

The Nature of Reality: Was Will Hunting Really All That Smart?

Laurence D. Robinson

Department of Mathematics and Statistics, Ohio Northern University, Ada, OH 45810

Abstract

In the movie Good Will Hunting, janitor Will Hunting (played by Matt Damon) is supposedly one of the greatest mathematical geniuses in history. It is my contention that Will Hunting makes an error in logic (with regard to “The Nature of Reality”) that such a great genius would not make, and thus that the movie has a major logical flaw. In this paper I discuss an idea that I first had well over thirty years ago, and an extensive project I conducted with regard to this idea during the past year.

Key Words: Good Will Hunting; mathematical genius; an error in logic; The Nature of Reality.

1. A Long and Sad Road Trip

In mid-April of 1985, I rode with my friend Stud from Berkeley to Santa Cruz. Although we got off to a late start (half an hour, or so), we still decided to take the scenic route along Highway 1. Somewhere near Half Moon Bay the traffic came to a complete stop, and it remained that way for quite some time. Eventually the traffic began to move slowly, and at some point we came across what was clearly the scene of a horrible car accident, with two totally smashed cars off to the side of the road. (Any police cars, fire engines, or ambulances that had been there earlier were long gone.) Stud said “You know, if we had left when we originally planned, we might have been right here when the accident occurred”. I considered this for a brief time and replied “If we had left when we planned, this accident probably would never have happened.” As my best recollection, it was at this time that my view of “The Nature of Reality” was born – although I am surprised I hadn’t thought of it earlier.

I don’t remember talking about it much afterwards, with one notable exception. I recall discussing it with my friend Frank, who told me about a time when, as a kid, he went to a baseball game at Tiger Stadium. During that game there was a moment in which the Detroit pitcher looked directly at him, just before throwing a pitch, and Frank wondered whether that moment may have impacted the game. I said “That’s what I’m talking about!”

2. Good Will Hunting

I don’t recall any other particular discussions I might have had about “The Nature of Reality” until many years later, when, near the turn of the millennium, I first saw the movie “Good Will Hunting”. I recognized what I strongly believe to be a crucial logical flaw in the movie. This flaw pertains directly to my view of “The Nature of Reality”, and I have had many discussions with friends, colleagues, and students since then. I have also sent emails to eminent scientists (including Neil deGrasse Tyson, Judea Pearl, and Leonard Mlodinow), attempting to get their views, but to no avail. Attempts to contact Matt Damon and Ben Affleck have also failed.

3. The Original Posting

On January 11, 2018, at 9:13 PM, I posted the following on the “ASA Connect” website:

Laurence D. Robinson, PhD
Posted 01-11-2018 21:13

I would like to share, with all who read this, my view of "the nature of reality", at which point I would appreciate your opinions. I will begin by pointing out what I believe to be a logical flaw in the movie "Good Will Hunting".

Specifically, in the scene where psychologist Dr. Sean Maguire (Robin Williams) tells Will (Matt Damon) about the first time he met his wife, there seems to be an implied assumption that if Sean had gone to "the game" (Game 6 of the World Series in 1975), instead of staying at the bar where he had just met his future wife, then the very famous home run hit by Carlton Fisk would still have occurred. I contend that if Sean had gone to the game, the game would have played out completely differently, and the famous home run which actually occurred would not have occurred – that's not to say that some other famous home run could not have occurred. It seems to be clear that neither characters Sean nor Will understand this – and I contend these two supposedly brilliant people would have known better! It is certainly clear that neither Matt Damon nor Ben Affleck (the writers) understand this.

Along the same lines, I think it's a good thing that I chose not to go to the Cal-Stanford football game in 1982 (a friend had an extra ticket), because if I had gone, then "The Play" would have never occurred!

I have run my ideas regarding this situation (and more generally my understanding of the nature of reality) by some of my friends, colleagues, and students, and for the most part they think I'm a dope! One exception was a 14 year-old (at the time) young man (son of an astronomy professor at my university) who correctly summed things up with the statement "everything that happens is a fluke".

So what do you think?

Dr. Laurence D. Robinson
Associate Professor of Statistics
Department of Mathematics and Statistics
Ohio Northern University
Ada, OH 45810

(419) 772-2358
L-Robinson.1@onu.edu

From "Good Will Hunting"
https://www.youtube.com/watch?v=jg_9FQk6UnA

"The Play"
<https://www.youtube.com/watch?v=mfebplfAt8g>

The responses to my posting came fast and furious during the two weeks that followed, and then abruptly (and surprisingly) stopped. The responses were very interesting and entertaining, with quite a bit of anger and hostility exchanged by the respondents – one in particular. There were numerous references to counterfactuals and butterflies, and several attempts at humor – for example: “It is well known that having children is hereditary. That is, if your parents did not have children, it is certain that you won't either”.

