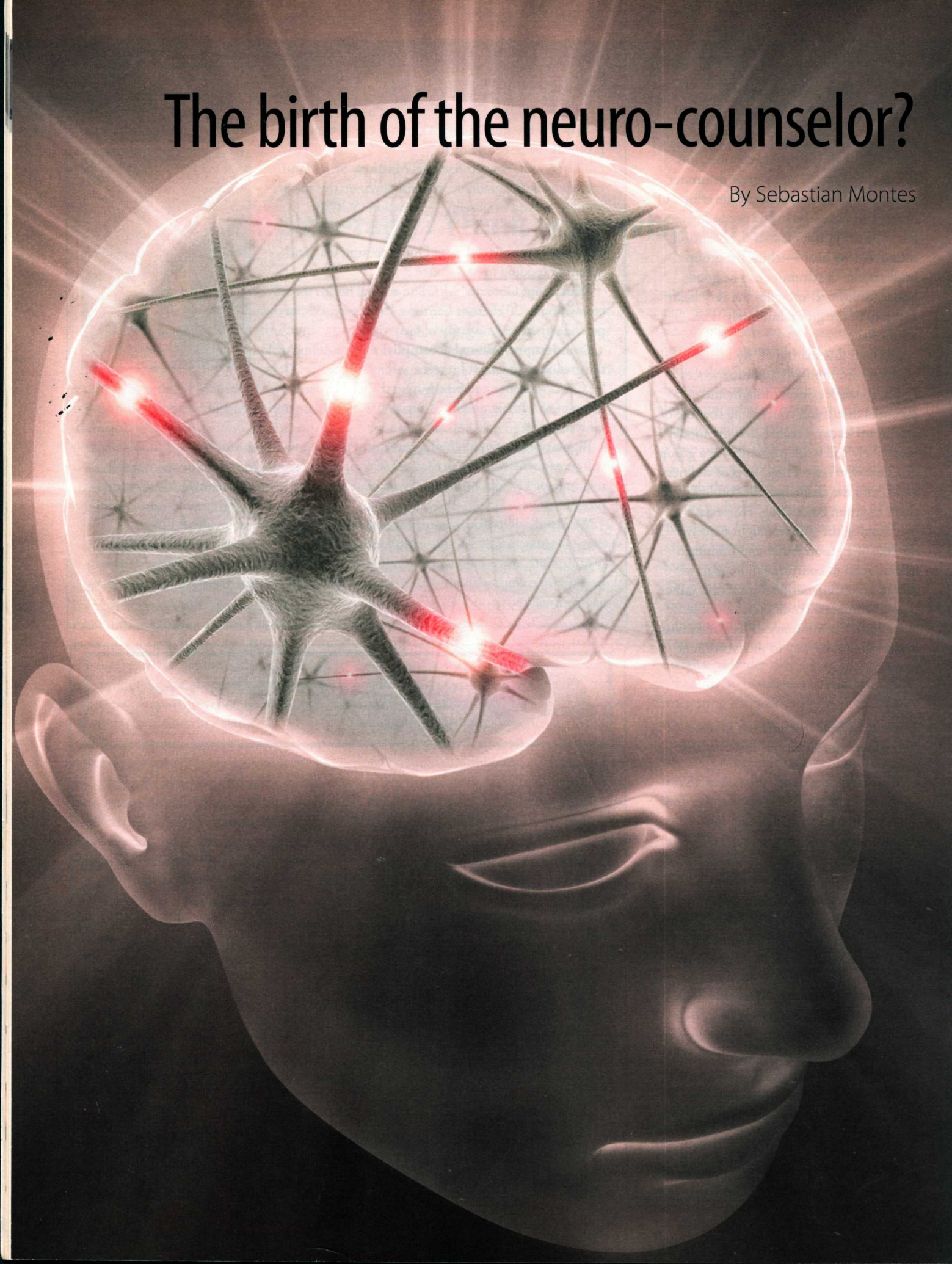
The birth of the neuro-counselor?

By Sebastian Montes



Proponents of neuroscience question whether counselors can be truly effective unless they know what is going on in their clients' brains, while its critics warn that overreliance on neurology will draw the counseling profession away from its humanistic roots

Lori Russell-Chapin was a quarter of the way through her scheduled 40 sessions of therapy with a 22-year-old college graduate with Asperger's syndrome whose social shortcomings — understanding cues, relating with others — were hampering his relationship with his girlfriend and his parents.

As Russell-Chapin has done with hundreds of other clients the past four years, she put the young man into her neural feedback treatment program, which combines real-time brain-wave analysis with cognitive therapy. Ten sessions in, there was an astonishing breakthrough.

"I walked into the room one day," Russell-Chapin says, "and he looked at me and said hello. And I said, 'Hello!' I know that doesn't sound like much, but that's big [for this client]."

Then, five sessions later, the client spontaneously asked Russell-Chapin how her daughter was handling her recent move, harkening back to a conversation the counselor and client had engaged in during an earlier session.

"I really almost fell off my chair," says Russell-Chapin, a member of the American Counseling Association. "People start feeling more comfortable with who they are as a person if the central nervous system functions better. … It's in behavioral checklists, it's in empirical data. I can see it in my software — I can see their brain waves changing. People have the ability to regulate their brains."

