

Theory and Application of Neuropsychological Underpinnings of Adjudicative Competency

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In their article, Aveson and colleagues postulate a model for understanding the neurocognitive underpinnings of competence to stand trial, and they present evidence to support that model for two specific facets: social intelligence and auditory verbal (episodic) memory. This commentary attempts to extend those findings by outlining specific interventions and assessment methods in the inpatient restoration setting that focus on strengthening these capacities and connecting them to the psycho-legal context. It echoes the work of Aveson *et al.* that court is a transactional, social context heavily dependent on auditory processing and verbal comprehension and expression and suggests that restoration programs ought to incorporate interventions and assessment tools that address such faculties. Further refinement of our understanding of competence and its constituent components will enable us to better allocate scarce resources throughout the system, to tailor restoration programming to the needs of each individual defendant, and to aid defendants through restoration programming to develop the skills to take a more involved, collaborative role in the process.

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Decades of research on competency to stand trial, and our efforts to restore it, have revealed clear-cut variables related to both initial findings of incompetency and ultimate determinations of nonrestorability. At the broadest level, serious mental illness (usually related to psychosis or bipolar disorder), significant cognitive deficits (whether developmentally inherent, acquired, or the result of a degenerative condition), or both, appear to factor prominently in these determinations.^{1–4} Although other factors, such as certain demographic, psychosocial, or legal variables, play a role, the clinical correlates have been found to have a much bigger influence.⁵ This focus on broad-based, diagnostic categories can overshadow other important etiological contributors, such as specific neurocognitive functions, that cut across numerous psychiatric, psychological, and developmental disorders and that are

more directly connected to the psycho-legal capacities that underlie competence to stand trial.

In their article, Aveson *et al.*⁶ provide both a model for understanding and a means of measuring more precisely two such neurocognitive facets related to incompetency: social intelligence and a form of episodic declarative memory, specifically auditory verbal memory. They postulate that there is “a complex set of abilities related to interpersonal communication and discourse” (Ref. 6, p 195) that underlie competency-related faculties and that often are compromised in individuals with serious mental illness. The term social intelligence was initially coined by Thorndike⁷ in 1920 and was described by him as, in part, the ability “to act wisely in human relations” (Ref. 7, p 227). It includes understanding the thoughts, feelings, motivations, and intentions of others, as well as the rules and norms of human relations (a knowledge prong). It also involves the ability to read social signals, to assume others’ perspective, and to adapt one’s behavior accordingly in a social context (a behavioral prong).⁸ The results of Aveson *et al.*’s study highlight the importance of this factor with respect to

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competency, as social, but not cognitive, intelligence differentiated those ultimately found competent from those who remained incompetent in a sample of male inpatients referred for competency restoration.

In addition, they posited on the basis of prior research⁹ the influence of a specific type of episodic memory impairment, namely auditory verbal memory, on competency-related abilities. Given the heavy reliance on verbal communication, mostly spoken, in court proceedings, they reasoned that those with deficits in the encoding, storage, and retrieval of information would struggle more with the demands of the courtroom and, thus, would be more likely to be deemed incompetent. Consistent with that hypothesis, their results indicated that those found competent outperformed their incompetent counterparts on measures of auditory verbal, but not visual, memory, even after controlling for overall intelligence. Taken together, these findings extend our understanding of the construct of competency by providing, as they term it, “a more heuristic and process-oriented neuropsychological model of [the cognitive processes]” (Ref. 6, p 196) that underlie it, rather than the strictly diagnostic approach that previously dominated the literature.

The findings of Aveson *et al.* resonate with me as a clinician who has assessed and treated individuals referred for competency restoration for more than 15 years, as they are consistent with my observations and experiences in that setting. This study also resonates with me as a researcher, as it suggests that we might be starting to home in on ways to measure those more nuanced, harder-to-operationalize variables that affect restoration. Taken as a whole, the work of Aveson *et al.* has important implications for interventions (particularly in the inpatient setting) as well as for research in the domain of competency restoration.

