some evaluators may be reluctant to make inferences about the meaning of test scores for competency questions without empirical support for such inferences. Another disadvantage is the time required to administer a standard neuropsychological battery.

FUNCTIONAL SCALES

There are a number of scales designed to directly assess functioning. Examples of functional scales used in occupational therapy practice are the Functional Independence Measure (FIM; Research Foundation 1987), the Kohlman Evaluation of Living Skills (KELS; McGourty 1979), and the Revised Kenny Self-Care Evaluation (Iversen, Silberberg, Stever, and Schoenig 1973). In general, these scales measure activities of daily living (ADL), such as mobility, hygiene, dressing, eating, and continence. Some scales also measure instrumental activities of daily living (IADL), such as use of telephone, laundry, transportation, money, and shopping. Subscales of these differ. The subscales of the KELS are self-care, safety and health, money management, transportation and telephone, and work and leisure. The subscales of the FIM are self-care, sphincter control, mobility, locomotion, communication, and social cognition. The subscales of the Kenny are bed activities, transfers, locomotion, dressing, personal hygiene, bowel and bladder, and feeding.

Examples of functional scales developed to facilitate multidimensional research and evaluation efforts with the elderly are the Multidimensional Functional Assessment Questionnaire (MFAQ; Center for the Study of Aging and Human Development 1978) and the Philadelphia Geriatric Center Multilevel Assessment Inventory (MAI; Lawton, Moss, Fulcomer, and Kleban 1982). The MFAQ is a structured interview assessing social resources, economic resources, mental health, physical health, and activities of daily living. The MAI is a structured interview assessing physical health, cognitive functioning, activities of daily living, time use, personal adjustment, social interaction, and perceived environment.

Advantages of these scales are their utility in standardizing functional assessments, which should enhance inter-rater reliability of these assessments. In addition, functional assessments focus on observed behavior, which some have considered to be the hallmark of competency issues. A disadvantage of the functional scales is the limited information functional scales provide about quality of thought, which is important for some competency questions. Another disadvantage is the minimal psychometric development for many scales, which might explain, for example, which set of subscales is most valid for organizing behavior relevant to competency questions.

COMPETENCY GUIDELINES

Criteria to be considered in evaluating an individual's capacity to make decisions are presented in Table 1. The criteria appear in the table in the order they were listed by their respective authors. These were developed for health-care decision making capacity, or more general self-care decision making capacity.

There are discrepancies between the guidelines, and no two sets of guidelines are identical. However four themes are seen in a number of guidelines. These are: choice, appreciation, understanding, and reasoning.

Additional suggestions for criteria can be found in recommendations for research on competency. Grisso (1986) recommended that research on legal competencies follow a construct validation model, and in particular the development of competency constructs which relate legal and psychological constructs, and which are operationally defined in forensic assessment instruments. He stated that competency constructs have six characteristics: functional (what can and could the person do), contextual (what is the environment), interactive (what are the person-environment congruencies), causal (what factor is causing incompetency and related potential for change of that factor), judgmental (whether the interactive incongruencies exceed a cut-off level), and dispositional (outcome). Schaie (1987) recommended that research on everyday competencies, rely upon a Thurstonian model, and in particular study of relationships between intellectual processes and intellectual products (real-life behaviors). He stated that predictions of competencies should focus on intellectual products, as well as be: relevant; pragmatic to complete; reproduce as much individual difference variance in as many classes of real-life behaviors as possible; and, be valid for the entire spectrum of adults, including the old-old.

Guidelines are useful in identifying important issues to assess. Disadvantages to these guidelines are the discrepancies between sets, and the lack of comparison studies that would establish which sets are most comprehensive or most valid. Another disadvantage is the lack of standardized methods for reliable assessment of each criterion.