Four years — and hundreds of clients — after implementing neuroscientific technology into her counseling techniques, Russell-Chapin asserts that if counselors do not know what's happening in their clients' brains, they can't possibly be effective.

"I'd been saying to graduate students for years, once we know more about the brain, it's going to change how we do therapy," says Russell-Chapin, a counselor educator at Bradley University and co-director of the Center for Collaborative Brain Research, a partnership between the school and a large medical center. "I really do think the brain is the final frontier, and we're at this point where every day, we learn something new. If we as a profession want to go forward, we've got to go forward with the future, and this is where the future is. ... The more I know [about the brain], the better counselor I'm going to be."

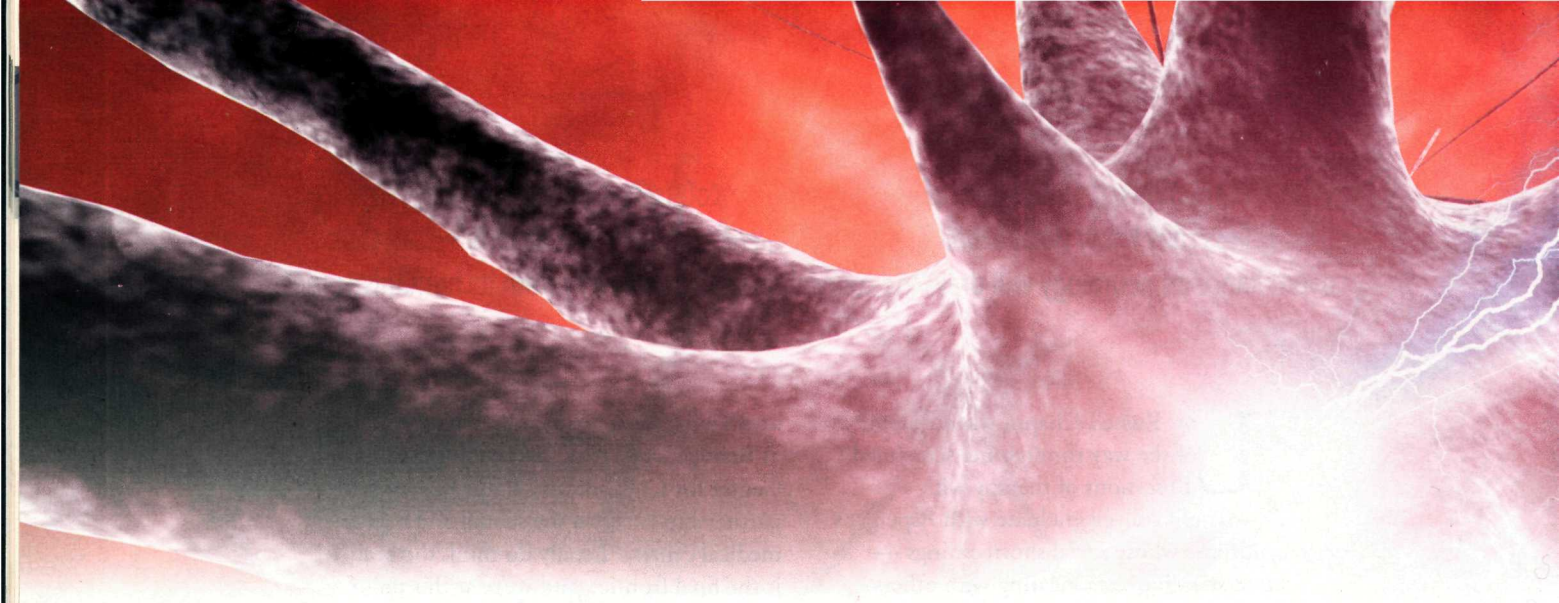
Peering into the brain

The advances are staggering. Scientists and researchers are forging a seemingly endless stream of breakthroughs with the help of technologies that peer into the brain's structure and function. And mental health practitioners are harnessing these discoveries through an array of new therapeutic models.

The torrent of technological innovation has already upended long-held notions of the brain's slow but steady decay, furnishing empirical evidence that mental health professionals can bolster and even create new neural connections that may lead to targeted behavioral changes.

The development of functional MRI (fMRI) technology has opened a window into the brain's neuronal network in real time, showing blood flow and activity in specific areas of the brain that are associated with specific functions. The discovery of neuroplasticity and neurogenesis — findings that the brain can change its neural structure and create entirely new neurons — has given rise to carefully engineered computer programs that claim to strengthen specific brain processes.

Although the study of the brain has long been the domain of psychiatrists and the more medically oriented end of the mental health spectrum, neuroscience



has increasingly made its way into the counseling profession. With that has come the promise of heretofore unimaginable therapeutic possibilities that, for many counselors, have chipped away if not obliterated centuries-old beliefs about the distinction between the brain and the mind.

In growing numbers, adherents of the neuroscientific mindset are seizing upon an array of newer techniques to use in their clinics, including cognitive enhancement therapy and eye-movement desensitization and reprocessing. Many findings and techniques based in neuroscience are even being adapted into long-practiced counseling approaches such as cognitive behavior therapy.

A healthy portion of traditionalists and holdouts are uncomfortable with neuroscience's growing influence in the practice of counseling, however, wary that it may steer the profession away from its humanistic roots.

