

GREAT DISASTERS

The Great London Smog

London is a busy city, and like any other city, it can be a bit difficult to get around sometimes. Heavy traffic, unexpected road closures, the complexities of the Underground... Now imagine all that, but with the added obstacle of fog so thick that you can barely see your own hand in front of your face, in the middle of the day.

The smog that settled over London in December 1952 didn't just make it harder to go shopping on Oxford Street; it was lethal.

I'm Kari Fay, and this is Great Disasters.

Londoners were accustomed to the pea-soupers, as they used to call them. They were a fact of life. Air quality in London had been bad since sometime in the thirteenth century; that's just what happens when you put lots of people and developing industry in one place.

They were called pea-soupers because they had that sort of colour and consistency; the first recorded instance of the description comes from an 1820 report on life as a young artist by John Sartain, who described coming "through a fog as thick and as yellow as the pea-soup of the eating house... which, being a compound from the effusions of gas pipes, tan yards, chimneys, dyers, blanket scourers, breweries, sugar bakers, and soap boilers, may easily be imagined not to improve the smell of a painting room!"

It was also sometimes called a "London Particular"; this came from a Madeira wine imported for the London market, which also shared its hue with the London fogs. This is how Charles Dickens referred to it in Bleak House, when Esther is met by a young gentleman on her arrival in London.

"I asked him whether there was a great fire anywhere? For the streets were so full of dense brown smoke that scarcely anything was to be seen.

"Oh, dear no, miss," he said. "This is a London particular." I had never heard of such a thing.

"A fog, miss," said the young gentleman.

"Oh, indeed!" said I.

We drove slowly through the dirtiest and darkest streets that ever were seen in the world (I thought) and in such a distracting state of confusion that I wondered how the people kept their senses..."

It was well known that the London smog was not exactly healthy; it's described as being thick enough to make breathing difficult, and you don't need to be a doctor to know that's not good for you. As far back as 1880 it was being blamed for deaths, fatally aggravating lung conditions and essentially choking Londoners to death.

Still, nobody was quite prepared for the conditions that arrived in December 1952.

It had been particularly cold in November and December, with snow falling heavily across the area. This tended to drive people

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indoors, where they lit their fires to keep warm. This was, of course, the days before central heating was common.

Normally, the smoke pouring from their chimneys (and those of the area's industries) would disperse into the atmosphere, but on the 4th December an anticyclone settled over the capital. This effectively trapped a pot of cold, stagnant air beneath a lid of warm air. The smoke had nowhere to go. In the cold, relatively still conditions, moist air came into contact with the ground and condensed into fog. This mixed with the smoke from homes, gases from factory chimneys and all sorts of other particulates to create an especially heavy smog which lingered.

At first, it was taken pretty lightly. The Telegraph reported the first "casualty" on the 6th December:

"A mallard, presumably blinded by the fog, crashed into Mr John Maclean as he was walking home in Ifield Road, Fulham. Both were slightly injured. Mr Maclean handed the bird to the R.S.P.C.A."

Things had become notably worse by the following Monday, the 8th December. The Telegraph then reported that the fog had "blacked out central London and a band 40 miles across...All buses had stopped by 10 p.m. Hundreds of cars were abandoned...Thousands of people did not get milk."

Bear in mind, we're talking about London here. You may have seen that famous wartime image of the milkman cheerfully continuing his rounds amidst the wreckage of the Blitz. That may have been staged, but the point remains: it takes a lot to stop British people getting milk for their morning cuppa.

Even at this stage, though, the true scale of the disaster wasn't realised. There was just a hint, buried on page nine, where it was reported that the fog had caused respiratory problems in cows at the Smithfield Fat Stock Show. One prize heifer had died, and another was seriously ill.

The following day, the 9th of December, the fog lifted. Clearer skies returned, and the smoke was finally able to disperse. But the damage had already been done. Hospital mortuaries were filled, undertakers had run out of coffins, and florists had no more flowers for wreaths.

