

CHAPTER 3



Questions: Write and Test the Questions

Understand the four steps to answer a question

Good questions are easy to understand

Good questions ask for answers that are easy to find

Good questions are comfortable to answer

Good questionnaires make it easy to respond

Test your questions in cognitive interviews

What could possibly go wrong with the questions?

At this point, you will know

In the last chapter, we were looking at the right-hand side of the Survey Octopus, thinking about the people who will answer your survey and how many of them you want to ask.

We are now going to swap over to the left-hand side, looking at the questions you might ask.

Before you tackle this chapter, you need to know:

- What you want to ask—and specifically, your Most Crucial Question.
- What people want to tell you about—and specifically, their Burning Issue.

Understand the four steps to answer a question

Sometimes a question is so quick and easy to answer that you barely notice it.

Question: “Who’s there?”

Answer: “It’s me!”

Other questions can be trickier. Figure 3.1 has one, Question 25, in a questionnaire that I slogged through in my quest to find as many examples as possible to discuss here.

Question 25

In your **last five days at work**, what percentage of your work time do you estimate that you spent using publicly-available online services (not including email, instant messaging, and search) to do your work using a work computer or other device?

%

FIGURE 3.1

A daunting question, especially after I’ve already answered 24 previous ones.

To provide an answer, I’ve got quite a lot of work to do.

1. Understand the question.

For example, what is a “publicly-available online service?”

2. Find an answer.

I’ll need to think back over my recent activity and work out what I was doing for the “last five days at work.”

3. Decide on an answer.

How much of that activity counts toward this question? Am I willing to tell them that?

4. Respond with the answer.

Or maybe guess, perhaps 25%? To be fair to this question, at least it doesn't force me to try to map the answer I have to their views of what an answer might be—so there's no guessing about which option to pick.

And finally, at this point, I might simply feel tired and decide to break off from the questionnaire.

Of course, you don't want people to guess, or to break off, or to feel bemused by your questions.

I've adapted the four steps in Figure 3.2 from *The Psychology of Survey Response*. (Tourangeau, Rips et al., 2000) We're going to look at each step in detail, but first I want to mention that sometimes they blur into each other. When answering a simple question, these steps happen so fast that you barely notice them. Other questions, like Question 25, manage to pose quite a challenge at each step.

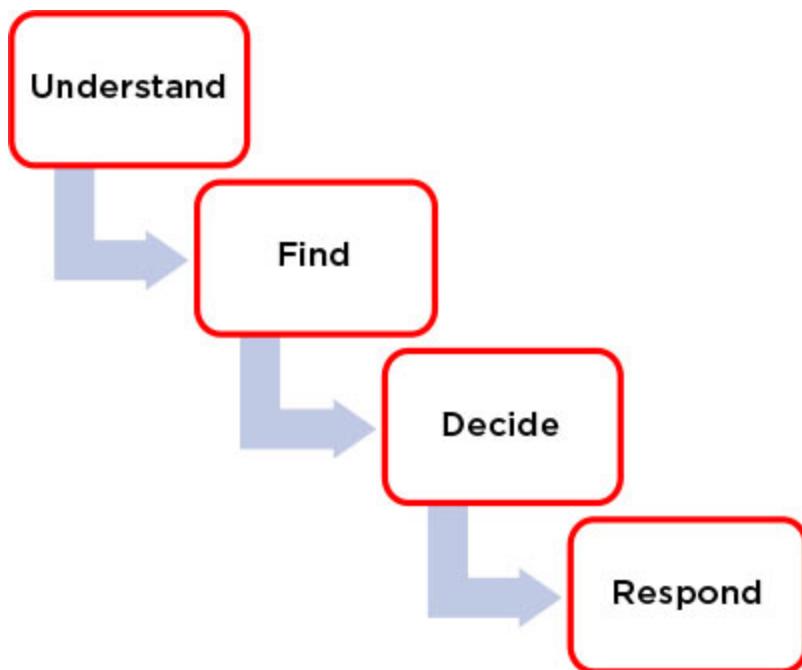


FIGURE 3.2
The four steps to answer a question.

Good questions are easy to understand

To understand a question, people have to:

- Get it off the page and into their heads (perceive).
- Turn it into something meaningful to them.

Perceive the question: see, hear, or sense

Are you reading this by looking at letters on paper, dots on a screen, by listening to a screen reader, or feeling it on a Braille display? Or something else?

Are you sitting in a comfy chair with a tablet, standing on a commuter train, flicking through a paper copy in a shop? Or something else?

Have you set aside plenty of time to absorb every word, or are you rushing through?

The people you are asking have their own idiosyncratic mixture of contexts, technologies, and available time. Note that if they can't perceive it, then they definitely can't turn it into something meaningful.

Turn it into meaning: short and simple

Comparing the easy question “Who’s there?” and the hideous Question 25, it’s obvious that it’s often harder to construct meaning from over 40 words than from two words. On the whole, shorter is better when it comes to sentences.

But short isn’t everything. For example, I could make the horrible question shorter by chopping out every other word so that it’s only half as long—and, at 22 words, well within typical guidelines for “short sentences” (25 words or fewer).

In last days' work, percentage your time you that spend publicly available services, including instant and to your using work or device?

Doesn’t help all that much, does it?

Turn it into meaning: familiar words in familiar ways

We all become accustomed to the words and phrases in our professional environments. To us, they're a convenient shorthand. To people outside, they're jargon: words that are unfamiliar, or (even worse) familiar words that are used in strange ways.

Let me tell you about a time when I was working for a government agency, and we tried this question on farmers:

What browser do you use?

I learned that farmers vary widely in their digital skills. Some farmers gave us a long reply that compared the merits of their preferred web browser and explained why they sometimes chose to switch to others. Others gave us replies like these:

“What’s a browser?”

“Oh, do you mean how do I get to the internet? I click on ‘e.’ I’ve never understood why it’s ‘e’ for internet.”

“Google. Yes, I use Google.”

My favorite interview was with a farmer with no digital skills whatsoever. Farming her sheep in a remote moorland farm like the one in Figure 3.3, her skills include breeding and training the sheepdogs she uses to manage her herd, as her land is unsuitable for any vehicles. But with no telephone and no mobile coverage on her farm, she didn’t have a computer, so “browser” meant nothing to her.