Undaunted, neuroscience enthusiasts say that a generation of resistance is eroding as counselors begin to tap into the therapeutic power behind neuroscience findings and technologies. Their hope is that a new crop of counselors will emerge into the field already reared on curricula that place more emphasis on neuroscience.

The future is nigh

Around the turn of the millennium, Allen Ivey, a life member and fellow of ACA, started banging the neuroscience drum, calling on the counseling profession to embrace neuroscience under the mantra of "Therapeutic Lifestyle Changes" such as exercise, meditation and other brain-boosting behavior.

He and his wife, Mary Bradford Ivey, also an ACA fellow, continued that clarion call in a 2012 webinar hosted by ACA (see "Neuroscience: The Cutting Edge of Counseling's Future" at *counseling.org/continuing-education/webinars*) and in their keynote at the ACA Conference in Cincinnati earlier this year.

The National Institute of Mental Health is increasingly turning to neuroscience as an alternative for moving away from the *Diagnostic and Statistical Manual of Mental Disorders*, Allen Ivey says. He predicts that action will eventually yield a totally new diagnostic approach.

"The brain-based paradigm is coming. … We're going to have a very different way of handling mental health," Ivey said in the 2012 ACA webinar. "

Ivey points to the understanding that negative stress leads to neuronal damage, which in turn impairs a person's faculties for memory and emotional regulation, while traumatic experiences can negatively affect the individual even at the genetic level. He also points to evidence that positive empathic interventions — such as those provided by counselors — generate neural pathways, and he posits that a neuro-friendly mindset helps underpin multicultural awareness. These conclusions, among others drawn from neuroscience, have led Ivey to be boundlessly optimistic that counselors can — and should — tilt the balance of the nature-nurture dichotomy in their favor.

"There's absolutely no excuse to give up on any client. … Our counseling can overcome genetics," he says in the webinar, which stands as one of the most popular ever produced by ACA.

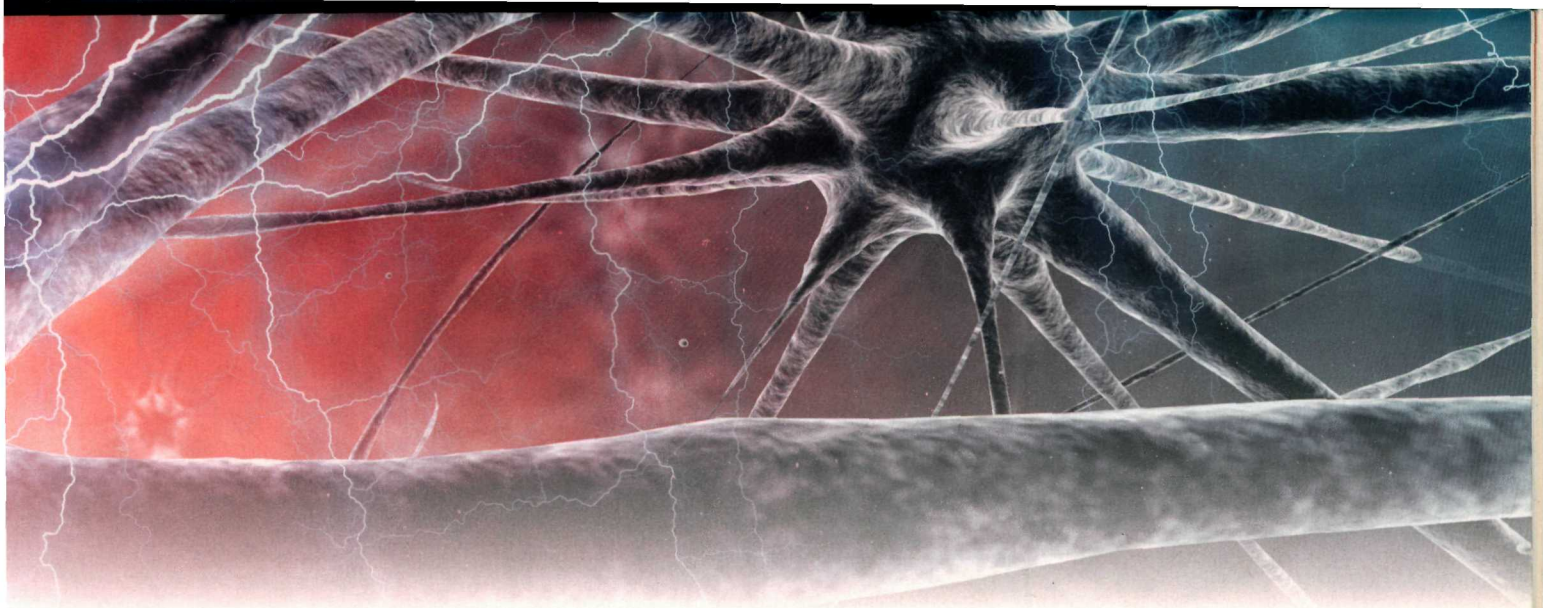
But others sound a note of caution on behalf of the humanist-oriented side of the counseling profession.

Matthew Lemberger-Truelove, president of the Association for Humanistic Counseling, a division of ACA, readily concedes that he marvels at some of the neurobiological work he sees his colleagues doing at the MIND (Mental Illness and Neuroscience Discovery) Institute at the University of New Mexico (UNM). But as those breakthroughs filter out, he says, counselors must be wary not to let them run roughshod over the profession's humanistic principles.

