PTSD in Railroad Drivers Under the Federal Employers' Liability Act

Kenneth J. Weiss, MD, and J. Michael Farrell, JD

Railroad and subway drivers can experience psychological trauma when trains strike or nearly miss other trains, motor vehicles, or persons or become instruments of death. Derailments, collisions, and suicides on the tracks can induce feelings of helplessness, horror, guilt, and anxiety in the drivers. Although some drivers experience acute stress disorder (ASD) or post-traumatic stress disorder (PTSD), their conditions are not always acknowledged within the occupational setting. The world literature suggests that PTSD has been an increasing focus of concern, giving rise to detailed intervention protocols. In the United States, the Federal Employers' Liability Act (FELA) governs the adjudication of work-related injuries among railroad employees. In practice, it is difficult for railroad drivers with PTSD to receive benefits if there was no "direct impact" linked to the employer's negligence. In this article, the authors review the literature on PTSD among railroad drivers, discuss relevant case law, and explain how the FELA militates against some employees with PTSD.

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Train drivers are at risk for psychological trauma when they experience an incident in which another person is killed or seriously injured.¹ The most common scenarios are railroad-crossing accidents and suicides (railroad and subway). These situations are prevalent enough to have prompted an article in the Chicago Tribune Magazine² and a recent National Public Radio broadcast³ that reached mass audiences. Psychiatric disorders are commonly found among railroad and subway drivers who have witnessed persons being seriously injured or killed by trains. This type of situation may give rise to acute stress disorder (ASD), post-traumatic stress disorder (PTSD), and related conditions that include anxiety, insomnia, psychophysiological symptoms, and depression (unspecified anxiety or adjustment disorder).¹

Key clinical features of ASD/PTSD include sleep disturbance, increased arousal (hypervigilance), intrusive and unwanted recollections (re-experiencing or flashbacks), a sense of helplessness, and avoidant behavior.⁴ The Diagnostic and Statistical ManualIV-Text Revision (DSM-IV-TR)⁴ criteria require that there be a direct threat of death or loss of physical integrity to the patient or others before ASD or PTSD can be assessed. In many individuals, the symptoms of PTSD abate over time. However, delayed-onset and chronic forms of the condition are also common, especially when there is prolonged or repeated trauma. In this review, we will first establish that stress disorders are prevalent among railroad drivers and then examine some difficulties U.S. train drivers have in receiving benefits under prevailing law (the Federal Employers' Liability Act).

Stress Among Train Drivers: Review of the Literature

There is worldwide concern about the publicsafety and psychological effects of railway fatalities. Railway accidents of all types have psychological consequences for passengers, communities, and railway employees. There is a growing body of literature on the effects of train disasters on the community of "secondary victims"⁵ and another on the characteristics of suicide victims and railway suicide prevention.^{1,6,7} One of the most comprehensive studies of the manifold effects of railway suicides was conducted in Britain,¹ wherein, as expected, the emotional toll on drivers was found to be diverse. Factors that tended to exacerbate stress included drivers' waiting alone, sometimes in the dark, for help to

Dr. Weiss is in private practice of forensic psychiatry and Medical Director of Delaware Valley Research Associates, Bala Cynwyd, PA; and Clinical Professor of Psychiatry, UMDNJ-Robert Wood Johnson Medical School, Camden, NJ. Mr. Farrell is a trial lawyer in private practice, representing persons in the state and federal courts of Penn-sylvania, New Jersey, and nationally. A version of this paper was presented at the 2004 annual meeting of the AAPL in Scottsdale, AZ, October 20–24. Address correspondence to: Kenneth J. Weiss, MD, Two Bala Plaza, Suite 300, Bala Cynwyd, PA 19004. E-mail: kweiss@comcast.net

arrive, and lack of support by the police. Among the factors that mitigated stress were acknowledgment by the victim's family and reassurance from the employer that the driver was not the guilty party.

