

Squirrel and Spider discuss...
Jointly Designing a Solution

*Inspired by a conversation with Fredrik Wendt
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Squirrel is running along a forest path, carrying a small acorn in his paws. He stops to gaze at a complex, spiralling spiderweb that glistens in a patch of sun between two low branches above him. Looking closer, he sees that the tree is covered in arachnids running to and fro among many other partially finished webs scattered throughout the branches. Spider spins himself a rope and, climbing down from the main web, hovers in front of Squirrel, swaying back and forth a little in the breeze.

SQUIRREL: Why, hello there, Spider! I must say, the colony has outdone itself with this web.

SPIDER: It's nice to hear that, Squirrel. I'd explain the mathematics behind the interlocking spirals, but frankly it's beyond me - I'm grateful we have such skilled web designers cranking out prototypes in the old stump over there.

SQUIRREL: Well, I'm just happy to admire the aesthetics. It catches the light really wonderfully.

SPIDER: And even better, it catches flies like no other we've made. The insect conversion rate is up 4% on the last design!

SQUIRREL: That must be good news for you and your friends. But instead you look a bit frustrated, Spider. Are you? Why?

SPIDER: I sure am. The problem is quality. Sure, this web is a triumph that will feed all 800 of us for at least a week, but all around it are at least twenty earlier versions, each of which failed. They tear in the wind, the holes are too big, the attachment cables aren't thick enough - it's always something.

SQUIRREL: Oh, no.

SPIDER: And it takes us a day or more to get just one web through the full cycle of spinning, assembling, testing, and reworking. At this rate, we could easily run out of food reserves by the end of the summer, just because we don't have enough functional webs in place.

SQUIRREL: Well, you know I really like working on problems like this. Would you like to talk about it some more and see if we can think of an approach that might help?

SPIDER (*lowering himself to the ground*): Sure, at this point I'll try anything!

SQUIRREL (*settling back on his haunches and chewing on a bit of grass*): So what do you think might be causing the quality problems?

SPIDER: Well, these new designs are always going to have a high failure rate - if they don't, then the designers probably aren't trying hard enough.

SQUIRREL: That makes sense.

SPIDER: So I'm sure we just need to deploy not just one experimental web each day, but two or five or more, so we get the failures out of the way and have working webs faster. The

designers are all for it - but the spinning teams won't even think about trying out speedier methods. They shout me down as soon as I start talking about accelerating deployments.
SQUIRREL: Hmm. What have you seen or heard that suggests to you that more frequent delivery would work here?

SPIDER: Well, it has for every other colony in the forest. Our cousins down by the river, for example, have a new trial web going up every hour. The designs fail just as often as ours do, if not more, but they find the problems and get to a working version in just a day or two.

SQUIRREL: That matches my experience too - iterating a design very fast is often a great strategy for improving quickly. Do others in the colony also see the value in changing approach?

SPIDER: Definitely. The Council of Elders practically ordered me to get more experiments underway.

SQUIRREL: But the spinners are still resisting the change?

SPIDER: Yes. They just want to keep doing what they've always done.

SQUIRREL: Got it. If I were in your situation, I'd be very keen to find out *why* they feel this way - to understand their reasoning and their intent. Do you agree that would be useful to know?

SPIDER: Certainly. I have a guess - I suspect they're afraid of screwing up and making the process even slower. That could mean food shortages this summer, maybe even starvation. The stakes are really high for us.

SQUIRREL: That's a very good guess - but I'm always cautious when I come up with hypotheses for others' behaviour. There could be more to the story, like a bad previous experience with delivery changes, or conflicting priorities coming from others in the colony.

SPIDER: Yes, that makes sense.

SQUIRREL: But in any case, it sounds likely that you share a common *interest* in generating more food quickly, is that right?

SPIDER: For sure.

SQUIRREL: So it's your *positions* that differ - you reckon the best way to get more food is to try deploying webs faster, while they think the best way to achieve the same goal is to stick with the existing methods.

SPIDER: Sounds right to me.

SQUIRREL: Summarising where we are so far, we've identified a common interest, and we want to understand the spinners' reasoning that gets them from that interest to their "no-change" position¹. The next puzzle is how to set up the conversation in which we find out about that reasoning and use it to come up with a solution together - that's *joint design*.

SPIDER: Yes, I've heard you talk about joint design before, Squirrel. But I'm not sure how to do it.

SQUIRREL: I have an approach that works for me, would you like to hear it?

SPIDER: I'm all ears. Actually, hairs. Well, it's complicated, but go ahead!

¹ For lots more on understanding interests and positions in a negotiation, see Fisher R, Ury WL, Patton B. *Getting to Yes, Negotiating Agreement Without Giving In*. Penguin; 2011.

SQUIRREL: The method I use is called the Framing Technique². You write down how you view yourself, the other party (here, the spinners), and your goal. Usually when I do it, my first go is not very promising. For instance, you might have started with this frame:

Self: Knowledgeable about the right approach. Annoyed that we haven't tried it yet.