"We're way more sophisticated than what's going on in one or two places inside of our body," he says. "Instead, we're a total unit that's operating in a reflexive way with the world around us. You can't just separate those. So, on the one hand, I agree with folks like Allen Ivey that neurology is incredibly important. But my problem is reducing it to the single problem, or even to a primary operation of what therapists need to do."

Lemberger-Truelove, an ACA member and assistant professor of counselor education at UNM, worries that counselors are closing their critical eye in the hopes of finding a panacea with neuroscience.

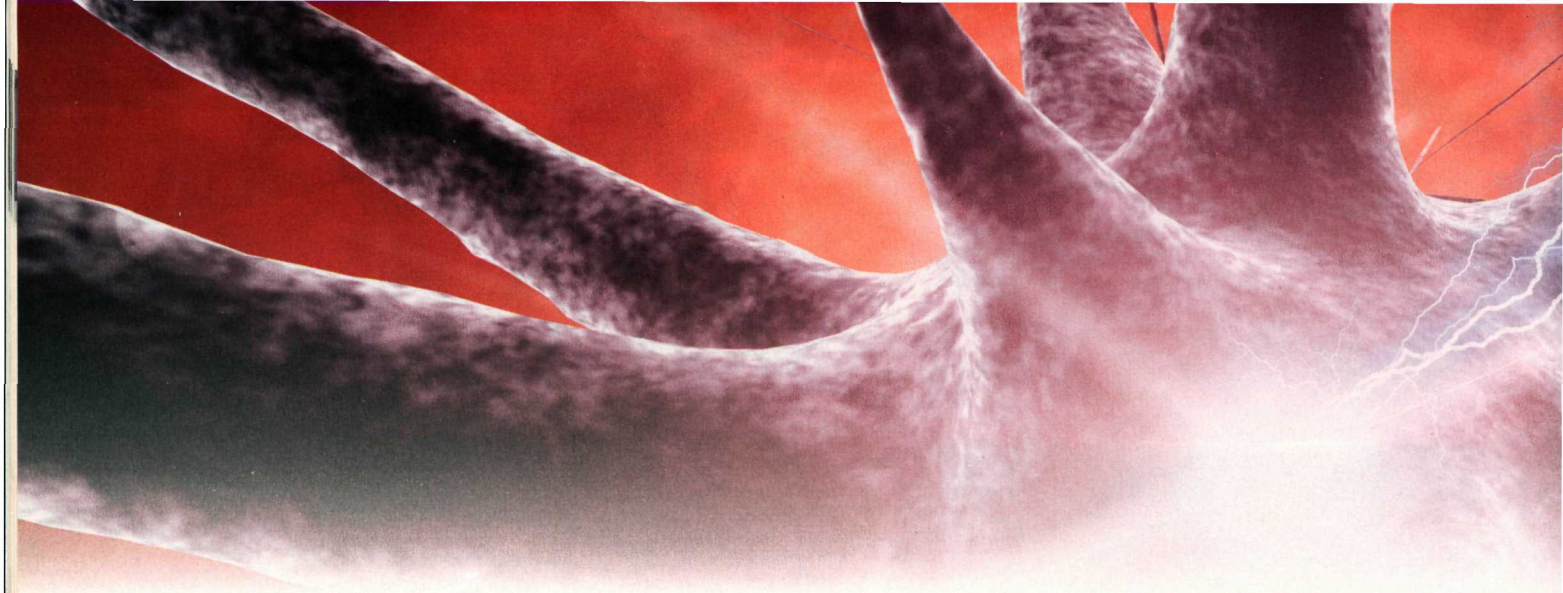
"We are eager to find out things that will help our clients," he says. "I think in so doing, we are going to — with good intentions — grab onto things that



might be a straw man. An overreliance upon neurology without looking at the total human experience … is potentially naive. And, yes, I do see more counselors going that way, for the same reason we go to simple diagnostic algorithms, for the same reason we refer a client for psychotropic medications for the quick fix: because we as human beings want linear causation. There is a link between sensation and perception. But there's also a difference between sensation and perception. In counseling, what we primarily deal with is a client's perceptions. In some way, the thing that individuals sense certainly leads to their perception, but it's not a perfect linear relationship. If counselors prioritize our profession as a profession about sensation, then we will change as a profession."

Becoming neuro-minded

Bill McHenry, associate professor of counseling at Texas A&M University-Texarkana, is a relative newcomer to neuroscience. He broke into the field a little more than a year ago after a long career focused largely on drug addiction. Looking back on his education, training and supervision, McHenry says it hinged on the belief that the brain people were born with was the brain they died with. It never broached the brain's capacity to change or the brain-based aspects of the counseling process, he says.



Throughout his early career, McHenry felt limited by how little he understood of what was going on inside his clients' brains. So, he started immersing himself in the emerging research and literature. That curiosity eventually led him to strike up a dialogue with one of his university colleagues, Angela Sikorski, a neuroscientist and assistant professor of psychology. To his surprise, he found that he could understand her explanations of the brain's structural, chemical and neural processes, which he had assumed would be overly complex.

