UX

A Field Guide To User Research

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About This Book

User research is an effective strategy to gain a deeper understanding of your target audience — a crucial step in order to choose efficient design solutions and build smart products. But what has to be considered when conducting user research? What methods have proven themselves in practice? And how do you finally integrate your findings into the design process? With this eBook, you will learn to take the guesswork out of your design decisions and base them on real-life experiences and user needs instead.

To get you started, we'll consider various research methods and techniques, but we will also tackle the more practical aspects (and difficulties) which face-to-face research brings along. Learning to identify potential research partners and finding the right questions to ask during an interview thus is part of this eBook — as well as presenting your findings und using them to iterate on your products' designs. If you feel that you and your team make a lot of decisions based on assumptions, then this eBook is your jump start into a more user-centered design process. Find the techniques that fit into your workflow and start to discover the actual problems — and unmet needs — of potential users firsthand.

— Cosima Mielke, Smashing eBook Producer

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A Five Step Process For Conducting User Research

BY DAVID SHERWIN ❧

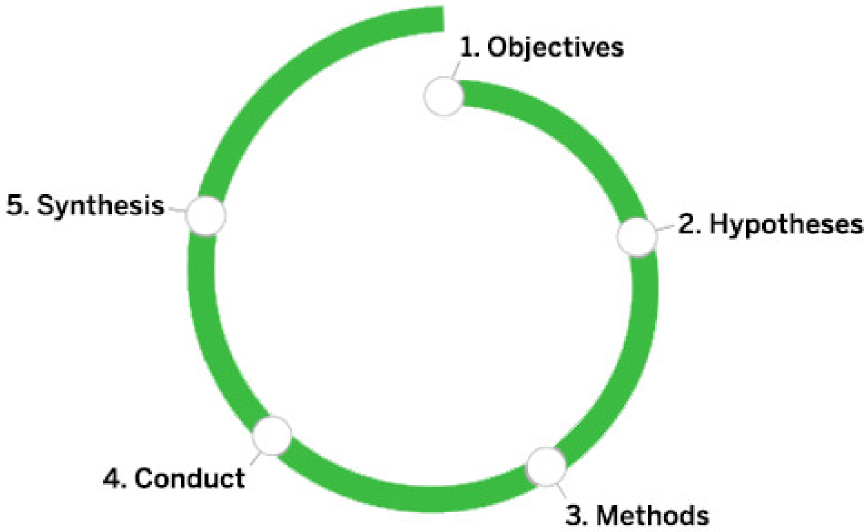
Imagine that this is what you know about me: I am a college-educated male between the ages of 35 and 45. I own a MacBook Pro and an iPhone 5, on which I browse the Internet via the Google Chrome browser. I tweet and blog publicly, where you can discover that I like chocolate and corgis. I'm married. I drive a Toyota Corolla. I have brown hair and brown eyes. My credit-card statement shows where I've booked my most recent hotel reservations and where I like to dine out.

If your financial services client provided you with this data, could you tell them why I've just decided to move my checking and savings accounts from it to a new bank? This scenario might seem implausible when laid out like this, but you've likely been in similar situations as an interactive designer, working with just demographics or website usage metrics.

We can discern plenty of valuable information about a customer from this data, based on *what* they do and *when* they do it. That data, however, doesn't answer the question of *why* they do it, and *how* we can design more effective solutions to their problems through our clients' websites, products and services. We need more context. User research helps to provide that context.

User research helps us to understand how other people live their lives, so that we can respond more effectively to their needs with informed and inspired design solutions. User research also helps us to avoid our own biases, because we frequently have to create design solutions for people who aren't like us.

So, how does one do user research? Let me share with you a process we use at Frog[1] to plan and conduct user research. It's called the "research learning spiral." The spiral was created by Erin Sanders, one of our senior interaction designers and design researchers. It has five distinct steps, which you go through when gathering information from people to fill a gap in your knowledge.



The research learning spiral is a five-step process for conducting user research, originated by Erin Sanders at Frog.

"The spiral is based on a process of learning and need-finding," Sanders says. "It is built to be replicable and can fit into any part of the design process. It is used to help designers answer questions and overcome obstacles

1. http://www.frogdesign.com/

when trying to understand what direction to take when creating or moving a design forward."

The first three steps of the spiral are about formulating and answering questions, so that you know what you need to learn during your research:

1. **Objectives**
   These are the questions we are trying to answer. What do we need to know at this point in the design process? What are the knowledge gaps we need to fill?
2. **Hypotheses**
   These are what we believe we already know. What are our team's assumptions? What do we think we understand about our users, in terms of both their behaviors and our potential solutions to their needs?
3. **Methods**
   These address how we plan to fill the gaps in our knowledge. Based on the time and people available, what methods should we select?

Once you've answered the questions above and factored them into a one-page research plan that you can present to stakeholders[2], you can start gathering the knowledge you need through the selected research methods:

4. **Conduct**
   Gather data through the methods we've selected.

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2. http://www.smashingmagazine.com/2012/01/26/ux-research-plan-stakeholders-love/

5. **Synthesize**
   Answer our research questions, and prove or disprove our hypotheses. Make sense of the data we've gathered to discover what opportunities and implications exist for our design efforts.

You already use this process when interacting with people, whether you are consciously conducting research or not. Imagine meeting a group of 12 clients who you have never worked with. You wonder if any of them has done user research before. You believe that only one or two of them have conducted as much user research as you and your team have. You decide to take a quick poll to get an answer to your question, asking everyone in the room to raise their hand if they've ever conducted user research. Five of them raise their hands. You ask them to share what types of user research they've conducted, jotting down notes on what they've done. You then factor this information into your project plan going forward.

In a matter of a few minutes, you've gone through the spiral to answer a single question. However, when you're planning and conducting user research for an interactive project or product, each step you take through the spiral will require more time and energy, based on the depth and quantity of questions you need to answer. So, let's take an in-depth spin through the research learning spiral. At each step of the spiral, I'll share some of the activities and tools I use to aid my teams in managing the complexity of planning and conducting user research. I'll also include a sample project to illustrate how those tools can support your team's user research efforts.

I like to write my research-framing questions on sticky notes, so that I can better prioritize and cluster them. The most important questions are translated into my research objective and captured in my research plan.

1. Objectives: The Questions We Are Trying To Answer

Imagine that you're in the middle of creating a next-generation program guide for TV viewers in Western Europe. Your team is debating whether to incorporate functionality for tablet and mobile users that would enable them to share brief clips from shows that they're watching to social networks, along with their comments.

"Show clip sharing," as the team calls it, sounds cool, but you aren't exactly sure who this feature is for, or why users would want to use it.

Step back from the wireframing and coding, sit down with your team, and quickly discuss what you already know and understand about the product's goal. To facilitate this discussion, ask your team to generate a series of framing questions to help them identify which gaps in knowledge they need to fill. They would write these questions down on sticky notes, one question per note, to be easily arranged and discussed.

These framing questions would take a "5 Ws and an H" structure, similar to the questions a reporter would need to answer when writing the lede of a newspaper story:

- "Who?" questions help you to determine prospective audiences for your design work, defining their demographics and psychographics and your baseline recruiting criteria.
- "What?" questions clarify what people might be doing, as well as what they're using in your website, application or product.
- "When?" questions help you to determine the points in time when people might use particular products or technologies, as well as daily routines and rhythms of behavior that might need to be explored.
- "Where?" questions help you to determine contexts of use — physical locations where people perform certain tasks or use key technologies — as well as potential destinations on the Internet or devices that a user might want to access.

- “Why?” questions help you to explain the underlying emotional and rational drivers of what a person is doing, and the root reasons for that behavior.
- “How?” questions help you go into detail on what explicit actions or steps people take in order to perform tasks or reach their goals.

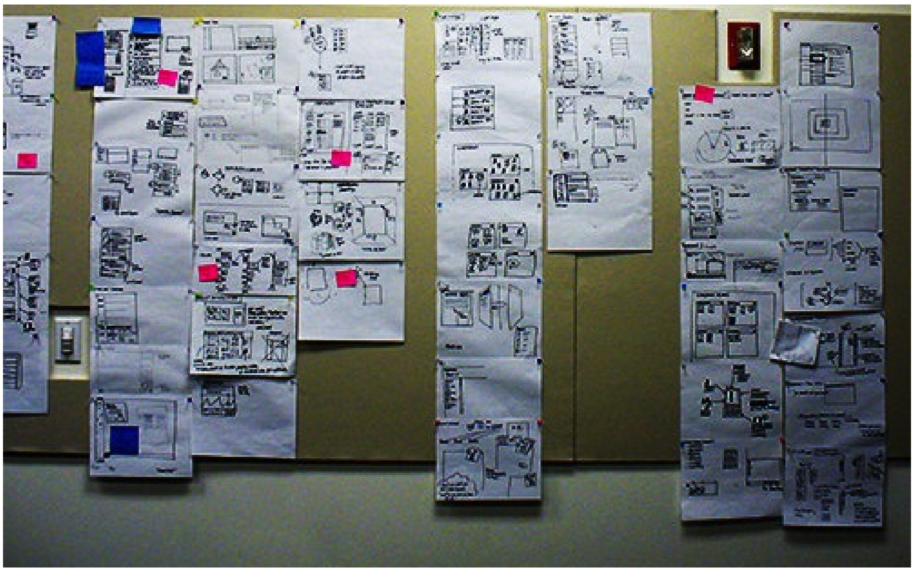
In less than an hour, you and your team can generate a variety of framing questions, such as:

- “Who would share program clips?”
- “How frequently would viewers share clips?”
- “Why would people choose to share clips?”

Debate which questions need to be answered right away and which would be valuable to consider further down the road. “Now is your time to ask the more ‘out there’ questions,” says Lauren Serota, an associate creative director at Frog. “Why are people watching television in the first place? You can always narrow the focus of your questions before you start research… However, the exercise of going lateral and broad is good exercise for your brain and your team.”

When you have a good set of framing questions, you can prioritize and cluster the most important questions, translating them into research objectives. Note that research objectives are not questions. Rather, they are simple statements, such as: “Understand how people in Western Europe who watch at least 20 hours of TV a week choose to share their favorite TV moments.” These research objectives will put up guardrails around your research and appear in your one-page research plan.

Don't overreach in your objectives. The type of questions you want to answer, and how you phrase them as your research objective, will serve as the scope for your team's research efforts. A tightly scoped research objective might focus on a specific set of tasks or goals for the users of a given product ("Determine how infrequent TV viewers in Germany decide which programs to record for later viewing"), while a more open-ended research objective might focus more on user attitudes and behaviors, independent of a particular product ("Discover how French students decide how to spend their free time"). You need to be able to reach that objective in the time frame you have alloted for the research.



In some projects, hypotheses may be expressed as written statements, which would then be taken into account when selecting methods. However, sometimes you'll need to generate hypotheses in the form of design sketches, which would then be pulled into the research planning process and be used as stimuli in your design methods.

2. Hypotheses: What We Believe We Already Know

You've established the objectives of your research, and your head is already swimming with potential design solutions, which your team has discussed. Can't you just go execute those ideas and ship them?

If you feel this way, you're not alone. All designers have early ideas and assumptions about their product. Some clients may have initial hypotheses that they would like "tested" as well.

"Your hypotheses often constitute how you think and feel about the problem you've been asked to solve, and they fuel the early stages of work," says Jon Freach, a design research director at Frog. Don't be afraid to address these hypotheses and, when appropriate, integrate them into your research process to help you prove or disprove their merit. Here's why:

- Externalizing your hypotheses is important to becoming aware of and minimizing the influence of your team's and client's biases.
- Being aware of your hypotheses will help you select the right methods to fulfill your research objective.
- You can use your early hypotheses to help communicate what you've discovered through the research process. ("We believed that [insert hypothesis], but we discovered that [insert finding from research].")

