

Risks connected with railway transport: sociological-psychological point of view

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Received on: 01-10-2016. **Accepted** on: 30-11-2016. **Published** on: 01-02-2017

doi: 10.23756/sp.v4i2.300



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Abstract

The article brings a completely unconventional view of the issue of examining causes of the worst railway disasters in the Czech Republic and Slovakia, as well as marginally in the world. The author is trying to find an answer to the question: "If the individual overviews of emergency events are analyzed, do the results relating to the cause of these emergency events differ?"

Keywords: railway transport, risk, railway disasters.

1. Introduction

The author has been analyzing risks connected with railway transport for a long time. She particularly examines the causes of emergency events on railway in passenger transport as well as in freight transport especially in relation to transport of dangerous substances on railway.

During the study she gathered a large amount of data from various sources – i.e. freely accessible sources, as well as internal sources of the biggest cargo carrier in the Czech Republic. Especially studying the information about railway disasters from freely accessible sources then motivated both of the

authors to think about the issue from another point of view – sociological-psychological.

When searching the internet, using key words such as railway disaster/accident, overview of railway accidents/disasters, you find:

1. Information about a specific situation (place, persons involved in the accident, number of casualties, number of injured people, causes, etc.)
2. A lot of overviews by various authors, such as:
 - a. The most serious accidents on railway
 - b. The most tragic railway disasters
 - c. The overview of the worst tragic accidents on railway
 - d. Etc.

All of these overviews have one thing in common, that is the use of adverb “the most terrible”, “the most serious”, or “the most tragic”.

Everybody intuitively understands the meaning of this adverb. However, if you want to use it as a “criterion” for further study, its clear definition based on which it would be possible to define the membership function of a set of “most serious railway disasters” is missing. Not only none of the authors of the above-mentioned overviews tried to make such definition, but also in most cases they did not state a brief description of their own points of view and criteria according to which they created the overview. The range of various overviews of railway disasters especially in the Czech Republic and Slovakia, which are available to the authors, is rather wide – from book publications such as (Gulík, 2006); very specific and unique overview contained in the archive fund of ÚV KSC – Department of transport and communications (Source 3), internal materials of railway (CD Cargo, 2016); detailed overview done by a serious journalist of public television (Source 1, Source 7), to many overviews from various private blogs and websites (Source 2, Source 4, Source 5, Source 6). With regards to the sociological width of the range of the authors of the overviews, there is a logical question:

“If the individual overviews of emergency events are analyzed, do the results concerning causes of these emergency events differ?”

To be more accurate – regardless of who, with what aim, for how long periods of time, and according to what criteria the specific overview of emergency events was created – do the causes of these events differ? If yes, how?

From the sociological point of view, the authors considered the opportunity to answer this question based on statistical analysis of the causes of emergency events in the individual overviews to be very interesting.

2. Data

From all collected data were, for this paper, chosen data from Source 1 and Source 2 and the comparison was done.

Discussion

The authors is neither an expert of sociology, nor psychology. The examined question and the issue described in the chapter came up spontaneously during the study of EE on railway from a completely different point of view, as the authors focus on the examination of the causes of risks leading to railway disasters.(Becherova, 2016), (Bekesiene et al., 2016), (Hošková-Mayerová, Becherová, 2016).

Are not people these days – when all types of media inform us every day about tragedies from all over the world – hardened against tragedies of others? How does the fact that some media try to surpass the others with “gore” of their news influence a contemporary man? How did the perception of this term change – if it changed at all – in times when the information was passed on only orally, then telegraphically, by radio, etc.? How did people 200, 100 years ago perceive the term tragedy?

It would certainly be interesting to find out with the help of sociological research what people nowadays perceive as “the worst railway disaster”, or “tragic railway disaster”. What is nowadays actually hidden in the term “tragic accidents”. Are they only those with casualties? If yes, then is one enough, or do there have to be more casualties than one, how do people perceive an accident with a higher number of seriously injured people, but with no casualties? Is it also tragic?