"That was certainly a watershed moment for me in my career. I still have all of my [counseling] techniques, all of my awareness and clinical intuition, but now I can be even more purposeful in what I'm doing," McHenry says. "If you had asked me five years ago, eight years ago, 10 years ago, 'Are you going to be this closely connected to the field of neuroscience as a counselor, and do you think that's going to be important?' I believe I would have said no. Because that's not what we do in counseling. What we do in counseling is more artistic than regimented. As I've grown as a counselor, the better my skill set is, the more effective and efficient I am as a counselor. I would hope people would trust that this is a good thing for us. To know more about the brain is a good thing for counselors."

As the first step in what can be an admittedly steep learning curve, McHenry suggests counselors immerse themselves in the neuroscience literature. This does not mean they necessarily need to stay up to date on every single breakthrough and innovation. Rather, he says, with a basic understanding of neuroscience principles and a few training sessions, counselors should soon be able to communicate those fundamentals to their clients.

"The technology changes so much, and we learn so much more year by year, and one of the things it shows is that counseling and neuroscience are related, and they're related in a really, really good way."

"I've gone through cases that I worked years ago, and I thought, 'Man, if I would have know that, I really could have educated my clients better,'" he says. "That's the first piece to being more neuro-friendly for counselors is to be able to educate clients on potentially structural, chemical, biological and developmental issues within their particular brain. That information can be therapeutic in and of itself."

The second step centers on the therapeutic process. McHenry now understands the value of counselors being able to focus their attention on what lobe of the client's brain they're working in and where there might be a neurological disconnect. "If I can discover those things, then I can go back and try to reignite or retrigger other parts of the brain," he says.

The dialogue between McHenry and Sikorski led the duo to co-author *A Counselor's Introduction to Neuroscience*, which was published in August. Their partnership is one that embodies the deepening ties between neuroscience and counseling.

Sikorski admits that neuroscience has its shortcomings, but she says the steady march of new findings is continually proving how much common ground counseling and neuroscience share. One of the most encouraging dimensions of the neurobiological breakthroughs, she says, is that researchers have unearthed surprising discoveries into the brain's sensitivity to environmental factors, giving credence to the positive impacts of empathic listening and the counselor-client relationship.

"Do we know everything we need to know about how the brain works? The answer is no, absolutely not," she says. "But the technology changes so much, and we learn so much more year by year, and one of the things it shows is that counseling and neuroscience are related, and they're related in a really, really good way. The more we know about each, the more we contribute to our own specific discipline."

A possible bridge

The past several years have seen the emergence of interpersonal neurobiology (IPNB) to the forefront of the mental health field, says Raissa Miller, a doctoral student at the University of North Texas.

Many counselors see IPNB as a model that represents the possible middle ground between hard science and the art of counseling.

Pioneered by Dan Siegel, a clinical professor of psychiatry at the UCLA School of Medicine and executive director of the Mindsight Institute in California, IPNB seeks to foster an interdisciplinary view that encompasses the mind, body and brain as well as a person's relationships with others. Under the catchphrase of "inspire each other to rewire," IPNB draws from such disparate approaches as psychology, cognitive science, linguistics, chaos theory and anthropology to highlight how focus and personal relationships can change brain structure. It also gets at an understanding of the link between, for example, thoughts and feelings, or bodily sensation and logical processes.

IPNB, along with the writings of Bonnie Badenoch, particularly her landmark book *Being a Brain-Wise Therapist*, convinced Miller of the need to adopt a neuroscientific mindset as a counselor. An ACA member, Miller still has the audio recording of the first time she showed one of her clients a model of the brain to help the individual better understand stress level reactions. "It was shaky and probably sounded kind of funny, but I remember the client really lighting up and having an aha moment and releasing some of their self-blame," says Miller, who was seeing clients in her private practice at the time.

Miller took Siegel's 90-hour online course and participated in several IPNB workshops. She also trained with Badenoch in Dallas. Her next frontier is to study what happens not to clients within the IPNB framework, but to counselors themselves. Her dissertation is a qualitative phenomenological analysis of counseling students' experience learning IPNB, and she presented a hypothetical IPNB-based curriculum at the Association for Counselor Education and Supervision Conference in October.