Serious Accidents and Stress

A large, two-part study of train drivers was performed in Norway and Sweden, using a sample of 101 drivers involved in serious accidents from 1987 to 1989.^{8,9} The drivers underwent clinical interviews and completed questionnaires (Impact of Event Scale [IES] and General Health Questionnaire-20 item [GHQ-20]). The researchers looked both at the effects of the trauma on the health of the drivers and at factors that predisposed them to a stress response. About one-third of the drivers reported acute stress symptoms, often within 24 hours. (Acute Stress Disorder is the diagnosis applied to individuals who are in the early stage of the response to psychological trauma [within one month]. Individuals in whom symptoms develop later have delayed onset PTSD.) The symptoms included sleep disturbance, tremor, restlessness, and nightmares. All drivers reported intrusive thoughts of the accident, more than half of them in the moderate to high range of severity on the IES. Although there was no statistical correlation between the nature of the stress response and the number of previous accidents, Karlchagen et al.^{8,9} found that several of the drivers who had had similar trauma previously were more distressed clinically. The feeling of increased vulnerability or being worried about future accidents may heighten the stress response. There was a modest correlation between work experience and stress, which showed that the younger drivers had more severe symptoms. The one-month and one-year follow-ups showed that, whereas most post-traumatic stress was reduced, the drivers with the most previous accident experiences had the most residual distress. The drivers were interviewed, but there was no stated intervention protocol. The authors suggested that accident-independent variables are important in perpetuating clinical distress (for example, life stress and premorbid personal problems). They concluded: "But the repeated experience of accidents should always be considered as risk factor [sic] independently of the premorbid health of the driver" (Ref. 9, p 816).

In a subsequent Norwegian study,¹⁰ 395 of 830 drivers polled reported distressing incidents. Those drivers, as measured by the GHQ-12 and IES, re-

ported greater health problems including musculoskeletal and psychological symptoms related to the Intrusion subscore of the IES.

French train drivers, on the other hand, fared well on serial observations over three years following "person-under-train" (PUT) incidents, according to Cothereau and colleagues.¹¹ Not only did the effects of post-incident stress resolve within a year, but the drivers did not appear to suffer significant occupational consequences.

Suicides

Railway suicides have been studied in terms of psychological effects on drivers.^{1,12} Looking at incidents in the London Underground, Farmer et al.¹² found that drivers indeed experienced symptoms of psychological distress after these incidents. In their sample, 16.3 percent of the drivers exhibited PTSD symptoms. One month after the accident, 39.5 percent of PTSD sufferers had residual symptoms such as depression and phobic states. Researchers in England conducted a study using the reactions of 76 London Underground drivers who experienced persons jumping or falling in front of trains. One month after the incidents, 17.11 percent of the drivers had PTSD. Other drivers experienced depression and anxiety. At six months, no driver still had PTSD, but two had depression and anxiety.

In Swedish studies of PUT incidents involving subway drivers, Theorell *et al.*^{14,15} matched 40 PUT drivers with control drivers. Follow-ups were conducted at three weeks, three months, and one year. The researchers measured sick time among the drivers. The PUT group had significantly more sick time than did the control subjects (38% vs. 14%). In addition, the PUT group showed psychophysiological reactions (for example, sleep disturbance) at the three-week point.

Some attention has been paid to victim characteristics.^{6,16} A survey of 127 autopsy reports from South Delhi, reflecting railway accidents from 1996 to 2002, noted that ethanol was detected in 17.4 percent of the cases.¹⁶ This may lend support to the idea that many of the victims were suicides. Thus, improving railway safety may not reduce these random events, although public education has that potential.^{1,7}

Interventions

It is difficult for affected drivers to receive mental health care unless protocols are built into the rail system's policies. Cultural factors are also an obstacle, as the British study noted:

The so-called "macho" male culture that is still prevalent in all organisations centrally involved in managing suicide incidents, should be recognized as a significant factor deterring individuals from legitimate help-seeking. A culture change toward more person-centered interdependent environments should be supported in all organisations [Ref. 1, p 147].

