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# The Rubbish Researchers Puzzle

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I was quietly minding my pub when all of a sudden twelve men came bursting in. Think of warriors rejected by New Zealand's All Blacks for being way too fierce and you get the idea. *Why does this sort of thing always happen near closing time?* As soon as they had squeezed in, they began a menacing chant. *Of course they did!* While I didn't recognise the language, one word stuck out like a hot dog at a vegan buffet: *Hillabin!*

My gaze travelled past the drunks at my bar—half of them passed out even now—finally coming to rest on Professor Hillabin. Given that he claimed to be a staunch atheist, I was mildly disappointed to see his hands folded, head bent down and lips in silent motion. It would be difficult to imagine a less threatening fellow than him, with his unruly hair, elbow protectors, and comically unfashionable glasses. Sixty on the outside, he was of undefined age on the inside. Although I was twenty years his junior, over the years a curious sort of male bond had formed between us.

On concluding their chant with an obscene tongue gesture clearly designed to frighten the devil's devil, the warriors headed straight towards me, the pub shaking to the beat of their steps. Their appearance reminded me of Pacific Islanders, except for one curious detail—the colour of their eyes. Theirs were a piercing blue. *The strange things one notices when one is about to die.*

“We want Dr. Hillabin,” the tallest of the warriors demanded. “Where is he?”

I thought fast. “He's away pontificating.”

“Nasty!”

“Agreed.”

“He'll be back.” That was not a question.

“Sure,” I said, not about to contradict him. “Can I offer you drinks while you wait? It’s on the house.”

After I had poured twelve ‘boilermakers’, they split up to cover both exits, only interrupting their boisterous chatter to interrogate each leaving guest. So much for my plan to let the professor escape via the back exit. As casually as possible, I wiped the top of my bar until I was face to face with Hillabin who, despite having completed his prayer, still looked pale.

“So what’s all this about?” I asked softly.

“Did I ever tell you the story of how I invented the world’s greatest logic puzzle?”

“Do you really think now’s the time?”

“It was back in 1990,” Hillabin began undeterred, “when Munona Intuioto, celebrated author of ‘Messages from Juice’, visited the Computer Science and Mathematics department. A delightful chap. However, when we took him out for lunch to an Italian restaurant, things got a little out of hand. For someone who claims that grapes have feelings, he certainly enjoyed his red. Just before passing out, he slurred, ‘Glad I came, discovering I’m not the only rubbish researcher.’ The rest of us looked at each other, aghast!”

“I don’t think those twelve giants are likely to pass out any time soon,” I commented, hoping to steer the conversation towards the peril at hand.

Unfortunately, it would have been easier to put the Titanic in reverse. “Intuioto broke the cardinal rule of academia,” Hillabin continued. “Never outright accuse a colleague of being useless!”

“But who cares what he thinks?” I asked, becoming interested in spite of myself. “Your work should speak for itself!”

“That’s just it. Intuioto spoke the truth and we all knew.”

“Really?”

“One of my esteemed colleges was working on location-based services, spending three years figuring out what to do when a smartphone does not know where it is.”

“That could be useful,” I ventured.

“His answer: have the phone ask its user.”

“Well...”

“Meanwhile, another venerated comrade based his career in mathematics education on his epiphany that, ‘some concepts are harder to understand than others’.”

“Surely you jest?”

“Sadly—no. He did it by giving the hard ones a new name: *Threshold concepts*.”

This caused me to wonder whether I had wasted my time running a pub. *What a researcher I would have made!* “And neither was aware how trivial their ‘insights’ were?”

“Ironically, while academics are brilliant at critically evaluating the work of others, they are quite incapable of judging the quality of their own.” Hillabin downed his gin and tonic in a single gulp. “Psychologists call it the ‘bias blind spot’.”

I was stunned! This was the first time he had cited *psychologists*. Before I had a chance to recover from this shock, I received a second one when two of the warriors stomped up to the bar. Flanking him on either side, Hillabin looked like a balloon animal caught in a vice.

“You’re sure Dr. Hillabin isn’t here?”

“As the good professor himself might say, how can we sure about anything?” I replied philosophically.

“In that case, more boilermakers!”

After passing them two trays full of glasses, they paid and even gave me a tip. Things were looking up. At least for me.

“Hillabin?” I asked softly, after they had returned to their mates.

Unresponsive, he stared right through me as if I were one of those 3D posters.

Not daring to call out his name any louder, I reached over the bar and shook him by the shoulders.

“Oh,” he said, blinking. “So *this* is reality?”

“Unfortunately. Where were you?”

“In my favourite lecture theatre—as a clown.”