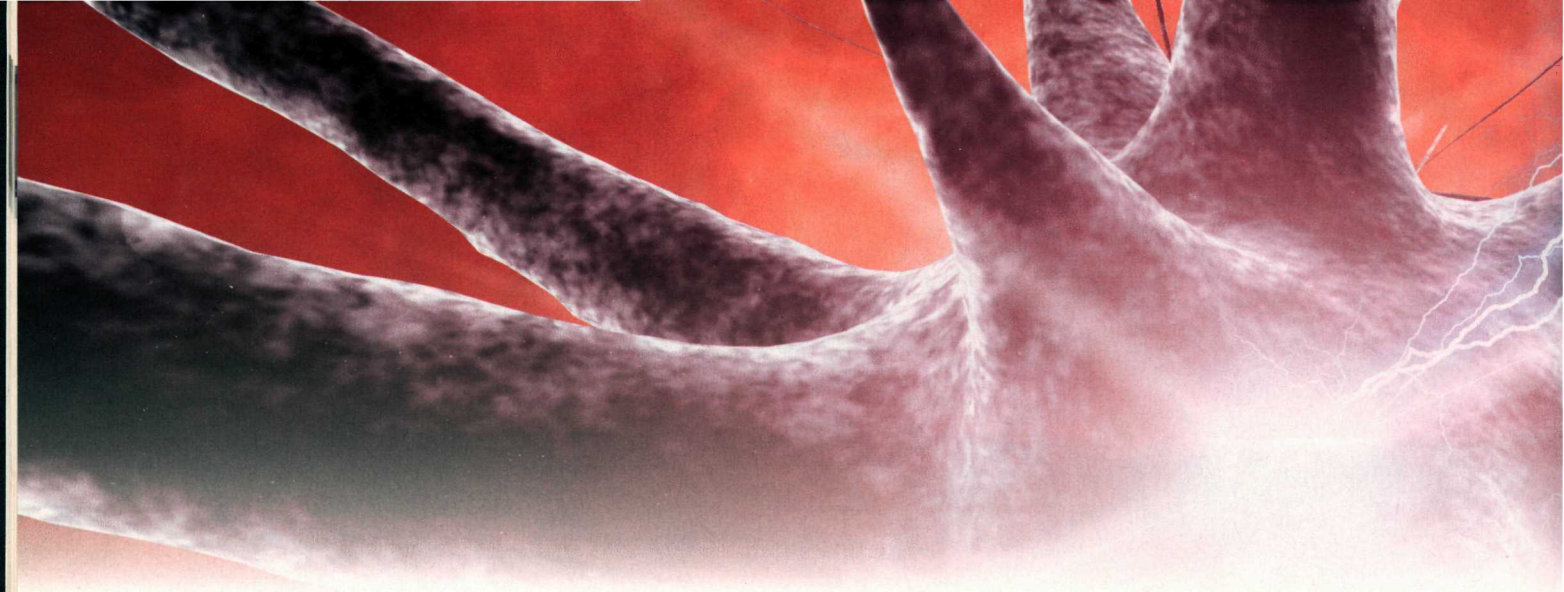
Miller believes IPNB can yield useful insights into the counseling experience, for example, by applying scientific terminology and understanding to counseling elements such as countertransference and the dynamic of empathy.

By taking that approach, she says, "it's not just theoretical concepts anymore. It's actual things going on in the brain. Anecdotally, what I hear is that it helps them [counseling students] understand themselves a lot better, which in counseling training is so important. Anything that helps counselors be more aware of their own internal world and understand the reactions they're having with clients in the moment can also help them understand what's going on with their clients and what really needs to be targeted for intervention. We are so grounded in the [client-counselor] relationship having a substantial impact on the mind, change and the whole counseling process. This helps us understand from a neuroscientific perspective why that information is critical."

Immediate results

The neurological answer to a client's problems can start as simply as learning to breathe.

Russell-Chapin still uses much of the same cognitive therapy she has used with clients throughout her career. The difference today is that she incorporates



neurofeedback into the therapy to show clients how to control their skin temperature, breathe, exercise and sleep.

"People who come to me for neurofeedback have been to five or six therapists and they have had good therapy, but there's still something missing. This is the piece that's missing," she says. "I've always believed counseling works, and we've known it works from the beginning of time. Behaviors change, so we can see people changing. Now we know what works, and we can see it with fMRIs. You can truly see pre- and posttest how we've built new neuronal pathways from doing therapy. So I'm still doing cognitive therapy, but now when my client comes to me and says, 'Boy, am I feeling anxious' or 'Boy, I have this huge headache' or 'I am so depressed,' I know exactly what part of the brain is activating."

"I love doing this as a counselor," she says. "Through the principles of operant and classical conditioning, I can help get their brain waves regulated again. It's remarkable. The brain is so malleable that we can condition it just like we can condition any other muscle in our body."

Ryan Melton, an ACA member and clinical training director of the Regional Research Institute at Portland State University, had his doubts. He didn't think the array of computer games associated with cognitive enhancement therapy would work. He judged them to be too mundane and not engaging enough for clients to find worthwhile or useful.

But in the studies in which he has been involved, cognitive enhancement therapy has time and time again proved to be useful for clients with severe mental disorders who were consistently showing signs of neurocognitive deficits. Melton describes those neurocognitive deficits to his counseling students as "the invisible symptoms within invisible illnesses."

> "Because of some of our traditions [in the counseling profession], I think what happens ... is that when we feel like the talking cure doesn't work, then we're kind of stuck. There's more that we can do."

Melton says cognitive enhancement therapy was developed and originally implemented more by psychologists. But the therapy has been making its way more and more into the counseling profession during the past few years. And he couldn't be more excited.

"Because of some of our traditions [in the counseling profession], I think what happens ... is that when we feel like the talking cure doesn't work, then we're kind of stuck," Melton says. "There's more that we can do, and when we focus on these neurocognitive deficits and the skills, the accommodations that can be done can be very simple."

With dozens of clients, Melton has seen cognitive enhancement therapy's video-game-based model leverage neuroplasticity to repair specific psychosocial and neurobiological deficits, including processing speed, executive function, working memory, social cognition and the like. The video games require clients to employ those specific faculties at certain times.