Williams *et al.*¹⁷ discussed trauma-counseling workshops for British Rail train crew managers. They quoted a retiring train driver, who highlighted the cumulative effect of train-caused deaths:

One of the worst things is knowing I have killed three people. The first didn't have much of an effect on me, it was dark and I didn't see him, but 2 years ago there were two in the space of a month and that affected me badly. When the last one happened I couldn't believe it, I thought I was going to have to give up the job. I couldn't cope with it. You just keep thinking it's going to happen again, every time you see somebody standing by the train. It's something a train driver should not have on his mind. . . [Ref. 17, p 483].

Williams *et al.*¹⁷ defined PTSD and then indicated that such a condition can occur among train drivers who witness a railway suicide. (Seeing the victim would be correlated with the development of post-traumatic symptoms, because it personalizes the incident, increasing guilt.) Before outlining the intervention program, the authors made the following observations:

The nature of the experience is deeply traumatic to train drivers, affecting the whole person and most aspects of his or her life. Furthermore, the consequences are enduring across time, continuing to be a source of considerabl[e] distress years or even decades on. Recovery and adjustment do not occur automatically, unaided, or unassisted [Ref. 17, p 485].

They proposed a protocol for recovery of affected drivers, with a year-long response including extended psychological care and at least four debriefing meetings at the following points: immediately after the incident, on return to work, before an internal inquiry, and at one year.

The Danish system has had a protocol in place since 1986.¹⁸ Tang noted, "Railway suicide is a constant potential trauma for drivers and requires prior preparation and post-incident in [sic] treatment" (Ref. 18, p 477). Denmark's policy includes: psychotherapy within 24 hours of the incident, preparation of young train drivers for and an introduction to psychotherapy, introduction to crisis intervention for instructors and others who are called to intervene, and information campaigns inside and outside the company about railway suicides.

Comment

The literature provides documentation across several countries that train drivers are at risk of ASD/ PTSD after accidents, especially when someone is killed. In light of the discussion that follows, we note at this point that PTSD occurs independently of whether the driver was at risk of physical injury. In most cases, the condition is self-limiting. The literature is not specific about the efficacy of early intervention, but the premise is clinically sound. Though not universally true, there appears to be a correlation between repeated traumatic events and the persistence of symptoms. This raises an issue to be discussed later: whether previously traumatized drivers represent a special class of at-risk employees.

The Federal Employers' Liability Act

The administration of railroad employees' workrelated injuries falls under the Federal Employers' Liability Act (FELA),¹⁹ which saw its first iteration in 1906, its second in 1908, and liberalization (from the employees' viewpoint) in 1939. U.S. railroads were built for the most part in the 19th century. Trains were viewed by the public as huge, menacing objects—quite heavy and traveling at high speed—that had the potential to maim or kill.²⁰ Passengers were often jostled, and when derailments or collisions occurred, many people were traumatized. The 19th century formulation of stress symptoms was a diagnosis of "railway spine."21 This condition, falling somewhere between PTSD, fibromyalgia, and conversion disorder, was considered a physical condition caused by spinal concussion.^{22,23} (Stacy cited an early description of the condition by British surgeon John Eric Erichson, quoting the array of symptoms Erichson attributed to "railway spine": defective memory; confused thoughts; diminished business aptitude; ill temper; disturbed sleep; hot head; impaired vision; impaired hearing; perverted taste and smell; impaired sense of touch; attitude changes; gait changes; loss of limb power; numbness; coldness; and sexual impotence [Ref. 21, p 36].) The rise in the number of persons reporting "railway spine" may have ushered in an era of malingering, medical quackery (among expert witnesses), and dubious legal theories of liability.²⁴

Railroad employees subsequently have suffered a variety of occupational illnesses, mostly in the form of physical trauma. This has given rise to an interesting chapter in the history of labor relations. Prior to the FELA, railroads used a variety of legal defenses to avoid liability. These included assumed risk (employees took chances voluntarily), negligence of a fellow employee; and contributory negligence of the injured employee; and the employee had to prove that the work event was the proximate cause of the injury.