Generating research hypotheses is easy. Take your framing questions from when you formulated the objective and, as a team, spend five to eight minutes individually sketching answers to them, whether by writing out your ideas on sticky notes, sketching designs and so forth. For example, when thinking about the clip-sharing feature for your next-generation TV program guide, your team members would put their heads together and generate hypotheses such as these:

- **Attitude-related hypothesis**
  "TV watchers who use social networks like to hear about their friends' favorite TV shows."
- **Behavior-related hypothesis**
  "TV watchers only want to share clips from shows they watch most frequently."
- **Feature-related hypothesis**
  "TV watchers are more likely to share a highlight from a show if it's popular with other viewers as well."

3. Methods: How We Plan To Fill The Gaps In Our Knowledge

Once you have a defined research objective and a pile of design hypotheses, you're ready to consider which research methods are most appropriate to achieving your objective. Usually, I'll combine methods from more than one of the following categories to achieve my research objective. (People have written whole books about this subject. See the end of this article for further reading on user research methods and processes.)

Methods such as contextual inquiry, whereby you spend time with people where they live and work, help you build a strong foundational understanding of how they live and of potentially unmet needs.

BUILDING A FOUNDATION

Methods in this area could include surveys, observational or contextual interviews, and market and trend explorations. Use these methods when you don't have a good understanding of the people you are designing for, whether they're a niche community or a user segment whose behaviors shift rapidly. If you have unanswered questions about your user base — where they go, what they do and why — then you'll probably have to draw upon methods from this area first.

Methods such as card sorting can help you understand how people organize and prioritize different types of information that's important to them – as well as help you generate new ideas and concepts that could prove critical in your interactive designs.

GENERATING INSPIRATION AND IDEAS

Methods in this area could include diary studies, card sorting, paper prototyping and other participatory design activities. Once I understand my audience's expertise and beliefs well, I'm ready to delve deeper into what content, functionality or products would best meet their needs. This can be done by generating potential design solutions in close collaboration with research participants, as well as by receiving their feedback on early design hypotheses.

Specifically, we can do this by generating or co-creating sketches, collages, rough interface examples, diagrams and other types of stimuli, as well as by sorting and prioritizing information. These activities will help us understand how our audience views the world and what solutions we can create to fit that view (i.e. "mental models"). This helps to answer our "What," "Where," "When" and "How" framing questions. Feedback at this point is not meant to refine any tight design concepts or code prototypes. Instead, it opens up new possibilities.

Methods such as usability testing can help us refine and improve existing design ideas and website or application designs, as well as uncover gaps in knowledge that we may not have considered. While what's shown above is a formal usability testing lab set-up, there are many ways to conduct similar tests[3] with a wide range of tools, both on site and remotely.

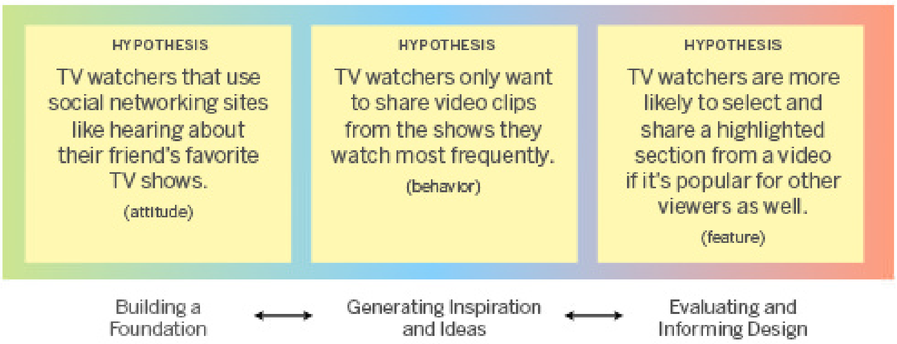
EVALUATING AND INFORMING DESIGN

Methods in this area could include usability testing, heuristic evaluations, cognitive walkthroughs and paper prototyping. Once we've identified the functionality or

3. http://www.smashingmagazine.com/2011/10/20/comprehensive-review-usability-user-experience-testing-tools/

content that's appropriate for a user, how do we present it to them in a manner that's useful and delightful? I use methods in this area to refine design comps, simulations and code prototypes. This helps us to answer questions about how users would want to use a product or to perform a key task. This feedback is critical and, as part of an iterative design process, enables us to refine and advance concepts to better meet user needs.

Let's go back to our hypothetical example, so that you can see how your research objective and hypotheses determine which methods your team will select. Take all of your hypotheses — I like to start with at least 100 hypotheses — and arrange them on a continuum:



I like to write all of my research hypotheses on sticky notes, and cluster them to identify how they may be proved or disproved through different research methods.

On the left, place hypotheses related to who your users are, where they live and work, their goals, their needs and so forth. On the right, place hypotheses that have to do with explicit functionality or design solutions you want to test with users. In the center, place hypotheses related to the types of content or functionality that you think might be relevant to users. This point of this activity is not to create an absolute scale or arrangement of hypotheses that you've created so far. The point is for your team to cluster the hypotheses, finding important themes or affinities that will help you to select particular methods. Serota says:

> *Choosing and refining your methods and approach is a design project within itself. It takes iteration, practice and time. Test things out on your friends and coworkers to see what works and the best way to ask open-ended questions.*

Back to our clip-sharing research effort. When your team looks at all of the hypotheses you've created to date, it will realize that using two research methods would be most valuable. The first method will be a participatory design activity, in which you'll create with users a timeline of where and when they share their favorite TV moments with others. This will give your team foundational knowledge of situations in which clips might be shared, as well as generate opportunities for clip-sharing that you can discuss with users.

The second method will be an evaluative paper-prototyping activity, in which you will present higher-fidelity paper prototypes of ideas on how people can share TV clips. This method will help you address your hypotheses on what solutions make the most sense in sharing situations. (Using two methods is best because mixing and matching hypotheses across different categories within a research session could confuse research participants.)

You can conduct multiple methods when meeting with users. My preference is to conduct at least two different methods, moving from hearing people share stories about their lives to encouraging them to be creative in participatory activities.

4. Conduct: Gather Data Through The Methods We've Selected

The research plan is done, and you have laid out your early hypotheses on the table. Now you get to conduct the appropriate research methods. Your team will recruit eight users to meet with for one hour each over three evenings, which will allow you to speak with people when they're most likely to be watching TV. Develop an interview guide and stimuli, and test draft versions of your activities on coworkers. Then, go into the field to conduct your research.

When you do this, it's essential that you facilitate the research sessions properly, capturing and analyzing the notes, photos, videos and other materials that you collect as you go.

Serota also recommends thinking on your feet: “It’s all right to change course or switch something up in the field. You wouldn’t be learning if you didn’t have to shift at least a little bit.” Ask yourself, “Am I discovering what I need to learn in order to reach my objective? Or am I gathering information that I already know?” If you’re not gaining new knowledge, then one of the following is probably the reason why:

- You’ve already answered your research questions but haven’t taken the time to formulate new questions and hypotheses in order to dig deeper (otherwise, you could stop conducting research and move immediately into synthesis).
- The people who you believed were the target audience are, in fact, not. You’ll need to change the recruitment process (and the demographics or psychographics by which you selected them).
- Your early design hypotheses are a poor fit. So, consider improving them or generating more.
- The methods you’ve selected are not appropriate. So, adapt or change them.
- You are spending all of your time in research sessions with users, rather than balancing research sessions with analysis of what you’ve discovered.

Our research teams prefer to externalize all of the data we've collected throughout the research process. This helps us to find fresh connections and patterns, which often lead to more powerful research findings.

5. Synthesis: Answer Our Research Questions, And Prove Or Disprove Our Hypotheses

Now that you've gathered research data, it's time to capture the knowledge required to answer your research questions and to advance your design goals. "In synthesis, you're trying to find meaning in your data," says Serota. "This is often a messy process — and can mean reading between the lines and not taking a quote or something observed at face value. The *why* behind a piece of data is always more important than the *what*."

The more time you have for synthesis, the more meaning you can extract from the research data. In the synthesis stage, regularly ask yourself and your team the following questions:

- “What am I learning?”
- “Does what I’ve learned change how we should frame the original research objective?”
- “Did we prove or disprove our hypotheses?”
- “Is there a pattern in the data that suggests new design considerations?”
- “What are the implications of what I’m designing?”
- “What outputs are most important for communicating what we’ve discovered?”
- “Do I need to change what design activities I plan to do next?”
- “What gaps in knowledge have I uncovered and might need to research at a later date?”

So, what did your team discover from your research into sharing TV clips? TV watchers do want to share clips from their favorite programs, but they are also just as likely to share clips from programs they *don’t* watch frequently if they find the clips humorous. They do want to share TV clips with friends in their social networks, but they don’t want to continually spam everyone in their Facebook or Twitter feed. They want to target family, close friends or individuals with certain clips that they, the user believes, would find particularly interesting.

Your team should assemble concise, actionable findings and revise its wireframes to reflect the necessary changes, based on the answers you’ve gathered. Now your team will have more confidence in the solution, and when your designs for the feature have been coded, you'll take another spin through the research learning spiral to evaluate whether you got it right.

Further Reading On User-Research Practices And Methods

The spiral makes it clear that user research is not simply about card sorting, paper prototyping, usability studies and contextual interviews, per se. Those are just methods that researchers use to find answers to critical questions — answers that fuel their design efforts. Still, understanding what methods are available to you, and mastering those methods, can take some time. Below are some books and websites that will help you dive deeper into the user-research process and methods as part of your professional practice.

- *Observing the User Experience, Second Edition: A Practitioner's Guide to User Research*[4], Elizabeth Goodman, Mike Kuniavsky and Andrea Moed
  A comprehensive guide to user research. Goes deep into many of the methods mentioned in this article.
- *Universal Methods of Design*[5], Bruce Hanington and Bella Martin
  A comprehensive overview of 100 methods that can be

4. http://www.amazon.com/Observing-User-Experience-Second-Edition/dp/0123848695/
5. http://www.amazon.com/gp/product/1592537561

employed at various points in the user-research and design process.

- *101 Design Methods: A Structured Approach for Driving Innovation in Your Organization*[6], Vijay Kumar
  Places the user research process in the context of product and service innovation.

- Design Library[7], Austin Center for Design (AC4D)
  An in-depth series of PDFs and worksheets that cover processes related to user-research planning, methods and synthesis. ❧

6. http://www.amazon.com/gp/product/1118083466
7. http://library.ac4d.com/

A Closer Look At Personas: What They Are And How They Work

BY SHLOMO GOLTZ ❧

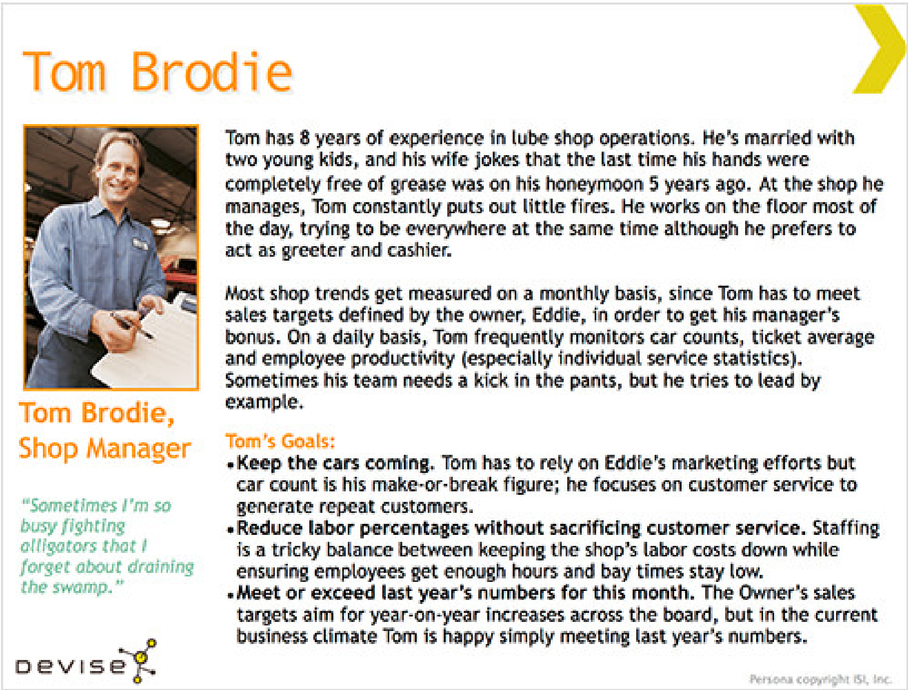
In my experience as an interaction designer, I have come across many strategies and approaches to increase the quality and consistency of my work, but none more effective than the persona. Personas have been in use since the mid-'90s and since then have gained widespread awareness within the design community.

