Placing Blame on the Driver Alone Will Not Lead to a Culture of Safety: Let's Strengthen the Activities of the Committee to Investigate the Causes of Accidents and Establish Real Safety Measures

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The Incident at Hirosaki

On May 2, 2009, an extra train was being operated to accommodate heavy traffic during a busy period. This extra train was scheduled to arrive at the outbound platform of the main line at Hirosaki Station, in Aomori Prefecture, as an out-of-service train. The driver was then to move to the opposite end of the train to depart from the outbound main line onto the inbound main line after loading passengers. On that day, the driver operated the out-of-service train on time and arrived at Hirosaki Station, using service braking to stop. Because it was an out-of-service train, the conductor was scheduled to board after the train's arrival at the platform, and the train driver got out to unlock the door for the conductor. While he was outside the train, the conductor informed him that the train was moving. The driver hurried back to the cab and activated the emergency brake, but the train had already moved 30 centimeters. Though this is only a guess, his leg may have brushed against the brake valve and eased up on the brake as he was getting out to unlock the door for the conductor. The train driver then prepared the equipment in the inbound cab and moved the train back to its proper starting point. Because he had only fifteen minutes to turn back the train, he felt uneasy as he departed from the inbound main line at Hirosaki Station on time. The driver felt a strong jolt, however, when the train passed the switch between the inbound main line and outbound main line, as he had failed to note the speed limit of 25 km/h in the portable train timetable. Though the driver immediately applied service braking, he felt a second jolt. When he applied the service braking again and checked the speedometer, he noted that the train was traveling at 56 km/h, exceeding the speed limit of the switch. The train ended up passing through the switch and finally came to a stop after 1 kilometer.

The Company's Response to the Incident

East Japan Railway Company (JR East), which operates the line, analyzed the circumstances behind the incident and identified three causes.

1. The driver failed to report to the dispatcher that the train had moved 30 centimeters while he was moving to the other cab.

2. The driver did not note the 25 km/h speed limit at the switch in the portable train timetable.

3. Although he should have applied the emergency brake upon feeling the jolt, the driver only used service braking. He was worried that he might have to undergo re-education and was surprised when the train did not stop after the second application of service braking and exceeded the speed limit at the switch, finally running on for one kilometer.

Exceeding the speed limit posed a serious danger to the lives of the passengers and crew. It was quite good fortune that the train did not derail.

JR East also formulated a series of countermeasures.

Concretely, it decided as follows:

1. The guidance officer, lead driver, and officer in charge of teaching would supervise the driver's performance from May 13 to June 16.

2. On May 11, the guidance officer, and on June 18 the guidance officer and officer in charge of teaching would check the drivers' performance through simulations at the training centre.

Following the evaluation, JR East notified the driver that he was no longer qualified to work as a train driver and suggested that another type of occupation would be better. Because of the suddenness of the notification, the driver was upset and distressed. On the following day, he appealed to the workplace supervisor, saying that he would like to work as a train driver again. However, his appeal was rejected. The JR East Akita branch office said "We recognize exceeding the speed limit as being quite a serious event. We received the report from the workplace supervisor, who well understands the situation of the driver. We examined the report and concluded that his judgment that the driver should work in another sort of job is appropriate." Negotiations continued for one year without the sides getting any closer.

After working as an office worker for one year full of anxiety and disappointment, the driver was transferred to station duties with his agreement.

Urgent Workplace Meetings at JREU to Inform Union Members of the Circumstances

The Hirosaki sub-branch, which covers the area where the train driver involved in the

incident worked, held urgent workplace meetings on June 30 and July 1, because JR East's one-sided punishment "make an error = be disqualified from driving" destroys the lives of union members, and merely shifts responsibility onto train drivers, in a way that cannot ensure safety. Also, JR East's behavior is a gross deviation from the philosophy of "do not blame individuals but investigate causes" that we, JREU and JR East, developed. Of course, union member had a sense of crisis that the workplace atmosphere might change in such a way that they would not be able to report the truth and would not be given the right to speak. Despite the short notice for the meetings, more than half of the members gathered.

Opinions from Union Members

1. The simulator should be used for training to improve skills and should not be used as a standard for making judgments on disqualification.
2. The policy of "make an error = be disqualified from driving" is a matter of course at workplaces in the Akita branch (Two months of reeducation are the norm).
3. The "make an error = be disqualified from driving" rule has led to a change in the workplace atmosphere to one where workers are afraid to report the truth.

The members expressed their anger at JR East's unilaterally imposed punishment: "disqualification as a driver."