The FELA sought to hold employers accountable for their employees' injuries. It differs from the typical worker's compensation law, in that the FELA requires that the claimant prove employer negligence-to any degree. This differs from the policy of the Federal Aviation Administration, for example, which has a worker's compensation policy²⁵ similar to that of other federal agencies.²⁶ In its current version, the FELA has defeated most of the commonlaw defenses that employers had relied on. The Act also imputes potential liability to the "agents, officers and employees" of the railroad, so that the fellowemployee defense cannot be used. Contributory negligence, under the FELA, is not an absolute bar to litigation; rather, negligence can be apportioned to both parties. The proximate-cause formulation is not the preferred means of analyzing causality,^{27,28} a departure from ordinary negligence analyses used in non-FELA cases.

In a 1957 decision, the Supreme Court asserted a liberal interpretation of employer liability under the FELA: "Under the Federal Employers' Liability Act, the test of a jury case is whether the proofs justify with reason the conclusion that employer negligence played any part, even the slightest, in producing the employee's injury " (Ref. 27, p 506). Then in 1963, the Supreme Court further examined causality, saying that reasonable foreseeability of harm was an essential ingredient of FELA claims.²⁸ There have been subsequent refinements of the definition and analysis of employer liability. The federal courts have considered the FELA to be increasingly liberal and inclusive. Nevertheless, there have been attempts in Congress to dismantle the FELA, a move opposed by organized labor and Democratic legislators.

The Supreme Court, FELA, and "Zone of Danger"

In 1994, the United States Supreme Court heard two FELA cases, *Gottshall v. Consolidated Rail*

Corp.²⁹ and Carlisle v. Consolidated Rail Corp.,³⁰ both plaintiffs having experienced work-related psychiatric conditions³¹ not occasioned by collisions or deaths on the tracks. While working for Conrail, Gottshall witnessed the death of a coworker from a heart attack and developed serious psychiatric illness requiring hospitalization. Gottshall and others were discouraged from intervening at the scene, and were ordered back to work after the man collapsed. He tried to resuscitate the man for 40 minutes. The employees were ordered back to work within sight of the body. The results of the witnessed death were typically traumatic, in that Gottshall experienced helplessness and horror, though there was no direct threat to him. A few days later, Gottshall became fearful of dying, with a variety of symptoms, including ASD, depression, and physical deterioration. He sued Conrail under the FELA, claiming that the railroad was negligent for creating the circumstances that led to his trauma. The circuit court granted summary judgment to Conrail, saying that Gottshall's injuries were not covered under the FELA. The Third Circuit Court of Appeals reversed, citing the liberal recovery policy of the FELA and its common-law-based remedies. Regarding Conrail's liability, the court majority used a "genuineness" analysis to conclude that Gottshall's injuries met that threshold and that under the FELA the employee's injuries were foreseeable.

Carlisle, also working for Conrail, complained of poor equipment, long hours, high stress, and poor working conditions. A promotion to trainmaster added the burden of erratic hours. Developing depression and associated symptoms, he eventually broke down. Carlisle sued Conrail under the FELA for negligent infliction of emotional distress, claiming that the health consequences of his work conditions were foreseeable. At trial, a jury agreed, awarding him monetary damages. Citing its holding in *Gottshall*, the Third Circuit affirmed the judgment, reasoning that Carlisle had demonstrated Conrail's negligence, that Conrail had breached its duty to provide a safe workplace, and that Carlisle's injuries had been foreseeable.

Conrail appealed the Third Circuit's rulings in *Gottshall* and *Carlisle*, and the Supreme Court heard oral arguments on February 28, 1994.³² Conrail argued that working conditions, in the absence of physical impact, could not satisfy a zone-of-danger test or other common-law analysis. The appellant

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conceded, under questioning, that the respondents' physical symptoms might be compensable under a zone-of-danger test. However, to support the Third Circuit's ruling, Conrail argued, would be to expose the railroads to a huge potential class of plaintiffs who had stressful jobs.