For every designer who uses personas, I have found even more who strongly oppose the technique. I once also viewed personas with disdain, seeing them as a silly distraction from the real work at hand — that is, until I witnessed them being used properly and to their full potential.

Once I understood why personas were valuable and how they could be put into action, I started using them in my own work, and then something interesting happened: My process became more efficient and fun, while the fruits of my labor became more impactful and useful to others. Never before had I seen such a boost in clarity, productivity and success in my own work. Personas will supercharge your work, too, and help you take your designs to the next level.

I hope that those who are unfamiliar with personas will read this series of articles, divided into two parts, and give them a try and that those who are opposed to their use will reconsider their position. Where the use of personas has generated uncertainty and even controversy, I have leaned in with curiosity and a critical eye, questioning the tenants of my discipline to determine what works for me — and I'm all the better for it. Perhaps what I've learned will help others in their journey to hone their work as well.

What Is A Persona?



A persona document should clearly communicate and summarize research data. (Image: Elizabeth Bacon[8]) (View large version[9])

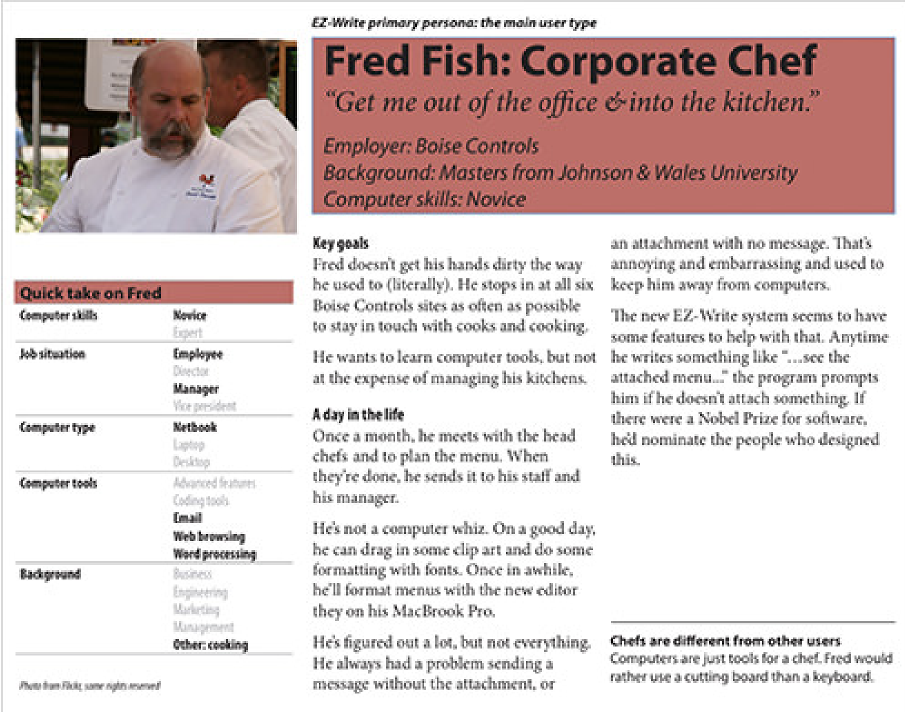
8. http://www.slideshare.net/ebacon/death-to-personas-long-live-personas-presentation
9. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/01-devise-opt.jpg

A persona is a way to model, summarize and communicate research about people who have been observed or researched in some way. A persona is depicted as a specific person but is not a real individual; rather, it is synthesized from observations of many people. Each persona represents a significant portion of people in the real world and enables the designer to focus on a manageable and memorable cast of characters, instead of focusing on thousands of individuals. Personas aid designers to create different designs for different kinds of people and to design for a specific somebody, rather than a generic everybody.

What Does A Persona Look Like?

While a persona is usually presented as a one-pager document, it is more than just a deliverable — it is a way to communicate and summarize research trends and patterns to others. This fundamental understanding of users is what's important, not the document itself.

I emphasize this distinction because many people think of a persona and the document that captures essential elements of the persona as the same thing — they are not. It is all too easy for novice practitioners of goal-directed design to fixate on the "best way" to make a persona document and to lose sight of the bigger picture, which is to fully understand a user and then simply share the top-level information with others.



The main elements presented here are the key goals and the "Day in the Life," which are common to all well-made persona documents. Other elements, such as the "Quick Take on Fred" are included because of team and/or project requirements. Each project will dictate a certain approach to producing persona documents. (Image: Interaction Design[10])
(View large version[11])

For designers looking for a jump start on creating persona documents, I highly recommend the persona poster template[12] by Creative Companion. This poster organizes and formats all of the important information that a designer would need to create an amazing one-page deliverable.

10. http://www.user.com
11. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/02-cook-opt.jpg
12. http://creativecompanion.wordpress.com/2011/05/05/the-persona-core-poster/

Where Does The Concept Of Personas Come From?

Understanding the historical context and what personas meant to their progenitor will help us understand what personas can mean to us designers. Personas were informally developed by Alan Cooper[13] in the early '80s as a way to empathize with and internalize the mindset of people who would eventually use the software he was designing.

Alan Cooper interviewed several people among the intended audience of a project he was working on and got to know them so well that he pretended to be them as a way of brainstorming and evaluating ideas from their perspective. This method-acting technique allowed Cooper to put users front and center in the design process as he created software. As Cooper moved from creating software himself to consulting, he quickly discovered that, to be successful, he needed a way to help clients see the world from his perspective, which was informed directly by a sample set of intended users.

This need to inform and persuade clients led him to formalize personas into a concrete deliverable that communicates one's user-centered knowledge to those who did not do the research themselves. The process of developing personas and the way in which they are used today have evolved since then, but the premise remains the same: Deeply understanding users is fundamental to creating exceptional software.

13. http://www.cooper.com/journal/2008/05/the_origin_of_personas

Personas are an essential part of goal-directed design. Each group of users researched is represented by a persona, which in turn is represented by a document. Several personas are not uncommon in a typical project. (Image: Gemma MacNaught[14]) (View large version[15])

How Do Personas Fit In The Design Process?

Since its humble origin, Alan Cooper's design methodology has evolved into a subset of user-centered design, which he has branded goal-directed design[16]. Goal-directed design combines new and old methodologies from ethnography, market research and strategic planning,

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14. http://www.slideshare.net/GemmaMacNaught/gemma-macnaught-simplifying-personas-final-2
15. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/03-persona-pile-opt.jpg
16. http://www.dubberly.com/articles/alan-cooper-and-the-goal-directed-design-process.html

among other fields, in a way to simultaneously address business needs, technological requirements (and limitations) and user goals. Personas are a core component of goal-directed design. I have found that understanding the fundamentals of this goal-directed approach to design first will help the designer understand and properly use personas.

In the summer of 2011, I was fortunate enough to become an intern at *Cooper*, which is where I learned (among other things) how to use personas. At Cooper, I found that, while personas are easy to understand conceptually, mastering their use with finesse and precision would take me many months. There, I witnessed everyone on the team (and even the clients) referring to personas by name in almost every discussion, critique and work session we had. Personas weren't just created and then forgotten — they were living, breathing characters that permeated all that we did.

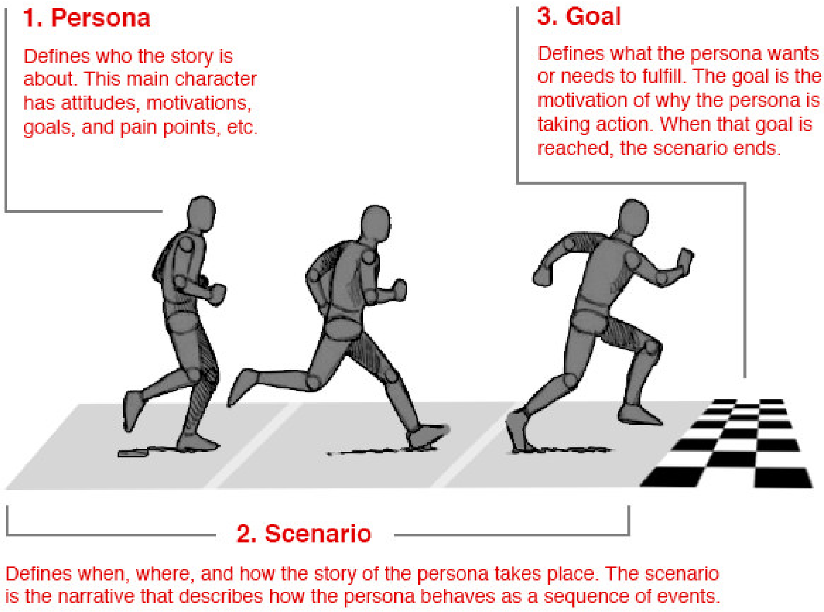
I learned that personas are an essential part of what constitutes the goal-directed process. I learned that personas, though important, are never used in isolation, but rather are implemented in conjunction with other processes, concepts and methods that support and augment their use.

COMPONENTS OF GOAL-DIRECTED DESIGN THAT SUPPORT PERSONAS

- **End goal(s)**
  This is an objective that a persona wants or needs to fulfill by using software. The software would aid the per-

sona to accomplish their end goal(s) by enabling them to accomplish their tasks via certain features.

- **Scenario(s)**
  This is a narrative that describes how a persona would interact with software in a particular context to achieve their end goal(s). Scenarios are written from the persona's perspective, at a high level, and articulate use cases that will likely happen in the future.



The three parts of goal-directed design are most effective when used together. For instance, in order for a sprinter to reach their potential, they need a place to run and a finish line to cross. Without a scenario or end goal, the sprinter would have nothing to do or strive for.
(View large version[17])

17. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/04-running-persona-opt.jpg

Personas, end goals and scenarios relate to one another in the same way that the main character in a novel or movie goes on a journey to accomplish an objective. The classic “hero’s journey” narrative device and its accompanying constructs have been appropriated for the purpose of designing better software.

How Are Personas Created?

Personas can be created in a myriad of ways, but designers are recommended to follow this general formula:

1. Interview and/or observe an adequate number of people.
2. Find patterns in the interviewees’ responses and actions, and use those to group similar people together.
3. Create archetypical models of those groups, based on the patterns found.
4. Drawing from that understanding of users and the model of that understanding, create user-centered designs.
5. Share those models with other team members and stakeholders.

Step-by-step instructions on how to create a persona is beyond the scope of this article, but we’ll cover this in the second article in this series.

What Are Personas Used For?

Personas can and should be used throughout the creative process, and they can be used by all members of the software development and design team and even by the entire company. Here are some of the uses they can be put to:

- **Build empathy**
  When a designer creates a persona, they are crafting the lens through which they will see the world. With those glasses on, it is possible to gain a perspective similar to the user's. From this vantage point, when a designer makes a decision, they do so having internalized the persona's goals, needs and wants.