The Hirosaki sub-branch stressed the importance of the philosophy of safety ("do not blame individuals but investigate causes") and the creation of a workplace culture where people can tell the truth, and also suggested that we do what we should do and observe regulations in order to reduce the risk of making mistakes and to work safely. At the same time, speakers from the Hirosaki sub-branch appealed to union members the present situation, emphasizing that JR East's character is changing to a style that emphasizes seeking the responsibility of employees and a bureaucratic system that does not investigate causes. It also launched a signature campaign to call upon workplace supervisors to focus on reeducation and re-ascertaining the skills of train drivers.

The Hirosaki Sub-Branch Organizes an Investigation Committee with the JREU Head Office, Akita District Office and Train Drivers' Chapter

JR East failed to analyze the causes and background factors leading to the incident but rather made it into an issue involving the driver's character. Is this really fair? Are the causes stressed by JR East the real main causes? Accidents and incidents happen when there is a combination of causes and background factors. One single factor cannot be seen as the sole cause of an accident. A full picture cannot be attained without analyzing

each of the basic causes and backgrounds from various perspectives. Furthermore, we cannot eliminate accidents if we do not take multiple countermeasures in response to the various factors. Further, safety is improved when all the employees of JR East share a common awareness. When analyzing causes, we need standards of judgment for deciding whether a certain error is one that can be condoned or not. If JR East does not analyze these things, and decides instead to shift the problem to one involving the driver's character, this will lead to abandonment of the safety philosophy "do not blame individuals but investigate causes" that JREU and JR East created together. If we do not manage things properly and take adequate countermeasures, there is a risk that many drivers will make the same mistake someday. In that sense, this issue is one for all train crews, and moreover, it is an issue for all union members. There is a possibility that drivers will exceed the speed limit or move trains unintentionally. For this reason, we determined that we need to deepen discussions at our own initiative, and took the step of establishing a Committee to Investigate the Causes of Accidents.

Possible Causes based on members' opinions

1. The key to the door on one of the cabs was stiff, so the conductor was unable to unlock the door easily. As a result, the train driver went to that cab to open it for the conductor.
2. The train driver wanted to let the passengers get on the train as soon as possible. (Some passengers were waiting for the train at platform; customer service is given top priority.)
3. The train driver did not follow the proper procedure when leaving the cab (the handle was left in the service braking zone but it should have been in the neutral zone to keep the train stopped).
4. The train driver forgot to check the speed limit at the switch because he was worried over whether or not to report that the train had moved 30 centimeters when he stepped outside the cab.
5. The train driver was worried about whether to stop the train or not after exceeding the speed limit at the switch.
6. The train driver was thinking about how he would be treated after reporting the error (He thought he might be punished and that rumors would spread around the workplace).

Possible background factors based on members opinions

1. It was the driver's first time leaving from the outbound main line to the inbound main line at Hirosaki Station.

2. The train driver did not know about the gradient at Hirosaki Station.
3. Under the working culture at workplaces in the Akita branch, when the train is switching directions, the conductor traditionally gets on the train and opens the door before the train driver boards to prepare the equipment.
4. There is a possibility that the driver made an error because the braking handle should not be in the emergency brake zone when operating a diesel motor car.
5. There is a sign indicating the 25 km/h speed limit before the switch, but it should have been located further away to properly inform drivers.
6. Because there is a long section of straight track leading into the switch between the inbound and outbound lines (more than 300 meters), it is easy to make an error.
7. Whenever a train crew made a mistake, it was noted on a whiteboard at workplace. As a result, the train driver hesitated to file a report because he was concerned he would be made an example of. (At that time, there was a whiteboard by the roll call area. If someone made a mistake, it was written on it as an update. Many crew members felt that the driver was being used as an example.)
8. The conductor had entered the company in the same year as the driver. It may be that as a result, the driver was trying to show extra respect for the conductor by getting out and opening the door.
9. Even if the train driver had decided to report that the train had moved 30 centimeters, he would have had only 15 minutes to do so. However, there is a strong consciousness among crew that trains should not be delayed.

Clarifying the Contradictions in JR East's Actions

Union members had the following opinions regarding the contradictions in JR East's arguments:
1. Even though the speed limit is 25 km/h at the switch, safety measures such as ATS were not in place.
2. The noting of errors and accidents on the whiteboard was a way to use drivers as examples. (Drivers hoped that other drivers would make mistakes, so that their own errors could be erased.)
3. The background factors or countermeasures against the fact that the train moved 30 centimeters were not discussed.
4. JR East failed to give the guidance officer and officer in charge of teaching specific indications to check the driver's performance.
5. Even though the simulator is intended to be used as training equipment for drivers, in this case it was used as a standard for the judgment that the driver was unqualified.

6. No clear standards were given for the judgment of disqualification as a driver.
7. It is not clear how the guidance officer decided whether the driver was competent as a driver or not.
8. The company said it took his past accidents into consideration when disqualifying the driver, but in fact his past incident was simply an overrun.