COMPETENCY SCALES

More recently, tests have been developed to specifically address questions of competency in the elderly. The "Hopkins Competency Assessment Test" (HCAT; Janofsky, McCarthy, and Folstein 1992) is a measure of capacity to consent to treatment, and consists of a short essay concerning advanced directives, followed by a series of questions to assess comprehension. The HCAT corresponded with competency judgements made by a psychiatrist, but not necessarily with Mini-Mental Status Examination scores. These data suggested it was useful as a brief screen concerning competency to make treatment decisions and write advanced directives, and that specific competency tests may not correspond with cognitive screening tests.

A second measure of capacity to consent to treatment has been developed for demented older adults (Marson, Cody, Ingram, and Harrell 1994), which uses a clinical vignette method carefully scored according to five competency criteria. Cut-off scores were derived as performance more than two standard deviations below that of the normal control group. Neuropsychological tests of word fluency predicted demented patients scores on the third criterion, capacity to appreciate the consequences of a

TABLE 1
Guidelines for Assessing Decision Making Capacity

1	2	3	4	5	6
Evidencing a Choice	Awareness of Situation	Communicating Choices	Appreciates Potential for Choice	Awareness of Needs	Consideration of Values and Goals
Reasonable Outcome of Choice	Factual Understanding of Issues	Understanding Relevant Information	Appreciates Situation and Alternatives	Awareness of Alternative Strategies to Meet Needs	Communication of Choice
Choice Based on Rational Reasons	Reasoning and Deliberation	Appreciating Situation and Consequences	Stability of Decision	Expression of a Preference	Reasoning and Deliberation
Ability to Understand	Functioning in One's Environment	Manipulating Information Rationally	Consistency with Values and Goals	Capacity for Understanding Issues	
Actual Understanding				Appreciation of Impact of Decision	Adequate Reasoning

1. Roth, Miesel, and Lidz (1977).
2. Gutheil and Appelbaum (1982).
3. Appelbaum and Grisso (1988).
4. Lo (1990).
5. Qualls and Verstaag (1991).
6. Smyer (1994).

treatment choice. In addition, the five competency criteria displayed a hierarchy of difficulty level. These data suggested the test is an innovative approach to approximating the physician-patient encounter, in which specific competency criteria can be embedded, and which evidences content and criterion validity.

The "Competency Assessment Inventory" (CAI; Keller and Lawrence 1984) is a measure of capacity to manage finances, and has been used in state institutions in the Commonwealth of Pennsylvania as an aid in making competency determinations, consistent with Pennsylvania's definition of competency. The CAI focuses exclusively on financial competency, and covers currency identification, financial management, and financial concepts. The form is intended as a guide, and there are no reliability or validity data.

The "Community Competency Scales" (CCS; now entitled the "Independent Living Scales" (ILS); Anderten 1979; Loeb 1983) are comprised of 166 items forming 19 subscales, reflecting ability to care for self or property. Subscales were developed through interviews with clinical and legal professionals, about the relevant components of self-care and property-care in the elderly. The CCS correlated only moderately with ADL ratings of significant others (Searight, Dunn, Grisso, Margolis, and Gibbons 1989), which was attributed to differences between self-reports and other-reports. Reliability estimates are adequate and normative data are being collected. Validity studies have concerned the scale's ability to correspond with living arrangements.

The "Cognitive Competency Test" (CCT; Wang and Ennis 1986) measures eight domains: personal information, card arrangement, picture arrangement, memory, reading, finances, verbal reasoning, and visual-spatial learning. Correlations between the CCT, MMSE, and multi-disciplinary clinical panel were poor, with many subjects performing poorly on the CCT and MMSE judged to be competent by the panel (Rutman and Silberfeld 1992). The authors noted the need to consider the reasons behind the incorrect answers, rather than rely on the tests alone.

A significant advantage to many of these scales is an attempt to interpret psycho-legal definitions of competency. In addition, several of these scales have reliability and/or normative data. Additional research is needed in three areas: predictive validity studies (e.g., correspondence with panel assessments, judicial assessments, future functioning); concurrent validity studies (e.g., studies of the relationships between these scales and standard neuropsychological and functional tests); and construct validity studies (studies of internal structure, factor structure with other competency scales, group differences, and process).