- **Develop focus**
  Personas help us to define who the software is being created for and who not to focus on. Having a clear target is important. For projects with more than one user type, a list of personas will help you to prioritize which users are more important than others. Simply defining who your users are makes it more apparent that you can't design for everyone, or at least not for everyone at once — or else you risk designing for no one. This will help you to avoid the "elastic user," which is one body that morphs as the designer's perspective changes.

- **Communicate and form consensus**
  More often than not, designers work on multidisciplinary teams with people with vastly different expertise, knowledge, experience and perspectives. As a deliverable, the

personas document helps to communicate research findings to people who were not able to be a part of the interviews with users. Establishing a medium for shared knowledge brings all members of a team on the same page. When all members share the same understanding of their users, then building consensus on important issues becomes that much easier as well.

- **Make and defend decisions**
  Just as personas help to prioritize who to design for, they also help to determine what to design for them. When you see the world from your user's perspective, then determining what is useful and what is an edge case becomes a lot easier. When a design choice is brought into question, defending it based on real data and research on users (as represented by a persona) is the best way to show others the logical and user-focused reasoning behind the decision.

- **Measure effectiveness**
  Personas can be stand-in proxies for users when the budget or time does not allow for an iterative process. Various implementations of a design can be "tested" by pairing a persona with a scenario, similar to how we test designs with real users. If someone who is play-acting a persona cannot figure out how to use a feature or gets frustrated, then the users they represent will probably have a difficult time as well.

Are Personas Effective?

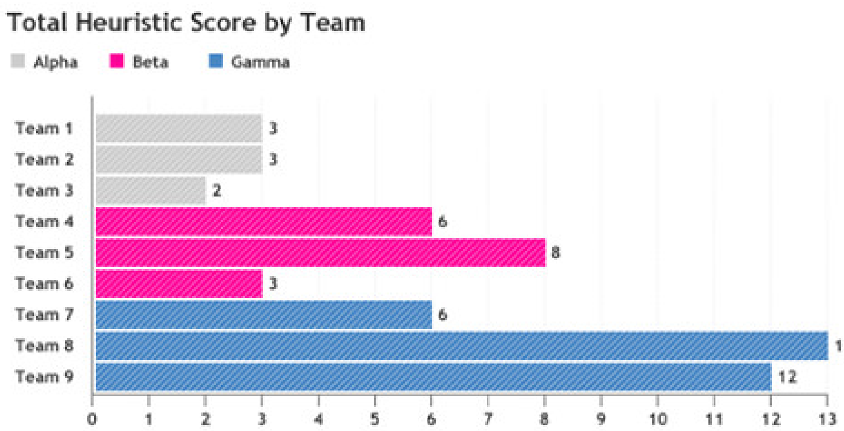
If you still aren't convinced that personas are useful, you are not alone. Many prominent and outspoken members of the design community, including Steve Portigal and Jason Fried, feel that personas are not to be used. They make compelling arguments, but they all rule out the use of personas entirely, which I feel is much too strong. (A nuanced analysis of their anti-persona perspectives is beyond the scope of this article but is definitely worth further reading. Links to writings about these perspectives can be found in the "Additional Resources" section at the end of this article.)

Like any other tool in the designer's belt, personas are extremely powerful in the right time and place, while other times are simply not warranted; the trick is knowing when to use which tool and then using it effectively.

Any tool can be used for good or evil, and personas are no different. If used improperly, as when personas are not based on research (with the exception of provisional personas, which are based on anecdotal, secondhand information or which are used as a precursor or supplement to firsthand research), or if made up of fluffy information that is not pertinent to the design problem at hand, or if based solely on market research (as opposed to ethnographic research), then personas will impart an inaccurate understanding of users and provide a false sense of security in the user-centered design process.

As far as I can tell, only two scientifically rigorous academic studies on the effectiveness of personas have been conducted: the first by Christopher N. Chapman in 2008, and the second by Frank Long in 2009. Though small, both concluded that using personas as part of the design process aided in producing higher-quality and more successful designs.

These studies join a growing body of peer-reviewed work that supports the use of personas, including studies by Kim Goodwin, Jeff Patton, David Hussman and even Donald Norman. The anecdotal evidence from these and many other writers has shown how personas can have a profoundly positive impact on the design process.



An excerpt from Frank Long's study of the effectiveness of personas. Designs created by students who used personas and scenarios (pink and blue) scored higher than the designs of those who used neither (gray) in a type of usability test called a heuristic analysis.

How And Why Do Personas Work?

Personas are effective because they leverage and stimulate several innate human abilities:

- **Narrative practice**
  This is the ability to create, share and hear stories.

- **Long-term memory**
  This is the ability to acquire and maintain memories of the past (wisdom) from our own life experiences, which can be brought to bear on problems that other people face.

- **Concrete thinking**
  This is the tendency for people to better relate to and remember tangible examples, rather than abstractions.

- **Theory of mind (folk psychology)**
  This is the ability to predict another person's behavior by understanding their mental state.

- **Empathy**
  This is the ability to understand, relate to and even share the feelings of other specific people.

- **Experience-taking**
  This is the ability to have the "emotions, thoughts, beliefs and internal responses" of a fictional character when reading or watching a story.

Personas, goals and scenarios tap into our humanity because they anthropomorphize research findings. When hundreds or even thousands of users are represented by a persona, imagining what they would do is a lot easier than pouring over cold, hard, abstract data. By using personas, goals and personas together in what Cooper calls a "harmonious whole," one is able to work in a more mindful way, keeping the user at the heart of everything one does.

If a designer truly understands and internalizes the user and their needs and how they could potentially fulfill those needs, then seeing potential solutions in the mind's eye becomes much easier; rich and vivid ideas from the user's perspective seem to percolate to the top of mind more rapidly and frequently. These ideas are more likely to turn into a successful design than by using other methods because the designer has adopted the user's filter or frame as their own.

This potent combination of personas, goals and scenarios help the designer to avoid thinking in the abstract and to focus on how software could be used in an idealized yet more concrete and humanistic future.

Do I Really Need To Use Personas?

To determine whether personas would be appropriate, a designer must first step back and determine who they are designing for. Determining the audience for a design is deceptively simple, yet many people never think to take the time to explicitly figure this out.

The fundamental premise of user-centered design is that as knowledge of the user increases, so too does the likelihood of creating an effective design for them. If a designer designs for themselves, then they wouldn't need to use personas because they are the user — they would simply create what they need or want.

Designers do design for themselves from time to time, but professionally most design for others. If they are doing it for others, then they could be designing for only two possible kinds of people: those who are like them and those who are not like them. If they are designing for people like them, then they could probably get away without personas, although personas might help. Usually, though, designers design for people unlike themselves, in which case getting to know as much as possible about the users by using personas is recommended.

> *Treat different people differently. Anything else is a compromise.*
> *– Seth Godin*

Personas help to prevent self-referential thinking, whereby a designer designs as if they are making the software only for themselves, when in fact the audience is quite unlike them. This is how most designers actually work: according to what they like or think is the right way to do things. Even a seasoned designer can go only so far on intuition. This is one of the biggest mistakes one can make when designing software (or anything else, for that matter).

Conclusion

As human beings, designers are all biased and can only see the world through their own eyes — however, they can keep that in mind when designing from now on. Designers must strive to the best of their ability to keep their biases and, dare I say, egos in check.

Designers don't always know what is best — but sometimes users do and that is what personas are for: to stand up and represent real users, since real users can't be there when the design process takes place. In your next project, there will come a time when you must decide what is in your user's best interest. Just like in the movies, picture a devil and angel on your shoulders, where the devil tries to coax you to design something that pleases only your own sensibilities, and the angel is the persona who cries out in defence of their own needs. Who will you listen to?

Granted, not even the most disciplined user-centered and goal-directed designer can be completely unbiased. As professionals, we all use our best judgment to make decisions (based on knowledge of the field, knowledge of competitive markets and work experience), but some people's perspective is more self-centered than others. Personas help to keep a designer honest and to become mindful of when they are truly designing for others and when they are just designing for themselves. If you are going to design for someone unlike yourself, then do your users a solid and use a persona.

We'll discuss the process of creating personas from ethnographic research in part 2 of this series.

Additional Resources

PRESENTATIONS AND POSTERS

- "Presentation Deck: Personas Demystified[18]," Shlomo Goltz
Kick off a persona-creation project with your team.

18. http://www.slideshare.net/TheConartist/what-are-personas-and-how-to-use-them-a-presentation-by-shlomo-goltz

- "Presentation Deck: Provisional Persona Workshop[19]," Shlomo Goltz
  Create provisional personas with stakeholders.
- "Persona Poster Template[20]," Creative Companion
  A great way to get a jumpstart on creating a persona one-pager.

BOOKS

- *The Inmates Are Running the Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity*[21], Alan Cooper
- *About Face 3: The Essentials of Interaction Design*[22], Alan Cooper
- *Designing for the Digital Age: How to Create Human-Centered Products and Services*[23], Kim Goodwin
- *The Essential Persona Lifecycle: Your Guide to Building and Using Personas*[24], Tamara Adlin and John Pruitt
- *The User Is Always Right: A Practical Guide to Creating and Using Personas for the Web*[25], Steve Mulder

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19. http://www.slideshare.net/TheConartist/provisional-persona-workshop-10
20. http://creativecompanion.wordpress.com/2011/05/05/the-persona-core-poster/
21. http://www.amazon.com/Inmates-Are-Running-Asylum-Products/dp/0672326140/
22. http://www.amazon.com/About-Face-Essentials-Interaction-Design/dp/0470084111/
23. http://www.amazon.com/Designing-Digital-Age-Human-Centered-Products/dp/0470229101/
24. http://www.amazon.com/Essential-Persona-Lifecycle-Building-Personas/dp/0123814189/
25. http://www.amazon.com/User-Always-Right-Practical-Creating/dp/0321434536/

GOAL-DIRECTED DESIGN

- "Goal-Directed Design: An Interview With Kim Goodwin[26]," Christine Perfetti, User Interface Engineering
- "Designing With Scenarios: Putting Personas to Work[27]" (PDF slidedeck), Kim Goodwin

DEFINING PERSONAS

- "Perfecting Your Personas[28]," Kim Goodwin, Cooper Journal
- "Getting From Research to Personas: Harnessing the Power of Data[29]," Kim Goodwin, Cooper Journal
- "7 Core Ideas About Personas And The User Experience[30]," Jeff Sauro, Measuring Usability
- "Explaining Personas Used in UX Design," Part 1[31], Part 2[32], Ben Melbourne
- *Personas*[33] (white paper), W5

26. http://www.uie.com/articles/goal_directed_design/
27. http://rtsnance.com/ui15/pdfs/day-one/goodwin-wksp.pdf
28. http://www.cooper.com/journal/2008/05/perfecting_your_personas
29. http://www.cooper.com/journal/2008/05/getting_from_research_to_perso
30. https://www.measuringusability.com/blog/personas-ux.php
31. http://asinthecity.com/2011/05/13/explaining-personas-used-in-ux-design-%E2%80%93-part-1/
32. http://asinthecity.com/2011/05/13/explaining-personas-used-in-ux-design-%E2%80%93-part-2/
33. http://www.greenbook.org/marketing-research/w5-on-personas-06410

- "The Power of Personas[34]," Charles B. Kreitzberg and Ambrose Little, MSDN Magazine
- "Personas: Putting the Focus Back on the User[35]," James Costa, UX Booth
- "The Origin of Personas[36]," Alan Cooper, Cooper Journal
- "Death to Personas! Long Live Personas![37]" (slidedeck) Elizabeth Bacon and Steve Calde, Catalyze
- "Personas[38]," Lene Nielsen, Interaction Design Foundation