Another interesting topic in this connection is the question:

“How is this term perceived by the professionals of all units of the integrated rescue system (IRS)?”

They are – unlike general public – confronted with tragedy in their everyday work. Depending on the type of their profession, some more, some less, but all of them have had an experience with an EE firsthand. This experience must necessarily influence each individual. The question is how, and how the perception of the term “tragedy” changes.

Conclusion

Security and safety have been a very important factor in everyday life of people for many years. At present, there are many definitions related to security and safety; those are being developed and adapted to today’s modern

times. Security disturbance may cause serious consequences on safety, certainty and continuity of the state function at emergency situations. (Rosická, 2002), (Rosická, Beneš, 2007). Transport infrastructure belongs to the most significant critical infrastructure components. Solving questions related to security, protection, assessment or critical infrastructure assessment is among hot current issues.

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Source 1: *Stéblová – name of death* (2010) Available online: <http://www.ceskatelevize.cz/ct24/domaci/1434088-steblova-jmeno-smrti>, Praha, In Czech.

Source 2: The largest *railway accident* in the Czech Republic (2016) Available online: <http://www.top365.cz/podrobnosti.php?tema=36>, (In Czech:

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Největší železniční neštěstí v České republice, Přehled největších železničních neštěstí na našem území).

Source 3: Miroslav Kunt, (1997, 2008) Overview of railway accidents and traffic disturbances in the 50s, Železnice & Historie, archivní fond ÚV KSČ, Available online: <http://archiv.kvalitne.cz/drobnost/nehody.htm>, (In Czech: *Přehled železničních nehod a poruch dopravy v 50. letech* .

Source 4: ČTK. (2008) The most tragic train accident in the Czech Republic by the number of victims. www.Ceskenoviny.cz, 2008-08-08, [2015-07-23]. Available online. (In Czech. *Nejtragičtější železniční nehody v ČR podle počtu obětí*)

Source 5: Pražan J. (2013) Krouna - the most tragic accident of the '90s, Available online: http://www.krouna.cz/articles.php?article_id=2340, (In Czech. *Krouna - nejtragičtější nehoda 90. let*).

Source 6: Novák D. (2016) *Hradec nad Svitavou 13. September 1967*, Týdeník Českých drah – ŽELEZNIČÁŘ, Available online: http://www.cd.cz/old/TCD2008/8_10neho.htm, In Czech

Source 7: Pösel M. (2015) *Database of rail accidents in the Czech Republic and Slovakia*, Available online: http://ec.europa.eu/eurostat/statistics-explained/index.php/Transport_accident_statistics, In Czech

Source 8: Honuš A. (2016) *On The Track At The Studenka The Same Tragedy Has Already Occurred. 25 years ago*, Available online: <http://www.novinky.cz/domaci/375953-na-trati-ve-studence-se-uz-stejna-tragedie-odehrala-pred-25-lety.html>, (in Czech: *na trati ve studénce se už stejná tragédie odehrála. před 25 lety*

