The Great Tri-State Tornado of 1925

Lucy Travis

Junior Division

Historical Paper

Paper Length: 1,722 words

In 1925 meteorology was in its infancy. Forecasts were designed to comfort citizens and predict the general weather of rain, snow, or sun. The military controlled all weather reports and banned certain words like "cyclone," "hurricane," and "tornado" which were said to bring unnecessary fear (Sean Morris). When the Tri-State Tornado hit it was unexpected by residents throughout Missouri, Illinois, and Indiana. On its 219 mile trek it claimed the lives of 695 people and injured hundreds more (Tri-State Tornado). Air Force weather officers Captain Robert Miller and Major Ernest Fawbush were then assigned to study the event and convinced the military to rethink policies regarding permitted language. As a result, the change saved many lives in tornados to come (John Galvin). The Tri-State Tornado was a tragic event for hundreds of families in its destructive path and served as the triumphant catalyst for advancements in technology and storm tracking which resulted in hundreds of thousands of lives being saved over the past ninety years.

In 1914 there were only 200 weather observers across the United States sending weather data by telegraph twice a day. Meteorologists in Washington DC processed the information and distributed it to communities around the country (Ronan Pioneer). At the time public broadcasting was very limited. There was no quick way to spread information across the countryside. At most, some households had radios, and television had not been invented. People would listen to the forecast at stores or on neighbor's radios. Even those who knew the forecast were not very informed, because the word tornado was outlawed from the forecast. In later accounts, it was said that some weather predictors knew the tornado was coming, but could not announce a

warning (Sean Morris). "Tornado" continued to be banned word despite storms ravaging the region (Great Tornado). In 1920 weather forecasts were produced, but were commonly based on proverbs and wives tales (National Endowment).

At the time Illinois, Missouri, and Indiana had been officially named states for about 100 years. People were happily living in small towns and most owned farms or had gardens. Kids went to local schools and rode the bus to and from every day. When the March 18th storm occurred, no one in the community had any reason to suspect. The weather forecast said nothing about a tornado. The forecast predicted:

Missouri: Showers probable tonight and Wednesday; colder Wednesday (St. Louis Post Dispatch)(Wallace Akin, 2).

Illinois: Rain probable tonight or Wednesday; colder Wednesday and Wednesday night. (St. Louis Post-Dispatch)(Wallace Akin, 2).

Indiana: Mostly overcast Tuesday and Wednesday; probably showers by Tuesday night; moderate temperature (Chicago Tribune) (Wallace Akin, 2).

At about 1:00 pm on March 18th outside of Ellington, Missouri, a local mailman on his horse-drawn carriage saw an ominous funnel headed in his direction. He immediately galloped toward town to spread the danger warning. While he was lucky the tornado passed him, he could not make it to town in time (Wallace Akin, 1). After the twister went through Missouri it continued barreling east.

Residents in southern Illinois were just as unsuspecting. Kids went to school, adults went to work, and others continued their daily routines. Survivors recalled the cool, spring conditions that morning. Around noon the skies became dark and the storm

clouds gathered overhead. Ellen Van Way Nottingham, a young girl at the time, vividly recalled her experience. At about 3:45 pm school was let out and the winds were high. Students struggled to get home through strong gusts while trying to avoid injury from flying debris. Nottingham's mother, Martha, had gone to the store and upon arriving saw her nephew looking out the back window at a dark grey cloud coming from the southeast. Then they spotted the huge, almost two-mile wide funnel ripping toward them destroying anything and anyone in its path. The next thing Martha remembered was waking up and her feet were stuck under large amounts of rubble from the shop. She slid off her shoes to escape and surveyed the land around her. She found her nephew's lifeless body under building debris. Barefoot, she walked the three miles home through the fractured remains of a once strong community. When she got home she was relieved to find that most of her family had survived. Some family members suffered severe wounds. Helen had a deep cut on her leg and died at 3:00 am the following day due to infection (Sara Manifold). The storm had hit many unprepared families like the Nottinghams.

Finally, the Tri-State Tornado struck Indiana. It was said that there were up to three separate tornadoes at once. Though none of the tornados went far into Indiana, they caused a lot of damage. 100% of Griffin, Indiana was destroyed as well as almost 100 farms. Local newspapers reported in one city alone there were 70 to 80 deaths (Jamie Grabert).

