

Abstract Model Testing

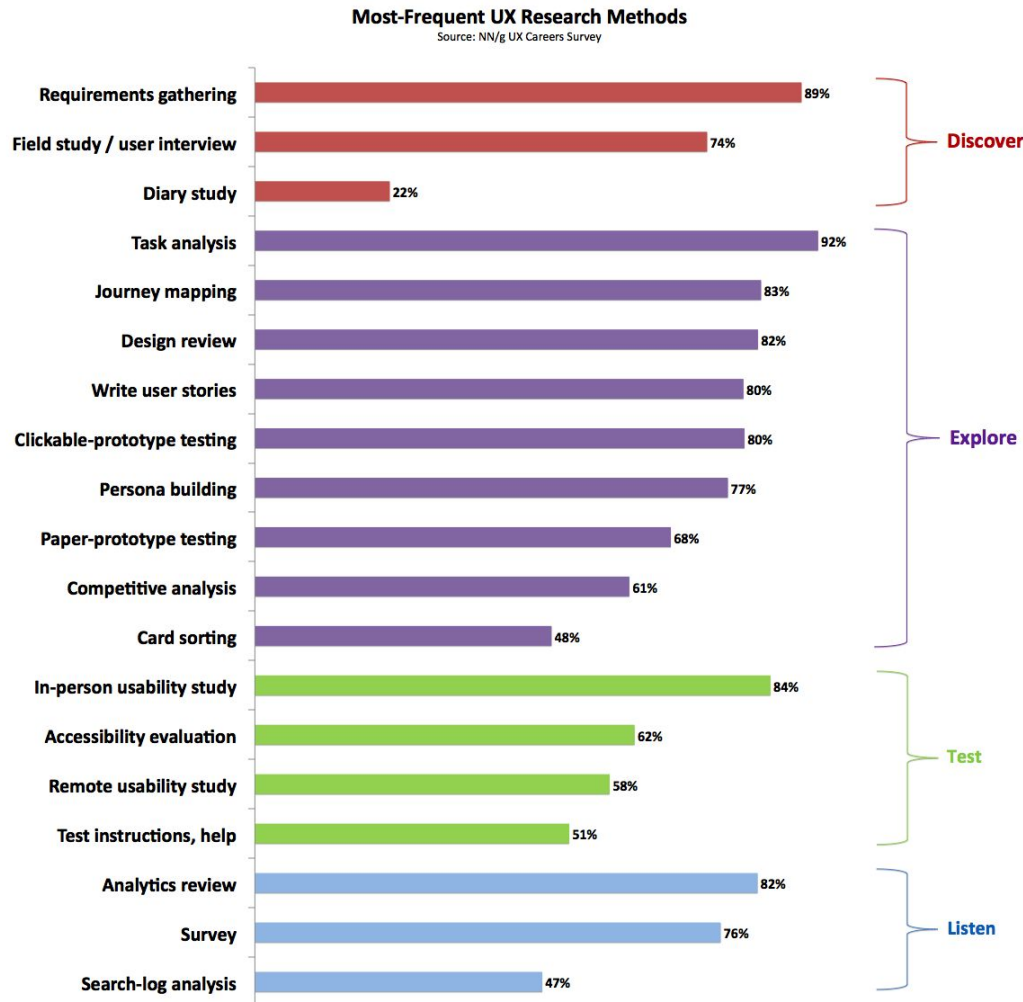
Solving a mystery of hidden assumptions

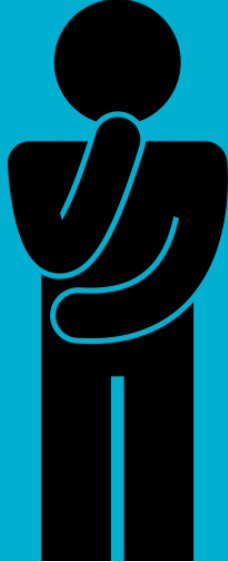
Laura Faulkner PhD - January 2021

Our UX research toolkits contain powerful methods to find unknowns.

Yet, sometimes there are latent conditions **behind** the experiences that will cause them to fail.