Summary of Literature Review

Competency assessments for cognitively impaired elderly, take place in clinical and legal domains, and concern determinations about elderly individuals' capacities to care for themselves, their property, and to make decisions about their health care. A fundamental issue at stake in competency assessment concerns retention of the right to self-determination, based on an assessment of decision making capacity within a situation. The results of competency assessments can have implications for interventions by clinicians and the state, and for the elderly individual's autonomy, affecting both civil liberties and well-being.

These assessments present significant challenges for the clinician evaluator. There is no consensus on precise definitions for psycho-legal constructs of competencies in the elderly. It is not clear how to measure these constructs, or how they relate to more well established practices of psychodiagnosis and psychological testing. Nevertheless, these evaluations demand a high standard of precision, relevance, and empirical validation to meet legal and ethical standards. In response to these concerns, competency determinations have been increasingly restricted to decision-specific and situation-specific questions.

Four assessment methods are available to assist competency evaluations. Neuropsychological testing provides ability-based assessment whose chief advantages are its focus on cognition, psychometric standards and neurological referents. Functional testing provides behavior-based assessment whose chief advantage is close approximation of every-day behavior. Competency guidelines and competency scales provide assessments specific to issues of self-care, property-care, or health-care situations, whose chief advantage is a attempt to operationalize psycho-legal conceptualizations of competency.

This review highlights the complexity and significance of competency evaluations. This is a pressing issue facing clinicians, the courts, and our society in the face of increasing numbers of elderly adults who are at risk for cognitive impairments. Existing techniques in neuropsychological assessment, functional assessment, and competency guidelines and scales provide valuable tools for approaching this problem. Lacking are empirically validated conceptualizations and assessment techniques specific to competency questions in the elderly. A construct validation approach as several advantages to organizing research that yields validated constructs and methods which could guide legal statutes and clinical practice.

ADVANTAGES TO USING A CONSTRUCT VALIDATION APPROACH

It can be argued that because of the difficulty in developing generally applicable theory and methods that an atheoretical, highly specific and face valid approach to competency assessments is necessary. However, there are several advantages to pursuing a construct validation approach to this problem. First, from a measurement theory perspective, without constructs and construct validation, we are left only with particularized validation methods, leading to the impossible and illogical outcome of measures for all specific life situations (Loevinger 1957). The existence of validated theory provides for the possibility of constructs and measures which may apply to larger classes of situations. Second, from a legal point of view, general constructs are needed, because statutes cannot guide all contingencies, but must be general frameworks applicable to multiple contingencies. Third, because of the risk involved in incorrect or unjust competency assessments, validated conceptualizations and measures are needed to maximize reliability and appropriateness of individual assessments. In summary, because of the need for maximal reliability and validity, the need for general constructs to serve as statutes, and because of the scientific superiority of theory which could guide interrelated decisions in complex systems, a construct validation approach is advantageous. Another way of saying this is that the requirements and complexity of the system either rule out a construct validation approach or demand it. The deciding

factor is perhaps the sophistication of conceptualization that the construct validation approach affords.

Construct validation can be used to denote a philosophical orientation to inquiry, especially relevant to psychological assessment situations. Construct validation has been described as a joint convergent and discriminant strategy, evaluating the relationships of constructs with observable properties and with other theoretical constructs (Loevinger 1957). Hence, construct validation concerns the validity of tests and, by extension, of theory. Traditionally, the construct validity of an assessment procedure, refers to whether the assessment outcome can be interpreted as measuring a quality or attribute which is not operationally defined, but to which are attached certain meanings and consistencies (Cronbach and Meehl 1956). This is especially appropriate to questions of competency since it is difficult to find a simple, universal definition or test for competency (Roth, Meisel, and Lidz 1977). In building knowledge about competency, construct validation involves evaluating concepts and experiments for consistency and integrating these into definitions and measures for constructs. The principle types of experiments for this purpose are studies of: factor structure, internal structure, group differences, change over occasions, and processes of decision making by patients or experts (Cronbach and Meehl 1956). The goal is to validate the test as well as the associated theory, while appreciating the character of psychological theory, and the inherent difficulties in its substantiation (Meehl 1978). This reference again points to the nature of construct validation as applied to questions of competency. Again, the goal is not to discover a "holy-grail" (Roth et al. 1977) definition of competency, but to sensitively describe consistent dimensions of the construct, and the theoretical landscape within which the construct operates which can then serve as a road map for the clinician making competency assessments. Finally, a construct validation approach has the advantage of explicit acknowledgment of assumptions about the ontology of constructs. When these assumptions are on the table, the relationships between different approaches to assessment and research may be clarified.