COURTESY OF KATE LAWLER, TEXTILE ARTIST

FIGURE 3.3
Moorland sheep.

On reflection, it's not that big a surprise to discover that a sheep farmer isn't familiar with IT jargon. It can be more of a surprise to discover that people doing the same job as you aren't familiar with the jargon that you use.

For example, I was helping a team of designers and developers asking similar people about details of their work. We didn't expect jargon

problems at all.

One of our questions was:

“What methodologies do you use on this project?”

When we tested it, we found that half of the people we tested the question with didn't know what we meant, and the other half interpreted it quite differently from how we'd intended it: we wanted to know about whether they used CSS methodologies such as BEM, but they answered about using Agile development approaches.

We went back to the question, thought harder about what we really wanted to know, and changed it to:

“Which CSS architecture do you follow?”

We were now using words that were entirely familiar to our defined group of people, in ways that made sense to them. Familiar words in familiar ways.

“Of course I can read it,” he said. “I know what every word means.”

“Well, then?” said Masklin.

Gurder looked embarrassed. “It’s what every sentence means that’s giving me trouble,” he said.” (Pratchett, 1990)

Turn it into meaning: ask people to focus on one thing at a time

One of the most frequent mistakes that I see in questions written by people who are new to survey research is asking about two things at the same time, such as Question 31 in Figure 3.4.

(31) Do you have independence in choosing projects and directing your energy?
(with 10 being the highest)

FIGURE 3.4

Question 31: “Do you have independence in choosing projects and directing your energy (with 10 being the highest)?”

Let’s unpack question 31 a little. Maybe you have complete independence in everything that you do: easy. Or perhaps you are entirely at the mercy of a boss or someone else: unpleasant for you, maybe, but at least the question is easy.

What about people who can choose their project at the start but must then commit to it with little control? What about people who must accept whatever assignment they are given but can then choose how much energy to put into different aspects of it?

Survey methodologists call this a *double-barreled* question, borrowing the adjective from the idea that a double-barreled shotgun might fire at you twice at the same time.

Do you think I’m being a bit nitpicky about that example? Try one in Figure 3.5 instead, from an online diagnostic quiz for people suffering from low moods.

Q 18 of 18

If this questionnaire has highlighted any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

FIGURE 3.5

This question includes work, home, and other people.

When we tested the low mood question, we learned that people had different answers for work, home, and getting along with other people: a triple-barreled question, especially unfortunate in this example, given that a low mood tends to have a bad effect on people's cognitive capacity.

Good questions ask for answers that are easy to find

When you've understood the question, you've got to find an answer, as in Figure 3.6.

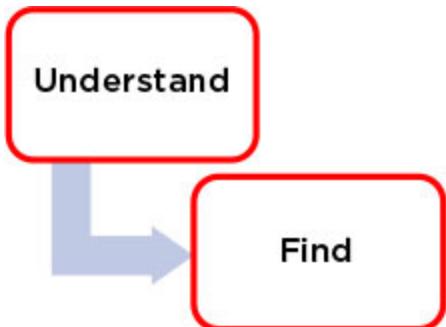


FIGURE 3.6
The next step is to find the answer.

Consider a question such as "When did you last visit a grocery store?" The answer is probably somewhere in your head. You may need to think about it for a while, but for most of us, retrieving the memory will be possible.

A second type of question asks you to gather the answer from somewhere else. For example, in Figure 3.7 a UK supermarket starts a feedback questionnaire by asking for a 4-digit code from a receipt or invitation card. The pictures of where to gather the answer in Figure 3.7 help quite a bit.



FIGURE 3.7
Gathering an answer from a supermarket receipt.

Occasionally, you'll have to ask someone else to get an answer. Maybe another person will remember something that you don't. ("I forgot which room number we had at that hotel. Can you recall it?") Or perhaps it's something that you never knew in the first place. ("Mom, do you know how old I was when I had that immunization shot?") If your questionnaire is going to a business, then one specific person may have to do a lot of asking others to get through it.

There's a final category: an answer that you have to create at the time you're asked. A British newspaper, the *Guardian*, asked me one of those recently, when it asked me in Figure 3.8 to decide how much I agree with the statement "I feel really close to the *Guardian*." It's not a topic that I'd ever thought about, so I didn't have an opinion conveniently in my head. I couldn't look up an answer on the web, and I think I'd have

felt quite silly if I'd asked someone else, so I created an answer by thinking about it.

The screenshot shows a survey interface with a light blue header containing 'Survey' and 'About' buttons, and a logo. The main area has a dark blue background. A question is displayed in white text: 'I feel really close to the Guardian'. Below the question is a list of five response options, each preceded by a radio button. The options are: 'Agree strongly', 'Agree slightly', 'Neither agree nor disagree', 'Disagree slightly', and 'Disagree strongly'. At the bottom right of the main area is a 'Submit' button with a right-pointing arrow.

FIGURE 3.8
A question that made me create an answer.

Sometimes, the strategy that a person will use depends on the question and their own circumstances. For example, Figure 3.9 asks about products stocked in a grocery store.

The screenshot shows a survey interface with a light gray background. A question is displayed in dark blue text: 'Are there any other products you would like to see stocked in this store?'. Below the question is a large, empty rectangular input field for writing a response.

FIGURE 3.9
Are there any products you would like to see stocked?

One person might need to think back, consulting their memory: “Now let me think. When I couldn’t get that cereal—was that this store or that other one?”

If you’ve just had a frustrating experience in a grocery store, going in with a detailed list of items and failing to find some of them, then you might find the answer to “Are there any products you would like to see stocked?” by gathering your list of missing shopping items from your list.

Another person might, just possibly, ask someone else who went on the same shopping trip. “What was that beer you couldn’t get yesterday?”

And yet another person might decide to be creative: “Now that you mention it, we’re changing to a more plant-based way of eating so, hmm, let me see, how about tempeh?”

At this point, review your questions and think about the strategies you expect people might use to answer them. On the whole, “in-your-head strategies” are the easiest; if you expect people to gather an answer, ask someone else, or create an answer, then you’re increasing the effort, which may stop people from finishing your questionnaire.

There is an approximate curve of forgetting

Let’s think about memory for a specific event. You can only retrieve that memory accurately when:

- You noticed something about the event and remembered it in the first place.
- The memory was still there and accessible
- The memory hasn’t gotten confused or overlaid with something else.