Experts disagree on the actual number of tornadoes that split off or formed concurrently across all states. On its path, the Tri-State Tornado killed 695 people,

injured thousands more, and destroyed over 15,000 homes, most of the damage occurring in Illinois. The seemingly relentless tornado took nearly three and one-half hours and stretched 219 miles. The massive twister caused extensive amounts of damage and many lives could have been saved if weather forecasters were allowed to issue an appropriate warning of the imminent danger or announce it in the forecast (Tri-State Tornado).

It took days to get the injured to the hospital. Trains were filled to capacity or beyond with the wounded and many people died before they could board a train or receive medical attention. It took months for people to repair the damage and tens of thousands were left homeless (John Galvin). After this event, the eyes of many were opened to the need for tornado warnings and tracking. This tornado caused a lot of unnecessary destruction and death.

Twenty-three years after the Tri-State Tornado hit, another tornado hit Tinker Air Force Base in Oklahoma City and caused $10 million in damage. After this destructive event, it was obvious the military needed a plan to try to save more lives. General Fred Borum decided to research tornado tracking. He assigned two of his men, Captain Robert Miller, and Major Ernest Fawbush, to investigate tornados, how they form and their patterns. The team started as soon as they could and five days later they were put to the test. They recognized signs of a tornado coming through a town nearby. They were able to broadcast a warning to those in its path and when the Tinker Tornado hit, people were already safe in bunkers and many lives were saved. The Tinker Tornado caused $5 million in damage, but no lives were lost.

It wasn't long after the Tinker Tornado that the military lifted the ban on the word "tornado." People continued to study and advance the technology and continued to make improvements until we reached the technology that is used today (John Galvin). "Tornado forecasting and the technology that accompanies it has improved greatly over the years, researchers say. Thanks to heightened reporting and awareness, better building practices and inventions like the radio and Doppler radar, tornado fatalities have declined steadily for nearly a century," the New York Times stated (Sean Morris).

Tetsuya Fujita was the meteorologist who invented the Fujita Scale in 1971 to rate the strength of tornadoes. It rates them anywhere from an F-0 to an F-5 and measures the destruction caused to human-made objects and plants. An F- 0 tornado is a very small tornado with winds usually below 73 mph and minimal destruction. An F-5 tornado is the most powerful tornado with wind speeds of about 261-318 mph and results in extensive damage and casualties. Experts agree the Tri-State Tornado sustained such high winds and caused so much devastation it should be rated an F-5 tornado (Fujita Scale).

Doppler Radar was invented in 1964 and is based on the Doppler effect to create an image of the weather activity. The Doppler Effect is when the frequency of light, sound, or other waves increases and is used to determine the velocity, location, precipitation, and many other factors in tornados. By looking at the ways the waves bounce back we can see if there is any precipitation or what the wind currents are like. By seeing the wind patterns we can predict when and where a tornado will land and estimate its path. It is an important tool that was invented to help save more lives in

tornados to come and more accurately predict the weather (Doppler Radar). These are just some examples of different ways we have developed technology with tornados to help save more lives. If we can continue to make improvements in weather forecasting and improve accuracy, then many more lives will be saved in tornados to come.

Today we continue to track tornadoes and have saved many lives with the knowledge we have gained. For example, a tornado that hit Kansas in 2016 was rated as an F5 tornado, but because of the accurate warning provided, no lives were lost. There are many lives that have been saved because we understand tornados better. We can now use our knowledge from the past to more accurately predict their path. Of the F5 tornadoes in the US from 2000 to 2019, most of them caused less than 100 deaths, while some resulted in 0 - 10 deaths. Tornado tracking is very important to our safety today and continues to save many lives annually (List F5 Tornados).

The Tri-State Tornado that devastated parts of Missouri, Illinois, and Indiana in 1925 is the deadliest tornado to ever hit the United States. It destroyed many homes and put tremendous stress on many families. It was said that the struggle from the aftermath of the tornado was worse than The Great Depression that followed (Wallace Akin, 5). The destruction and lives lost opened our eyes to the importance of storm and tornado research. Captain Robert Miller and Major Ernest Fawbush became historic scientists for tracking the Tinker Tornado and advocating for the word ban to be lifted. Many lives have been saved today and many more could have been if these warnings systems had been available. The Tri-State Tornado showed both triumph and tragedy in its 219-mile path.

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