Three ontological perspectives about constructs are: (1) the *realist view*, in which constructs are interpreted as real causal entities existing in persons; (2) the *constructive-realist view*, in which constructs are seen as manifestations of real entities understood only in terms of concepts that summarize their empirical properties in relation to a one another; and (3) the *constructivist view*, in which constructs are hypothetical concepts which organize and summarize behavioral consistencies for the theorist, but exist only in context and have no reality outside the theoretical system (Messick 1981). Each of these views has different implications for the research strategy or the assessment method used in relation to the construct.

THREE CONSTRUCT VALIDATION APPROACHES TO COMPETENCY

These three ontological perspectives can be applied to competency. *One* way to apply these to competency is summarized in Table 2 and described below.

The first theory is the realist view, presented in figure one. In this theory, competency is real trait or characteristic which *exists within an identified patient*. It is related to cognitive abilities and behavioral function but is a separate trait. Using this theoretical framework, the assessment method is to use a test which measures the trait. The items

TABLE 2
Ontological Perspectives and Implications

<i>Theory</i>	<i>Assessment Model</i>	<i>Research Method</i>
Realist	Design a Test Measuring a Trait	Content and Criterion Validity
Constructive-Realist	Develop an Equation Relating Variables about a Construct	Factor Analysis and Causal Modeling
Constructivist	Develop Guidelines Articulating Meanings of Personal Variables within Contexts	Qualitative and Naturalistic Description

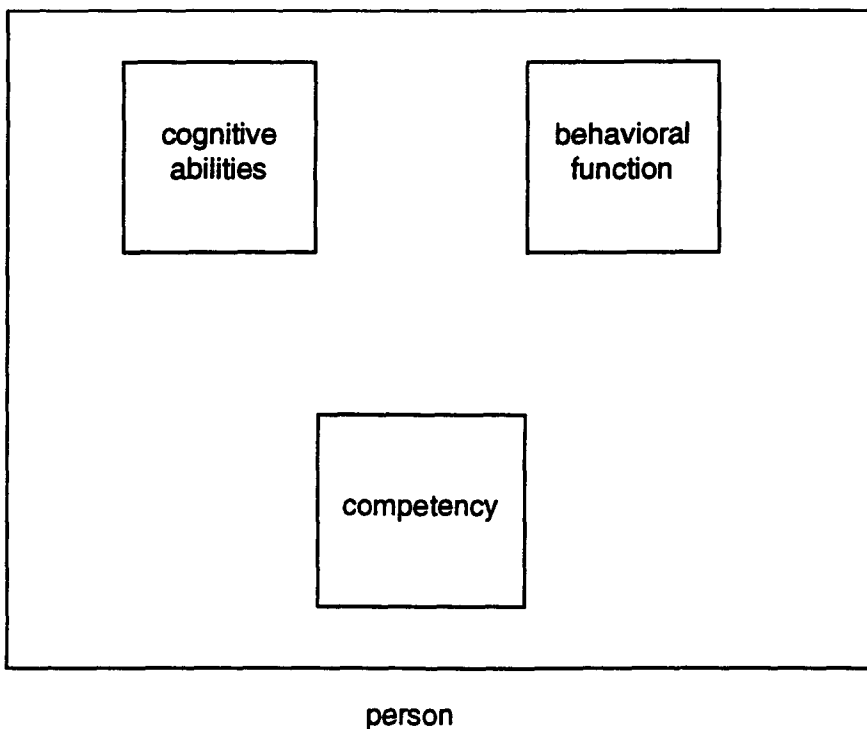
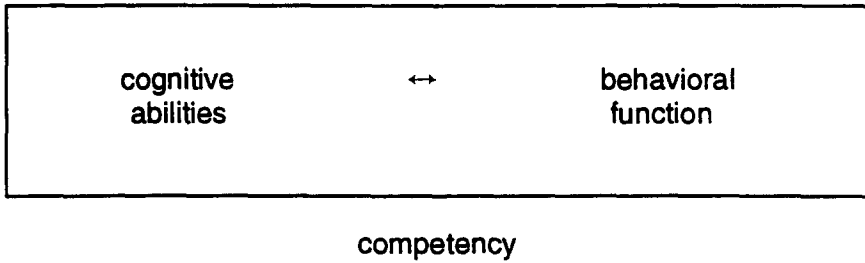