Other: Stuck in a rut. Won't change. Too conservative.

Goal: Convince them to try the new methods, already!

Does that sound familiar?

SPIDER: Yes, that's how I was thinking about it earlier. But as I talk to you, I'm starting to see the situation differently.

SQUIRREL: Good! That's usually what happens to me too. I look at my initial frame and think about how much learning the participants are likely to get if I use it - usually not much. Then I crumple up the page and write another. Sometimes it takes me five or more tries to get a version that I believe could lead to mutual learning. Writing it down seems to really help - it lets me look at it a bit more objectively.

SPIDER: I see. I think my frame now is something like this:

Self: Keen to get a solution in place. Curious about the reasoning behind their position.

Other: Resistant to change. Probably have a sensible reason - what? Fear of screwing up?

Goal: Understand the thinking that led to their position. Come up with a solution together.

SQUIRREL: Excellent! That's a good setup for joint design. Sometimes I take the final written version of the frame into the discussion with me, and refer to it to help me remember how I want to approach the situation.

SPIDER: That's a good idea.

SQUIRREL: There's one more thing that might help - role-playing the conversation to practise a mutual-learning approach using your frame. Would you like to try that with me?

SPIDER: Sure! You be the Chief Spinner.

SPINNER (*says Squirrel*): What did you want to talk to me about?

SPIDER (*says Spider*): Well, I see a problem with what we're doing and I wanted to talk about a solution.

SPINNER: OK, what problem?

SPIDER: I see we're deploying at most one web per day, and most of them fail. I think we should try speeding up.

SPINNER: That sounds silly. We'll just make more mistakes if we go faster.

SPIDER: Well, I have an idea -

SQUIRREL: Hang on there. What happened to asking about their reasoning?

SPIDER: Drat! I got hooked on my approach. This curiosity stuff is hard!

SQUIRREL: It certainly is. Here's a trick - ask more questions.

SPIDER: I can try that.

² Based on the work of Diana McLain Smith. See, for example, "Putting the 'Relational' Back in Human Relationships", in *The Systems Thinker*, vol. 19, no. 3, p.2; available at http://dianamclainsmith.com/wp-content/themes/dms/pdf/systems_thinker. Accessed April 17, 2016.

SPIDER (*says Spider*): What's your view on our situation?

SPINNER (*says Squirrel*): We're behind and it's getting worse. I'm very worried about having enough food for winter.

SPIDER: Anything in particular worrying you?

SPINNER: Well, one thing is that the weavers keep making fragile beams with too little tensile strength. One good gust and they're gone.

SPIDER: So web quality is an obstacle to progress?

SPINNER: For sure it is.

SPIDER: Would you like to try a little experiment to see if we could improve output quality?

SPINNER: Gee, I'm not too keen on experiments. I think we should stick to known methods.

SPIDER: Well, what would prevent you trying an experiment?

SQUIRREL: Let's stop again. You're doing really well with the questions - almost *too* well! As the Chief Spinner I'm feeling like you're cross-examining me, and I'm getting worried that you have a hidden agenda. The tricky thing to try now is balancing advocacy and inquiry - say something about your view, and ask about his reaction to it.

SPIDER: This is definitely not easy!

SQUIRREL: Don't worry, it's hard for everyone. Let's pick up after I agree that quality is an obstacle.

SPIDER (*says Spider*): We agree - I think web failures are a problem too. In fact, I have some ideas about how to address them by releasing faster. Would a new approach be interesting to hear about?

SPINNER (*says Squirrel*): Honestly, it wouldn't. I don't want to be the one who tries something new and makes things worse. We should stick to the old ways, and just execute better.

SPIDER: It sounds like changing would be unsafe for you. Is that right? I can see why you might feel that way.

SPINNER: Those old fogeys on the Council would panic and blame me if an experiment went wrong.

SPIDER: What if we approached them together with a plan? I have reason to think at least some of them would be receptive.

SPINNER: That would help for sure. My other concern about an experiment is the time it takes. I'm snowed under just trying to keep production moving, nevermind thinking up clever new methods.

SPIDER: I think I can help there too. I'd be willing to run an experimental team in parallel with yours. I just need your advice on the new ideas, and a few branches to build on.

SPINNER: I could do that. What are the new ideas?

SQUIRREL: That's sounding very good, Spider. In the real conversation, you'll hear about their actual reasoning, so the outcome is likely to be a bit different -- but it sure seems like you've got a good route to a joint design.

SPIDER: Yes, I'm feeling much more confident. Thanks, Squirrel.

SQUIRREL: No problem, Spider. My nut-gathering schedule will take me back this way next week, and I'm looking forward to seeing what beautiful creations you spin up next.

SPIDER: I'm sure we'll have several to show you!