HOW AND WHY PERSONAS WORK

- "The Narrative Practice Hypothesis: Clarifications and Implications[39]," Daniel D. Hutto, Academia.edu
- "Ad-Hoc Personas and Empathetic Focus[40]," Donald Norman
- "Personas and the Advantage of Designing for Yourself[41]," Joshua Porter

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34. http://msdn.microsoft.com/en-us/magazine/dd569755.aspx
35. http://www.uxbooth.com/articles/personas-putting-the-focus-back-on-the-user/
36. http://www.cooper.com/journal/2008/05/the_origin_of_personas
37. http://www.slideshare.net/ebacon/death-to-personas-long-live-personas-presentation?type=powerpoint
38. http://www.interaction-design.org/encyclopedia/personas.html
39. http://www.academia.edu/217619/The_Narrative_Practice_Hypothesis_Clarifications_and_Implications
40. http://www.jnd.org/dn.mss/adhoc_personas_em.html
41. http://bokardo.com/archives/personas-and-the-advantage-of-designing-for-yourself/

- "Personas: Practice and Theory[42]" (PDF), John Pruitt and Jonathan Grudin, Microsoft
- *The Persona Lifecycle: Keeping People in Mind Throughout Product Design*[43], John Pruitt and Tamara Adlin
- "Losing Yourself in a Fictional Character Can Affect Your Real Life[44]," Jeff Grabmeier, Ohio State University

EFFECTIVENESS OF PERSONAS

- "Real or Imaginary: The Effectiveness of Using Personas in Product Design[45]," Frank Long, Frontend
- "The Personas' New Clothes: Methodological and Practical Arguments Against a Popular Method[46]" (PDF), Christopher N. Chapman and Russell P. Milham, Microsoft
- "Putting Personas Under the Microscope[47]," Suzy Thompson, Cooper Journal

42. http://research.microsoft.com/en-us/um/redmond/groups/coet/grudin/personas/old versions/pruitt-grudinold.pdf
43. http://www.amazon.com/Persona-Lifecycle-Throughout-Interactive-Technologies-ebook/dp/B006OM89KQ/
44. http://researchnews.osu.edu/archive/exptaking.htm
45. http://www.frontend.com/the-effectiveness-of-using-personas-in-product-design.html
46. http://cnchapman.files.wordpress.com/2007/03/chapman-milham-personas-hfes2006-0139-0330.pdf
47. http://www.cooper.com/journal/2009/06/measuring_the_effectiveness_of

- "Quantitative Evaluation of Personas as Information[48]" (PDF), Christopher N. Chapman ❧

48. http://www.userphilosophy.com/wp-content/uploads/2009/02/reprint-hfes08-chapman-love-milham-elrif-alford.pdf

A Closer Look At Personas: A Guide To Developing The Right Ones

BY SHLOMO GOLTZ ❧

How can designers create experiences that are custom tailored to people who are unlike themselves? As explained in part 1 of this series, an effective way to gain knowledge of, build empathy for and sharpen focus on users is to use a persona. This final part of the series will explain an effective method of creating a persona.

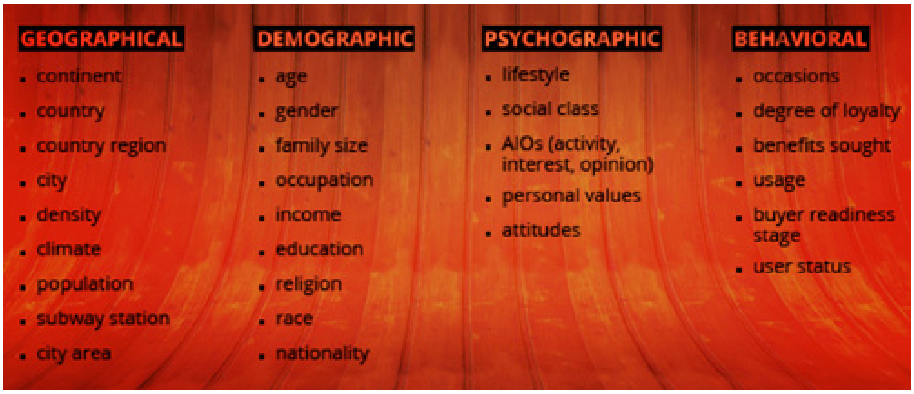
There are myriad ways to integrate user-centered thinking into the creative process of UX design, and personas are one of the most effective ways to empathize with and analyze users. There is no one right way to develop a persona, but the method I will share here is based on processes developed, field-tested and refined over the years at the interaction design agency Cooper[49]. This process follows a logical order that begins with knowing nothing (or very little) about users and ends with a refined and nuanced perspective of users that can be shared with others.

1. *Identify Your Users*

Before you can learn from people, you need to decide whom to learn from. You could create a screener based on

49. http://www.cooper.com/

demographics and psychographics to determine who to observe and talk to and who not to.



There are many ways to filter out people and focus on those who are relevant to a project. A combination of factors usually determines the criteria of a screener. (Image: Steamfeed[50]) (View large version[51])

Traditional research on market segmentation is a good place to start. If a user base is already established, then you might have a source of data on demographics; if there is no such source, then you could send out surveys to current users to obtain more information. If you have no user base (which will be the case if your company is new), then find out more about the users of your competitors or of similar companies or products.

2. Decide What To Ask

The most common way to learn from users is to interview and/or observe them. An interview script or research

50. http://www.steamfeed.com
51. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/08/01-segmentation-opt.jpg

protocol will ensure that you obtain the same information from all research subjects, so that the data set is homogeneous. The process of developing a script or protocol forces you to think about what you will need to learn from research participants. Interviews and observation aren't just about acquiring raw data, but about gaining a thorough understanding of participants and their perspectives.

Learning everything about participants is impossible within the limited time available for interviews and observation, so try to ask the most advantageous questions and observe the most relevant behavior. To determine what information is most needed, think of your knowledge gaps, which details would best inform your design decisions, what your team members are curious about, and what would give the team a common frame of reference regarding the participants' needs and goals.

The questions and areas of observation need not be exhaustive at this stage, because the goal is to gain a fundamental understanding of users, from which the team can extrapolate in future and answer new questions on their own. By thoroughly understanding users, team members should be able to put on the persona's shoes and walk in uncharted territory. Users won't have a seat at the table during the product's development, but a persona created from the right kind of information is the best proxy. By capturing the essence of their perspectives from asking the right questions, you will be able to create a persona that brings their voice into the conversation.

The exact questions you ask will vary according to the project's goals, the types of people being interviewed or observed, and the time constraints. No matter what you ask, though, keep the following in mind:

- Ask primarily open-ended questions.
- Ask participants to show more than tell.
- When possible, ask for specific stories, especially about anything you cannot observe.

Ask roughly the same questions of all research participants. A script will help with consistency. (Image: Sam Sweitz[52])

Don't be afraid to ask seemingly naïve questions either because you'll want to find out as much as possible. (Naïve questions are never stupid; they show an eagerness to learn, and they establish a non-authoritative tone

52. http://www.samsweitz.com/research/

in the interview, which is great for building rapport with participants.) Following these guidelines will result in a rich set of answers and a firm foundation on which to build a persona.

You could create your own interview script from the following template, which I have used in many enterprise software design projects. I have found it quite useful as a jumping-off point in new projects.

OVERVIEW

- Give us a little background on your job.
- How and why did you take on this job?
- How long have you been working in this capacity?
- Why do you work for this company and not another?
- Tell me a bit about your industry and your role in it.

DOMAIN KNOWLEDGE

- What skills are required to do your job?
- How do you stay up to date and get information on your industry and profession?

GOALS

- What are your responsibilities in your job?
- How do you define progress or success in your job?

- How do you measure progress or success?

ATTITUDES AND MOTIVATIONS

- What are the most enjoyable parts of your job?
- What do you value most?
- Do you have any external (i.e. extrinsic) or internal (i.e. intrinsic) motivations for doing a good job (such as rewards, promotions, perks)?

PROCESSES

- Describe a typical workday. What do you do when you first get into the office? What do you do next?
- How do you do [a certain task]?
    - How long does this task typically take?
    - Where would you start?
    - What would you do next?
    - Can you show me how you do that?
- What activities take up most of your time?
- What activities are most important to your success?
- Of the things you do during a typical workday, are any of those processes or tasks mandated by your company or industry?

- What processes have you developed on your own?
- Have you learned to work better from your colleagues?

ENVIRONMENT

- How is your office organized to help you accomplish your tasks or goals?
- Show me how you use your office to accomplish your tasks or goals?

PAIN POINTS

- What are the most difficult, challenging, annoying or frustrating aspects of your job?
- After a typical workday, what about your job (if anything) is still on your mind? (In other words, what issues keep you up at night?)

TOOLS AND TECHNOLOGY

- What traditional (i.e. analogue) tools do you use to accomplish tasks in your job?
- What digital tools do you use to accomplish tasks in your job?
- Where do any of your tools fall short? (What do you need them to do that they don't do or don't do well?)

MENTAL MODELS

- What kinds of people do well in your position? Why?
- Describe a process and how it has changed or not changed over time.

RELATIONSHIPS AND ORGANIZATIONAL STRUCTURE

- Besides clients and customers, who else do you interact with in your work?
- Who do you report to?
- Who reports to you?
- How often do you collaborate with others?
- How do you collaborate?

PROJECTING INTO THE FUTURE

- If we came back in [x number of] years to have this conversation again, what would be different?
- If you could build your ideal experience, what would it be?

WRAPPING UP

- Have we missed anything?
- Is there anything you want to tell us?

- Is there anything you want to ask us?

3. Get Access To Users

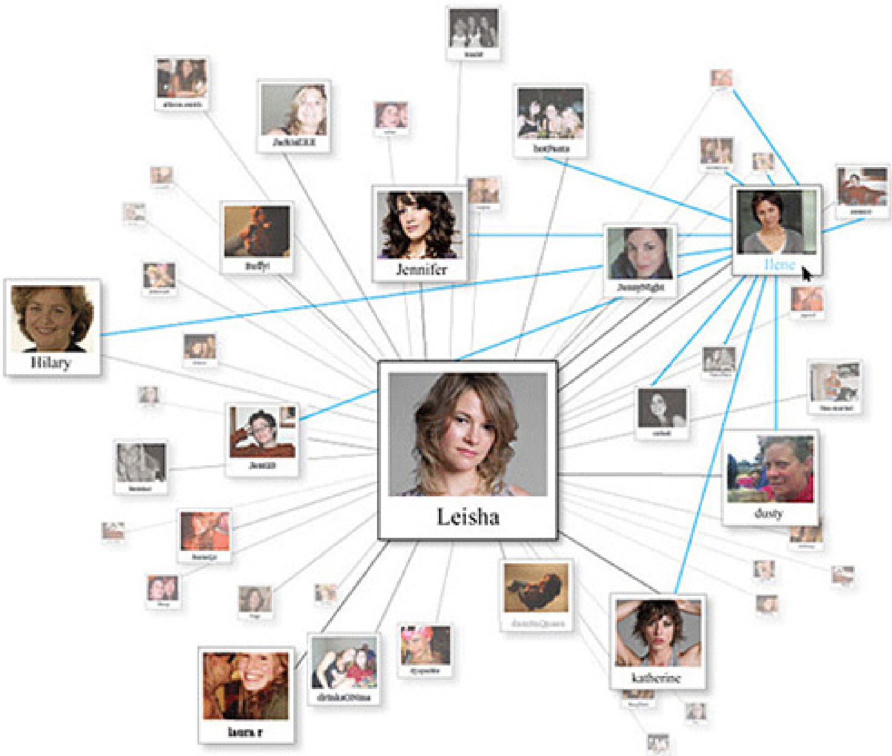
This step will largely determine how effective your personas are. Finding an adequate number of people will determine whether your personas are an accurate and useful representation of the research participants. Experts recommend finding anywhere from just 5 to around 30 participants per role. The exact number isn't important, as long as trends and patterns emerge. These number might seem too small to be of any reliable use, but the data set isn't intended for statistical analysis, but rather for qualitative analysis that will inform the design process.