Collective bargaining was held four times between the JREU Akita District Office and JR East Akita Branch Office, and twice between the JREU Head Office and JR East Headquarters.

We held collective bargaining with the aim to investigate the causes and adopt countermeasures against such incidents, and to ensure that the driver was being re-educated and monitored with a view to putting him back to work. JR East's consistent response was as follows:

1. JR East re-educated and trained the driver for two months and monitored his performance to see if he was qualified or not. It was judged that this was no longer necessary.
2. The movement of the train by 30 centimeters before it departed as a passenger train was recognized as one of the background factors, but it is hard to say that the movement was the cause of the violation of the speed limit.
3. Even if the movement of the train by 30 centimeters was a background factor, there is no need to investigate the causes.
4. Priority has been given to installing ATS (automatic train stop systems) at the entry to stations, while installing devices at the departure of stations is a lower priority.

Management Must Take the Position of Workers on the Front Line

We can say that the train driver exceeded the speed limit because he allowed the train to move 30 centimeters while he was changing cabs and was worried about whether he should report it or not. He operated the train while in a state of emotional instability, leading to his exceeding the speed limit. It was the first time for the driver to depart from the inbound main line of Hirosaki Station as a special train, so he was given instructions from a person in charge of teaching and asked other drivers to give him advice on operating the train and preparing for it on that day. He studied calmly beforehand.

As can be seen from JR East's response, although they recognized the movement of the train by 30 centimeters as being one of the background factors, they failed to carry out a deeper analysis of the basis behind it, and stated clearly that there was no need to do so. It seems only commonsense that JR East should have analyzed the physical state of the

driver who accidentally moved the train. They should also have adopted countermeasures as the same situation could happen to other drivers. Further, they should have fully investigated the contents of the education they provided and the instructions given at the workplace where such incidents happened. The idea behind the safety philosophy of "do not blame individuals but investigate causes" is to take countermeasures and provide instruction that will prevent other drivers from causing similar incidents. I am not saying that we should only investigate the causes, and that the drivers have no responsibility. Of course, the driver bears responsibility. However, JR East has not carried out a full investigation. They made up their minds right from the start that the driver would be held responsible and tried to settle the matter as a problem involving the driver's qualifications, and drove the driver into a corner by claiming he lacked the qualification to be a driver.

JR East demands that employees report incidents immediately. However, is it possible to do so? We are human beings, and have emotions. We are constantly pressed for time. We bear responsibility for passengers' lives, and are required to make instant judgments. As train drivers working on the rails, we cannot depend on dogmatic ideas. Many members are fearful that if they file an incident report, it will be written on the whiteboard as a warning to others. Young members are particularly concerned about this. The important issue is to make an inquiry into the facts, clearly grasp the correct information, clarify causes and proper countermeasures, and educate drivers as safety professionals and full-fledged members of society through education and discussions among young and senior drivers to ensure that mistakes are not repeated.

Investigation on the Outcome and Causes of the Amagasaki Rail Crash

In considering the Hirosaki incident, it is worth looking back at the derailment that took place on April 25, 2005, on the JR Fukuchiyama Line, leading to 107 deaths and more than 500 injuries in an accident on a scale virtually unknown in recent years in Japan. The Aircraft and Railway Accidents Investigation Commission, which is established to prevent accidents, reported the outcomes and causes of this accident as follows:

"This accident is estimated to have occurred because, as a result of the driver's failure to activate the brake on time, the train entered a right-curving section of track with a 304-meter radius at a speed of 116 km/h, above the 70 km/h speed limit, and the first car derailed to the left side as if turning upside-down. The second to fifth cars also derailed. The reason why the driver delayed braking is presumed to be because he was paying attention to the conversation between the conductor and dispatcher as the

intercom had been hung up and he feared that the conductor had refused his request to file a false report, and as he was thinking of how to make an excuse to avoid re-education (*nikkin-kyoiku*), he failed to pay attention to the operation of the train. It is possible that the driver called the conductor to ask him to file a false report, and in examining this it is important to consider JR West's way of managing drivers, under which it imposes upon them *nikkin-kyoiku* and other disciplinary actions as a penalty, and where if a driver fails to file a report or makes a false report, it imposes strict penalties.

The driver involved in this accident had been given *nikkin-kyoiku* for a previous error. During the re-education, drivers are given day work, and is forced to write reports in front of a manager or to undergo examinations all day long. The length of the re-education depends on the depth of the driver's reflection, but is generally done for a long period of time. It also serves as a warning to other drivers. The driver in this case, who had experienced this penalty, asked the conductor to file a false report understating the distance of the overshoot. He was anxious about how the conductor would report this error to the dispatcher. Needless to say, the driver knew that if a report were not filed immediately, the *nikkin-kyoiku* he would be subjected to would be even stricter. Consequently, the driver's attention was focused on the conversation between the conductor and dispatcher.

