

Healing the Wounds of the Future

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Several years ago, the satirical newspaper *The Onion* ran an article about “Pre-Traumatic Stress Disorder,” based on a “study” by the Department of Future Veterans Affairs. Victims of the disorder, according to the report, experience “vivid, ultra-realistic flash-forwards” of disturbing wartime events that are yet to come. Soldiers who have never experienced a day of battle nevertheless “prelive” the hell of war.

The story was irreverent and no doubt offensive to some, but it was funny. It was funny because the whole idea of remembering the future is absurd.

Or is it? Well, obviously we don’t recall actual memories of things yet to happen, but we can imagine future events—and vividly. Is it possible that the mere prospect of terrifying battle experiences is enough to traumatize soldiers before they actually deploy?

Two psychological scientists believe so, and have been working to validate the idea of pre-traumatic stress. Dorthe Berntsen of Denmark’s Aarhus University and David Rubin of Duke were intrigued by the possibility that soldiers might be “wounded” by imagining the future, just as they are psychologically wounded by the past. To explore this, they set out to see if pre-traumatic stress reactions mirror the symptoms of well documented post-traumatic stress disorder, or PTSD—notably, intrusive and disturbing images and dreams, increased arousal, and avoidance of these negative triggers.

Berntsen has for some time been studying the mental health and well-being of a group of Danish soldiers who fought in Afghanistan in 2009. For this particular study, she and Rubin studied the Danish contingent of the International Security Assistance Force 7—ISAF 7—who spent six months at the forward operating bases in Helmand Province. While there, the soldiers came under heavy attack by the enemy. About half were combat soldiers, and seven in ten reported having killed an enemy soldier.

But the scientists began interviewing these soldiers before they ever left Denmark. After they were recruited into the army, but five to six weeks before deployment, military psychologists collected data on various aspects of the soldiers’ mental health—including a checklist of PTSD symptoms. They also gathered other clinical information, some of which could be configured into a checklist of symptoms for pre-traumatic stress. These were essentially mirror images of the post-traumatic stress symptoms, focusing on the future rather than the past. The soldiers were also interviewed while in Afghanistan, and twice when they were home again—at three weeks and three months after return. So the scientists were able to see, one, if pre-traumatic is a real phenomenon, and two, if pre-traumatic stress reactions are a risk factor for the development of PTSD later on. That is, were the soldiers with the most fearsome imaginings of future battle more likely (compared to others with similar battle experience) to suffer full-blown PTSD after their service was done?

Both hypotheses proved true. Most fundamentally, Berntsen and Rubin showed that soldiers experienced

involuntary, intrusive images of possible future events—plus emotional arousal and avoidance—at the same level as reactions to actual past battlefield events. The scientists conclude that pre- and post-traumatic stress reactions are two subjectively different manifestations of the same underlying phenomenon. What's more, they demonstrated that the soldiers scoring highest on pre-traumatic stress—while still at home, not yet deployed—these soldiers went on to experience more and more intense symptoms of PTSD.

These findings, reported in a forthcoming article in the journal *Clinical Psychological Science*, challenge our current understanding of PTSD as a disorder related to the past. Intriguingly, the findings are consistent with a line of neuroscience research showing that episodic memory and future projections recruit overlapping brain structures.

The findings also have implications for treatment, the scientists say. Currently, the most common treatments—such as exposure therapy—focus on past traumatic events as represented in memory. These treatments have a good track record, but these new findings suggest that they might be enhanced by including exposure to frequently imagined future trauma as well. The findings also suggest the usefulness of mindfulness therapies, which do not target specific kinds of mental content, but could help with unwelcome images from both the past and the future.

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