The respondent Gottshall argued evolving standards in the definition of causality. Modern juries, counsel suggested, would tend to appreciate that emotional injuries have multiple causes that could be construed as "proximate." He implied also that the concern over unlimited lawsuits is mitigated by the necessity under the FELA for proof of employer negligence. Respondent Carlisle argued that the jury found Conrail negligent in ignoring the known literature linking stressful work conditions to medical consequences. Parallels between FELA cases and the law of worker's compensation were drawn. Counsel argued that Carlisle represented a class of plaintiffs whose injuries were within the scope of the FELA as it was originally intended.

Four months later, Justice Thomas delivered the majority opinion.³¹ In both instances, the court found for the petitioner, Conrail. Although a cause of action consisting of negligent infliction of emotional distress would be cognizable under the FELA, the proper analysis, the Court said, would be the zone-of-danger test. Under this test, the respondents could not recover for emotional injuries stemming from a stressful work environment.

Discussion

The research and anecdotal literature—and common sense—suggest that individuals experiencing horrifying events that include death of others or near death of self or others come away with emotional residue. Because there is an ever-present threat of traumatic occurrences—for example, subway drivers regularly encounter persons committing suicidethere is a chance of repeated trauma and emergence or aggravation of PTSD. Although railroads in the United States are barred from explicitly using assumed risk as a defense,³³ once a train driver has experienced PTSD but continues or returns to work, the playing field changes. That is, an already traumatized driver may require special care, which does not appear to be the rule in the United States. (We did not review protocols of subway systems.) Whose responsibility is it to identify and correct post-traumatic conditions? And is the failure to do so negligence?

For railroad employees suffering from stress disorders stemming from non-direct-impact injuries, seeking relief under the FELA can indeed be an unhappy affair. The case law demonstrates evolving standards of causality and liberalization in the types of cognizable claims under the FELA. PTSD, for example, is recognized and compensable under the FELA. In a Mississippi case,³⁴ the employee suffered great horror when perceiving the impending wreck and also had serious physical injuries. He was awarded \$750,000, as he suffered residual anxiety that prevented him from returning to work. Nevertheless, it appears that, at this point, the analysis of negligent infliction of emotional distress may not quite reach all railroaders experiencing horrifying events. A key question remains: Is a purely psychic injury compensable under the FELA? It appears that the answer is yes, under the two-pronged analysis that the claimant was within the zone of danger due to employer negligence.

Claimants under the FELA must prove (1) some degree of negligence on the part of the employer; (2) that the employee was within the zone of danger; and (3) that a causal nexus connects the two. The FELA, while limiting many traditional common-law defenses by the railroads, does not serve as insurance against any work-related injury.35 In Justice Thomas's opinion in Conrail v. Gottshall, it is acknowledged that the case law has attempted to bridge the gap between the restrictive standards in common-law cases of negligent infliction of emotional distress, on the one hand, and the liberal intent of Congress and the FELA, on the other. Citing the Third Circuit's decision in Gottshall: "[D]octrinal common law distinctions are to be discarded when they bar recovery on meritorious FELA claims " (Ref. 29, p 369). However, the FELA is not a worker's compensation statute-that is, under the FELA, there must be injury and negligence.³¹

The *Gottshall* decision recounts several legal theories that could govern the adjudication of such negligence claims and limit the rights of employees: (1) the physical-impact test, (2) the zone-of-danger test, and (3) the relative-bystander test (Ref. 31, pp 546– 9). In the physical impact test, there must be some contemporaneous physical impact due to the defendant-employer's conduct. Though popular in 1908, the Court observed, this test has been abandoned by all but five states. The zone-of-danger test, a legal contemporary of the physical-impact test, was used by 14 jurisdictions as of 1994. This test provides that there must either be a physical injury or an immediate risk of harm due to the defendant's negligence. The claimant, however, must be within the zone of danger (see below). The relative-bystander test is an alternative to the zone-of-danger analysis, whereby persons witnessing injury or death of someone with whom they have a close relationship can recover damages. Thus, bystanders outside the zone of danger can recover for purely emotional injuries in about half the states (non-FELA cases).