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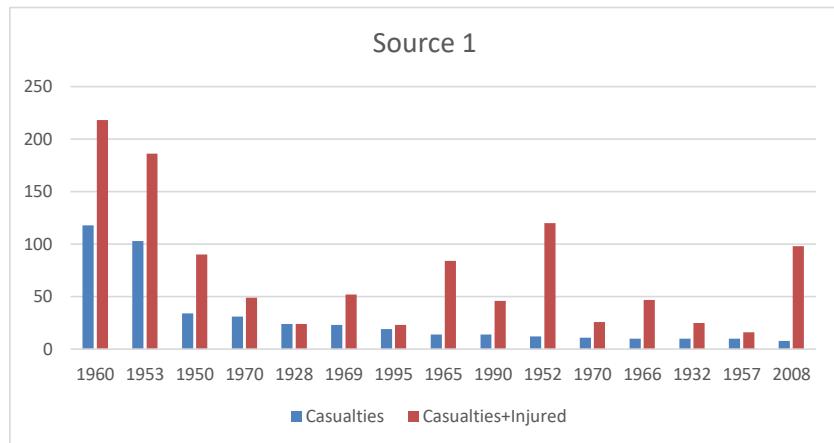
Casualt.	Injured	Place	Date	What happened	Note	Cause	Subcategory	Place of incident
118	100	Stiblova-Pardubice	14.11.1960	Collision with train and fire	fog	leaving the station without permission from the dispatcher; ride despite "Stop!"	A1, B7, C6	at station
103	83	Sakvice-Břeclav	24.12.1953	Collision with train		default train drivers who drank alcohol before driving	A1, C4	railroad crossing
34	56	Podivín na Břeclavsku	21.12.1950	Collision with bus		early lifting of barriers at railroad crossing	B5,C4,C8	railroad crossing
31	18	Rikonín u Tříšova	11.12.1970	Collision with derailed wagon		admitted locomotive train on unauthorized rail line	A3, C6	on railway
24	not know	Zaječí Břeclavsku	18.9.1928	Collisions with freight trains		unauthorized ride	A1,C6	on railway
23	29	Bezděčín-Mladá Boleslav	28.7.1969	Collision with bus		crossing despite the red light	B5,C4,C6	railroad crossing
19	4	Polička-Skuteč	24.6.1995	Collisions with 4 freight wagons		leak of loaded wagons from the station	A3	on railway
14	70	Traha-Hloubětín	21.9.1965	Collision with train		failure to observe sectioning a signal	A1,C6	at station
14	32	Spálov-Semily	25.8.1990	Collision with obstacle		dispatcher sent trains against each other	A3, C6	on railway
12	108	Suchdol nad Odrou	26.8.1952	Deraiment		failure signaling equipment	A2, C16	on railway
11	15	Vážského Meziříčí	23.2.1970	Collision with train	???		A1	on railway
10	37	Desná-Děčín-Lounsko	2.5.1966	Collision with car		notifies the delayed train	A1, C6	railroad crossing
10	15	Znojmo	2.7.1932	Collision with train	Strong storm	delayed train	A1	on railway
10	6	Brunov-Býčí náce	27.4.1957	Collisions with freight wagon		leak of freight wagon	A3	on railway
8	90	Studénka	8.8.2008	Collisions with obstacle	Fallen a bridge	fallen a bridge	A3	on railway

Source 1

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Casualties	Injured	Place	Date	What happened	Cause	Subcategory	Place of incident
110	106	Stěbová	14.11.19 60	Collision with train	leaving the station without permission from the dispatcher, ride despite "Stop!"	A1, C6	at station
103	83	Šakvicové	24.12.19 53	Collision with train	default train drivers who drank alcohol before driving	A1, C4,	railroad crossing
34	56	U Podivinách	21.12.19 50	Collision with bus	early lifting of barriers at railroad crossing	B5, C4,C8	railroad crossing
23	29	Bezděčín	28.7.1969 9	Collision with bus	crossing despite the red light	B5, C4, C6	railroad crossing
18	5	Kroun	24.6.1995 5	Collision with train	leak of loaded wagons from the station	A3,C6	on railway
14	32	Spálov	25.8.1990 0	Collision with train	failure dispatcher, the dispatcher sent trains against each other	A1, C6,	on railway
12	108	Suchdol nad Odrou	26.8.1995 2	Derailment	failure signaling equipment	A2, C16	at station
12	70	Praha-Hloubětínská	21.9.1965 5	Collision with freight train	failure to observe sectioning a signal	A1, C6	at station
5	2	Prostějov	9.12.2004 4	Collision with military van	the cause is unknown	C4	railroad crossing
4	4	Hradec Králové	4.4.2003	Collision with bus	bus driver has overlooked warning signal	B5,C6	railroad crossing
2	30	Blanicke	23.7.2004	Collision with train	opaque place	A1	on railway
2	0	Brno-Komárov	27.4.2009	Collision with people	irresponsible behavior of children	B6	on railway
0	45	Paskov	16.2.2009	Collision with train	driver has overlooked red light	A1, C6	on railway

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