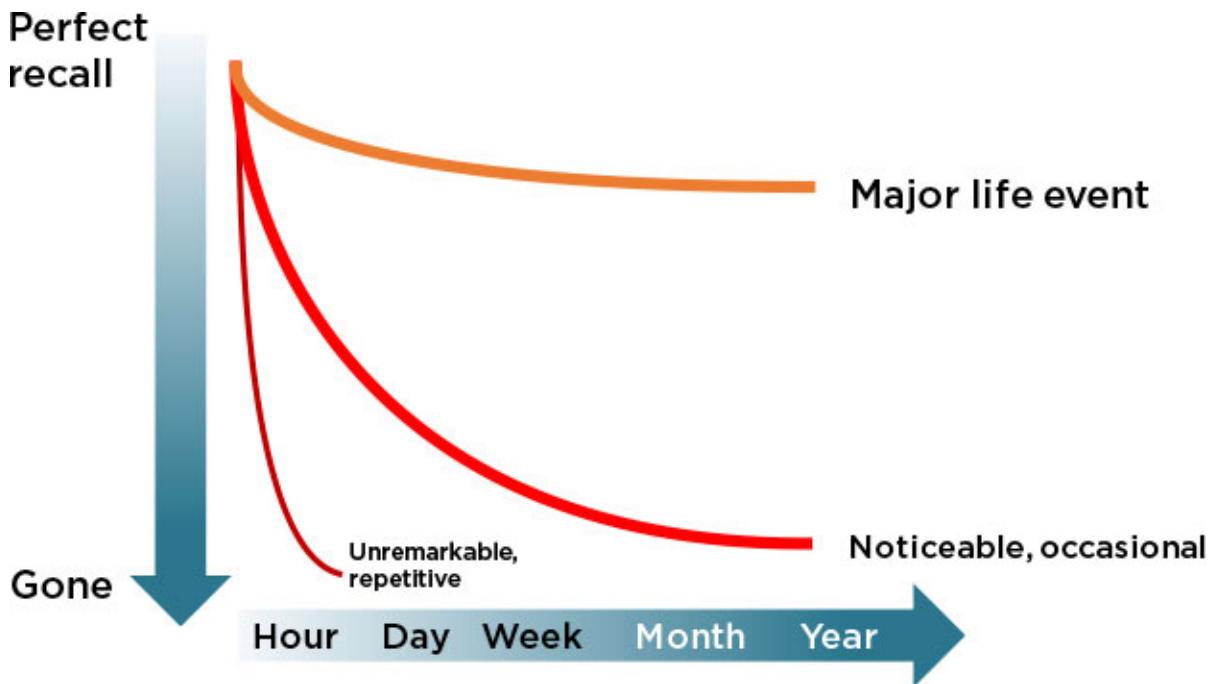
People remember some things better than others. If it’s a major life event such as getting married, a special vacation, or a house move, then probably many details of it will be easy to recall a year later, or even

more. Sometimes a distressing life event is so deeply memorable that the memory becomes a burden, leading to unpleasant flashbacks or even Post Traumatic Stress Disorder. Other memories can be a source of continuing joy, a “happy place” that can be revisited at will.

For many of us, there are noticeable, occasional events that we can remember quite well for a week or two, but then they start to fade. For example, I enjoy shopping for materials for quilting. I can easily recall the trip two weeks ago and the fabric I selected, but the details of the one a few months previously have gone, merged in my memory with earlier events.

Then there are unremarkable, repetitive events that we can barely recall an hour later. How many times have I looked at my phone today? No idea. (Although I can probably guess: too many.)

I've compared these different experiences in Figure 3.10.



ADAPTED FROM SUDMAN, BRADBURN ET AL., 1996

FIGURE 3.10
The approximate curve of forgetting.

Ask about a recent, vivid experience

Let's take another look at Question 25, this time in Figure 3.11. It's asking about what for many of us—certainly for me—are exactly those unremarkable events that I wouldn't be able to recall. I might be able to estimate how much time I spent looking at a computer yesterday, but there's no chance of a good estimate of exactly what I did when I was using it.

Question 25

In your **last five days at work**, what percentage of your work time do you estimate that you spent using publicly-available online services (not including email, instant messaging, and search) to do your work using a work computer or other device?

%

FIGURE 3.11

Question 25 asks about unremarkable, repetitive behavior.

Be realistic about the practicalities of recall. Choose time periods that are appropriate to the types of event you're asking about. Ask about people's recent, vivid experience to get the best data.

Distinguish between recall and recognition

The market researchers often want to know how people think or feel about brands, for clients who may be looking at their brand positioning or the effectiveness of a recent advertising campaign.

For example, when finding out about chocolate brands, as in Figure 3.12, a good researcher will always ask about recall first:

“Please name three chocolate brands.”

and only then move on to recognition (also called *prompted recall*):

“Have you seen or heard anything about these chocolate brands recently?”

- *Cadbury*

- *Hershey*
- *Nestle (and so on)*



COURTESY OF CHRISTIAN GUTHIER,
WWW.FLICKR.COM/PHOTOS/WHEATFIELDS/4146894012

FIGURE 3.12
If only all questionnaires were about chocolate.

Recall is the harder task: it relies on people caring enough about that product category to have laid down some memories around brands. That's exactly what a lot of advertising is aiming to do: it's trying to get you to focus on a brand for long enough to remember something about it.

Recognition is easier because it creates an immediate experience. But recognition has the disadvantage that it focuses you on the list offered—possibly driving away any other brands that might have been mentioned. Which ones can you think of?

Avoid asking for predictions of future behavior

Did you notice that the chocolate question asked about what you've seen and heard recently, not about which brand you planned to buy next?

That's an example of good survey practice: ask about events in the recent past, or what people think right now—not what they might do in the future.

If you ask someone to predict their behavior, then that's a created answer—and known to be somewhat unreliable. Think about your own behavior: if you've ever skipped a planned workout, eaten something that wasn't quite as healthy as you intended, or missed a deadline purely because your prediction of the time you needed wasn't very accurate, then you've got more than enough examples of your own.

So, sadly, there is not much “curve of prediction” to tell you which of those created answers about the future might be reliable, so Figure 3.13 features a large negative cross.



FIGURE 3.13
There is not much “curve of prediction.”

The easy recommendation is: Don't ask people to predict behavior.

