Forensic Briefs

Reid Meloy - Threat Assessment Pathways

In this episode of Forensic Briefs, Dr. Reid Meloy returns to examine threat assessment and management through the development and application of the TRAP-18. He discusses proximal warning behaviors, distal risk factors, time-sequencing of violent pathways, and emerging research using artificial intelligence in forensic risk assessment. The conversation also analyzes the Capital Gazette mass murder, highlighting failures in threat management and the critical warning sign of attackers “going dark” before violence.

Dr. Millkey Welcome to Forensic Briefs. I am one of your hosts, Alex Millkey.

Dr. Guyton And I am your other host, Michelle Guyton.

Dr. Millkey Michelle, why don't you tell us who we'll be talking to today?

Dr. Guyton Today we are thrilled to welcome back Dr. Reid Meloy to the show. As you may remember, Dr. Meloy is a board-certified forensic psychologist, an internationally recognized expert in threat assessment, targeted violence, and counterterrorism. For more than three decades, he has consulted on high profile criminal counterintelligence and counterterrorism cases, including over 24 years working with the FBI's Behavioral Analysis Unit at Quantico.

Dr. Guyton His counterterrorism work began when he served as the consulting forensic psychologist to the U.S. Attorney General and the prosecution of Timothy McVeigh and Terry Nichols. Following the Oklahoma City bombing. Dr. Meloy is the originator and developer of the TRAP-18, which is a validated risk assessment tool used by counterterrorism professionals across North America, Europe, South Africa, Australia, and New Zealand.

Dr. Guyton He has also co-developed the WAVR-21, a widely used structured professional judgment instrument for assessing workplace and campus violence. Dr. Meloy's research on stalking and threats to public figures led to a commissioned National Academy of Sciences report, and informed the development of fixated threat assessment centers in multiple countries. Dr. Meloy is frequently quoted in places such as The New York Times, The Washington Post, The Wall Street Journal, The New Yorker, and NPR.

Dr. Guyton He has also served as a technical consultant to CSI and the Paramount Plus series *Indivisible: Healing Hate*, which explored the roots of the January 6th, 2021 attack on the US Capitol. Welcome back to *Forensic Briefs* Reid Meloy.

Dr. Meloy Thank you. Michelle, good to be here again.

Dr. Guyton We are excited to have you back and continue and deepen the conversation about all things violence and threats. And this session really talking about sort of the assessment and management of that. So we are going to be talking with you about threat assessment and your tool, the TRAP-18. We have talked about this with some of our guests in the past who have done some studies with your tool, but it's your tool.

Dr. Guyton So could you tell us how this came to be, how you came to develop this measure?

Dr. Meloy I'll be very happy to, Michelle. The TRAP-18 is the - short for the Terrorist Radicalization Assessment Protocol. And, of course, the 18, or the number of indicators in the instrument. I'm a consultant to the behavioral Analysis Unit at the FBI, and I've been doing that now for about 24 years. And I came into the counterterrorism work in the 1990s, but did not receive the security clearances that I needed for the FBI work until right after 9/11.

Dr. Meloy And one of the things that I noticed over those - the early aughts. So we're talking about, 2001 through 2005, 2006 that there was just a tsunami of threats and risks that were coming at local, state, and federal law enforcement agencies. And that there was a need for prioritizing cases for

efficiency in terms of the personnel and efficiency in terms of the budgets that were increasing and how that money would be used.

Dr. Meloy So, that became the observational reasons for thinking about the development of an instrument. And then in 2009, 2010, we developed the proximal warning behaviors and published that typology in 2012. And I did that work, again, I consider that one of the most important things I've done in my career. I did that work with three colleagues Angela Guldimann, who's a forensic psychologist in Switzerland; Jens Hoffmann, who's a forensic psychologist in Germany; and David James, who's a forensic psychiatrist in in Britain.

Dr. Meloy And we published that typology paper in 2012, in one of my favorite journals, *Behavioral Sciences in Law*. And that became a foundational article for essentially the first half of the TRAP-18, the eight proximal warning behaviors.