Trends are often observable from just five people. Build on that to gain a deeper understanding. The number of participants does not matter as much as whether you gain new information from interviews and observation. The law of diminishing returns applies here; at a certain point, new interviews or further observation will elicit little to no new information because all relevant patterns have been unearthed and the researcher has reached a level of understanding known to ethnographers as "verstehen[53]." At this point, no more research is needed.

The benefit of observation in addition to interviews is that a relatively small number of participants is needed for it. If you can't find enough people on your own or

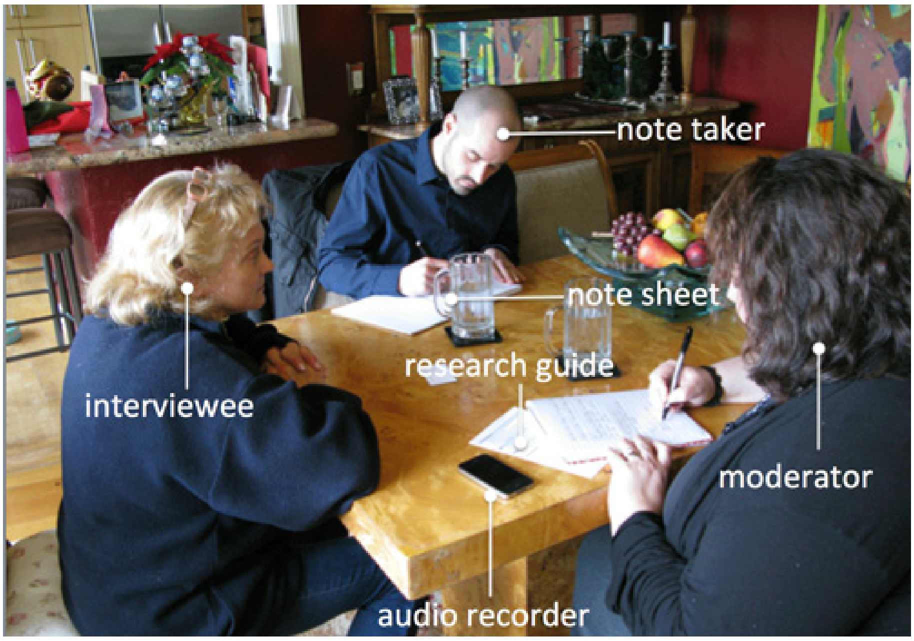
53. http://copernicusconsulting.net/the-essence-of-qualitative-research-verstehen/

with help from people you know, then consider a recruiting agency.



4. *Gain An Understanding Of Users*

The majority of the process of creating personas is usually spent interviewing and observing people. Collaborate with another team member so that they capture anything in the interview or observation session that you might miss. You and your colleague should be physically present with the research participants, in a location that makes the most sense for the project. In a suitable location, participants tend to provide more detailed and accurate information and are less likely to behave unnaturally.



Observing and interviewing in person and in a location relevant to the project will yield the most useful data. Also, capturing information in multiple ways, such as by taking notes and recording audio, will ensure accuracy. (Image: Interactions[54])

Direct, unfiltered interaction with participants is critical at this stage in order to gain empathy with the people you will be designing for. Being there in person is not always feasible, but try to do it whenever possible. If you can't do that, then consider the next best thing: interviewing people who *have* had direct interaction with users. Personas created from secondhand information are called provisional personas[55]. The perspectives will be secondhand, filtered and biased, but they're better than nothing and you'll have somewhere to start your research.

54. http://interactions.acm.org/blog/view/designers-toolkit-a-primer-on-capturing-research
55. http://www.slideshare.net/TheConartist/provisional-persona-workshop-10

Empathy is important to understanding users holistically, and direct interaction is the only way to inform the heart as well as the mind. I'm not one to get touchy-feely for its own sake, but when you are able to empathize with users firsthand, then you're better able to tap into their intuition and act on inklings that you otherwise would not have. Firsthand exposure is paramount.

5. *Analyze The Data*

The analysis stage is the most complicated because you must compare multiple variables of behavior and attitudes among many research participants. It requires some practice, and it gets much easier with experience. To find out more in depth, look at the descriptions in the Fluid project[56], or consider reading *Designing for the Digital Age*[57].

After learning about research participants directly or indirectly, you will need to make sense of it all by finding patterns in the data. In short, for each group of participants with the same role (for example, a group of doctors), you would rank each participant against a number of attributes of behavior and attitude, determining which participants have similar attribute rankings in order to discover common traits among them. Each group of similar participants would then serve as the source of a persona.

56. http://wiki.fluidproject.org/display/fluid/Persona+Creation
57. http://www.amazon.com/Designing-Digital-Age-Human-Centered-Products/dp/0470229101

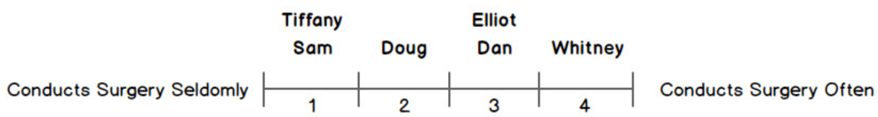
Personas are not just "roles," although they might seem to be at first. Roles are great for segmenting and grouping similar users together for analysis, but roles are not personas. Roles are defined largely by the tasks people perform, rather than by how they perform those tasks or how they feel about accomplishing the tasks. Usually, two or more personas are required to represent the range of behavior within a role.

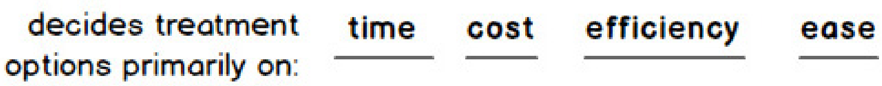
For instance, if you are designing medical software to be used by doctors, nurses, technicians and patients, then you would want to interview people in all four roles; however, when analyzing their responses, you would compare doctors to doctors, not doctors to technicians. Their roles might overlap somewhat, but don't muddy the water by combining data from multiple roles. Compare participants with the same role; otherwise, large differences will obscure smaller differences between participants.

You can represent most of the observed behaviors and attitudes as a spectrum (for example, from low to high or sad to happy). Each spectrum should be discrete and divided into four levels.

In this sample spectrum, low and negative attributes are on the left, and high and positive attributes are on the right.

On each spectrum, participants can be given a score of 1, 2, 3 or 4 (similar to the Likert scale[58]). The even number prevents a neutral score (for example, a score of 3 out of 5 would provide little value in creating a persona). Some variables are difficult or impossible to represent on a spectrum; in this case, don't force it, and instead express the variable as a multiple-choice question.

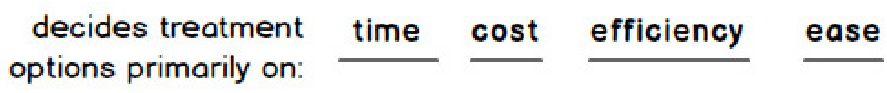




To determine how many spectra to analyze, go over the responses to the interview questions and note any distinct behavior or differences in attitude. Fewer than 5 spectra is usually too few, and over 20 is too many, so aim for somewhere in between. If you have trouble deciding which spectra to use, look back at the categories of questions in the interview script shown earlier, and determine which categories most effectively group and differentiate research participants. Motivations and goals, frequency and duration of tasks, and attitudes towards tasks are good places to start.

After you've listed 5 to 20 variables for a role, place each research participant on each spectrum, as shown on the next page.

58. http://en.wikipedia.org/wiki/Likert_scale

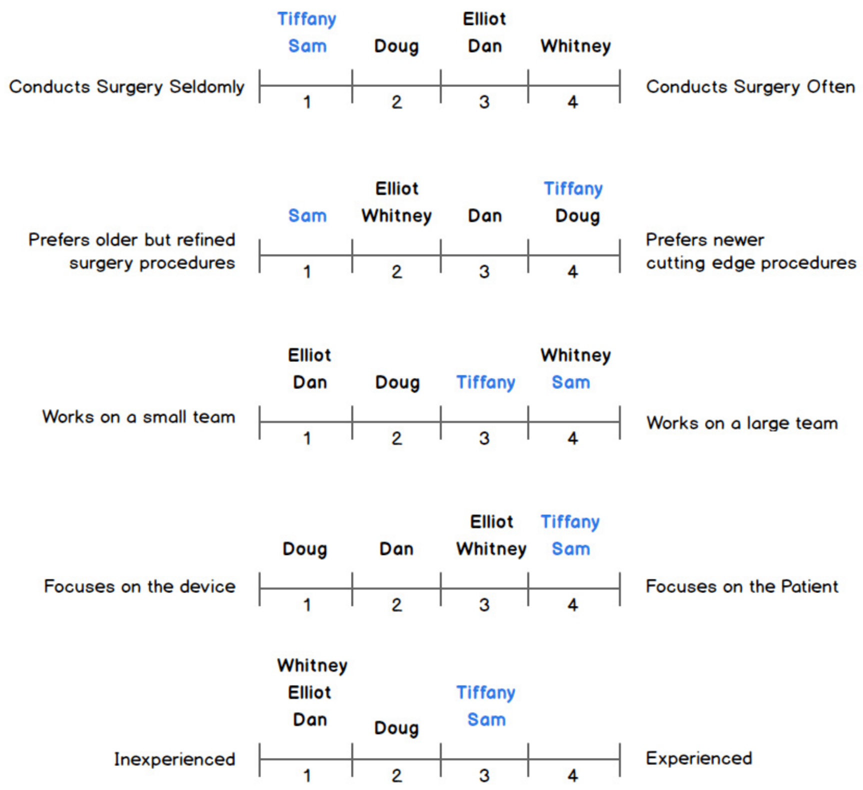


When placing each participant on a spectrum, keep in mind that the data is all relative at this point. The fact that Whitney does more surgeries than Doug, who does fewer than Elliot, is more important than who is a 2 rather than a 3 or 4 on the scale.

Once you've mapped all research participants on the spectra, it is time to identify patterns. This part might seem overwhelming, especially if you have researched many people. Start small by finding two people who tend to have the same scores on various spectra. This pattern analysis is similar to that of a semantic differential[59] or a multivariate affinity diagram[60].

Of the five spectra (see image on the next page) that describe the doctors interviewed, Tiffany and Sam appear in the same place three times, in similar places one time, and in disparate places one time. As far as we're concerned, Tiffany and Sam are similar people and should be represented by one persona. Looking further, Dan and Elliot also have similar or the same placement on the spectra, too, but their placement differs from that of Tiffany and Sam. Dan and Elliot should be represented by a different persona from Tiffany and Sam.