It was originally estimated that four thousand people had died in the disaster; more recent studies indicate that this figure could actually be closer to ten or twelve thousand.

So how did this happen?

Most of the deaths attributed to the smog were caused by respiratory distress; many casualties had pre-existing conditions which had left them predisposed to illness, or which were exacerbated by the smog, leading to a premature death. The very young and the very old were most at risk.

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According to the Met Office, in one single day of the smog the London air was taking in 1,000 tonnes of smoke particles, 2,000 tonnes of carbon dioxide, 140 tonnes of hydrochloric acid and 14 tonnes of fluorine compounds, while 370 tonnes of sulphur dioxide was converted into 800 tonnes of sulphuric acid.

And citizens were then taking that into their lungs.

Aside from the immediate deaths, there were also lasting consequences. The damage to people's lungs wouldn't go away. Once weakened by the 1952 smog, it was only a matter of time. A recent study indicated that those who'd been exposed to the smog in the first year of their life had a 20% increased risk of childhood asthma, while those whose mothers were exposed during pregnancy had an 8% increased risk. A lot of those people haven't even reached retirement age yet, so the impact could still be ongoing.

During the chaos, the media focused largely on the impact the fog had on transportation, sporting events, and crime. The buses weren't running, and neither were the city's footballers, but criminals were reported to be in their element with a smash and grab wave rolling through the streets.

The only human casualties reported were the unusual; a teenage girl stabbed with a stiletto by an assailant disguised by the fog, or the 52-year old judge who was injured after walking right off the edge of the platform at Liverpool Street Station. The thousands of people falling into respiratory distress, gasping for a breath that just wouldn't come, weren't in the headlines. After all, it wasn't the kind of disaster where you had bodies in the streets; many of the deaths were premature, but they were people who were already ill or old, and maybe there were other factors involved so the fog couldn't entirely be blamed...It seemed hard for many to understand that the city's air had become deadly.

We can see now that there were, essentially, three factors that created this catastrophe.

The first was the weather. The anticyclone which trapped the smog over London was a natural phenomenon, one that brooked no human intervention. An accurate forecast could have predicted the anticyclone, but it's not clear whether anyone at the time could have predicted the impact it would have.

The second factor was pollution. The anticyclone and the resultant lingering fog would have been pretty harmless by itself; it was the trapped smoke that blackened the air and made it deadly. Widespread burning of coal was one of the biggest offenders; it was the standard fuel of the day. It was burnt in everything from domestic fireplaces to railway trains and power stations. And Londoners weren't burning the advanced smokeless coal that you can buy today, it was cheap, dirty stuff, throwing out a toxic smoke which poisoned the air. There's a political aspect involved here, too; the government could have taken action to reduce the pollution, but such

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action would have an economic impact as well, and the country was still struggling to rebuild after the war.

And the third factor? Familiarity. For Londoners, a smog wasn't unusual, it wasn't a reason to panic or evacuate, or a cue to take extra measures for their personal safety. Most simply shrugged, said "Oh well," and got on with their day as best they could. That very British attitude meant that people still went out onto the streets and breathed in the heavy muck, instead of perhaps staying inside and limiting their exposure. It meant that people failed to do anything to prevent the pollution, failed to recognise their own contributions to it, because it was the way things had been for so long.

It's like the story of the frog in a pot. Supposedly, if you put a frog in a pot of boiling water, it'll recognise the danger and jump right out, but if you put a frog in a pot of tepid water and gradually bring it to the boil, it won't recognise the danger and it'll boil to death. Also, you're a monster if you do that, so please don't test that theory.

London was effectively that pot, one that had been gradually coming to a boil for centuries. And it wasn't until people died in their thousands that the danger was recognised.

The subject of the Great London Smog was covered recently in the Netflix drama *The Crown*; however as is usual for this sort of thing it was quite heavily fictionalised. The emphasis of the series is, of course, on Queen Elizabeth and the government of the day, so the writers exaggerated the political impact it had at the time. In fact, as I said, Londoners were so used to peasoopers that there was little expectation of a political response - and little panic.