Dr. Meloy And then in 2013, 2014 and other work that I was doing with a psychiatrist and psychoanalyst friend in Britain, Jessica Yakeley, we did a paper on the distal characteristics that we believed were risk factors based upon, research that had come before - all research - we're standing on the shoulders of other people, and it's very important to acknowledge that all of our work has come through other people's work that has preceded us.

Dr. Meloy And Jessica and I then wrote another paper, which turned out to be important in our understanding. And within that were the were the ten distal characteristics of the TRAP-18. Our first study we did was on a sample of school shooters in Germany. And that was a very positive, outcome study where we had essentially uncontrolled descriptive piloting data on the effectiveness of the proximal warning behaviors.

Dr. Meloy And then we did our first comparative study. And then that research now has blossomed as the TRAP-18 over the past decade, with multiple studies primarily in Australia, North America and Europe. The TRAP-18 is an structured professional judgment instrument, it's not an actuarial instrument. And the items are - indicators are coded by, ideally, a threat assessment team that is working the case.

Dr. Millkey You mentioned proximal and distal variables. Would you take some time and unpack those for us, please?

Dr. Meloy Yes. The way we use the word proximal is in close time proximity to the attack. And we formulated eight proximal warning behaviors that we thought this was a rational, theoretical model that needed to be tested, of course. And we looked at the research literature from the preceding 25, 30 years and organized it into these eight proximal warning behaviors.

Dr. Meloy And those again typically follow the distal characteristics. The distal characteristics are more distant in time from the attack. And typically they are more chronic vulnerability indicators, such as failure to affiliate with a group, a history of violent criminal behavior, a history of mental disorder - diagnosed, mental disorder, the development of what we call personal grievance and moral outrage.

Dr. Meloy Those are all distal characteristics. The proximal warning behaviors typically are more dynamic. But what's so interesting, Alex, and this goes right to your question, is we did a time sequencing analysis of the proximal and the distal characteristics of a sample of 125 lone actor terrorists in,North America, in Europe. And what we found was that the proximal warning behaviors did follow the distal characteristics, the distals did precede the proximal warning behaviors.

Dr. Meloy And that's important because again, proximal and distal is - was - that was our theory, but it we needed to empirically test it. And fortunately there has been some really nice developments in time sequencing studies that are mostly done in criminology, you see very few of them in psychology. But we were able to then apply an analytical model to all this data on these 125 lone actor terrorists to show in what sequence these behaviors unfolded,

for each of the individuals, and then be able to plot those together in the analysis.

Dr. Meloy And that's published in - that's on my website, and it's also published in the *Journal of Threat Assessment and Management.* So that's, again, kind of a long winded answer to your question.

Dr. Millkey I mean, long winded. I don't think it was particularly long winded, I think it was thorough. I appreciate it. So you've been using this or it was developed to triage resources initially for, I guess, signals, threats that were coming in. Have you been using it mostly to triage or to predict or to postdict? I mean, how have you been applying the TRAP?

Dr. Meloy The research has largely focused on a post dictive analysis of cases, both individual cases as well as group studies where we've been able to do comparative group studies, doing post dictive analysis to see how well the TRAP-18 is able to classify violent versus nonviolent subjects. The TRAP has done very well in being able to do that.

Dr. Meloy So we've got good - we've got solid postdictive validity from studies we've done in North America, as well as studies that have been done in both Europe and also in Australia. And the instrument tends to be widely utilized in Australia and in New Zealand. We have yet to see the instrument utilized in Asia. We're hoping that, you know we can get some penetration there as an instrument, but that has been the most important line of research in terms of application to cases.

Dr. Meloy It's getting us closer to predictive studies, but predictive studies are virtually impossible in these areas. You end up basically doing postdictive studies just because of the extremely low base rates for these lone actor, targeted attacks. The good news - one of the good news is that people are experimenting with a TRAP-18 outside of terrorist subjects, and they're experimenting with its use with adolescents, and they're also

experimenting with its use with targeted attackers that don't appear to have any ideological motivation.