The *Gottshall* decision acknowledged the right to recover for negligently inflicted emotional distress. However, Justice Thomas explained, the Third Circuit used an improper test, a "genuineness" analysis, in Gottshall and a "genuine and foreseeable" test in *Carlisle* (Ref. 31, pp 550–1). The Court questioned the reliability of such standards, noting also that the role of the law is to place reasonable limits on recovery. With respect to Carlisle, Justice Thomas found no duty of an employer to avoid creating a stressful work environment, calling the Third Circuit's ruling "unprecedented." Lumping PTSD and "the stresses and strains of everyday employment" together, the Court-insensitively, in our view-concluded that railroads could not be held responsible for the emotional well-being and mental health of their employees (Ref. 31, p 554). Justice Souter, concurring, considered the standards enunciated in Gottshall to be appropriate.³⁶

Based on fear of runaway liability and a perceived need to harmonize the tension inherent in FELA claims, the Court agreed with Conrail's contention that the zone-of-danger test was most appropriate. That is, "an emotional injury constitutes 'injury' resulting from the employer's 'negligence' for purposes of the FELA only if it would be compensable under the terms of the zone of danger test " (Ref. 31, p 555). Operationalizing the test, the Court specified that a worker could recover even in near-miss situations: "Railroad employees thus will be able to recover for injuries-physical and emotional-caused by the negligent conduct of their employers that threatens them imminently with physical impact" [emphasis added] (Ref. 31, p 556). In other words, trauma to a victim, no matter how horrifying to the employee, would not qualify per se for FELA relief.

To summarize, the following are the elements of the zone-of-danger test as it applied to the FELA as of 1994: (1) employer negligence, in any part; (2) employee presence within the zone of danger of physical impact-whether or not the impact occurred; and (3) a cognizable injury—physical or emotional. Justice Thomas was careful to distinguish this analysis from the physical-impact test, the latter excluding a class of individuals who apprehended-but did not experience-physical impact. However, there is no explicit acknowledgment of another class of employees: those apprehending an impact on a victim under circumstances constituting psychological trauma in the railroad employee. We believe that this is an appreciable class of railroaders, which is supported by the above-cited world literature.

Within a few months of the Gottshall decision, another case against Conrail came before the Third Circuit. In Bloom v. Conrail,³⁷ driver Bloom's train struck a car and killed the driver. A few months later, Bloom's train killed a suicide victim. In the latter incident, Bloom heard a sound as the train struck the person. Although he did not request mental health services after the first incident, he developed PTSD and phobic avoidance after the second. He received mental health care but was unable to return to work. When he sued under the FELA, the district court awarded Bloom \$425,000; liability was apportioned at 30 percent to the railroad and 70 percent to the suicidal pedestrian. On appeal, citing the recent Supreme Court holding in Gottshall, the Third Circuit applied the zone-of-danger test and ruled that there was no impact on Bloom, reversing the trial court.

Three years after Gottshall, the Supreme Court reaffirmed its zone-of-danger analysis in Metro-North Commuter Railroad Co. v. Buckley.³⁵ In that case, the claimant learned that the employer had exposed him to asbestos dust. Then the employer offered asbestos-awareness training-to wit, that exposure can cause cancer. Though Buckley had yet not had asbestos-related injuries, he had an anxiety condition, manifested by a concern-not wholly unrealistic-that he would develop cancer as a result of his exposure. Justice Breyer, speaking for a strongly concordant Court, ruled that the FELA would not cover Buckley's emotional condition until he could prove that a medical condition existed due to exposure to asbestos dust. In this case, therefore, there was no "impact" on which to base a claim.

