Chapter 5

LIVING WITH PROBLEMS

Early in my design career, receiving a brief felt like the beginning of a race. I would immediately grab the baton and run towards a solution. As I became more experienced, I realised that receiving a brief is more like being given a small bowl of beans. I could cook them into a meal straight away and go home with a full belly. However, I realised there was another option. I could press the beans into the dark soil and stay hungry a bit longer. Nothing would happen for a while, but if I watered the dirt and resisted the urge to dig them up, just to check, I would achieve a much better yield. The choice to remain unfed while something slower takes hold is what living with problems feels like. Sometimes the beans rot. Sometimes they multiply. A lot depends on how much you trust yourself as a designer.

Most of us are trained to be the person who cooks. We learn processes that lead to solutions. You are rewarded for serving something hot before the meeting ends. In design, that instinct is costly. The first plausible solution is usually a map of your habits, not a map of the situation. Experienced designers learn to stay with the problem instead of rushing to the solution[1]. They sit with a brief in the dark for a while, ask questions that complicate it, and honour the period where there are only hunches and loose ends. It is not a romantic pose. But every hour you spend framing the problem hands you back time later.

Framing a problem in design is more of a necessity than a stylistic choice. This goes back to the characteristics of design problems that differentiate them from everyday problems. Everyday problems are repairs of the known. If the kettle leaks, you change the seal. If a bus is late, you catch the next one. The range of possibilities is narrow and success is clear. Designerly problems present as gaps or frictions with blurry edges. Variables argue with one another, and what

1- Cross, N. (2004) Expertise in design: an overview. *Design studies*, 25(5), 427-441.

counts as "better" depends on whose future you have in mind. Information is missing, and some of what you think you know is wrong in ways that will only show up when you move. You do not solve these as puzzles with a single answer. You frame a workable way to act.

Staying with the problem is a mental challenge. You are three days into a brief and have nothing to present. The team next door already has concepts on the wall. Your client emails asking for a progress update and you reply with more questions instead of slides. A colleague glances at your desk and sees index cards and scribbles where they expect wireframes. That silence, the gap between receiving a brief and having something to show for it, is where this chapter lives. You rarely get paid to come up with problems, and when you do, there is little shared understanding of what a "good" problem even looks like. Most tools and methods point you towards the solution, and framing the problem feels like an onboarding phase, something to get through so you can move on to what your job is supposedly about. But when you plant the beans instead of cooking and serving them, you do not wait idly. There are things you can do to make sure they are not rotting in the dark but growing into something worth the hunger.

This chapter introduces you to the habits designers have of living with problems and how to become comfortable doing so. We begin with the hardest part: learning to tolerate not knowing. Uncertainty is where many designers flinch but where the best ones settle in. From there, we look at how to collect and scope the pieces of a problem, how to judge what fits inside your frame and what to leave out, and why the size of a problem and the size of its solution are rarely what you expect. We then turn to iteration, not as polishing a fixed answer, but as a discipline of letting each attempt reshape

the question. The chapter widens to consider how zooming out of a brief can transform its possibilities, how problems sit inside larger systems, and how to untangle their apparent complexity. We close with a move that experienced designers learn to make: turning the problem itself into something valuable, so that the frame becomes a feature rather than a constraint to be overcome.

My heart was never deprived of knowledge.
Few secrets remained unknown to me.
For seventy-two years I thought, day and night,
Only to realise that I knew nothing.

- Umar Khayyam

Quatrain #93

FINDING COMFORT IN UNCERTAINTY

I was a teenager when I first read about "dark matter" in the universe. My first thought was that it meant a material that doesn't emit light; it's simply black. And I was very surprised when I later learned that it is called dark not because of its colour, but because scientists didn't know much about it. They knew something beyond matter needed to exist for the universe to stay stable and for the galaxies to stick together; however, no scientist was able to directly observe it.

It wasn't learning the real meaning of "darkness" in the name that surprised me, but rather, how scientists could live with such uncertainty. I asked myself "How can someone be called an expert, when they have admitted they know nothing about 99% of what they are working on?" The thought continued to trouble me throughout my high school days, while I was preparing for the national physics Olympiad. I finally found the answer to my question while reading this verse by Umar Khayyam, "For seventy-two years I thought, day and night, only to realise that I knew nothing."

In most successful studios I know, people do not mind the fog of not knowing. They warm up with quick sketches, talk to each other, and look at the brief from different angles before committing to anything. Everyone at the studio knows they don't have anything yet. There is a shared appreciation about the presence of the dark matter. Bringing up a question or mentioning something no-one knows the answer to is accepted calmly and methodically. Someone writes down the unknown on the board and connects it to a couple of existing notes. Someone else jumps online to check references or scan the landscape. No-one rushes to find an answer.