But I've seen too many MCQs that are exactly about predicting behavior. Three that I see all the time are:

1. "Will you buy this product?"
2. "Will this price make you more likely to buy?"
3. "Are you likely to recommend our product to a friend?" (Yes, that's the Net Promoter Score® that we met in Spotlight B.)

The more nuanced recommendation is:

If you must ask people to predict behavior, bear in mind that there is not much "curve of prediction."

Good questions are comfortable to answer

Answering a question is a social act, and the third step, "Decide" in Figure 3.14, is about the decisions you make about whether you want to reveal your answer, or which answer to choose when there are several possibilities.

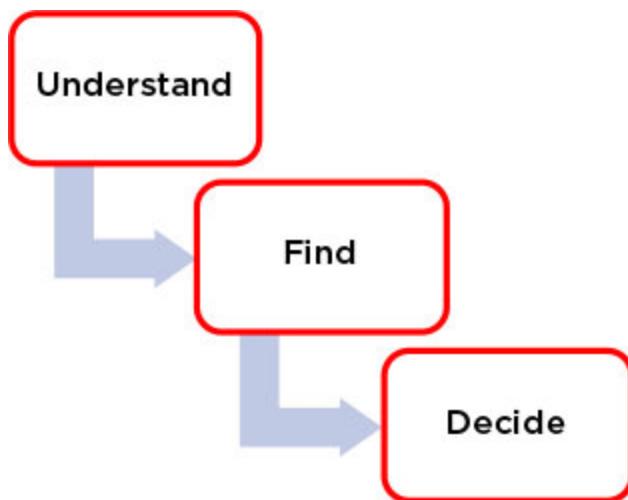


FIGURE 3.14
The third step is to decide on the answer.

Psycholinguistics expert, Lise Menn, lists a selection of the ways that people use language to do things:

“People choose words to have the effects that they want on other people—to be polite, to be understood, to make other people feel like insiders or outsiders, to make them feel good or ashamed, to encourage or console, impress or inform.” (Menn, 2011)

A thoughtless choice of words, or a difference in perspective, can lead to tricky exchanges like this one in Figure 3.15.



FIGURE 3.15
An unconsidered answer can have a bad effect.

For most of us, most of the time, this process of deciding what to say and how to say it is unconscious.

Let's listen to this in an example from Kevin Cheng, illustrated in Figure 3.16:

Let's say I was in a car when someone called and asked, "Where are you?" Here are some answers I could give:

- *"In a car." (It's somewhat useful but doesn't describe much.)*
- *"In a black Subaru." (It might be completely unnecessary detail or might be incredibly useful if the person is on the lookout for your car.)*
- *"On my way." (It has similar utility to "in a car" in that it conveys you are in motion but not much else.)*
- *"Almost there." (It's much more useful information, even though it's quite vague.)*
- *"At 4th and Main." [It's more precise and useful, although not necessarily indicating whether you're staying there or not (Cheng, 2012)].*



COURTESY OF KEVIN CHENG AND ROSENFELD MEDIA

FIGURE 3.16
Where are you?

You might add a few more choices, such as “stuck in traffic, so I don’t know yet when I’ll be with you.”

The “decide” step is all about these little calculations about what sort of answer might be appropriate.

Privacy is important

“I’m not telling you.”

One of the most obvious decisions you can make is about what you’re willing to reveal and to whom. A question about income might be impertinent from a business that’s trying to sell you a hotel room, but acceptable (albeit onerous) from a government agency that’s got a legal mandate to ask. Almost any question can be OK in one context, but unacceptable in another:

“Where do you live?”

“What’s your email address?”

“What’s your Social Security number?”

In this internet age, when it’s easy to get any question in front of a rich variety of people, we’re also becoming acutely conscious that the answers may fall into the wrong hands.

Remember the Survey Octopus, Figure 3.17? The “decide” part of answering a question is deeply affected by the reason why you’re asking and the concerns of the people who are answering.