The U.S. Supreme Court recently revisited this area in the case of Norfolk & Western Railway Co. v. Ayers.³⁸ Ayers had been exposed to asbestos at the workplace and experienced symptoms of asbestosis. He pursued a claim for damages for mental anguish, resulting from his fear of developing cancer (mesothelioma). The Ayers Court held that the "mental anguish damages resulting from the fear of developing cancer may be recovered under the FELA by a railroad worker suffering from the actionable injury asbestosis" (Ref. 38, p 156). The decision distinguished the plaintiff's case from those involving merely a claim for negligent infliction of emotional distress without a physical injury, as in Buckley, where there was no claim of physical injury. The Ayers Court explained that its decision was in harmony with Buckley, which "sharply distinguished exposure-only plaintiffs from plaintiffs who suffer from a disease, and stated, unambiguously, that the common law permits emotional distress recovery for the latter category" (Ref. 38, p 156).

What about the driver experiencing psychic trauma, whose symptoms are not acknowledged by the railroad and who receives medical clearance to return to duty? Such a person might be especially at risk for further trauma, given the potential for fatal mishaps (more perhaps in urban subway systems than on interstate railroads). In a second event, the driver could be considered negligently placed in harm's way by virtue of the employer's failure to take action. This is a variant of the type of scenario envisioned by the *Gottshall* Court. A traumatized but untreated driver might be hypervigilant,³ inadvertently placing passengers at risk by, for example, braking inappropriately.

Under the FELA, the traumatized employee could argue that (1) he had been psychologically traumatized by his first collision; (2) the railroad knew or should have known of his condition, did not address it, and was negligent in exposing him to more trauma; (3) the railroad knew or should have known that there was literature relevant to PTSD and related conditions; (4) because of the railroad's negligence in failing to address the condition, he was continuously in potential danger if traumatized by a further incident; and (5) the apprehension of imminent catastrophe in a second collision would have taken place within the zone of danger of "impact." Here *impact* is given a connotation of perceptible emotional trauma caused by the intrusion of sensory information. To date, the case law has not gone this far in its interpretation of the FELA. Perhaps future expert witnesses, discussing the neurophysiology of PTSD, can make the point that the "impact" occurs in the mind.

Conclusions

Railroad drivers are susceptible to a variety of work-related conditions, some physical and others emotional. The FELA was enacted 100 years ago to enable injured employees to recover damages. While railroads are barred from using some traditional tort defenses, the employee has the burden to demonstrate that the employee has the burden to demonstrate that the employee in imminent danger of impact. We have learned from *Gottshall* that watching a coworker die on the job, and from *Carlisle*, that horrendous work conditions are insufficient to satisfy the zone-of-danger analysis. As the Supreme Court has explained, the employer cannot be made to guarantee a stress-free environment, and the FELA is not a worker's compensation law.

We are impressed that the literature demonstrates that there is a class of workers who appear to fall through the cracks of the FELA. These are the unfortunate railroaders, such as Bloom, who are emotionally affected by train wrecks, vehicles on the tracks, and suicides. Because of the size disparity between trains and cars or persons, the occurrences in question usually result in no physical impact on the employee. The impact, rather, is sensory, cognitive, and visceral. The employees, who are at risk for PTSD, are generally invisible to the railroads' medical departments and to the FELA.

We would like to see a leveling of the playing field with respect to emotional injuries under the FELA. In our view, the railroads' failure to identify those at risk for PTSD and to intervene is a potential form of negligence in light of the extant literature and clinical experience. The zone-of-danger analysis either should be extended to include sensory impact or a class of exceptions should be made so that more employees with PTSD are acknowledged under the law that was intended to protect them. Expert witnesses have a responsibility to provide the court with evidence that a mental injury with symptomatic manifestation is on par with physical injury, setting the stage for the FELA to emerge as a dynamic remedy for at-risk train drivers, fairly compensating them and encouraging improvements that will make our communities safer.