FIGURE 1
Realist View of Competency: One of Several Real Traits in a Person

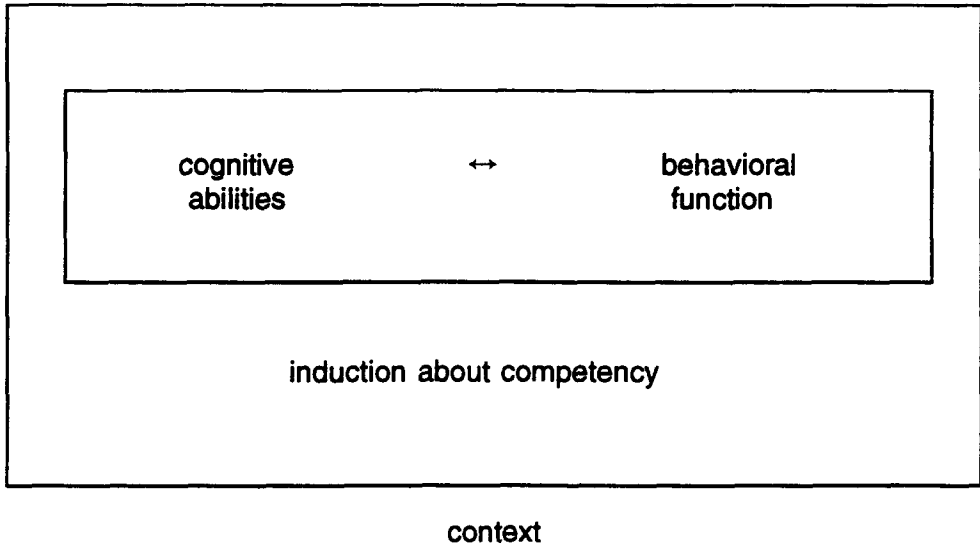
would be designed to tap the essential qualities of competency. This trait is operationalized as scores on competency tests. More general models for the trait could be tests of decision making (e.g., computerized models of decision making processes; Johnson 1990) or problem solving and concept formation in complex situations (e.g., Stanford Binet Verbal Absurdities subtest). Accordingly, the research strategy is to design a test which measures the trait, and to establish homogeneity (content validity) and adequate correlation with a gold standard (criterion validity).

**FIGURE 2**

Constructive-Realist View of Competency: A Construct Describing Relationships
between Cognition and Function in Reference to Competency in Persons

The second theory is the constructive-realist view, presented in Figure 2. In this theory, competency is a conceptualization about relationships between cognitive abilities and behavioral function as applied to a competency question. In this sense competency is a construct which is *operationalized in reference to an identified patient*, defined by relationships between a number of cognitive processes relevant to competency, such as reasoning, planning, working memory, and observed behavior. A deficit in any of these areas, or enough of a deficit in a number of these areas would sum to impaired competency for a decision in question. Under the second theory, the assessment method would be to use an equation which discerns if the requisite abilities are sufficient to predict a minimum competency. Accordingly, the research method would be to establish the interrelationships between sets of known variables as relevant to the construct of competency through convergent and discriminant correlations (e.g., factor analysis) or to derive an equation (e.g., multiple regression or causal modeling).