4. Talk at Vancouver

On January 29, 2018, I submitted my abstract for a talk to be given at the JSM 2018 in Vancouver. The talk was entitled “Was Will Hunting Really All That Smart?” The abstract was as follows: In the movie Good Will Hunting, janitor Will Hunting (played by Matt Damon) is supposedly one of the greatest mathematical geniuses in history. It is my contention that Will Hunting makes an error in logic that such a great genius would not make. I have posted a letter to the ASA Connect website regarding my ideas (entitled “The Nature of Reality”), and the responses have been fast and furious. In my presentation I will discuss my ideas and the responses I have received.

In early July 2018, I created two files, “Robinson’s Nature of Reality 1” and “Robinson’s Nature of Reality 2”. The first file contains my original post and a complete set of the responses it received. The second file contains my original post, a number of my own comments regarding the responses to my original post, and information regarding my (then) upcoming Vancouver talk. But most importantly, it contains a short paper entitled “My View of The Nature of Reality”.

Shortly after creating the above two files, I sent them by email to (almost) all of the people who had responded to my original post, as well as the various friends, colleagues, and students with whom I had discussed “The Nature of Reality”.

On Sunday, July 29, at the first session of JSM 2018, I presented my talk. I counted roughly only twenty people in the room, a turnout that was disappointingly low. However, I was happy to see Ed Gracely in attendance. Ed was the most supportive of all the respondents to my original post – and the only one to attend my talk. I was also pleased when I asked the audience if they could guess the name of the friend who had offered me a ticket to the 1982 Cal-Stanford game, and several shouted with delight “Stud!” (which was the correct answer).

If anyone reading this paper wishes to see the files “Robinson’s Nature of Reality 1” and “Robinson’s Nature of Reality 2”, simply contact me and I will send the files by email.

I will end this paper by including the “short paper” referred to as “My View of The Nature of Reality”. (It should be noted that this particular presentation was motivated by the responses to my original post.)

5. My View of “The Nature of Reality”

Let’s suppose I did go to the 1982 Cal-Stanford football game, and I brought my high powered rifle (every Berkeley grad student had one), and I shot the Stanford quarterback (some punk named Elway). I contend that “The Play” would never have happened. I’m sure everyone agrees.

But what if I hadn’t brought my rifle, but instead had a heart attack (I was 26 years old, and that’s the official age at which members of my family start having heart attacks). My heart attack, and the response to it (the reaction of nearby fans, the emergency medical personnel carrying me out on a stretcher, etc.), would have drawn the attention of various people on the field (players, coaches, referees, etc.), which would have changed the timing of future events on the field. I contend that “The Play” would never have happened.

But what if I hadn’t brought my rifle, or had a heart attack, but had instead been the statistics grad student who did the statistics homework for all the Cal football players. I would have gone as close to the field as I could, and I would have conversed with at least some of those players, which would have changed the timing of future events on the field. I contend that “The Play” would never have happened.

But what if I hadn't brought my rifle, or had a heart attack, or been the statistics grad student who did the stat homework for all the Cal football players (I wasn't). What if I was just an anonymous fan in the stands. My movements in the stands would almost certainly not affect the people on the field ... not directly. But the timing of my movements would have affected the timing of the movements of other people in the stands, which would have affected the timing of the movements of other people in the stands, and so on and so on. Invariably, some of those people would have interacted with people on the field, such that the timing of future events on the field would have been impacted. I contend that "The Play" would never have happened.

But what if I hadn't even gone to the game, but instead I had paused for 5 seconds before saying "no" to my friend when he asked me if I wanted to go (roughly 4 days earlier)? This would have changed the timing of my future movements (and my friend's), which in turn would have changed the timing of the future movements of our housemates and friends, and those whose paths we crossed on the streets and the beautiful campus, which in turn would have changed the timing of the future movements of ... yada yada yada ... which would in turn have changed the timing of future events on the field. (This reminds me of the old lady who swallowed a fly.) I contend that "The Play" would never have happened.

However, the astute reader might ask, what if I had paused for only 1 second? A nanosecond? This reminds me of a discussion I had long ago with the teenage son of some friends, who suggested the idea that there might be "buffers" (as he described it). Specifically, he suggested that if he went into his bedroom and slept for the night, with his alarm set for the "usual time", then the particular movements he makes during his sleep would not necessarily have an impact on future events. I think he may be correct. (*additional note: ... but to a very limited extent.)

Postscript: During a late night news broadcast, on the night of my road trip with Stud, I learned that there were seven occupants of the two cars that had collided, and all had been killed. I wish we had started out on our trip at the originally scheduled time.