

their shots, and hit 'vital' areas of the silhouette 75% of the time. Their shot 'groups' were large and dispersed across the entire face of the target. The experimental group, however, struck the target with 99% accuracy and placed 97% of their shots in the vital areas. Their shot 'groups' were as tight as those of highly qualified marksmen."

Grossman, author of two books on the effects of violent entertainment and video games on children, said that the CSP study demonstrates that strong shooting skills do indeed transfer from video games to actual firearms. He also noted, of the Indiana University study: "Basically, this research demonstrates, with brain scan research of large numbers of kids, that violent media causes violent behavior. This is vital information for law enforcement . . . and a major nail in the coffin for the media violence industry."

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## Interview: John P. Murray

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# 'These Studies Are On Track'

*Professor Murray teaches developmental psychology and directs the School of Family Studies and Human Services at Kansas State University. Findings of his research on the effects of violent media on children, are in the October 2001 Psychiatric Times (www.psychiatrictimes.com). Professor Murray was interviewed on Dec. 11 by Don Phau for EIR. The interview has been excerpted.*

**EIR:** What did the research of Dr. Mathews show?

**Murray:** I haven't seen the full version of the study, but we've been doing research as well on the effects of TV violence and activation of young children between 8 and 12 years old. . . . He was using clips of video-game violence; we were using clips from Sylvester Stallone's "Rocky IV." Where they come together, is we see areas of [brain] activation that are peculiar, that are significantly active when viewing violence and not active when viewing other things. . . .

So, while I can't speak for Dr. Mathews precisely, in our studies we found that an area of the brain called the *amygdala* is involved. It's an area of the brain about the size of a thumbnail at the base of the brain. That's the organ that senses threat in the environment. It fires up, in the most common way, if someone was to drop a snake in front of you. . . . That gasp is the amygdala. It senses the threat and instantaneously responds. It changes all kinds of things in the body, it changes respiration, heart rate, and a whole bunch of biochemical changes get triggered. We expected that when kids were watching violence, as opposed to non-violence, we would see more activation of the amygdala. That's exactly what we got.

**EIR:** This is your study. You did MRI studies also?

**Murray:** Yes, this is my study. What our findings also told us, was that the kids were aroused by the violence; they may be trying to imitate it and they stored it away in an area of the brain that is reserved for significant memories, for easy recall. That in itself tells you a story about why the effects of media violence had been demonstrated in overt behavior in kids over the past 30 or 40 years of research.

Now what Mathews did which is interesting, is that he took it a step further; he came at it from a different angle and asked a question . . . how would kids differ if we looked at kids who were either the victims of violence—that is, kids who were abused—or the perpetrators of violence? That is, kids who were aggressive and acting out. What Mathews has shown, is what we were predicting you might see: that you have less frontal lobe involvement, less pre-frontal cortex involvement in these disturbed youngsters. . . .

**EIR:** Does the study show that the violent video games are more effective in invoking this response?

**Murray:** That is my reading of what he found. He found these effects. He studied violent and non-violent video games and found these effects in only the violent video games.

**EIR:** Are video games invoking psychological trauma?

**Murray:** Well, they're invoking the arousal, not necessarily the trauma. They are certainly invoking the arousal and anxiety and the other concomitants of behaving violently, which will be increased heart rate; they're on the attack. The reason people have zeroed in on these video games, particularly the newer versions, the first-person shooter video games, is that they put the player in the context of being the aggressor, of performing the violence, as opposed to someone just watching violence. The concern has been that all the effects that have been demonstrated about TV violence or movie violence over the past 30-40 years are even compounded and exacerbated, made more dangerous, or more worrisome, by the video games where the viewer is a participant in the construction of the violence. . . .

Up until now, a lot has been speculation, and it still is kind of open to discussion. What isn't open for discussion is that we have easily 40 years of research on the issue of TV violence. It's been studied from every angle, but not neurologically; and there's clear evidence that kids who watch a lot of violence are more likely to be violent, and more likely to hold values favorable to using aggression to solve conflicts. That's been floating around at least since 1972 when the Surgeon-General released a report on this, and each year adds more information on this. But this whole new track of looking at brain functioning is very, very new. There will be ups and downs in our understanding and legitimate criticisms of the studies. But knowing what we know about how behavior changes when they watch violence, and getting a glimpse at how the brain operates, we have a pretty good estimate that these studies are on track.