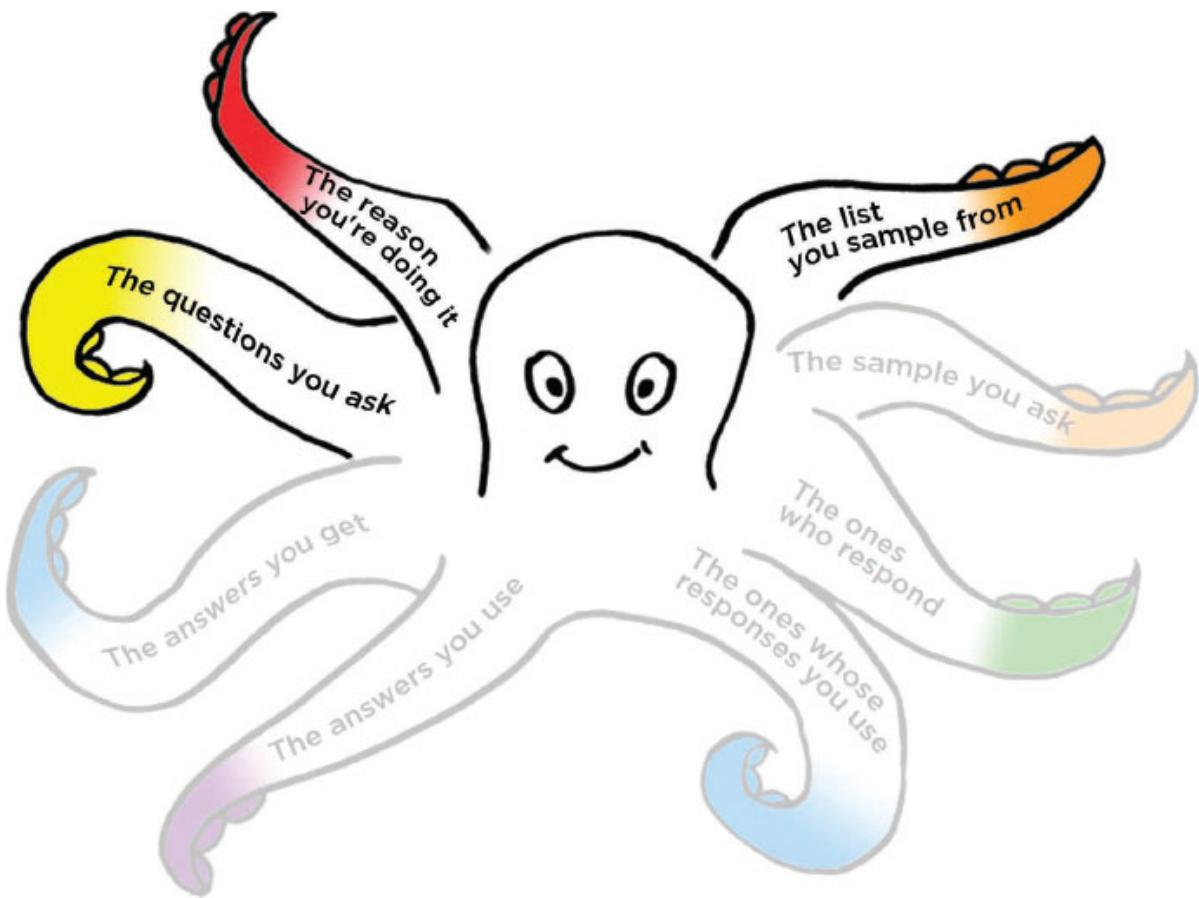


FIGURE 3.17

The acceptability of a question depends on why you’re asking and who is answering.

Do they trust you enough to reveal their Social Security number in a survey? Probably not, and why do you need it anyway?

Do they trust you enough to reveal their email address in a survey? Maybe—it depends on what you’re planning to do with it.

Do they trust you enough to tell you whether they have an email address or not? Probably—assuming that they know what “email address” means.

The context affects the decisions

Ordinary conversations are based on making inferences about relationships between consecutive statements.

If you consider it entirely on its own, a question such as:

Q: “Can you see the drugstore?”

might have several possible interpretations, including:

Q-a: “If you look around you right now, can you identify any stores that might be a drugstore?

Q-b: “Is this new branding for the drugstore bright enough to be visible in bad weather?”

Q-c: “Is your sight good enough for you to spot a drugstore?”

Does that seem like a stretch? You've recently been thinking about Kevin in his car, so Q-a probably seems like the obvious, most plausible interpretation.

If I change the context, the other interpretations might seem more realistic. For example, I might explain that the context in Q-b was a conversation about repositioning the brand. And the context in Q-c was in an optometrist's office.

Or maybe not—once you've settled on one view of a question, it's harder to be convinced by others.

These shifting sands, where a question can change its meaning depending on what happened previously, are well known to the survey methodologists who call them *context effects*.

A **context effect** happens when a question changes its meaning according to its position in a questionnaire or in a conversation.

There are countless examples. One I'd especially like to mention is this example from psychologist Cordelia Fine:

Have you, for example, ever filled in a question on a form that looks something like this?

Male

Female

Even an innocently neutral question of this kind can prime gender. (Fine, 2010)

“Prime gender” means that questions like this remind women that society has gendered views of women’s capabilities, and therefore leads them to reflect those gendered views in their answers. For example, Cordelia Fine describes an experiment where a gender-priming question led women to rate their math skills lower than women who did the same exercise but with a different preceding question. (Sinclair, Hardin et al., 2006)

Learning about gender priming has made me much more careful about whether I really need to ask about gender, and if so, I try hard to put the question toward the end of the questionnaire.

The context of the person who answers is also important

Typically, you create your questions within your world view, and that can be surprisingly different from the world view of the people you’re asking. For example, here’s an excerpt from a test of questions in the General Social Survey, a survey of contemporary American society run by the National Data Program for the Social Sciences based at the University of Chicago. In this example, the question as written assumes that people would identify with a political party—but this respondent clearly did not. *I* means *Interviewer*, *R* is *Respondent*, and :: signifies *prolongation of the preceding word*.

I: Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?

R: As a person.

I: As a Republican::

R: No.

I: Democrat::

R: No.

I: Independent or what.

R: Uhm:: I think of myself as (pause) Christian.

*I: OK. (writing). But politically, would you have any particular:
(inaudible)*

R: I am one of Jehovah's Witnesses so, you know, when it comes to:

I: I see.

*R: So I'm, I am acclimated toward government, but it is that of Jehovah
God's Kingdom.*

(Suchman and Jordan, 1992)

Yes, that excerpt came from a book published in 1992, but I can assure you that difficulties about deciding how to answer are as frequent today as they were then. For example, in the week before writing this sentence, surveys from two different organizations asked me questions about “support for my local community” that I couldn’t decide how to answer because the communities that I’m part of are based on shared interests, such as the charity that we support, not on geography.

Deciding on an answer can be painful

Sometimes the process of finding an answer “in your head” can stir up painful memories or bring to mind a topic that’s deeply sensitive and that makes the decision about what to reveal or not to reveal a difficult one.

Let’s return, briefly, to that frequently seen question about gender. Cordelia Fine described it as “innocently neutral.” Here’s another view, from s.e. smith:

“For some trans folk, it is a place of endless heartbreak. Every. Single. Time. I fill out a form, I stop here. There is a long pause. A hesitation. A*

sigh. I am not male. I am not female. On paper forms, I often leave it blank. . . .

Think about how it would feel to fill out a form with checkboxes which do not include a space for you.

Imagine doing this over, and over, and over again. Imagine dreading the filling out of forms not because it's a hassle and it's repetitive and it's not very fun. Imagine dreading it because you know that you are going to have to lie and erase yourself every time you fill out a form." (smith, 2009)

Of course, questionnaires are optional, so if any people in your defined group feel like s.e. smith when asked a question about gender, they have the option of breaking off. But the negative side is that you lose their data, you lose their views, and maybe (if this is a survey of customers) you lose their goodwill.

Conscious sensitivity about gender may be relatively rare, but there are many other topics that can stir up difficult emotions, such as bereavement, illness, divorce, or losing a job.

Sara Wachter-Boettcher writes movingly about the emotions and decisions that went through her mind when she had to answer the question:

Ich bin das __ Kind meiner Mutter; one form says: "I am the __ child of my mother" (Wachter-Boettcher, 2015).

For many of us, revealing the birth order in our families would have no particular resonance, but Sara had a brother who died in infancy.

Fortunately for us, Sara channeled her powerful emotions into the excellent book *Design for Real Life*, in Figure 3.18, that she wrote with Eric Meyer.