These can be missed by our usual methods.





Assumptions

Assumptions begin in the conceptual stage, well before design.



The Mysterious Case of the “Permissions Solution”

With Village Detective, Laura Faulkner, PhD.

THE PLAYERS

Four different players with
contending perspectives.



Users



Devs



Designers



Architects

The Setting

Client situation:
One super admin of each
system

Client need:
A super admin of one system
can change the other system

Client ask:
Both admins can change
both systems

Solution concept:
Super Admin A can grant
super admin permissions to
Admin B*

Collateral capability:
Super Admin B can now also
grant super admin
permissions



The Crisis

Designers felt something was wrong



Users won't adopt
the solution!

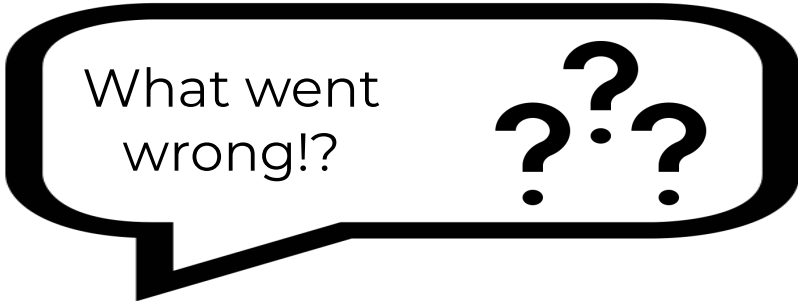
The Failed Solution

Test the users!

Test 1 theory:

If we build a prototype and have them walk through it, Users will balk at Step 3!

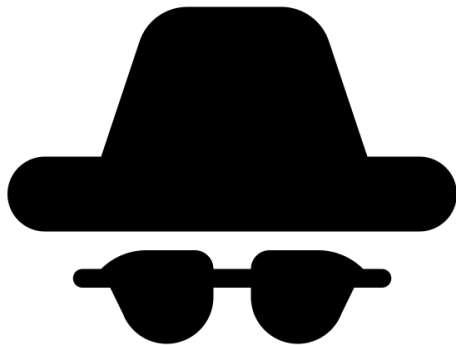
Test 1 Result: The Users were fine with it!



What went
wrong!?

???

Research Investigation



Or was it
something else?!

What was the Root Cause
Analysis of the Test 1 failure?

Why didn't the test capture the
hypothesis?

INVESTIGATION FILES:

Did we have the 'wrong' users?

Did we write the test plan wrong?

Was the Designers' hypothesis wrong?

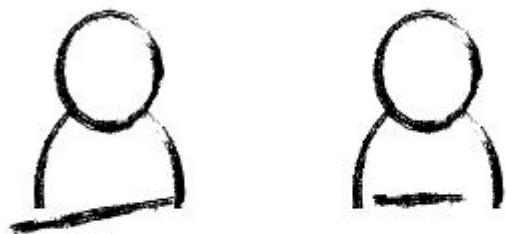


The First Clue

The first clue was in the root cause of the Test 1 failure:

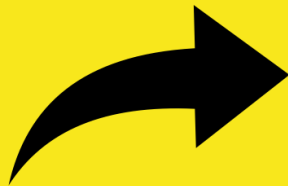
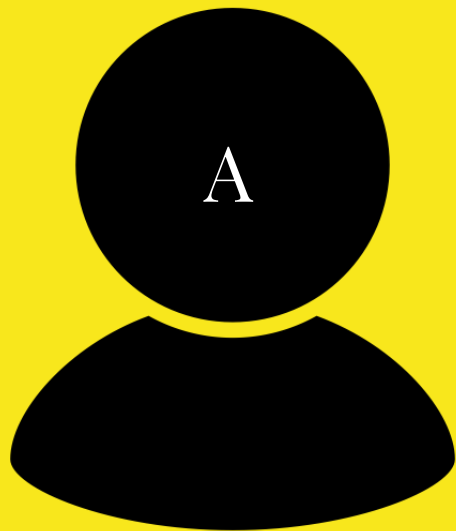
An undisciplined test plan.