59. http://en.wikipedia.org/wiki/Semantic_differential
60. http://en.wikipedia.org/wiki/Affinity_diagram

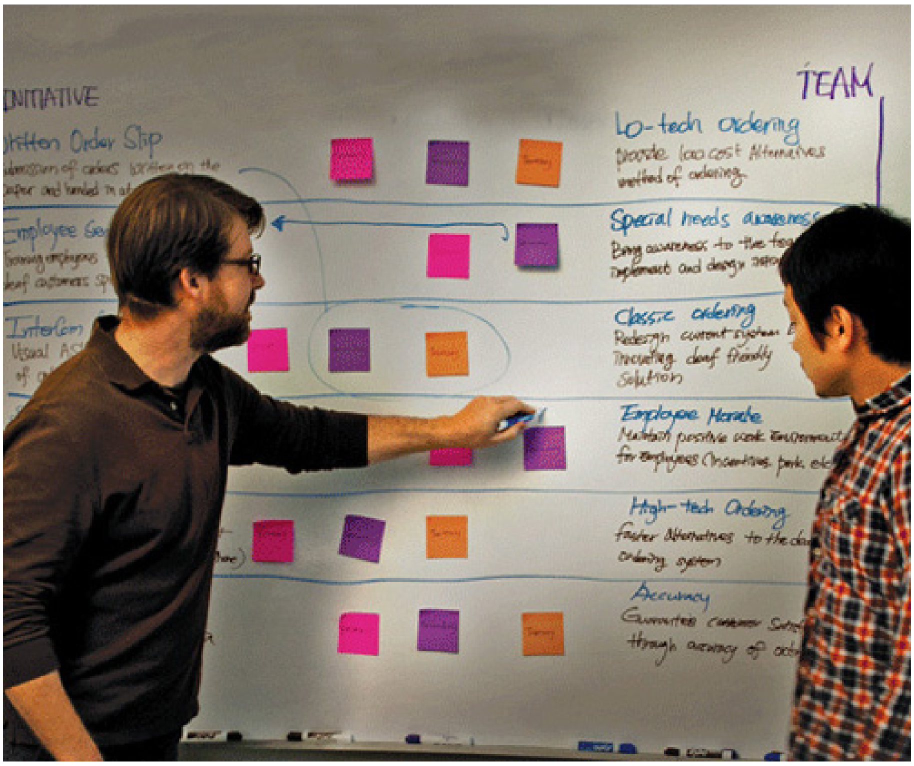


(*View large version*[61])

This researcher has created five variables to compare the doctors who were interviewed and has mapped all of the participants to those spectra. If Tiffany and Sam tend to appear in the same or similar places in a lot of the spectra, then they probably constitute a pattern that will eventually help to describe a persona. Most of the time, the patterns that you find among participants will not apply to every single one of the spectra, because almost all patterns are imperfect.

61. images/09-spectra-patterns-opt.jpg

This is not a problem; as long as participants match on a majority of the spectra, the pattern is valid. Repeat this process until you have discovered all of the patterns that represent groups of similar users. If done correctly, you will have compared a lot of the participants to each other, and the result should look something like the graph above (the color blue denotes the first pattern found).



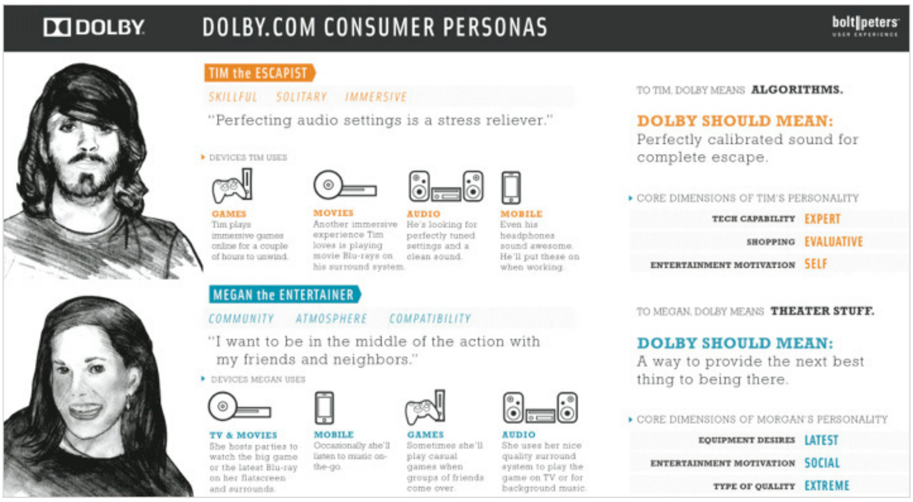
Grouping similar participants together can be laborious, but it is worth every minute. Consider collaborating with other researchers to benefit from multiple perspectives and to discuss points of ambiguity or confusion. (Image: Vijay Kumar[62])

62. http://www.amazon.com/101-Design-Methods-Structured-Organization/dp/1118083466/

This is where the difference between roles and personas comes into play. Even though the researcher interviewed many people who had the role of doctor, the participants had distinct patterns of responses, which will result in multiple personas with the role of doctor. Each unique pattern of behaviors and attitudes among participants should be represented by a unique persona.

6. Synthesize A Model Of Users

Now that you have groups of research participants who can be represented by different personas, decide how to describe those personas. During the interview and observation process, you might have heard responses or noticed behaviors that meaningfully characterize each research group. These common, average or dominant traits need to be captured in each persona.



These personas are characterized by only a few key attributes derived from interviews or observation. This deliverable conveys a clear and concise vision of the designer's users. (Image: Bolt | Peters[63]) (View large version[64])

7. Produce A Document For Others

There is no one right way to create a persona document, but essential elements will need to be included. An effective persona document that communicates a model of users to others typically consists of the following:

- name,
- demographic,
- descriptive title,
- photograph,
- quote,
- a day-in-the-life narrative,
- end goals (explicit and tacit).

The persona document on the next page clearly summarizes the research data. The main elements are the "Key Goals" and the "Day in the Life," which are common to all well-made persona documents. Other elements, such as the "Quick Take on Fred" were included because of project requirements. Each project you work on will dictate a certain approach to producing persona documents.

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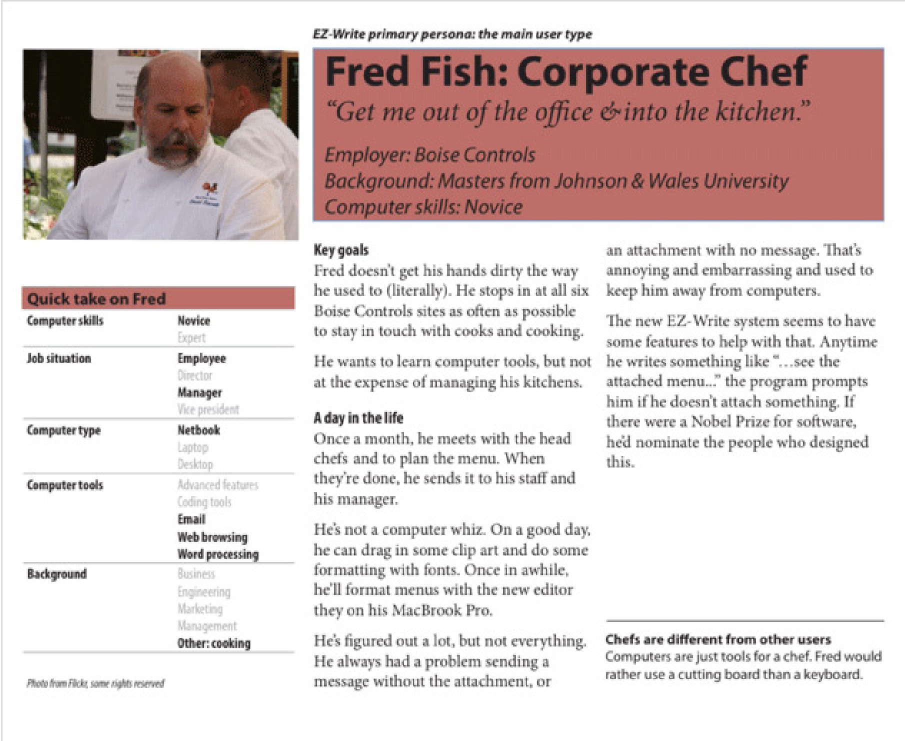
63. http://boltpeters.com/clients/dolby/
64. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/08/11-sketch-opt.jpg



EZ-Write primary persona: the main user type

Fred Fish: Corporate Chef

"Get me out of the office & into the kitchen."

Employer: Boise Controls
Background: Masters from Johnson & Wales University
Computer skills: Novice

Quick take on Fred

Computer skills	Novice Expert
Job situation	Employee Director Manager Vice president
Computer type	Netbook Laptop Desktop
Computer tools	Advanced features Coding tools Email Web browsing Word processing
Background	Business Engineering Marketing Management Other: cooking

Photo from Flickr, some rights reserved

Key goals
Fred doesn't get his hands dirty the way he used to (literally). He stops in at all six Boise Controls sites as often as possible to stay in touch with cooks and cooking.

He wants to learn computer tools, but not at the expense of managing his kitchens.

A day in the life
Once a month, he meets with the head chefs and to plan the menu. When they're done, he sends it to his staff and his manager.

He's not a computer whiz. On a good day, he can drag in some clip art and do some formatting with fonts. Once in awhile, he'll format menus with the new editor they on his MacBrook Pro.

He's figured out a lot, but not everything. He always had a problem sending a message without the attachment, or an attachment with no message. That's annoying and embarrassing and used to keep him away from computers.

The new EZ-Write system seems to have some features to help with that. Anytime he writes something like "...see the attached menu..." the program prompts him if he doesn't attach something. If there were a Nobel Prize for software, he'd nominate the people who designed this.

Chefs are different from other users
Computers are just tools for a chef. Fred would rather use a cutting board than a keyboard.

(Image: krizzeldibi[65]) (View large version[66])

A robust persona really only needs seven pieces to help everyone on the team understand the essentials about a user. Other elements are usually added to a document to paint an even more vivid picture, such as needs and wants, responsibilities, motivations, attitudes, pain points (i.e. problems, frustrations or road blocks), notable behavior, and design imperatives (i.e. things that a design *must* do to satisfy this user).

You could add a myriad of other things to a persona document, but more isn't always better. The document is usually one page, a limitation that forces you to focus on

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65. http://krizzeldibi.wordpress.com/2012/07/02/personas/
66. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/02-cook-opt.jpg

the essential elements, without distraction or fluff. If you can't fit everything on one page, then consider a supplemental document of some sort. Just remember that, while you've been immersed in the data, others will usually only see the one page. If it's much longer, people probably won't read it all, let alone remember the information. Keep things as brief as possible, and focus on the most salient points.

If you're looking for a jumpstart on creating persona documents, I highly recommend the persona poster by Christof Zürn[67]. The poster organizes and formats all of the important information that you'll need to create an amazing one-page deliverable.

8. Socialize The Personas

By sharing the persona documents with others, you're disseminating the knowledge that you've gained throughout this whole process. Consider presenting the personas to others in an engaging way, and give everyone the one-pager as a takeaway after the presentation.

67. http://creativecompanion.wordpress.com/2011/05/05/the-persona-core-poster/

Though low in information-density, these engaging posters are a great reminder of who the personas are and what they are like.
(Image: MailChimp[68])

The process outlined in this article is thorough and rigorous. It is based on years of refinement at Cooper and tweaked to my purposes. That being said, feel free to customize the process to fit your needs. Some parts can be simplified and even skipped after you've gained some experience. This is not the only way to create personas, but it is a great place to start. I hope you've found the process helpful.

68. http://blog.mailchimp.com/new-mailchimp-user-persona-research/

ADDITIONAL RESOURCES

- "Understanding Your Users: Developing Personas[69]" (slidedeck), Shlomo Goltz
  Use these presentation slides to kick off a persona creation project.

- "Provisional Personas: Workshop[70]" (slidedeck), Shlomo Goltz
  This guide walks through the process of creating provisional personas.

- "The Persona Core Poster: A Service Design Tool[71]," Christof Zürn
  This template can be used to create a one-page deliverable. ❧

69. http://www.slideshare.net/TheConartist/what-are-personas-and-how-to-use-them-a-presentation-by-shlomo-goltz
70. http://www.slideshare.net/TheConartist/provisional-persona-workshop-10
71. http://creativecompanion.wordpress.com/2011/05/05/the-persona-core-poster/

All You Need To Know About Customer Journey Mapping

BY PAUL BOAG ❧

> *Stories have defined our world. They have been with us since the dawn of communication, from cave walls to the tall tales recounted around fires. They have continued to evolve, with their purpose remaining the same: to entertain, to share common experiences, to teach and to pass on traditions.*

Francisco Inchauste wrote those words[72] on this website back in 2010. His post is just one of many on this website that talk about the power of storytelling to engage users.