The drama shows scenes of chaos in hospitals; even going so far as to have a civilian passing medical equipment to a doctor treating her friend. However, accounts from doctors working at the time don't go nearly so far. They were stretched, yes; every bed was full, patients with respiratory distress were placed on almost every ward and they began to run out of mortuary space. But they weren't turning people away, and before they got pushed far enough to feel any sense of emergency the fog lifted.

The Crown shows the scale of the tragedy hitting home with a single death, but in truth there wasn't one casualty who summarised the disaster, no single person whose loss effected change. It was thousands, in hospitals, in homes, all across the city, and only when you looked at the picture as a whole could you see that this was a larger calamity.

The Crown does portray the government's inaction, even if the details have changed. They were reluctant to take any action that would damage the economy, which was still reeling from the war, and were at the time maximising revenues by keeping cheaper, dirtier coal in the UK and exporting the better, less polluting, stuff.

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There was also a sense that it wasn't a priority; housing was still an issue following the blitz, rationing was still in place, there was no money and perhaps there was a feeling that it would sort itself out in time. There was already talk about modernising the railways and doing away with steam locomotion, one of the more noticeable pollutants, and there was the promise of nuclear power taking over from coal, ushering in a new age of safe, clean, reliable power.

Gradually, however, the truth did reach Westminster. At one point, Harold Macmillan (then Minister for Housing) was asked, "Does the Minister not appreciate that last month, in Greater London alone, there were literally more people choked to death by air pollution than were killed on the roads in the whole country in 1952?"

Still they stalled on action, slow to recognise that the danger of pollution outweighed the economic impact of legislating against it. Eventually they set up a committee to study the problem of smog - a committee which would, in 1954, report that the number of deaths had remained high from the date of the smog until February 1953.

The next winter brought another deadly fog, although it didn't last as long, lifting after about 48 hours. Action couldn't be delayed any further, and legislation began to change. Bonfires were banned in the city, smokeless zones were introduced, and cleaner energy was encouraged with first the City of London (Various Powers) Act of 1954 and then the Clean Air Acts of 1956 and 1968. Industrial pollution was challenged, restricted and monitored, and measures were introduced to address residential pollution too.

Of course, it wasn't just legislation that changed. The way we generate and use power changed, and for the better. When people's habits changed, it wasn't simply because the government told them to. It was a combination of legislation and the introduction of more affordable - and more attractive - options. The ability to heat your entire house at the flip of a switch is something we take for granted today, but central heating was revolutionary at the time. Fireplaces across London were ripped out, condemned as old fashioned and obsolete. The people of the day would probably be slightly baffled by the thought of interior designers putting them back in sixty years later.

The change was gradual, and it took time. People still died in London smogs right into the 1960s, but eventually, with the right measures in place and improved technology in homes, the old peasouper became a thing of the past.

Or did it?

We always hope to learn the lessons of the past, but a quick look at the skies over developing cities in Iran, India, China, Saudi Arabia and many other countries tells us that, in this case, maybe we haven't.

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Nuclear power didn't turn out to be the problem-free solution that was hoped for, so coal still plays a part in British energy production, contributing 22% of the energy used in 2015. The ubiquity of the car means that traffic pollution has brought its own problems, as has waste incineration and even landfill.

Air pollution is still a very real threat, and not one that always comes in a visible form. But, thanks to the lessons we learned in 1952, it's one that we know to take seriously. And perhaps, in time, it's one we will learn to overcome.

Great Disasters is written, researched and produced by me, Kari Fay. For more information, sources and further reading, check out the Great Disasters blog at greatdisasterspodcast.wordpress.com, or if you'd like to start a conversation, you can find the Great Disasters Podcast on Facebook and on Twitter @great_disasters. If you'd like to support the Great Disasters Podcast, you can become a patreon and earn unique rewards at patreon.com/greatdisasters.

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