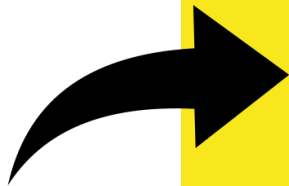
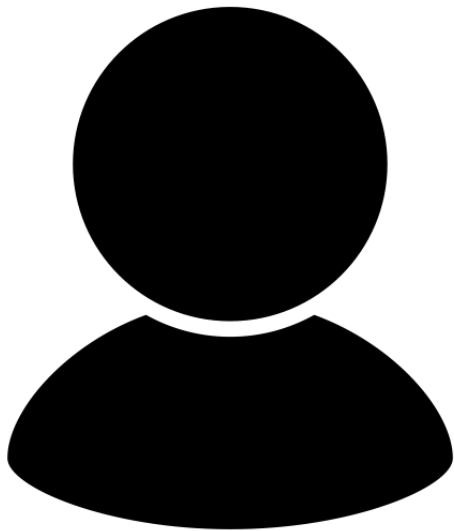


We started at the whiteboard

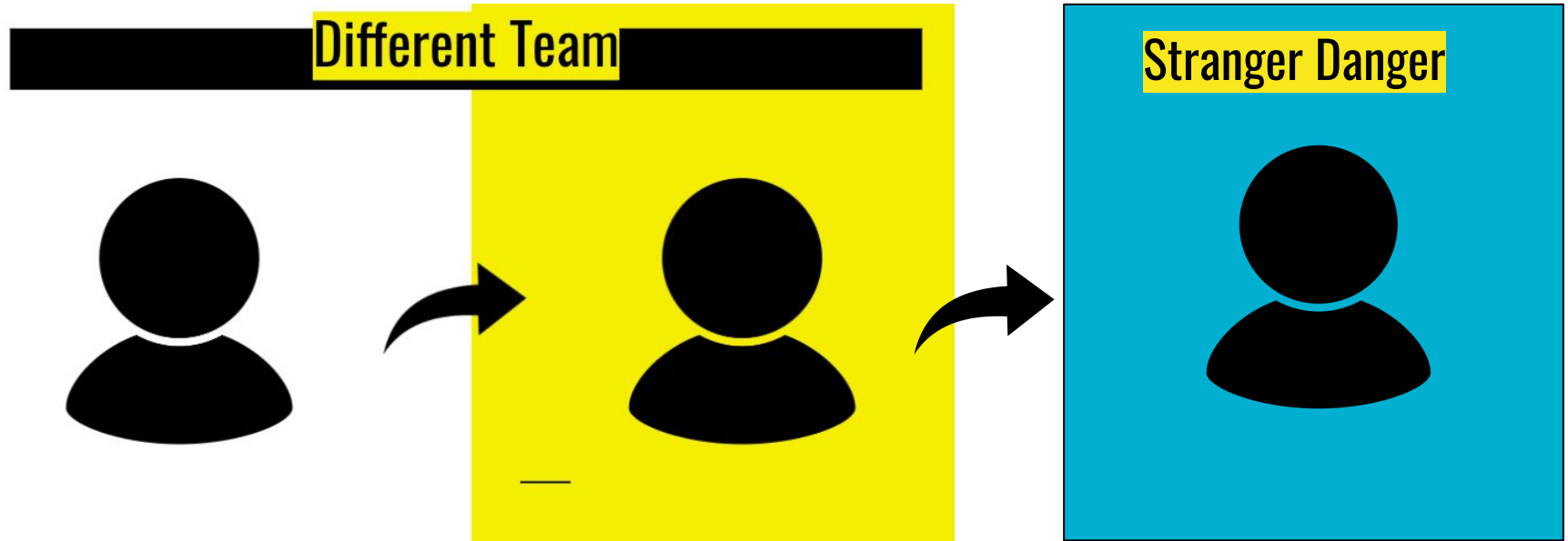
Same Team



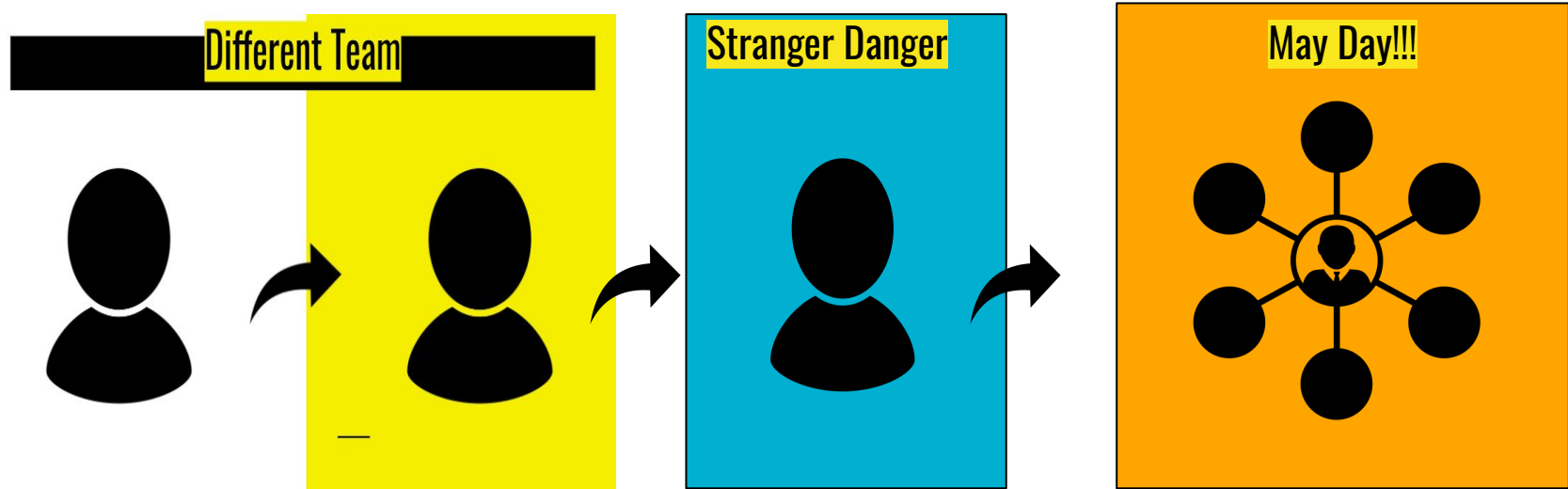
Different Team



Outside Team Shares with Someone Else



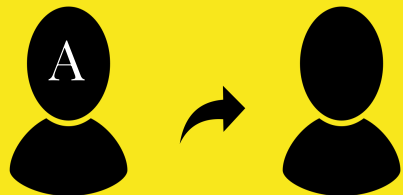
The Point Where the Model Breaks Down



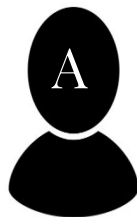
Trust is compromised.