Let's Not Waste the Lessons of the Amagasaki Rail Crash

Since the derailment on the Fukuchiyama Line, many drivers have been disqualified by JR East. The company sees problems as involving the drivers' character, apparently saying that accidents occur because they allow such drivers to operate trains. This approach emerged from the idea of crisis management, under which the Amagasaki accident was seen to have occurred because JR West allowed the driver to operate the train even though he was lacking in character, meaning that if the drivers' characters are not managed adequately, the same type of accident may reoccur. However, our view is that this incident has called into question JR West's way of managing drivers focusing on *nikkin-kyoiku* or disciplinary discharges to drivers who cause accidents or similar incidents, and imposing strict punishment on drivers neglecting to file reports of filing false reports. JREU and JR East come to completely opposite conclusions based on the same report on the accident. In the current incident, this led to *nikkin-kyoiku* for one year and disqualification of the driver.

JR East has three basic safety principles (responding at the *actual site*, on the *actual equipment*, by the *actual persons*) as standards of action. In explaining these principles,

the company states, “If we simply accept reports without question or judge from past experience and preconceptions, we cannot adequately investigate causes and improve or adopt countermeasures. Putting the three safety principles into practice promptly is the path to making correct decisions. Did JR East follow the three safety principles on this occasion? They did not. After receiving the reports, they thought, “The driver exceeded the speed limit because he was concerned about overshooting the stop mark,” and, “The driver exceeded the speed limit because he was concerned that he had allowed the train to move 30 centimeters.” Considering this, we need to investigate the background factors and causes. The two companies both believe that a serious accident may arise if they allow such drivers to operate trains. Consequently, they conclude it is a problem of the drivers’ characters, so they give them *nikkin-kyoiku* and disqualify them as drivers. It seems that JR East has decided to cast away the safety philosophy of “do not blame individuals but investigate causes” that JREU and JR East established together based on discussions at the International Railway Safety Conference.

Lessons from the Hirosaki Incident

From the discussions about the Hirosaki incident, the union members at this workplace have become furious about JR East’s response based on the idea of discarding bad drivers like disposable goods, without even understanding the situation of the workplace. This is not only the driver’s problem, nor simply a problem of transportation workplaces. It is a problem for all union members. Precisely for this reason, we held several meetings and emphasized to union members that JR East is not standing up for us. At the same time, we had the occasion to exchange opinions and share concerns with each other. We were able, this time, to hold a Committee for the Investigation of Accidents, and have gained this value experience which we will be able to out to use in the future whenever incidents take place. Within the Akita branch, we gained the confidence that we are able to formulate countermeasures and put them into practice.

JR East’s response to this incident was based on the logic of relieving drivers who make errors from their duties, showing that the conceptions rooted in JR West are now spreading swiftly within JR East. In such a situation, young drivers cannot be trained to be specialists. Human beings are living beings, and we make mistakes. It is important to understand causes and learn lessons from them, take countermeasures and educate drivers to not repeat errors, in order to ensure that drivers do not make the same mistakes again and again.

An ATS-PS system was installed at the switch where the speed limit was exceeded. Members of the Akita signal and telecommunication deport engineering center carried

out the construction work. This construction was not a planned one, but was spontaneously and urgently arranged. The workers involved received an award from the deputy general manager of transport for installing the ATS-PS. It is unparalleled within JR East for workers in one section to receive an award from the general manager of another section. JR East disqualified the driver who exceeded the speed limit, but still gave the award to the workers who installed ATS-PS.

Is this the kind of teamwork that is needed for railway workers? JR East's views toward safety are changing, and not in a positive direction. Removing workers who make mistakes is no way to establish safety. Safety is an eternal issue for railway companies. All the employees should share values concerning safety. Those who are the most familiar with the workplaces should be able to speak out freely. Maintaining workers' abilities is a common issue between the union and company. We, at JREU and JR East, should break the barrier between union and company, and maintain the safety philosophy of "do not blame individuals but investigate causes." It is natural that the union and company have sharp disagreements on this issue. However, in order to preserve railway safety and the future of our company, we cannot avoid this confrontation. The aim of my presentation today is to show that if the union and company do not monitor one another, the organization will fall into corruption. Organizations inevitably fall into the trap of bureaucratization and self protection. As an organization becomes bigger, the speed at which it falls into these traps increases as well. We must firmly maintain the safety philosophy of "do not blame individuals but investigate causes" and create a working environment where workers can work with vitality. I would like to conclude my paper by calling for the creation of safe and comfortable railways by giving JR East candid advice.