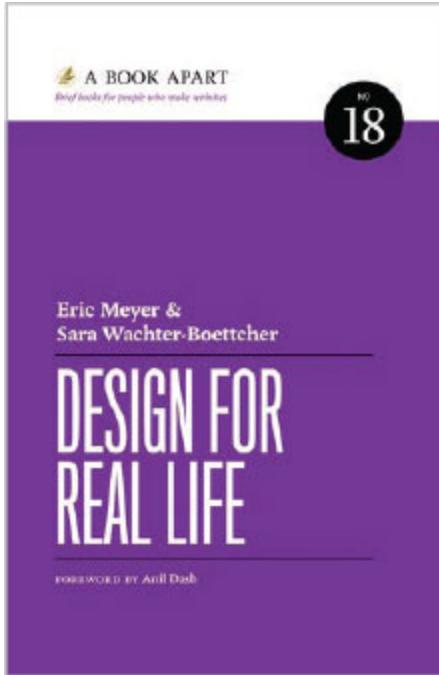


FIGURE 3.18
Design for Real Life. (Eric Meyer and Sara Wachter-Boettcher, 2016)

Good questionnaires make it easy to respond

Most traditional surveys rely on an interviewer—face-to-face, or more recently, on the telephone. The interviewer reads out the questions from the questionnaire, and the person who answers gives their response to the interviewer. The interviewer must record the response accurately, and sometimes that includes an on-the-spot interpretation of the answer to work out how to record it—the final respond step, as in Figure 3.19.

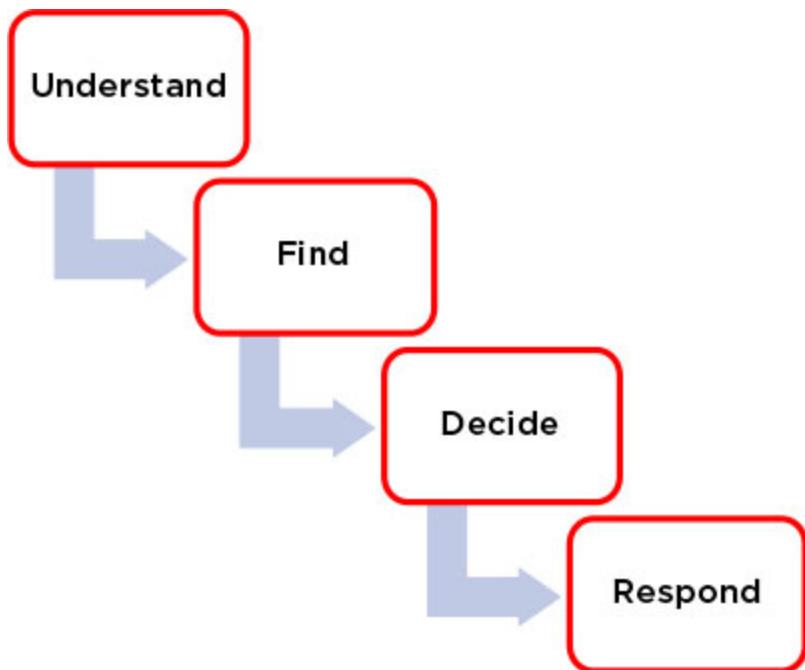


FIGURE 3.19
All four steps in answering a question.

With newfangled ideas, like getting someone to do a web survey, that respond task shifts over to the person who is answering the question. Creating a good questionnaire that makes it easy to respond is such a big topic that we're going to give it an entire chapter, Chapter 4 "Questionnaire," coming up.

Test your questions in cognitive interviews

You'll save a lot of time and effort when making your questionnaire by testing the questions first.

If you did the interviews to find Burning Issues that I recommended at the end of Chapter 2, "Sample," then you'll be one step ahead, because those interviews typically start to reveal any problems of a clash of world views, or issues with privacy and trust.

Even so, now that you have specific questions, some cognitive interviews are definitely worth the effort in order to reveal the detailed problems hidden within.

Try a little cognitive interview

Try this little cognitive interview yourself. Answer this question, and as you do so, think aloud and notice the processes you go through.

“How many windows are there in your house?”

Did you notice any hesitation or confusion? Maybe you live in something other than a house or are currently not exactly living in any fixed location.

Maybe you weren’t sure what counts as a window. My friend has some interior windows in the wall between her kitchen and her living room. Do they count? Our front door, pictured in Figure 3.20, has two glass panels in it that could count as zero, one, or two windows.

And what about your answering strategy: did you happen to know the answer for some reason, perhaps because you recently had all the windows replaced, or did you mentally stand outside the house and look at it or take yourself on a walk from room to room? Did you keep a mental running tally, or use your fingers, or write notes?



COURTESY OF WIL FREEBORN (WILFREEBORN.CO.UK) WHO CREATED THE WATERCOLOR INSPIRED BY A PHOTOGRAPH TAKEN BY THE UK GOVERNMENT DIGITAL SERVICE

FIGURE 3.20
I live in an 1896 house with glass panels in the door.

That's a flavor of the rich variety of things you'll find out when you try some cognitive interviewing on your questions.

Do cognitive interviews with people in your defined group

Find a few people in your defined group and invite them to try some questions for you. (I avoid using the technical term *cognitive interviewing* when I'm setting up the sessions.)

If you expect people to work through your questionnaire in a group, then it's fine to test the questions with a focus group.

I invariably expect that people will answer the questionnaire on their own, so I aim to do cognitive interviews with one person at a time—but,

of course, that person is welcome to bring a helper, carer, family member, or friend, if they'd usually have that person with them when they tackle a questionnaire.

I usually ask the person to work through the questions one-by-one and to do the following:

- Read the question aloud.
- Explain it back to me in their own words.
- Think aloud to find some potential answers.
- Tell me about the choice of which answer to give.

Meanwhile, I'm listening quietly and taking notes. The "listening quietly" is the hard part—focused listening is fascinating but tiring.

Most of all, cognitive interviewing is far, far quicker and more interesting than sitting in a meeting with stakeholders trying to write the questions in the first place, or (if you're a team of one) trying to second-guess what the people who answer will make of your questions all on your own.

What could possibly go wrong with the questions?

Writing questions isn't easy. There's a risk that the people in your defined group:

- Won't understand your questions.
- Will understand them in a way that is different from what you intended.
- Won't have an answer.
- Will have an inaccurate answer.
- Won't want to give you their answer.