Before exploring how those cognitive processes reveal themselves and can be assessed and treated in an inpatient setting, a caveat is in order. It should be noted that the thoughts and observations expressed herein are not meant to signify advocacy for the inpatient setting for competency restoration over a less restrictive one. Rather, it simply reflects the professional lens through which this author has viewed this subject matter, and it represents the most intense or concentrated delivery method of certain interventions. The observations, analyses, and recommendations outlined here can be extended to any setting that involves treatment in a social (even dyadic) context, and restoration

should always take place in the least restrictive setting in which the work can be accomplished.

Clinical Implications

The structured nature of an inpatient setting affords certain benefits that can promote neuropsychological rehabilitation and thus, positively affect an individual's restoration to competency. A structured setting, for instance, provides consistent daily schedules and routines to aid in regulating one's internal biological rhythms. This setting promotes healthy sleep habits, thereby facilitating the consolidation of information in memory that is key to court competency. It sets forth clear expectations for behavior as well, which in turn serves to facilitate the establishment of if-then neural connections in the brain as well as to provide a context for behavior. A structured setting also (typically) prevents access to potentially harmful substances that may further compromise brain functioning and interfere with competency-related abilities. What is more, a structured setting provides a context and a backdrop against which other interventions can be used.

What is more difficult to measure, but seemingly no less important, are the nuanced relationships that patients develop with treatment providers. Although the therapeutic relationship has a well-established link to treatment efficacy and effectiveness,¹⁰ much of that has to do with the dynamic that is established between therapist and patient. Less is known, or written, about the specific skills or capacities that patients develop from their myriad relationships with treatment providers (often numerous in the inpatient setting). Many of these capacities are exactly what Aveson *et al.* describe with respect to social intelligence, and they have direct correlates to the psycho-legal abilities that underlie competency to stand trial, particularly in the domains of appreciation, reasoning, and assisting counsel.¹¹

Social Intelligence

One aspect of social intelligence, they note, is “the capacity to understand the requirements of a given social context and behave accordingly” (Ref. 6, p 196). In the context of the courtroom, this entails understanding that there are procedures and a decorum to events that take place that must be followed to achieve the goal of resolving the legal case. It means having the self-control to wait until one is

addressed before responding, and to anticipate that opportunity, to understand the social parameters of the courtroom well enough to know that there are ways in which a defendant may give input or be heard, and that one should not interject randomly or impulsively what comes to mind. In the inpatient setting, the use of protocols and routines serve as a microcosm to model these courtroom procedures and to teach, reinforce, and later assess patients' ability to conform to them. The unit may have protocols for anything from daily hygiene activities to meal distribution, to group or activity sign-ups, to phone or visitation policies, to earning certain privileges. Patients' ability to learn these protocols (i.e., the social context) and to navigate them to get their needs met, including delaying the impulse for immediate gratification (that is, to behave accordingly) can be a marker for their ability to do similarly in court.

Social intelligence also entails being able "to interpret social events" (Ref. 6, p 196), to perceive social cues or signals, and to adapt one's behavior to match expectations in that context. In the courtroom, this translates into being able to collaborate meaningfully with an attorney, particularly in an open dialogue. That itself requires understanding what information will be important (i.e., relevant) to relate to one's attorney to help with the case and communicating that information effectively (i.e., logically and coherently). It may involve anticipating future events in the case to ask the right questions of one's attorney, or being able to assert one's own preferences in a reciprocal, give-and-take conversation with the attorney to determine the optimal strategy moving forward. In this sense, having the capacities to understand the norms of social communication, to appraise others' reactions to know when one is adhering to such norms, and to modify one's intended behavior to comport with those expectations are important aspects of social intelligence necessary to be competent to stand trial.

