

## The Paradigm Discourses

### “There and Back”

*ime travel. Quantum experiment proves t*

This week, Dogma made it a point to be on time, and then some.

Understanding opened the door, “You’re a bit early.”

“Yes,” but cocking his head to one side, “apparently not early enough.” The din was worse than last week. He made his way to the living room determined to absorb. What a mess, he was surprised it all fit.

Experiment was in heaven, directing a work crew to expand upon last week’s demo. However, now there were two tracks, shorter like before, but rotated in opposite directions, so they formed a giant ‘greater than’ sign, ‘>’. The work crew was also outfitting them with dual packet carts, huge bins, blue in one direction, red in the other, that each held 60 envelopes. The flippers and tapers had likewise been upgraded to handle a whole bin of envelopes.

He got that sinking feeling, then adamant that he could rise above pettiness, mentally repeated his mantra, ‘No stonewalling, no stonewalling. If Paradigm is wrong, be clear about how he’s wrong. If he’s right, swallow your pride and see if you can stretch the current place-scheme to include the new results.’ He grabbed a drink and found a corner with a good view of the whole apparatus – apparati?

The work crew finished just as the rest of the research members were arriving. After the usual chatter, the meeting got started in earnest.

Understanding, “I do believe our beloved EPR team has one more demo to regale us with.

“Experiment?”

“To the colored tracks!” He took position on the left end of the upper colored track and placed Proof on the left end of the lower colored track, below him. This placed Reason on the right end of both tracks, where the tracks met, the point of the ‘>’ sign.

“Note,” he said, “that blue envelopes go left on the upper track, toward me but go right on the lower track, toward Reason. Both he and I have a taper and a flipper. The other big change is that envelopes have been ‘packetized,’ carefully arranged in bins that hold 60 envelopes each: blue envelopes in blue bins, red envelopes in red bins.

“Finally,” he swallowed, “note there are more blue bins on each track, as they are closer together. This means that blue bins are received *after* their corresponding red ones, but sending,” he swallowed again, “is from blue to red. Now, try to follow, this gets a little tricky.

“I will send a packet to Reason on the upper track. Once Reason has determined the bit which that packet represents, he will use the lower track to forward that bit to Proof using the correct facing protocol.

“Now Dogma is right about another thing, we are” he nodded at Paradigm, “engaging in a little sleight of hand here. If we didn’t, we’d have colored envelopes shooting through the living room at high speed. So, grant us just a little leeway. This is a demo, after all.

“Reason will receive my packet before I send it, and Proof will receive a packet before Reason echoes it, which by themselves is not a problem, for in this little demo they are ‘spacelike’ separated. However, Proof is in my past light cone as we are ‘timelike’ separated.

“In this roundabout way, we are going to send information into the past, my past.”

Experiment started both machines, Reason faithfully echoing whatever packet he received, but having received it before Experiment sent it, while Proof decoded his packet from Reason, but likewise having received it before Reason sent it. Then, having received a packet the long way around from Experiment, and notably, before Experiment sent it, Proof simply logged the result on a big piece of wall board that hid him from Experiment, who also logged which bit he sent on a similar wall board, just moments later.

After a dozen or so packets, Proof stopped receiving packets, and shortly thereafter, Reason stopped echoing them, and finally Experiment stopped sending them.

Then, with surprisingly little flourish, Experiment pushed Logic’s wall board out of the way so that the audience could see both lists of bits.

They matched. Experiment received whatever he sent, but before he sent it. It was spooky.

One might have expected an applause, or even better, some *oohs* and *aaahs*, but the audience remained still and quiet, all eyes focused on Dogma.

He stood, and slowly turned to face the audience, then presented them with a deep, dramatic bow. “My compliments on your demo, time travel in a living room. I’ve always enjoyed a good magic show, the artistry, the cleverness, the subterfuge, the unabashed assault on reality. Really, truly, very well executed.

“Shame on you all.”

But internally, silently, he made a promise to himself, ‘I will find the mistake in this.’

And with that he made as dignified an exit as possible.