Measurement error happens when questions do not work well

If any of those things happen, you've got “measurement error.”

Measurement error is the difference between the true value of the answer and the answer you get.

It's the error that falls in the gap in Figure 3.21 between two tentacles of the Survey Octopus: “The questions you ask” and “The answers you get.”

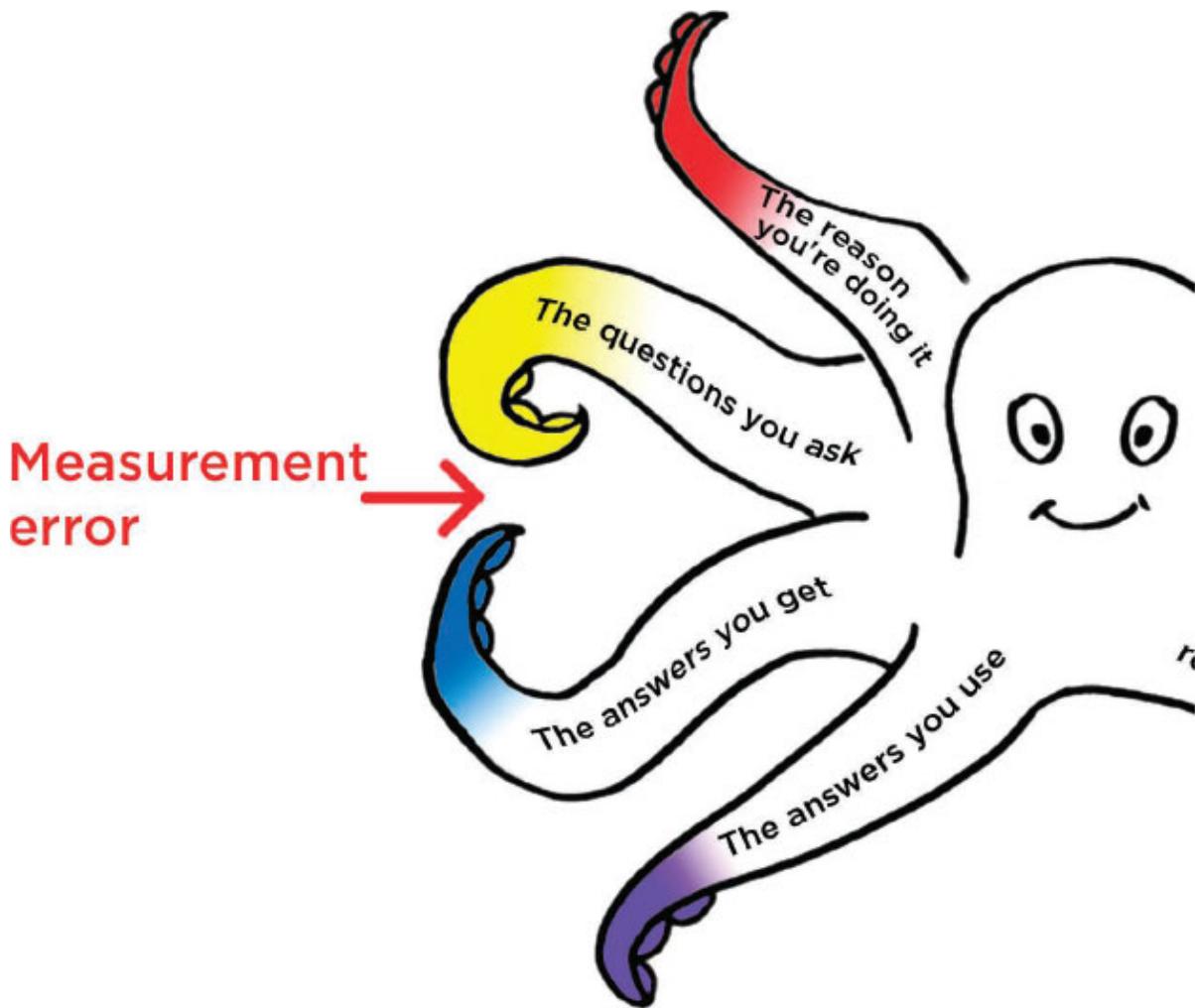


FIGURE 3.21
Measurement error happens in the gap between the questions you ask and the answers you get.

One uncomfortable, but major, potential source of measurement error is a Most Crucial Question that people can't or won't answer. The

uncomfortable part comes from this dilemma:

- Option 1: Press on with the survey, knowing that you'll have lots of error in the final result?

Or:

- Option 2: Iterate, returning to the Goals step to find a new Most Crucial Question?

Obviously, I hope you'll choose Option 2: Iterate, especially as it gives you another chance to include consideration of the Burning Issues that you discovered in your interviews in Chapter 2. But even if you decide to press on, it's better to discover that you might have a problem at this stage when there are still opportunities to help the people you want to answer, maybe by writing a better invitation or wording the Most Crucial Question slightly differently.

At this point, you will know

All this work on questions means that by now you have a set of questions that:

- Include the Most Crucial Question that will help you make the decision.
- Include the Burning Issue, the topic that they most want to talk to you about.
- Can be understood and answered easily by people.

It's time to turn them into a questionnaire, which you'll do in Chapter 4.

On the way, you'll find essential reading in Spotlight E, "Privacy." Please make sure that you read it.

And there are two additional Spotlights:

- Spotlight F, “Questions to Ask When You Choose a Survey Tool,” because it’s a topic that I get asked about a lot.
- If you are open to consider delivering your questionnaire as something other than a web survey, then have a look at Spotlight G, “Choose Your Mode—Web, Paper, or Something Else?”

SPOTLIGHT E

Privacy

When you have your questions, it's crucial to think about privacy before you start to build your questionnaire.

Let's think about a couple of examples. On a random day, I put "Data Breach" into my usual search engine and had a look at the "News" results. They included stories of data breaches at a supplier to Boy Scouts of America, Pearson (a major educational publisher), and a supplier to the New Zealand government, as in the news story in Figure E.1.