PRESUMED

ONE PERSON, SAME TEAM



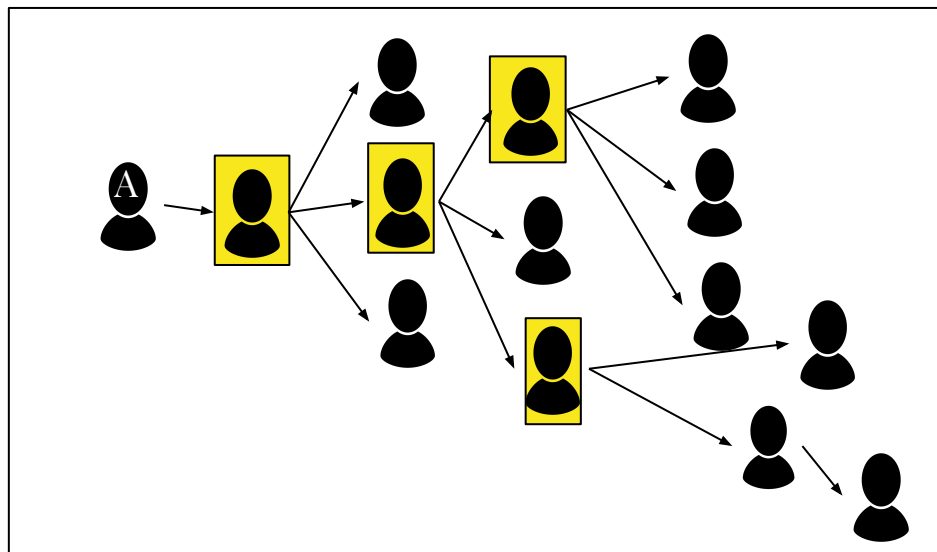
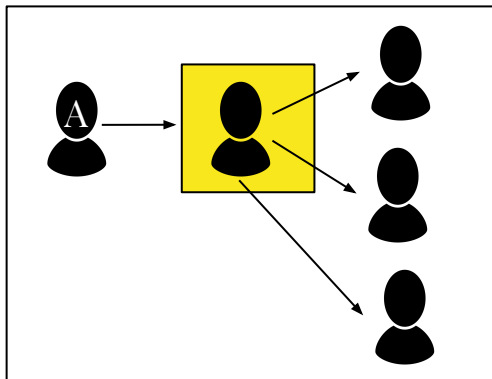
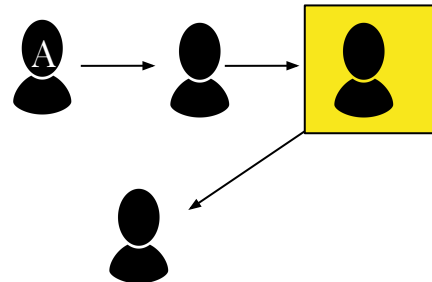
ONE PERSON, DIFFERENT TEAM



RECEIVER SHARES WITH SOMEONE ELSE, NOT KNOWN TO A



The Point Where the Model Breaks Down



RESEARCH DESIGN

So, why did the first test fail?

The experience design was so good that Users skipped right past even imagining there might be a security risk in the model.

Method & Plans: The secret to the solution

A key to the next clue: The disciplined test plan



Business Goals

These will start with a problem to solve and a ‘so that’ outcome statement.

Research Goals

This is what you’re going to learn, not what you’re going to do.

Objectives & Questions

These are the questions you want to answer.

Note: The questions you want to answer will not be the questions you ask!!

PRO TIP:

The questions you want to answer will not be the questions you ask!

“Questions you want to answer” = **Objectives**

“Questions you ask” = **Research Instrument**

Method & Participants

This is what gets the answers and the best-fit ‘who.’

Session Design Overview

This maps the Objectives & ‘Questions to answer’ to tasks & questions you will ask.

Script

What happens in the session. **Always** the last thing you write.

*NO, you may not write these until you finish and refine all of those above **and** get stakeholder buy-in and approval for them.*

What a good Village Detectives will do

1. **Map out:**
 - a. The people
 - b. The theory
 - c. The timeline
2. **Interrogated the village inhabitants.**

Okay, the users.
3. **Help the user put themselves into the story**

A storyboard is a powerful tool. Be sure to just show one frame of the story at a time!
4. **Hold lightly to the method**

This one is not doing the method 'right.'