In the inpatient setting, patients are constantly exposed to interpersonal interactions and social dynamics. Simply by observing staff interact with one another, patients are exposed to a modeling of reciprocal interactions, negotiations, and sometimes even conflict resolutions, all of which can aid in their appreciation of social cues and norms. In addition, staff provide an almost constant source of feedback to patients with respect to interpersonal dynamics, behavior, and meeting expectations. Any interaction with a patient may be an opportunity for the patient

to develop and receive feedback regarding these skills that are crucial to assisting in one's defense. For instance, staff may offer nonverbal cues that individuals are being too verbose, may prompt them verbally to refocus them when they become tangential or off-topic, or may reinforce them for asking a relevant question or relating an event in a logical, focused manner. More explicit and structured interventions, such as individual or group-based skills training or solution-focused therapies, may be effective in building these capacities in patients as well. Assertiveness training and conflict resolution techniques can improve patients' ability to assert their opinions appropriately and to learn how to work through disagreements or differences of opinion, much like they may be required to do with an attorney. Even the simple aspect of having one's basic needs taken care of in the structured environment can lead to the development of trust in another person, the acceptance of reliance on others, and the understanding that collaboration is in one's self-interest. In other words, these relationships with staff may serve to foster patients' ability to engage, open up, connect, trust, and collaborate with another person, their attorney, toward resolution of their case. This is the cooperation that is key to competency.

Another aspect of social intelligence involves understanding and appreciating the perspectives of others, including their motivations and intentions. This understanding is essential for competency, and often an area with which incompetent defendants struggle for a variety of reasons. Whether because of poor reality testing stemming from a psychotic illness, skewed perceptions from a personality disorder, or inability to formulate a theory of mind as a result of developmental disabilities, this deficit can interfere with defendants' ability to appreciate the realities of their situation in selecting the optimal strategy. This deficit can manifest itself in the legal process in a variety of ways, including understanding the motivations of the prosecutor in offering one particular plea deal or another; recognizing how a judge or jury is likely to absorb, assess, and integrate the evidence in a case to render a decision, including how these two entities (judge or jury) may do so differently; or appreciating their own attorney's advice and guidance with respect to the best defense strategy.

Numerous opportunities to develop and reinforce patients' capacities in this respect exist in the inpatient environment. For instance, through group therapies, whether psycho-educational or more process-oriented,

patients have the opportunity to hear others' views on topics, to consider those different perspectives, and to assess them against their own opinions. These opportunities can lead people to broaden a narrow mindset on a topic, to soften their rigidity around how they appraise it, and to consider alternative actions beyond their initial response. In essence, it can aid in strengthening their ability to put themselves in the mind of others, including a prosecutor who wants to find them guilty, a witness who may testify on their behalf (or not), or a judge or jury who are tasked with determining their case on the basis of the available evidence.

Auditory Verbal Memory

As Aveson *et al.* note, in a courtroom, information is conveyed almost entirely through spoken channels, making verbal expression and auditory comprehension essential to meaningful participation. In their words, the "courtroom may be aptly described as an auditory-verbal information ecosystem favoring those who are able to listen, comprehend, learn, remember, and attend to spoken language" (Ref. 6, p 196). The inpatient setting parallels this environment, with much information conveyed via spoken or written language and patients expected to communicate verbally with vital information regarding their histories, their symptoms, their needs, and their preferences. It can be a prime context to assess, develop, and strengthen patients' auditory comprehension and verbal memory abilities. A key component of restoration programs is psycho-education regarding the court and its procedures. Although certainly individuals benefit from gaining knowledge about the court, their rights, and their legal options (that is, the factual knowledge), more important is the mechanism this provides for strengthening the neuropsychological channels underlying attention, encoding, storage, and retrieval that are vital to auditory verbal memory. Frequently repeating information at regular intervals, and connecting it to realistic situations in the courtroom through the use of hypothetical cases, can help to consolidate this knowledge in long-term memory while also bolstering patients' ability to associate the material to their own cases, a capacity heavily reliant on episodic memory.