Dr. Meloy It's actually working quite well. So we're getting some broadening of the validity of the instrument into other groups. And I've actually - I've toyed with the idea of we should change the name from from Terrorist Radicalization Assessment Protocol to Targeted Risk Assessment Protocol, just because of the broadening, you know, of the validity, which I see as a, you know, as a good thing, it makes it more applicable to other situations.

Dr. Meloy But we need more research before - to see if the validation is going to hold up.

Dr. Guyton Well, you and your colleagues have brought this into the brave new world of AI, using artificial intelligence. You and your colleagues Marvin Acklin, Kailey Topping, and Julia Kupper, has published an article in 2025 *Journal of Threat Assessment and Management* called "Pioneering Artificial Intelligence Integration into Forensic Risk Assessment: Applying ChatGPT for Zero to the Terrorist Radicalization Assessment Protocol-18."

Dr. Guyton So, I'm wondering if you could tell us about this, because it's really a pretty fascinating study.

Dr. Meloy Yeah. What we did, Michelle, and what we're continuing to do is to explore the use of AI in forensic risk assessment and also beginning to think about ways in which AI can be applied to other tasks that forensic psychologist and forensic psychiatrist do. This particular study was just to look at the, essentially, the inner rater reliability using AI with human coders on a case.

Dr. Meloy So it was a one subject study. And simply what we did was we trained AI on the TRAP-18, had a code, and we did that with both the TRAP-18 manual as well as the research papers that had been published on the TRAP-18 over the past, primarily the past decade. And then we had two senior coders, two humans, that know how to code the TRAP-18. [Unintelligible.]

Dr. Meloy We then gave both AI, as well as the human coders, the same case and all the case material and said, "Code this case." And the AI, we specifically used a version of ChatGPT from OpenAI, we found that the two human coders and AI had perfect agreement on the proximal warning behaviors. Course, AI did this in a minute and the human coders took, you know, 2 or 3 hours to do it.

Dr. Meloy And then they had substantial agreement on the distal characteristics. So the iterator reliability there was less than the 1.0 correlation we got for the proximal warning behaviors. So, the results were, at least to my naive eyes concerning AI, were pretty stunning.

Dr. Meloy Not so much now, because as we've moved forward. Well, let me let me back up here for a moment. We know that AI is here. And as a forensic psychologist and people working in the field, we do not want to minimize or deny the fact that AI will have an enormous impact on what we do. So, it becomes a matter of how we understand it, how we use it, and how we function effectively as gatekeepers for its use.

Dr. Meloy And so that's the general sort of guiding philosophy of how we operate that we're trying to, as best we can, harness AI for use in terms of our work to make it more efficient and effective, and also, importantly, to eliminate some of the subjectivity and cognitive biases that we bring to our work, which I think AI can do actually very well, if it's trained appropriately on whatever the instrument is.

Dr. Meloy Since that time, we have - since that study, we're now working on more comprehensive models of risk assessment with training AI on larger data sets of subjects, and the results of those subjects, and then developing a program whereby one could provide AI with all the data on the case, AI

goes through the coding of the case, and then produces a whole variety of data points regarding that particular case.

Dr. Meloy And that's what we're trying to refine and do now. One of the things, though, that I have learned, and I want to tell you this story in a little bit of detail, because it's so important for people to hear, is that you want to be - in this work you want to be realistic about the importance of us learning about AI, and also skeptical about AI's effectiveness and and veracity.

Dr. Meloy And my story is that we attempted to train one of the AI programs, on a number of the TRAP-18 studies as a way to educate it for further coding. And then when I looked at the studies that AI had drawn from, I noticed this one of the studies was from - it was Meloy, et al, 2001. And, this was 11 years before the proximal warning behaviors had been developed, and about 14 years before the distal characteristics had been developed.

