The Triads of Little Pigs

Research Fables from the Sisters Grinn, No. 6

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Abstract: I started writing the fables in 1996, when I took over teaching the undergraduate research course. At first, they were "buried treasures" hidden in the online course materials (it was a hybrid course, and we were trying to get the students to develop internet surfing skills) for students to find. Then, as there were more of them, I started explicitly assigning them for student reading. As I've had time, I've written fables for areas where students seem to get "stuck" on basic concepts in research. Two of the fables have "readers' theater" versions that I use in class for traditional students. Casting the parts is always fun. Enjoy!

The entire series of Dr. Grace’s research fables are available in this repository. Patrons may access the series by clicking on Dr. Grace’s name in the item record.

On the outskirts of the determinedly upwardly mobile community of Experiment, there lived a neighborhood of porcine homesteaders. Experiment prided itself on being a vibrant community of diverse species, but it was clear that some species were more welcome than others. Wolves, for example, were aggressive and shrewd, and elephants were strong and smart. But pigs were pig jumping in mud so... so... so swinish. Still, the Pigs filled jobs, like garbage management, that few other species found desirable and their presence in the community was tolerated.

Not surprisingly, the average pig family income was inadequate to finance lavish housing, and the pigs were forced to construct their own shelters from the materials at hand. Some pigs obtained straw -- the cheapest available material -- and built houses with that. Others saved enough to purchase a load of sticks and fashioned houses from them. The most enterprising pigs purchased bricks, manufactured as a cottage industry at the local mud flats, and constructed their homes with those. Examples of all three types of construction were intermixed within the neighborhood.

Like many communities, Experiment had a juvenile crime problem. The upward mobility of most species depended upon two incomes per family, and children were therefore unsupervised in the after school hours. The problem seemed to be most severe among the wolves, who condoned their offspring running in unruly packs after school. Piggy protests about particular harassment fell on deaf ears: Wolves, would,
after all, be wolves, and running together built the teamwork skills that would prepare
them for their expected careers in finance and upper management.

One bright spring day, Waldo Wolf, the ringleader of the largest juvenile wolf gang,
devised a new diversion. Having chased a pig into its house of straw, Waldo and his
friends surrounded the dwelling and improvised new lyrics to their favorite rock song.
"Little pig, little pig, let us come in." The pig's panicked refusal incorporated
references to facial hair, and the wolves gleefully responded "Then we'll huff and
we'll puff and we'll blow your house in." And, somewhat to Waldo's surprise, when
they huffed and puffed they did manage to dislodge the roof and wall of the straw
dwelling. The terrified pig then ran to the next house, made of sticks, for shelter.
Waldo and the wolves followed, and repeated the scenario, with much the same
results.

This time, both pigs ran to a house made of bricks. Full of the excitement of the
moment, the wolves followed and again chanted their demands. This time, the roof
and walls held against the combined lupine airblast, and the porcine protests from
within included the threat to call the police. Flush with success, the wolves withdrew
to their hangout. There, they discussed their great achievement.

"Did you see how those pigs ran?", said Woodrow Wolf, a gang lieutenant. "I bet we
could have blown down the brick house, too, if we hadn't been tired from blowing
down the other two first! I bet we could blow down the whole pig neighborhood, and
then nobody would have to look at those ugly houses any more."

Waldo Wolf was not stupid, and he sensed the coming together of an empiric question
and a full season's after school activity. "Tell you what," he said. "Tomorrow, let's
start a project. ¹ We'll put three pieces of straw, three sticks, and three pieces of brick
in a hat. Every day, we randomly draw three objects from the hat, and we try to blow
down the corresponding houses in the order drawn." Woodrow and a few of the more
clever gang members marveled at the elegance of the plan, and the rest of the gang
didn't care, as long as they got to practice their newfound skill of house-huffing.

And so it went. Some days, the luck of the draw resulted in three flattened houses, and
sometimes -- when all three choices were brick fragments -- no porcine dwelling
suffered damage. It gradually became clear to the young wolves that they could never
blow down a brick house, even when attempted first, but that straw and stick houses
would always fall, regardless of the order picked. But as confidence in the findings
increased, so did the sense of outrage in the pig community. A neighborhood porker
patrol was established and the police grudgingly increased their surveillance. On
several occasions, the wolves narrowly escaped capture as they chanted their
challenge and huffed their destructive efforts.
After one particularly close call, Waldo decided to shift his operations to a new neighborhood on the far side of Experiment. The fun of watching squealing pigs rush from their houses to another shelter was too good to miss, even though the pigs had learned to seek shelter in brick houses as a first resort, rather than a last one. Waldo had discovered a settlement where all the houses were made out of straw, and on the basis of his previous experiences he was sure his gang could easily blow down any house they wished. He was eager to see what pigs would do when there was no safe brick housing to serve as haven.

When Waldo led the group to his new discovery, however, Woodrow expressed some misgivings. "I don't know about this, Waldo. These houses are a little bigger than the others. Are you sure we can generalize to this population?"

"What's to know?" retorted Waldo. "I've randomly assigned straw houses till I'm sick of it, and I know that we can blow them down. I know all there is to know about blowing down houses in Experiment. Are you with me or not?" Faced with mutterings about his courage from the other wolves, Woodrow curbed his protests that Waldo really only knew about the straw houses in one neighborhood of Experiment, which might or might not be representative of other neighborhoods. Reluctantly, Woodrow took his place at Waldo's side as the pack loped into position.

Again began the now-familiar and dreaded chant. "Little pig, little pig, let us come in!" But this time, the response was a noncommittal snort that had nothing to do with facial adornment. The wolves persisted. "Then we'll huff and we'll puff and we'll blow your house in!"

It took more effort than usual, and without the help of a strong breeze they might not have succeeded. But the wolf pack did succeed in blowing in a wall of the straw house. They eagerly anticipated the squealing exodus of the porcine occupant, taking bets on the direction the creature would run.

Instead, revealed before them, was a pygmy white rhino, wearing a boxer's robe emblazoned "Little Pyg". The rhino's surprise turned very rapidly to anger, and the expected rout became a charge. The details will be spared to protect sensitive readers, but suffice it to say that the term "Where's Waldo?" took on a whole new meaning in Experiment that day, and many mournful howls were heard at moonrise.

Woodrow, however, survived. And from that day to this, he has been eager to tell his tale of that fateful day, as a warning to others not to confuse random assignment of the sample with random sampling of the population.
He would have called it a clinical trial, except the word "trial" might have reminded his gang members of the consequences if they were caught, and dampened their enthusiasm for the proposed activities.

Smart as he was, Waldo was unfamiliar with the concepts of significance and power. Thus, his sample size was established by the rule of boredom and/or nausea. This concept is similar to, but distinct from that of data saturation in qualitative studies.