AI

New Zealand beefs up IT security after government data breach

By Mia Hunt on 06/09/2019

[!\[\]\(25d94b65b9301e92cb3bdc08e1fa2057_img.jpg\) Share 5](#) [!\[\]\(d3e7330f489d2d1ae60643e509445a14_img.jpg\) Tweet](#) [!\[\]\(61444e440a486e476c7c493ec4026b09_img.jpg\) Save](#) [!\[\]\(25c4b59ac5f56433f9afa12390b6a96d_img.jpg\) Share](#) [!\[\]\(2a8a281c56745523aa4e390e1ca498ab_img.jpg\) Email](#)

The data breach released information submitted by citizens applying to participate in a voyage marking the 250th anniversary of the first contacts between local Maoris and British settlers, depicted here in a 1769 painting (Image courtesy: British Library/Tupata)

New Zealand has clamped down on government agencies using unvetted IT service providers, following a data breach which saw a supplier inadvertently leak hundreds of people's personal information.

COURTESY OF WWW.GLOBALGOVERNMENTFORUM.COM/NEW-ZEALAND-BEEFS-UP-IT-SECURITY-AFTER-GOVERNMENT-DATA-BREACH/

FIGURE E.1

One of many examples of data breaches.

Another day, another data breach, and another big embarrassment—possibly even a massive fine—for some organization that has failed to deal properly with privacy. It's easy to think "I'm glad that it's not my job."

And you may be right: if you have privacy experts in your organization, then you can skip this Spotlight and go consult them. (But you might want to read it anyway so that you are armed with the key ideas before you open the discussion.)

Or you may be like me and responsible for privacy matters yourself. So I asked Heather Burns, a privacy expert in Scotland, to help us. She works with software projects and developers to help them to improve their approach to privacy.

She's not a lawyer—she says, “That's the whole point of my work, really”—and neither am I, so don't mistake this introduction for legal advice.

Why you need a Privacy Impact Assessment (PIA) for a survey and how to make one

Q: I'm a bit daunted by privacy. Isn't it a lot of legal mumbo-jumbo with the possibility of fines?

A: It's important to realize that good privacy practice isn't scary, and it may not need a roomful of lawyers either. It's about making sensible, proactive decisions that put the user first and protect your work in the process.

Q: By “users” of surveys, do you mean the people who are answering your questions?

A: Correct.

Q: If I've got to sort out the privacy concerns myself for my survey, where do I start?

A: There are two things you need to think of:

- How you protect yourself, internally.
- How you protect your users, externally.

For the first—yourself—you need to anticipate any privacy issues before they happen. I do that by helping clients to develop a Privacy Impact Assessment.

Q: What exactly is a Privacy Impact Assessment?

A: A Privacy Impact Assessment is usually abbreviated to PIA. It is a means of discussing and documenting any privacy risks in the work that you’re doing and the information that you’re collecting. It acknowledges that you have sat down and thought about these issues, identified any precautions you need to take, and written down your decisions for the record.

Q: Is a PIA the same as the privacy notice that you see on most websites?

A: No. The privacy notice is the public document that you’ll do in step 2: protecting your users, externally. A PIA document is strictly internal. Technically, in the event of a data breach or a privacy concern, a data protection regulator can request to see a copy of your PIA.

Q: Does everyone need a PIA?

A: My rule is “If you have to ask if you need one, then you do.” A data breach can hit the news in a way that you really don’t want it to.

Think hard, and creatively, about what risks are inherent to your organization and the project you are working on:

- Reputational damage?
- Bad media coverage?
- An angry data protection regulator?
- A class action lawsuit from aggrieved data owners?

Even if you are a lone student or a person with a small business, these days the social media can be savage.

Yes, this is something where you'll be thinking about legal matters, but don't necessarily look at it in terms of "comply or die." Think of best practice, creating user trust, and transparency of your work. There's absolutely a legal element to that, but it's about being good people as well.

Q: What goes into a good PIA?

A: Here are the steps I'd recommend.

1. Set up your document. Invest time in making a template you can use fresh on every new project.

2. Describe:

- The information you're gathering
- Why you're collecting it
- What you're using it for
- Who you're collecting it from
- Where you will store it
- Who will have access to it
- How long you will keep it
- How you will aggregate it
- What you will do with your survey data at the end

3. Describe how this information flows:

- From your users to you
- From your users to a survey tool
- From you to your partners
- From your survey tool to third parties

Think very hard. It's the information flows that can surprise you, especially ones from your survey tool to third parties. If you have

not yet read the privacy policy for your survey tool, now would be a good time.

4. Identify who is doing the work here.

- Who has access to the data?
- Who is in charge?
- Who is responsible?
- Whose job is it to deal with user concerns?
- Whose job is it if something goes wrong?
- Who is keeping an eye on things, such as who is accessing the data?
- If a data protection regulator wants to raise a concern, who is the point of contact?

5. Identify what privacy and data protection risks are inherent in the data. What would happen if your dataset was:

- Misused?
- Compromised?
- Breached?
- Aggregated with other information?

6. Identify and list what you're doing to mitigate these risks and prevent them, as much as you can, from ever happening.

7. Record everything you've done in steps 1 through 5 and sign the record. Someone's name needs to be on this sheet.

8. Amend and update the PIA as necessary. Use it in your project postmortem.

9. Rinse and repeat.

And my top tip is: If your PIA process raises questions like “Should we even be doing this?” or “Is this legal?”—you may have bigger issues than a document template.

Q: That looks like a lot of work, but I can see how it will repay the effort to keep the first one and amend it. Please tell me that having a good PIA will make it super quick and easy to write a privacy policy? Please?

A: Yes, absolutely. People want to know what's being done with their data and if they can trust the people asking. If you've done your PIA thoughtfully, then you'll know both of those things.

Here's what I want to see in a public-facing privacy notice:

- What data are you collecting about me?
- Why are you collecting it? That needs to be specific.
- Is that reasoning legally and socially justified, or are you a data vampire sucking my data blood?
- Which third parties are you sharing it with? Are you just a middleman?
- What third-party data are you aggregating it with (even if that's an online ad network)?
- Who else will have access to it?
- How long are you keeping it?
- Is it being aggregated or stripped of personally identifiable information?
- Should I expect any follow-up? What if I don't ever want to hear from you again?
- What if I change my mind later and decide that I don't want you to have my data anymore? How can I get it back from you?

Q: Yes, I can see how those questions look a bit daunting on their own, although I didn't expect the vampire. I can also see that if you've done the work of the PIA thoughtfully, then they are relatively easy to answer. So now I've got my privacy notice, where do I need to put it?