Had Joseph Louw decided to finish his dinner on April 4, 1968, the photographs that captured the horror of Martin Luther King Jr.’s assassination may never have come to be. Louw, a young South African photographer and filmmaker at work on a documentary about King, had been eating dinner in a Memphis restaurant during the hour before tragedy struck. A sudden urge to watch the NBC nightly news brought him back to the Lorraine Motel, where he soon heard a single shot fired.

Louw, who was staying three doors down from King, immediately rushed onto the balcony, where he saw King collapse to the ground. After realizing there was nothing he could do to help, he ran inside to get his camera. “At first,” he told LIFE the following week, “it was just a matter of realizing the horror of the thing. Then I knew I must record it for the world to see.”

Louw captured the chaos and emotion that hovered over that April evening. He shot four rolls of film, but one image in particular remains emblazoned on the memories of those alive to see it at the time. In the moments following the shot, as King lay unconscious on the balcony, his comrades turned their attention to a sight in the distance: the assassin, getting away. They pointed their fingers in concert in the direction of his flight.

Louw rushed to the studio of fellow photographer Ernest C. Withers to develop the film. As he did, his hands shook. “I remember the last stage of developing,” he said. “It was the longest 10 minutes of my life. The first picture I looked at was Dr. King laying behind the railing. I never did photograph him full in the face. I felt I had to keep my distance and respect.”
Not published in LIFE. The Lorraine Motel photographed in the hours after Dr. King's assassination, April 4, 1968.

Henry Groskinsky—Time & Life Pictures/Getty Images
Not published in LIFE. Will D. Campbell, alone on the Lorraine Motel balcony, gazes out into the night. "This picture was probably made as soon as we got there," Groskinsky told LIFE.com. "When I saw him standing there, alone, I thought it looked as if he was just asking himself, My God, what has happened here?"

Henry Groskinsky—Time & Life Pictures/Getty Images
Not published in LIFE. Outside of room 306, Theatrice Bailey, the brother of the Lorraine Motel's owner, cleans blood from the balcony. "There was no friction with the people there at the Lorraine," Groskinsky recalled, "even though here was this white man with a camera on the scene."

Henry Groskinsky—Time & Life Pictures/Getty Images
Theatrice Bailey attempts to clean blood from the balcony, hours after the 6 PM shooting of Dr. King. "I don't know if there were official people around taking notes and pictures and things like that," Groskinsky told LIFE.com. "Nobody was there when we were there. But the fact that the blood was still on the floor, and this man was actually putting it in a jar ... well, when you see a picture like that, God, it feels invasive."

Henry Groskinsky—Time & Life Pictures/Getty Images
Blood on hotel balconies, Memphis, Tenn.
ML King assassination
1968
Mr. Henry Groskinsky
The back of a photograph taken by LIFE photographer Henry Groskinsky on April 4, 1968, at the Lorraine Motel, Memphis, Tenn.

Time & Life Pictures/Getty Images

Not published in LIFE. The building on the left is the abandoned building from which Groskinsky took several of his photographs on the night of April 4. "It was a little scary crawling into the building, because who knew who was going to be there? Who doesn't want you to be there? The atmosphere was very dark, very creepy."

Henry Groskinsky—Time & Life Pictures/Getty Images
Not published in LIFE. Colleagues gather on the balcony outside the Lorraine Motel's room 306, just a few feet from where Dr. King was shot, April 4, 1968.

Henry Groskinsky—Time & Life Pictures/Getty Images
Not published in LIFE. Martin Luther King, Jr.'s neatly packed, monogrammed briefcase in his room at the Lorraine Motel, April 4, 1968 — with his brush, his pajamas, a can of shaving cream and his book, Strength to Love, visible in the pocket.

Henry Groskinsky—Time & Life Pictures/Getty Images
Not published in LIFE. Stunned, silent members of the Southern Christian Leadership Conference in Dr. King's room at the Lorraine Motel, April 4, 1968, including Andrew Young (far left, under table lamp) and civil rights leader and Dr. King's colleague, Rev. Ralph Abernathy, in the middle on the far bed. "I was very discreet," Groskinsky recalls. "I shot just enough to document what was going on. There, almost in the center of the picture, in the mirror, you can see my reflection. I took a couple of pictures and just kind of backed off."

Henry Groskinsky—Time & Life Pictures/Getty Images
Ralph Abernathy and Will D. Campbell, a long-time friend and civil rights activist, embrace in Dr. King's room. "I was documenting a momentous event," Groskinsky told LIFE.com, "and I thought that at any time I was going to be asked to leave, so I did what I could as quickly as I could."

Henry Grosinsky—Time & Life Pictures/Getty Images
Not published in LIFE. A photo taken through tree branches by Henry Groskinsky from a derelict building across the street from the Lorraine Motel, April 4, 1968, very close to where the shot that killed Dr. King likely came from.

Henry Groskinsky—Time & Life Pictures/Getty Images
An airplane dispatched by the U.S. government to retrieve Dr. King’s body and return it to Atlanta, Ga., waits on the tarmac in Memphis, Tenn., the day after MLK’s assassination. "Here we were, two white guys in the Deep South right after the murder of the preeminent leader of the black community — voyeurs, in a sense," Groskinsky remembers. "We were apprehensive about it. But when we got there, there were no big problems for us."

Henry Groskinsky—Time & Life Pictures/Getty Images
The cover of the April 12, 1968, issue of LIFE magazine.

Fred Ward—Life Magazine