Going Back
A Theory of Time-Travel

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A major aspect of time-travel that authors do not agree on, and which seems to present major philosophical problems is what happens if someone travels back in time and affects his or her own background. What if time travelers even kill their own ancestors, or, apparently the ultimate philosophical problem, themselves? In this article, I present a consistent, and, I believe, the ultimately satisfying solution to this problem.

First, note that one might go back in time to preserve history as well as to change history. Imagine you go back to the Illinois of the mid-1850's, go into a tavern, and find yourself in a discussion with Abraham Lincoln and some of his friends about whether he should go into politics with the newly formed Republican Party. He seems reluctant, but you help talk him into it. You return to the present satisfied in the knowledge that you helped end slavery, preserve the Union, and preserve the rest of history as we know it.

In the movie, Back to the Future, the hero, Marty, travels from 1985 to 1955 and finds himself interacting with his parents-to-be. To his horror, he seems to be interfering with their decision to get married. A photo of himself he is carrying starts fading, and he, himself, starts feeling weak. The explanation, offered by Doc Brown, the scientist of the movie, is that if his parents don't get married on time, he will not be born, and so, will cease to exist. This seems to me to be a satisfactory theory. Marty saves his parents' marriage and his own existence. However, he has made a change. He helps his father, previously a spineless nerd, find self-confidence. When Marty returns to 1985, he finds a different family, headed by a self-confident success. His parents and sister even dress differently than they did before Marty's time-travel. However, he has not changed! He still remembers his old, nerdy family, and finds his new family strange. They, however, are baffled by his disorientation—they have always been the way they are as far as they're concerned. The question is, who was he

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that morning, someone who grew up in the nerdy family or someone who grew up in the confident family? I will answer this below.

In the movie, TimeCop, the hero goes ten years into the past and prevents his pregnant wife's murder. When he returns to the present, he still feels himself to be a widower, but when he gets home, he finds his wife and nine-year old son. They act as if everything is normal, and he went to work normally that morning. The question is, who was he that morning, the 10-year widower, or the happy husband and father?

My solution takes off from Marty's fading photograph. As the time traveler changes the past, all future from that time on changes—not only photographs and other objects, not only other people, but the time traveler himself and his memory. When Marty gives his father self-confidence, Marty's memory changes so that he knows his father to be a self-confident person, and his memory of his family changes also. When he returns to 1985, wearing his "new" clothes, he finds everything as he remembered it. Not only did he save his parents' marriage, he preserved his father's self-confidence. Only we, the time-independent observers, know that there have been changes. Similarly, the TimeCop's memory changes at the moment he saves his wife. He has not prevented her actual murder, but preserved her actual escape from danger. When he returns to the present, and goes home, he is the same husband and father who went to work that morning. His day was exciting because he went back in time to preserve his wife from possibly being murdered. Once again, only we know that he succeeded in changing history.

From the point of view of the time traveler, every effect she has is to preserve history as she remembers it, since in the very act of changing history, her memory changes also. In fact, the same is true of everyone else who lives in the same fictional or non-fictional world. If some time traveller changes some historical fact that I know, or some event in my or my family's history, my memory changes at the same time, so history, to my perception, is seamless.

So what if the time traveler kills one of his ancestors, or even himself? To be consistent, the victim actually dies, and at that moment the killer ceases to exist. The victim remains dead, and so the victim continues not to exist. It is just like the many other unsolved crimes that have actually occurred. Only these cases are truly unsolvable, since once the crime is committed the killer does not exist.