A third theory is the constructionist view, presented in Figure 3. In this theory competency is a conclusion *which exists only in the mind of the expert*. In this sense the construct is an inductive summary describing cognitive abilities and functional abilities within a context. A key aspect to this theoretical framework is that the induction about competency takes place in a context which impacts the meaning of the composite variables and of the conclusion. The examiner may consider contextual variables relevant to the contended situation such as the degree of risk or exploitation, the psychosocial vulnerabilities and supports which may mitigate the degrees of risk, the legal context for interpreting the clinical findings, and the personal values of the patient and family. Under the third framework the assessment method is to use a set of guidelines to guide the decision process. Accordingly, the research method would be to study inductive processes within environmental contexts, through research such as naturalistic studies of expert decision making, panel decision making, and judicial decision making. This construct orientation is appealing because it explains the potential differences between expert judgement and recognizes the discretion in individual decisions according to variables influenced by the context, such as personal values of the patient and of the expert.

**FIGURE 3**

Constructivist View of Competency: An Inductive Summary in an Expert's Mind in a Context

These three frameworks have been presented as distinct frameworks, although it is conceivable to integrate the frameworks or to see them as points along an ontology continuum. Maintaining the distinctions in frameworks, while simplistic, is useful in illustrating the assumptions underlying approaches to competency and how these relate to methods of assessment and research.

An alternative application of the three frameworks is as steps in the competency determination process. First, an empirically developed and neurologically referenced measure of decision making is completed. Second, data on behavioral function and environmental resources are weighed with the decision making measure in an equation. Third, issues of values and morals are considered. In cases of competing values and morals, impartial judges or juries are called in. Additional study is needed to determine whether different assumptions can be used eclectically, sequentially, or if one or more ontological orientations is necessarily subsumed by another (i.e., a constructivist view may insist that the influence of the context be acknowledged in any approach). Additional research may determine inconsistencies in using multiple assumptions or may select one approach as most consistent with certain desirable properties, such as compatibility with legal definitions.

The important point for the present purpose is to illustrate the advantages of a construct validation approach. This approach brings to light ways in which ontological assumptions have been driving the conceptualization and practice of competency assessment. In addition it raises an abundance of unanswered questions, while suggesting a starting point for an organized approach to these questions.

CONCLUSION

Determinations of an elderly individual's competency concern capacity to make decisions about one's self, one's property, and one's medical care. In diagnostically complicated and marginally impaired elderly, these determinations are often clinically and ethically complex. As the numbers of elderly increase, so do the number of elderly at risk for impairments which may result in competency determinations. In order to honor the perspective and protect the rights of elderly individuals, these determinations must rest upon a consistent and validated foundation of knowledge and practice. Accomplishments in neuropsychological, functional, and competency assessment provide tools for future study of this problem. Empirically validated conceptualizations and assessment techniques specific to psycho-legal competency questions in the elderly are needed.

Simple and universal definitions of competency are unlikely. A deliberative construct validation approach which is sophisticated as to the character of psychological theory may be our best bet for advancing knowledge and practice in this critical area. One part of such a construct validation approach is to recognize assumptions about the ontology of different conceptualizations of competency. These assumptions help determine the placement of constructs into theoretical frameworks and have implications for the integration of neuropsychological, behavioral, and contextual variables into practical assessments of competency. These frameworks may be useful in organizing thoughts about competency in assessment and research settings. Future research may establish such frameworks to be sequentially or simultaneously compatible, or mutually exclusive.

This article was written to describe the complexities of competency related theory and practice, and to present a starting point and, hopefully, an impetus, for understanding and studying these complexities. In this article, the construct of competency was explored predominantly from a psychological perspective. In the future, interdisciplinary approaches, including historical, psychosocial, and legal conceptualizations of the issues, will provide the most comprehensive construct explanations.

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