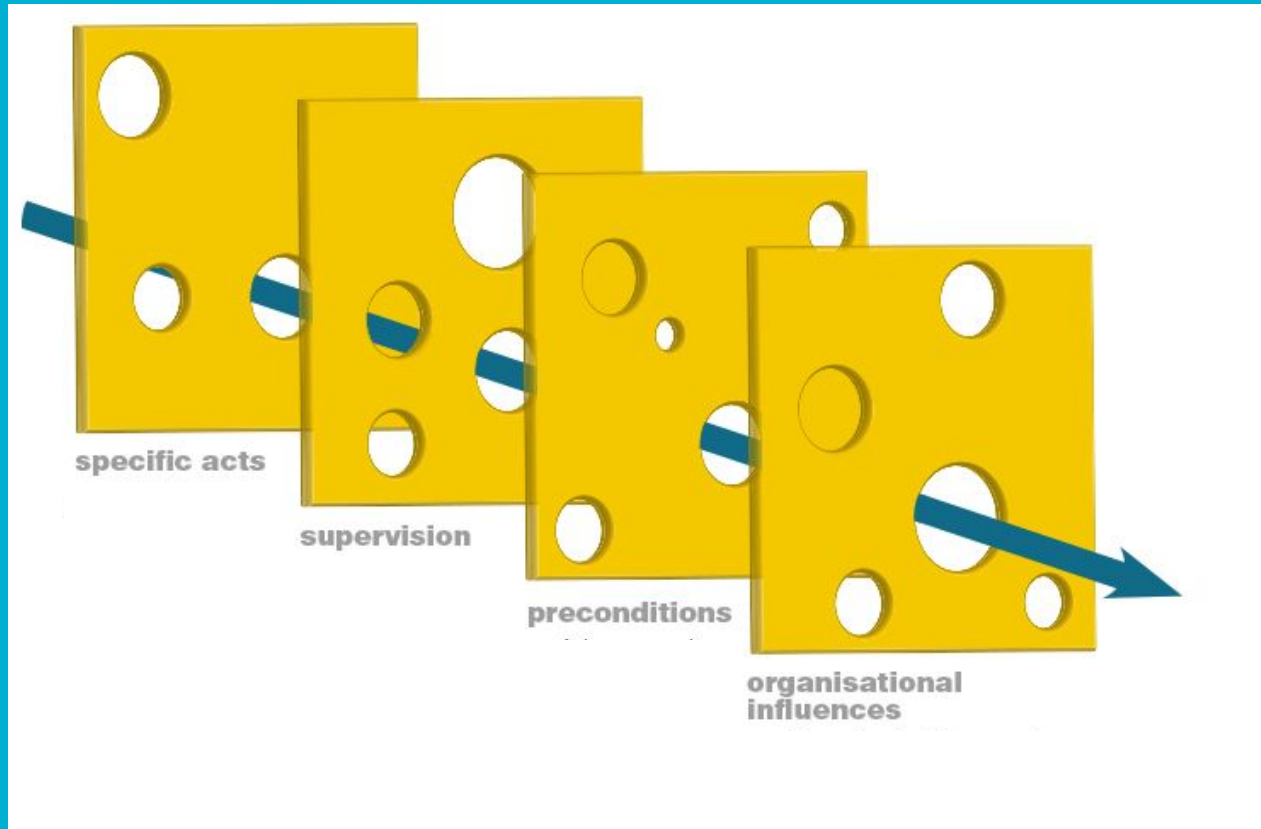
Trust our own instincts and knowledge as an investigator.

Light bulb



Solving the Case

THE SCIENCE BEHIND DISASTERS - James Reason's Swiss Cheese Model



Insights from Psychology and Psychometrics on Measuring Risk Tolerance

By Michael J. Roszkowski, Geoff Davey, and John E. Grable PhD, CFP

Executive Summary

- Despite some arguments to the contrary, a client's financial risk tolerance can be measured accurately by a questionnaire, provided that the questionnaire has been developed in accordance with psychometric principles.
- The science of psychometrics has a set of standards by which to judge the quality of a questionnaire. These standards deal with the processes used to create the questionnaire as well as the characteristics of the results produced by the questionnaire.

In this case, we needed to determine “Risk Tolerance”

Which can be discovered by ...

Good research design!

THE TRUE FINDINGS

RISK ACCEPTANCE

They didn't understand the risks.
They were okay with the solution.

YES - ADOPT
YES - MAKE UNKNOWN MISTAKES

They understood the risks & implications.
They were okay with them.

YES - ADOPT
NO - THEY WOULD MAKE UNKNOWN MISTAKES

They didn't understand the risks & implications. (bad things that would happen)
They were not okay with it anyway.

NO - NOT ADOPT
NO - THEY WOULD NOT MAKE HIDDEN MISTAKES

They understood the risks & implications.
They were not okay with that

NO - NOT ADOPT
NO - THEY WOULDN'T MAKE HIDDEN MISTAKES

RISK PERCEPTION



So, how did it all turn out?

In The Mysterious Case of the Permissions Solution the solution did go forward.

However, due to research results about the trust and risk tolerance issues, the “bad thing” was done well.