Dr. Meloy So, AI had told an article that I had written with other people 24 years ago, then had used that article as a basis for developing their coding expertise. And then I went back and looked at the article, and there was no data in the article that spoke to any of the coding items on the TRAP-18. So, AI essentially had hallucinated certain aspects of this article, and then had used it for the basis for teaching itself the model, and then had added the subjects in that article to the aggregated subject database for its own training.

Dr. Meloy So you have to be just *incredibly* careful about how the data is understood and translated by AI, and then used for whatever task you think it's using it for. And you just literally have to study the details of the output and just look for, in a very granulated way, look for errors and correct those errors.

Dr. Meloy And this, of course, this is - you're listening to somebody who's a - who's in kindergarten in relationship to AI knowledge. And this has absolutely nothing - everything that I'm saying here has nothing to do with any expertise that I have in coding, which is zero. Yet, it's the kind of detailed, granulated work that we need to do when we're trying to apply this, so-called intelligence to our work that we're attempting - to the product we're attempting to put together for our consumer, which oftentimes is the courts.

Dr. Meloy So just a *huge* word of caution, which you don't want to abdicate your authority and your responsibility when you utilize AI at all. And you want to be the gatekeeper for anything that AI is generating, to check it, and double check it, and triple check it to make sure those sources are reliable and valid, and that AI is using that source material in a reliable and valid way.

Dr. Meloy That's the black box, is how is AI using this material? How do we understand it in terms of the product that it's producing?

Dr. Millkey It's so easy to just assume that these large language models, which are incredibly sophisticated, are just either something that we can't understand or just not doing the homework. But I'm sure you've seen we all see now, I think with some regularity in the paper an attorney will submit a brief for a motion with hallucinated case law, in it. I mean, there's - I think there's been two in the last month here in Oregon that I just read about in the paper.

Dr. Millkey And that doesn't count the ones that no one detected or that I didn't read about. It's just important not to abdicate our judgments. And you do mention, in this article, concerns, which I share, about de-skilling forensic psychologists and psychiatrists through over reliance on this. And I think it's a real concern. I appreciate that you took the time to to dig into this.

Dr. Meloy Yeah, it's an enormous concern. And we need to not only be concerned, but we need to act, and to take action whenever we're either utilizing AI or encountering somebody else that's using it. To dig into the the origins of the data that have been utilized by AI to, you know, to generate the product that AI is reportedly, you know, said it is setting forth again, is here to stay,

and we've got to figure out how we're going to be intelligent gatekeepers of this phenomena.

Dr. Meloy One day I'm optimistic, the next day I'm pessimistic that we'll be able to stay in control of it. I'm reading actually a good book right now that I'll plug, it's called *The Empire of AI.* And it's just a very good, detailed look at one particular company, OpenAI. And so I recommend that to people that are listening to this podcast.

Dr. Millkey At the risk of pontificating in a sort of pretentious sounding way, you know, there's this old story about the philosopher Seneca. Seneca - it's not about Seneca, it's a story that Seneca told, how there was a Roman who had all these enslaved people who were experts in this and that. And he thought, "Well, I'll be a scintillating conversationalist at dinner, because anytime somebody brings something up, I'll have whichever one of my enslaved people knows about that whisper in my ear, and then I'll say whatever brilliant thing he said."

Dr. Millkey And then one of the guests said to him, "Have you ever thought about taking up wrestling?" And he says, "No, I'm an old man. I can't wrestle." And he says, "No, but put your slave's are young." You know, and sort of clothing yourself in this borrowed knowledge anyway, that's an aside. I immediately regret talking about it, but here we are.

Dr. Guyton Well, I mean, in some ways, this reminds me that you can have psychological testing where psychologists were trained in psychometrics, were trained in the specific instruments, we know how they work. And then you might have somebody maybe from another discipline, or who's untrained and - well, let's just go with another discipline, but allied, who gives somebody the MMPI gets a hold of the computerized report.