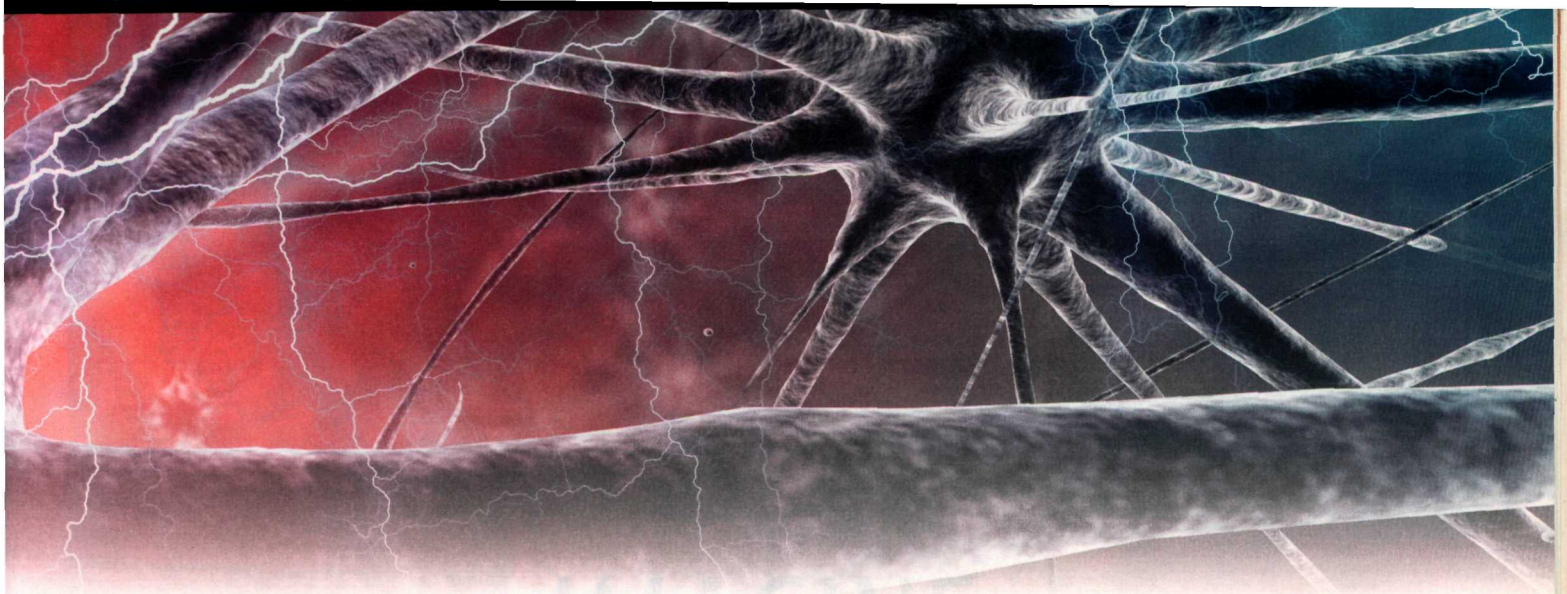
Melton reviews the results with each client. He talks through what cues the clients responded to, what they did well and what they struggled with, and how those cognitive decisions — be they failings or successes — translate into the clients' day-to-day performance at work and in their personal lives.

By performing better on the games, the clients get instant feedback and find a sense of greater self-efficacy, Melton says. In addition, he says, clients show up more regularly for appointments and feel more invested in the process.

"It's more immediately engaging. They see immediate benefits," Melton says. "They feel — and probably there is — more science behind it than, say, cognitive behavioral therapy, even though CBT might be doing the same thing. The clients are really buying in [with cognitive enhancement therapy]."

Melton has weaved neuroscientific principles into every course he has taught in three years as a counselor educator at Portland State. "Once you get through that initial barrier of what [counseling students] think the profession can and can't do, there's absolutely an appetite for this kind of information," he says.

Though he'd still like to see neuroscience more widespread across counseling curricula, he hopes its growing



presence is creating a profession in which hostility toward neuroscience principles is a thing of the past. "I hope so. I think we need to grow as a profession," Melton says. "Others might disagree with that, but I hope so."