“What? No, don’t tell me about your happy place. I don’t want to know.”

“In that case, should we discuss my escape?” Hillabin asked hopefully.

“Let’s not rush things,” I suggested, desperate to know the ending to his story. “If everybody in your department already knew that pointless research was going on, what did it matter what Intuioto said?”

“Suppose that you’re the only deficient researcher,” the professor got right back on track. “You recognise all other academics in the department as competent. In your innocence, you assume that you’re competent too. That’s a stable situation.

“Now Intuioto comes along, trumpeting that there exists incompetence in the department. Well, if you know all your colleagues to be capable, then the only logical explanation is that he must be referring to you, isn’t it? Confronted by implicit proof that your research is vacuous, you have no choice but to resign that very same day. It may not seem that way, but we academics are a proud people.

“Instead, let’s imagine that there are two vapid researchers in the department, let’s call them Jack and Jill. As far as Jack knows, only Jill is inept and he waits for her to resign after lunch with Intuioto. Meanwhile, Jill thinks that Bob is the incompetent one and waits for him to resign. As a result, lo and behold, it’s the end of the working day and there’s a distinct lack of quitting going on.”

“What happens then?” I asked eagerly.

“Jack figures out that Jill did not resign because she must know of another incompetent researcher. So he asks himself, who could that person be? Well, since Jack knows that all other researchers in the department except Jill are competent, it can only be himself! By the same logic, Jill figures out that she’s incapable too. Since the vice-chancellor always goes home right on the dot, Jack and Jill will hence both resign sometime during the following working day, the day after Intuioto’s lunch.”

“Amazing!”

“It gets even better! If there are three feeble researchers, all three will resign two working days after the lunch, and so forth. Accordingly, the twenty-two abysmal researchers in my department resigned twenty-one working days after Intuioto’s revelation.”

“Wow! How many were left?”

Hillabin picked up his glass, peering into the emptiness inside. “I expected everybody else to resign on day twenty. It came as a bit of a shock when they didn’t.”

“Uh... so you’re no longer with the university?” I asked, frantically trying to recall the size of his bar tab. Between the prospect of a sudden slaying and chronic poverty, I did not like my chances of collecting on it.

“Understandably, the vice-chancellor was a bit miffed about the entire department resigning all at once. But then, as I explained our predicament for the umpteenth time, it occurred to me that we had inadvertently stumbled upon an astonishing logic puzzle. We wasted no time writing it up for the *International Journal of Esoteric Logic*, listing all twenty-two of us as authors. Having thus validated our statuses as academics, *nobody* had to resign.”

“So, a happy ending,” I concluded. “But that still doesn’t explain what those twelve bruisers want with you.”

“Well, there was still the little matter concerning the title of our paper. We could hardly call it the ‘Rubbish Researchers Puzzle’ now, could we?”

“So what did you do?”

“It shames me to admit it, but we ended up blaming some poor natives. It became famous as the ‘Blue-Eyed Islanders Puzzle’.”

“Uh-oh. Our twelve friends all have blue eyes.”

“Instead of researchers, it involves a hundred perfectly logical islanders, some with blue eyes and some with brown. Mentioning eye colour is taboo and there are no reflective surfaces. Furthermore, the islanders believe that the god of the island hates people with blue eyes, hence anyone finding out that they are blue would flee to the mainland within the same day. Initially, no one leaves because no one knows the colour of their own eyes. But one day a visitor arrives, announcing that he’s surprised to see blue eyes on the island.”

Hillabin cracked his neck, as if preparing it for a much bigger cracking to come. “I deserve what’s coming. Sorry about the inevitable collateral damage. Please contact my estate for reparations and my outstanding tab.”

I struggled not to cry like some sad drunk. “It was an honour serving you drinks.”

“It was my honour drinking them.”

Slowly he got up and marched up to the group of islanders at the main entrance. *How brave!*

“Ahem. I’m Professor Hillabin,” he announced, his voice quivering.

The tallest of the islanders grabbed the professor’s hand, shaking it so vigorously that Hillabin nearly lifted off, like in a cartoon. “We’re from the Tamaporo Island Tourism Board,” the big man announced. “Your logic puzzle has quadrupled visitor arrivals to our island. While the number of tourists who insist on ‘revealing’ to us that we have blue eyes is bloody annoying, the economic benefits have been considerable. Therefore, please accept this small token of our appreciation.”

On a golden plaque, words were written out in little pearls in the manner of a dot matrix printout. It read, ‘If this sentence is true, then Professor Hillabin is the greatest researcher ever.’

The celebrations continued well past closing time.