Whenever I engage with a team of designers in studio or a team of decision-makers in a boardroom, one of the first things I watch for is how they treat the unknowns or the person who brings them up; this tells me about their expertise. Some have become so good at avoiding the unknown and shutting down anyone who mentions it that they have created professional language around the dismissal: That's a "known unknown"; Let's stick to what we can control; Let's not speculate; That's outside the scope.

I'm sure Fritz Zwicky didn't find out about the dark matter in 1933 by sticking to what he could see through his telescope. Instead, he looked outside his scope, speculated about what could be, let go of his sense of control, and admitted the existence of the unknown.

In design, one gets used to not having all the answers. Fixating on an early solution to fill uncertain space is the biggest mistake you can make. This is not only a creative challenge, but also a cognitive one. Once someone decides a direction, everything that follows tends to conform to it. You stop noticing data that does not fit. You design for the first frame instead of testing whether it even deserves attention. Good studios manage this by keeping the beginning of a project open on purpose. They use it to shape the question, not the output.

Recognising the presence of uncertainty is part of knowing. It is the dark matter that balances the space, whether it be the universe or the problem space. When a situation feels unclear, there are usually two kinds of unknowns in play. The first type of unknown, facts, are about the world: arrival rates, handling times, who does what and when, what people do rather than what they say. The second type, values, guide judgements: which trade-offs matter, who bears the cost, how will success be evaluated over months rather than days. If you do not separate these, you'll end up debating on what you should have measured and researching on what you should have decided. Nevertheless, the pressure for quick resolutions to avoid uncertainty is understandable in studio. Clients want

momentum. Students want marks. Teams want to feel useful.

Above all, the brain is wired to avert problems, a characteristic that is known as Need for Cognitive Closure[2]. We dislike the uncertainty just as we dislike darkness. We have the urge to land on a firm answer quickly and stay there. To protect us from the uncomfortable unknown, the brain locks into the first plausible scenario and shuts down alternatives. We even opt for irrational options when the rational decision entails some ambiguity[3]. You tend to privilege tidy data and sidestep the messy, often ignoring the material factors like culture, values, and politics. These cognitive biases towards finding a quick solution are not easy to overcome.

Like every other cognitive skill, comfort with uncertainty is not a heroic trait. It is a habit that can be practised and taught. Some of us fixate early because not knowing feels like failing. If that is you, try choosing a private measure of progress that is independent of solutions. Instead of counting the ideas you generated, record how many contributing factors you have discovered, how many non-trivial connections you have made between them, and how many frames you have considered. Track the ratio of factual to value unknowns you resolved each week. Note when a new frame changed your mind. These are small, honest indicators that you are doing the work. Over time they make the discomfort bearable.

A practice I often find useful in overcoming problem aversion, is to articulate the unknown and uncertain as some form of artefact. We are biased towards action, so movement feels better than reflection. I start by setting a small, explicit exploration of the problem space. Write things down. Sketch them. Make the connections visible. Collect precedents and inspirational materials. Activities like these will help you move within the problem space without leaving it.

Do not dismiss the unknowns. Write them down and organise them. Like an astronomer charting dark matter in

2- Kruglanski, A. W. (1989). The psychology of being right: The problem of accuracy in social perception and cognition. *Psychological Bulletin*, 106(3), 395.

3- Ellsberg, D. (1961). Risk, Ambiguity and the Savage Axioms. *The Quarterly Journal of Economics*, 75(4), 643–669.

the invisible universe, seek patterns in the unknown parts of the problem space. Start with the two types, facts and values, but don't stop there. List the unknowns you could measure this week without heavy machinery. Then list the unknowns of value you need to surface through conversation and decision. Decide on a small probe for each item. A probe is a tiny action that trades an hour for clearer footing. Think of a quick shadowing session, a targeted call, a simple online search, a quick test, or a paper prototype. The point is not to be busy. The point is to learn what the situation is made of before you name its answer.

You can enforce a quiet ban on answers the first hour of any new brief. You can separate your unknowns of fact from unknowns of value. Choose one probe for each to monitor within forty-eight hours. If you must use AI in that window, ask it only to argue with your frames or to find counterexamples. Then, for the rest of the week, put your favourite solution in your pocket. When someone asks what you are making, answer with a clearer problem sentence instead. At the end of the week, lay those sentences beside the original brief and look at how your understanding of the problem has changed. If it hasn't, you probably skipped the hard part. If it has moved for good reasons, you are learning to work in the presence of dark matter: not by ignoring what you cannot see, but by designing with the confidence that it is there.