Beyond this type of structured intervention, the inpatient setting affords numerous opportunities for the use of repetition as an intervention in more informal contexts. These occasions to relay, and later to

assess the patient's recall of, relevant information enable us to engage the auditory verbal memory that Aveson *et al.* note is so key to restoration. For instance, medication administration occurs at specific times throughout each day. This method of administration can be utilized as a context for a routine assessment of every patient who takes medications, every day, at regular intervals. It affords nurses an opportunity to engage in a verbal dialogue with patients to assess the quality of their speech. It enables them to educate patients about their medications, or about other court-related information, and then to assess their recall of such information four, or eight, or 12 hours later. It permits the opportunity to engage in informal conversations with patients about their daily goals and plans and to place these communications in a social context, thus integrating these two neurocognitive functions that are vital in navigating the more complex, social-cognitive processes of the courtroom.

Research Implications

Historically, research in this area of forensic psychology has been limited to readily available, observable, measurable, chartable, or checklist-style factors, such as demographic characteristics, historical data (social, criminal, psychiatric), and clinical data (diagnoses, medications, lengths of stay, etc.).³ It is difficult to capture the more nebulous aspects of restoration programs, such as patients' relationships with staff, their repeated exposure to court-related information, or simply having the opportunity to engage in a dialogue and to voice their opinions or feelings about the court or their case to a neutral (i.e., nonjudgmental and nonadvisory) party. Such exchanges can be helpful, from an emotional exposure-based perspective, in enabling patients to desensitize to the case sufficiently to be able to discuss it more objectively and from different perspectives when they once again have the opportunity to do so with counsel. These are, however, difficult factors to quantify and to study objectively.

We already know a lot about what restores someone to competency, how quickly, and when such efforts are unlikely to be fruitful. We need to get creative in devising ways to assess these more nuanced variables that affect competency to advance our understanding of both the construct and the process (and, thus, to better allot precious resources). Aveson *et al.* identify several neuropsychological tests that can quantify these neurocognitive factors they describe, such as the Advanced Clinical Solutions or Logical Memory

subtests of the Wechsler family of instruments.^{12,13} It is equally important to devise ways of operationalizing these constructs that are more ecologically valid and tied to court-related activities. For instance, the number of occasions or amount of time (in minutes, perhaps) a patient is able to review with someone information related to the patient's own case may provide a crude measure of exposure. The length of time patients are able to converse about court or their own case before digressing into irrelevant, tangential ideas could be used as a measure of breaking set. The number of details a patient is able to recall from the police report, or from a hypothetical case vignette, could serve as a measure of auditory verbal memory, akin to the Logical Memory subtest on the Wechsler Memory Scale.¹³ Quantifying these aspects of the inpatient restoration experience could help to determine their effect on restoration and, if positive, could be incorporated more systemically into competency restoration programs (inpatient, outpatient, or jail-based) nationwide. Or, taking a more individualized approach, if such variables are more consequential for some defendants but not for others, restoration programming (and placement) can be tailored to their individual needs.

Clearly, some aspects of restoration, much like any mental health treatment, will always be too dynamic, nuanced, or socially dependent to capture with mechanistic, impersonal research measures. That, however, should not stop efforts to understand better and to capture with more precision, as Aveson *et al.* do, those elements that influence a defendant's competency and that facilitate restoration.

Conclusion

Although understanding of courtroom terminology, personnel, and procedure is certainly an important aspect of competence to stand trial, rarely is this the sole or principal basis for findings of incompetence. Rather, it is the capacities to process, manipulate, incorporate, and store information; to understand the social context and how to navigate it; and to appreciate the perspectives and motivations of others in a social

context that frequently interfere with a defendant's ability to proceed through the legal process. The work of Aveson *et al.* and similar research that helps us to isolate the specific neurocognitive functions most related to competency will enable us to tailor assessments, interventions, and accommodations more appropriately to aid defendants in developing the skills necessary to participate meaningfully in their defense. Furthermore, developing a better understanding of this construct and its constituent parts will enable us to do so more efficiently and with a better allocation of the limited resources at our disposal.

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