The central issue was not so much the ability to grant the permissions. It was about the inability to see and vet who they had been granted to.

Design and Dev introduced significant changes that made this transparent, and thereby gained the users’ trust.



Tips & Tricks for Researchers

An Ashgate Book



Managing the Risks of Organizational Accidents

JAMES REASON



The best *‘non-UX’* UX book you’ve never read

If you read only one professional book this year, let it be this one.

Steps & tips to develop your own abstract model test



1. **Trust your own doubts and those of others.** That niggling intuition is data you can use. It just might save folks from a disaster.
2. **Imagine the disaster.** Think of the worst things that could happen, however unlikely. You want to lead the participant to imagine those on their own.
3. **Keep in mind that a disaster happens when latent conditions align.** These are hard to find until you think beyond simple situations and single points of fail.
4. **Write disciplined test plan goals and objectives.** The very *process* of writing this critical preamble in a test plan can lead you to the right method and participants.
5. **Don't plan to show the test participant an actual design or implementation.** If you get pushback about this, plan a second test.
6. **Test experts as well as novices.** Experts can be the ones most susceptible to latent conditions because they do unexpected actions with things 'known' to them.
7. **Develop a story to place the participants in the situation.** <>
8. **Create visual representations of the story.** Consider a storyboarding approach with simple figures and shapes. This is psychology, not a design competition.
9. **Question the participant at key points in the story.** Human emotions are the disaster beacon of where latent condition or fail points exist.
10. **Develop a model from the results of the model.** In this case it was a 'risk tolerance' model. Yours will track to the business and research goals.

Bonus: Be gentle with yourself and others. If we could find all of the latent conditions, they wouldn't be latent conditions.

Author/Presenter



BIO: Laura Faulkner, PhD, is the Head of Research at Rackspace Technology. She has degrees in Psychology, Anthropology, and Sociology with minors in Statistics and Biology. She brings 25 years of passionate dedication to UX research, and many expert lessons learned through classical research training and the bumps and bruises of real-life practice and leadership.

CLAIM TO FAME: Author of the seminal UX study and paper “Beyond the Five-User Assumption”

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Presentation Designer



BIO: Andrea has a Master of Science in Information Studies at the University of Texas at Austin with a concentration in User Experience Research. She has analyzed problems in the tech industry, healthcare, and education. In her current role, she is the first UX Researcher and Process Owner at CODE STUDIO INC. Her research has been honored by the.

CLAIM TO FAME: User Experience Professional Association (UXPA) 2018 Student Competition Finalist

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References & Resources

- **UX Research Methods.** UX Research Cheat Sheet chart by Nielsen/Norman Group from an article about service delivery design: <https://www.nngroup.com/articles/ux-research-cheat-sheet/>
- **Book.** Managing the Risks of Organizational Accidents by James Reason, 1997. Book available at: <https://www.amazon.com/Managing-Risks-Organizational-Accidents-Reason/dp/1840141050>
- **Article.** Psychology and Psychometrics on Measuring Risk Tolerance. Michael J. Roszkowski, Geoff Davey, and John E. Grable PhD, CFP. Journal of Financial Planning; Denver Vol. 18, Iss. 4, (Apr 2005): 66-77. At <https://search.proquest.com/openview/90ff6fac6628559cf396e89c73ed2b3c/1?pq-origsite=gscholar&cbl=4849>
- **Book.** Blink: The power of thinking without thinking. Malcom Gladwell. Little, Brown and Co. (2005)
- **Article.** How to change your research reports so today so that stakeholders act on them now. Laura Faulkner 2019. <https://medium.com/@laurafaulkner/how-to-change-your-research-reports-today-so-that-stakeholders-act-on-them-now-5473ff1af74>
- **Article.** How to have a bold point of view without having an opinion. Laura Faulkner 2019. <https://medium.com/@laurafaulkner/how-to-have-a-bold-point-of-view-without-having-an-opinion-a-guide-for-ux-researchers-e0fe3d133c5b>
- **Podcast.** Steve Portigal's Dollars to Donuts, Episode 28 with Laura Faulkner of Rackspace. 2020. *In it I describe, among other things, the 'Research Intake Process'*

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