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- 19. 35 Stat. 65, as amended, 36 Stat. 291, 53 Stat. 1404, Federal Employers' Liability Act (FELA), 45 U.S.C. § 51 et seq (1908). The relevant paragraph in § 51 reads: "Every common carrier by railroad while engaging in commerce between any of the several States or Territories, or between any of the States and Territories, or between the District of Columbia and any of the States or Territories, or between the District of Columbia or any of the States or Territories and any foreign nation or nations, shall be liable in damages to any person suffering injury while he is employed by such carrier in such commerce, or, in case of the death of such employee, to his or her personal representative, for the benefit of the surviving widow or husband and children of such employee; and, if none, then of such employee's parents; and, if none, then of the next of kin dependent upon such employee, for such injury or death resulting in whole or in part from the negligence of any of the officers, agents, or employees of such carrier, or by reason of any defect or insufficiency, due to its negligence, in its cars, engines, appliances, machinery, track, roadbed, works, boats, wharves, or other equipment."
- 20. An early account of the carnage involved in railway disasters was recounted in Mittelmann M: Dr. Gurdon Wadsworth Russell's account of the 1853 railroad accident at Norwalk, Connecticut. Conn Med 64:291–97, 2000. In this event, a passenger train fell through an open drawbridge. A passenger, Dr. Russell, noted that the engineer jumped off safely before the plunge. His account did not mention whether the engineer experienced trauma or "survivor guilt."
- 21. Stacey M: Terror of trains. Am Heritage 54:35-9, 2003
- 22. Cohen ML, Quintner JL: The derailment of railway spine: a timely lesson for post-traumatic fibromyalgia syndrome. Pain Rev 3:181–202, 1996. The authors reexamine railway spine and the nosologic confusion caused by the blurring of boundaries between traumatic injuries and psychogenic conditions.
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- 25. Federal Aviation Administration Office of Employee Relations and Benefits, AHL-100: Supervisor's guide to workers' compensation claims, May 2001. Available at www.faa.gov/ahr/super/ owc/supgud.cfm. Accessed April 17, 2005
- Federal Employees' Compensation Act, 5 U.S. Code, §§ 8101-8193 (1993). This is a no-fault workers' compensation program; railroad workers are not covered.
- 27. Rogers v. Missouri Pacific Railroad Co., 352 U.S. 500 (1957)
- 28. Gallick v. Baltimore & Ohio Railroad Co., 372 U.S. 108 (1963)
- 29. Gottshall v. Consolidated Rail Corp., 988 F.2d 355 (3rd Cir. 1993)
- 30. Carlisle v. Consolidated Rail Corp., 990 F.2d 90 (3rd Cir. 1993)
- 31. Consolidated Rail Corp. v. Gottshall, 512 U.S. 532 (1994)
- Consolidated Rail Corp. v. Gottshall (U.S.S.Ct. Transcript), 1994 WL 663409 (1994)
 - 33. 45 U.S.C. §§ 53-54 (1908)
- 34. Illinois Central Railroad Co. v. Gandy, 750 So.2d 527 (Miss. 1999)
- Metro-North Commuter Railroad Co. v. Buckley, 521 U.S. 424 (1997)

36. Gottshall, supra, at 558: "I write separately to make explicit . . .the Court's duty. . .to develop a federal common law of negligence under FELA, informed by reference to the evolving common law. See Atchison, Topeka & Santa Fe Railroad Co. v. Buell, 480 U.S 557, 568–70 (1987)." He continued, at 559, citing the Court's decision in Kernan v. American Dredging Co., 355 U.S. 426, 432 (1958): "Instead of a detailed statute codifying common-law principles, Congress saw fit to enact a statute of the most general terms, thus leaving in large measure to the courts the duty of fashioning remedies for injured employees in a manner analogous to the development of tort remedies at common law. But it is clear that the general congressional intent was to provide liberal

recovery for injured workers. . .and it is also clear that congress intended the creation of no static remedy, but one which would be developed and *enlarged* [emphasis added] to meet changing conditions and changing concepts of industry's duty toward its workers." Justice Souter concluded in *Gottshall* at 559 at that "the Court's decision today [is] a faithful exercise of that duty. . .and. . .adoption of the zone of danger test is well within the discretion left to federal courts under FELA. . . ."

- 37. Bloom v. Consolidated Rail Corp., 41 F.3d 911 (3rd Cir. 1994)
- 38. Norfolk & Western Railway Co. v. Ayers, 538 U.S. 135 (2003)