Dr. Guyton And then they say, “Ha, ha!” Right? And we know that there are a lot of problems with that. But within that there are psychologists who know the psychometrics, they know the tests, and they can understand that nuance, right? To use a phrase from our earlier show of, you know, the nuance rather than sort of binary. But it scares me in this respect because there are so few people who know psychology, who know forensics, who know threat assessment, and also understand AI and the fact that it's evolving at such a rapid pace that to know it one month doesn't mean you know it six months later and how it works and and what it’s using or not using.

Dr. Guyton And so I think that has, for me, made me a little bit hesitant. I know, you know, it's coming, it’s here, it’s here to stay, it’s going to be used. And yet, I feel so afraid by it in that end. Like so, I heard you recommend that book, but in terms of understanding how it's used in assessment purposes, are there other things that you recommend for our listeners to become familiar and be less afraid of than I am in this vein?

Dr. Meloy Yeah, that's exactly it, Michelle. Because, just a little bit about my process that may be helpful for folks, is that, yeah, when I - when Marvin Acklin, my old forensic psychologist colleague - he and I are the same age. Marv has been practicing in Hawaii for many, many years. When he approached me about getting involved in this, my initial reaction, was one of fear, anxiety, and resistance.

Dr. Meloy And I had to kind of just recognize that the reactivity within myself to kind of - to want to kind of steer clear of all this, but just to then step very carefully going forward, recognizing my fears about this. And then over time, those lessened and I began to be able to, in bits and pieces, understand what was going on.

Dr. Meloy But then having these negative experiences with AI that both, they annoyed and in one particular case angered me, was also very useful in my own process of recognizing that we will feel very vulnerable to this new technology. We do feel vulnerable to it, but again, we got to be very careful that we don't minimize and deny the fact that it is here.

Dr. Meloy And, in a sense, move forward despite anxieties about it, to learn as much as we can and then look for credible resources to understand it as best we can. One of my important moments was, so my wife is a neuroscientist at the University of California, San Diego, and she does neuroimaging research, and she's been doing imaging, functional and structural imaging research for 25 years.

Dr. Meloy And, you know, I was talking to her about all this stuff, and she said, “Oh, yeah, it took us about five years to work out all the, you know, all the details of the, some of the, you know, programs that we're using.” So she put the time frame very much in perspective for me that you really have to dig in for the long haul in terms of your understanding as well as your application to your own use.

Dr. Meloy But if you feel confused and don't understand it, stop and get clarity before you move forward. Don't devalue yourself and say, “Well, I'm just not bright enough to get this. I don't understand it. I'll just I'll just let the machines take over.” You know, we don't want the world to become in actuality *Terminator Two*. And so we've got to stay in charge of the machines.

Dr. Meloy But, you know, stop, get clarity, get understanding before you then move forward to the next step. And if you're working with somebody who has set themselves forth as a expert in AI. Don't be afraid to push them with very, very simple, direct questions that you need to have answered before you can go forward.

Dr. Meloy And don't devalue or diminish yourself by saying, “Well, that’s probably a really stupid question. I don't think I should I should ask this.” You know, seek out the data. Seek out your information. I never met this man, but I wish I had his name was Martin Horn, and he was one of the great - he was both a psychiatrist and a psychologist from the late 20th century.

Dr. Meloy But one of my favorite breakthroughs of all times. “In God we trust. All others must have data.” It's one of my favorites. And, you know, do not shrink back from seeking data and the information you seek. And I pushed Marvin, who knows a lot more about this than I do, as both a forensic psychologist and individual who's deeply working with AI.

Dr. Meloy And I pushed him to the point where he said, “Yeah, I, you know, I just don't understand that.” And it's very ambiguous to understand within AI how this is working, and we just don't know, and people don't know how this is working. And to recognize that there's enormous uncertainty in even the folks that are developing artificial intelligence, enormous uncertainty into how this is actually working, including people that are, you know, at the forefront of telling us how wonderful this is.

Dr. Meloy And it's going to - all the tech bros in Silicon Valley telling us how this going to go to present a new age to us. So just be be, you know, be open to it, but also be be very skeptical of it.

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