A leap of faith

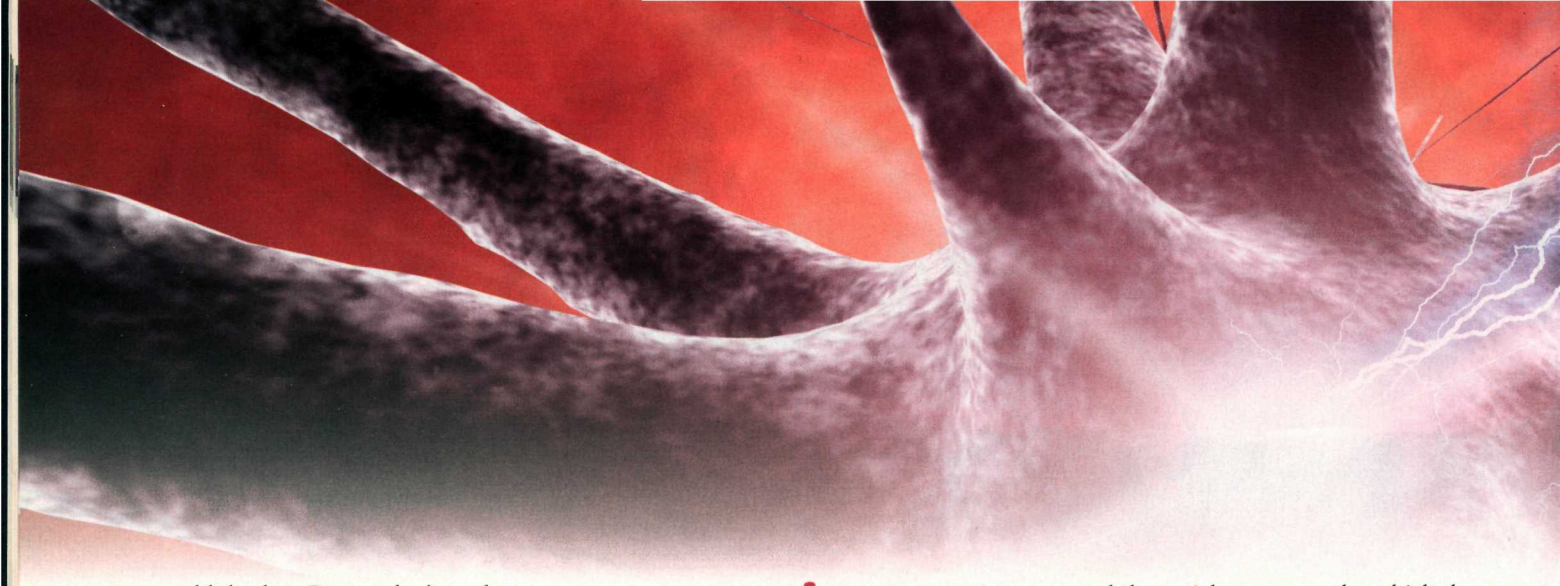
Critics of neuroscience blast some of the techniques as lacking scientific justification and data to prove their effectiveness. Even counselors who are enthusiastic supporters of neuroscience generally remain guarded about its more dramatic claims.

Miller is encouraged by the developments she has witnessed within the IPNB framework, though she acknowledges that much of the research upon which IPNB is based lies largely outside her expertise.

The science "is emerging, and I think we have to be cautious. For any of the neuroscientists, it is easy to get ahead of themselves," she says. "I feel like I am having to trust some of these neuroscientists and psychiatrists who are writing these books. I'm having to trust their interpretations. I'm having to trust that some of the implications and what they're saying is true, which I guess is a little shaky, but I've not hesitated."

Melton takes issue with how directly some practitioners draw conclusions from the neural activity they witness during sessions. He concedes there is a lot of room for the science to grow and become more precise.

"We do sometimes make too much of the fMRIs," he says. "If we could diagnose using fMRIs or blood tests,



we would do that. But we don't, and we can't. Even the [American Psychiatric Association] says we're still 10 years away from that. Of course, I remember them saying that 10 years ago. It's not just about what's lighting up in our brain. Even when I talk to physicians, they say, 'Oh, well they're getting less blood flow to the dorsolateral prefrontal cortex' or wherever, and I say, 'What does that *mean* for the kind of day-to-day work [the client] faces?' And they can only say, 'Well, they're getting less blood flow.'"

Still, neuroscience continues to entrench itself into what insurance providers and mental health organizations deem as best practices, Miller says. This leaves some counselors worried that other mental health professions are making big advances as a result of embracing neuroscience. They fear that if counseling doesn't do the same, there will be dire consequences, especially if counselors aren't at least conversant in neuroscience principles or able to express how those principles are relevant to — and supportive of — the counseling process.

"I kind of see us falling behind or maybe not being seen as legitimate, which I think is already sometimes a struggle — to not be seen as on the same playing field as other mental health professions," Miller says. "This seems to be the emerging common language, so if we want to stay on the same footing as other mental health professionals, we would do well to integrate it. … The counseling profession has struggled to produce significant outcome studies showing that what we do is effective. If we can start using this language and show how what we do is effective and publish it more, I think it's just going to strengthen the field."

> "For how long do we as counselors have to feel [inferior to] the psychologists and psychiatrists? Let's just do what we do well. I encourage other professions to chase that straw man because, in the end, that's just not the philosophy of counseling."

But faced with that argument, Lemberger-Truelove urges the counseling profession to stand its ground.

"For how long do we as counselors have to feel feelings of inferiority with our big brothers, the psychologists and psychiatrists?" he asks. "Let's just do what we do well. I encourage other professions to chase that straw man because, in the end, that's just not the philosophy of counseling. Counseling is really about appreciating the individual, their unique differences and how an individual can best manifest whatever unique difference they have. If we remain steadfast in the idea that we interact with clients' perceptions of themselves and their world and the social systems under which they operate, then I think there will still be a place for us, and we won't be competing with the different [mental health] professions. We'll really be stalwarts. We'll be the experts of how clients can exist in a very pragmatic, useful way."

In that sense, the humanistic aspect that counseling brings to mental health is a crucial counterweight to the excitement of neuroscience, Melton says.

"We still know that we get our best outcomes when we establish a strong therapeutic alliance with our clients," he says. "That's one thing we know that's almost necessary in treatment, regardless of our profession. It's true in psychiatry and psychology and social work and counseling. So we still need that piece, even if our follow-up treatment is going to be a pill, cognitive behavioral therapy or cognitive enhancement therapy. That still needs to be there. Let's not go one way or the other. Let's stay in the middle with this, because that's what we know."

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