But storytelling is not just a tool to engage users. It is also a powerful way to teach organizations more about their customers.

Most organizations are reasonably good at gathering data on their users. But data often fails to communicate the frustrations and experiences of customers. A story can do that, and one of the best storytelling tools in business is the customer journey map.

72. http://www.smashingmagazine.com/2010/01/29/better-user-experience-using-storytelling-part-one/

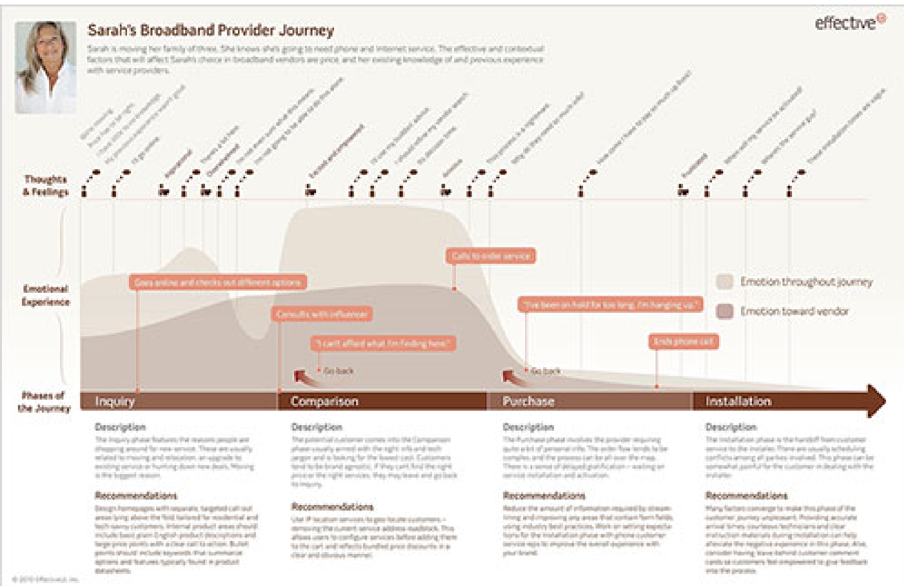
What Is A Customer Journey Map?

A customer journey map tells the story of the customer's experience: from initial contact, through the process of engagement and into a long-term relationship.

It may focus on a particular part of the story or give an overview of the entire experience. What it always does is identify key interactions that the customer has with the organization. It talks about the user's feelings, motivations and questions for each of these touchpoints.

It often provides a sense of the customer's greater motivation. What do they wish to achieve, and what are their expectations of the organization?

A customer journey map takes many forms but typically appears as some type of infographic. Whatever its form, the goal is the same: to teach organizations more about their customers.



A customer journey map takes many forms but typically appears as an infographic. (Image: Effective UI[73]) (View large version[74])

It will come as no surprise that marketers often use customer journey maps. But more and more digital professionals are adopting them, too.

Why You Should Create Customer Journey Maps

A customer journey map is a powerful tool.

If you are a designer, it will help you to understand the context of users. You will gain a clear picture of where the user has come from and what they are trying to achieve.

If you write copy, it will help you to understand what questions users have and how they are feeling.

It gives managers an overview of the customer's experience. They will see how customers move through the sales funnel. This will help them to identify opportunities to enhance the experience. The map will show how enhanced customer service can differentiate the organization's digital experience.

For the user experience designer, a customer journey map helps to identify gaps, points in the customer experience that are disjointed or painful. These might be:

- **gaps between devices**, when a user moves from one device to another;

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73. http://www.uxmatters.com/mt/archives/2011/09/the-value-of-customer-journey-maps-a-ux-designers-personal-journey.php
74. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/12/1-broadband-provider-journey-large-opt.jpg

- **gaps between departments**, where the user might get frustrated.
- **gaps between channels** (for example, where the experience of going from social media to the website could be better).

Most of all, a customer journey map puts the user front and center in the organization's thinking. It shows how mobile, social media and the web have changed customer behavior. It demonstrates the need for the entire organization to adapt.

It encourages people across the organization to consider the user's feelings, questions and needs. This is especially important with digital products and services.

Even the process of creating a customer journey map will help people to focus on the needs of users. (Image: Adaptive Path[75])

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75. http://mappingexperiences.com

With so many benefits, a customer journey map makes a lot of sense. But where do you start?

How To Research A Customer Journey Map

The process of creating a customer journey map has to begin with getting to know users.

Many organizations already have some information about users. In fact, you might meet resistance from those who feel that repeating this exercise would be a waste of time. This is why gathering existing research is a good start. Often, this research will be out of date or buried in a drawer somewhere.

By gathering existing research, you will see what the organization knows and how relevant that information is. This will placate those who are resistant, while potentially saving you some research effort.

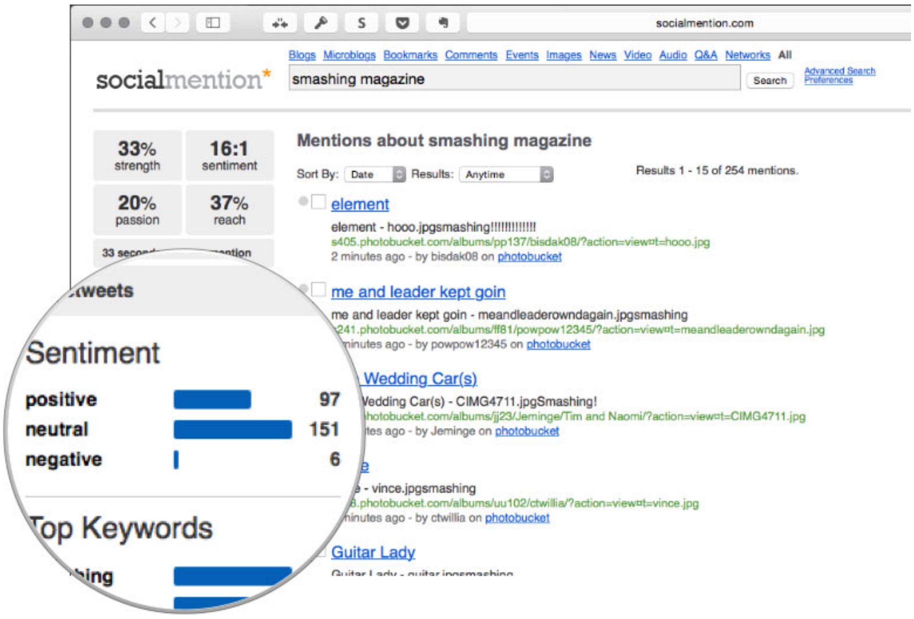
There are two types of research: analytical and anecdotal.

Analytical Research

You can turn to many sources for data about users. The most obvious is website analytics, which provide a lot of information on where users have come from and what they are trying to achieve. It will also help you to identify points in the process where they have given up.

But be careful. Analytics are easy to read wrong. For example, don't presume that a lot of clicks or long dwell times are a sign of a happy user. They could indicate that they are lost or confused.

Social media are also a useful source of data. Tools such as SocialMention[76] tracks mentions of a brand and whether those mentions are positive or negative.



Tools such as SocialMention help you gather data about how the brand is perceived. (View large version[77])

Search data also provides valuable insight into what users are looking for, revealing whether your existing website is providing the right information.

Finally, consider running a survey. This will help you build a more detailed picture of users' questions, feelings and motivations.

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76. http://www.socialmention.com
77. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/12/3-socialmention-example-large-opt.jpg

Anecdotal Research

Although data can build a compelling case, it does not tell a story by itself. For that, you need anecdotes of user experiences. You can get these by speaking to users in interviews or on social media.

You will also discover that users volunteer experiences by posting them to social media. Be sure to collect these mentions because they will be a useful reference point in your final map.

Speaking to front-line staff who interact with customers daily, such as those in support and sales, is another useful way to understand customer needs.

The detail of the research will be constrained by your time and budget. If your organization has many different user groups, then creating detailed customer journeys for each might be hard. Therefore, focus the research on primary audiences.

You can make educated guesses about the customer journeys for secondary audiences. Do this by workshopping solutions with front-line staff and other internal stakeholders. Although this “quick and dirty” approach will not be as accurate, it is still better than nothing.

Be careful to make clear what has research behind it and what does not. Making many decisions based on assumptions is dangerous. Once management sees the benefits of research, they will be willing to spend more time on it.

With your research complete, it is time to create the map.

Presenting Your Customer Journey Map

As mentioned, there is no right or wrong way to produce a customer journey map. Normally, it will be some form of infographic with a timeline of the user's experience. But it could just as easily be a storyboard or even a video.

A customer journey map has no set form. Use whatever form most clearly communicates the story. (Image: Jonathan Lupo[78]) (View large version[79])

The goal is to ensure that the user's story remains front and center in people's minds. Get a designer to produce the graphic to ensure it is as clear as possible and grabs people's attention.

Whatever its form, the map should contain both statistical and anecdotal evidence. It should highlight users'

78. http://visual.ly/mobile-commerce-strategy-tactics?utm_source=visually_embed
79. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/12/4-mobile-commerce-strategy-large-opt.jpg

needs, questions and feelings throughout their interaction with the organization.

Producing a clear map is a design job. Work with a designer to find the right approach. (Image: Philips[80])

Don't make it too complex. It is easy to get caught up in the multiple routes a user might take. This will just muddy the story.

The graphic is not meant to map every aspect of the customer's experience. Rather, it should tell a simple story to focus people's attention on the customer's needs.

Think of the customer journey map as a poster pinned to the office wall. At a glance, people should be able to see the key touchpoints that a user passes through. It should

80. http://www.design.philips.com/philips/sites/philipsdesign/about/design/aboutus/Experience-Flows.page

remind them that the customer's needs must always be at the forefront of their thinking.

The map should be clear and simple, something you could pin to the office wall.

There are so many ways to approach the customer journey map. I would love to hear of any good examples you have seen. ❧

Facing Your Fears: Approaching People For Research

BY CAROLYN CHANDLER ❧

When working on a project, have you ever felt that you and the rest of the team were making a lot of decisions based on assumptions? Having to make choices with limited information is not unusual — especially in complex projects or with brand new products.

Phrases like "We think people will use this feature because of X" or "We believe user group Y will switch to this product" become part of the early deliberation on what to develop and how to prioritize. At some point, though, these phrases start to feel like pure guesses and the ground under your feet feels shaky. What can you do about it?

Regardless of your role in the project, one activity in particular will help your whole team build a solid foundation for product strategy and design: that is, approaching potential users for research, such as interviews and usability tests.

Such research is an important aspect of user-centered design. It helps you build products that are rooted in a deep understanding of the target audience. Among other benefits, interviewing potential users helps you achieve the following:

- more precisely define who the target audience is (and isn't),
- face and challenge your assumptions,
- uncover unmet needs,
- discover the behaviors and attitudes of potential users firsthand.

You can conduct informal yet valuable user research yourself with practice and with guidance from great sources like Steve Portigal's *Interviewing Users* and Steve Krug's *Rocket Surgery Made Easy*. One thing that stops a lot of people from trying their hand at research isn't just lack of experience, but a fear of approaching people and asking for their time. This obstacle is greater than many would care to admit.

The Difficulty Of "Face To Face"

I was teaching an experience design class in high school when it really hit me. Students were engaged in the design process until they were told that they had to request interviews from strangers. The anxiety levels went through the roof! A look of shock covered their faces. Shortly after, two of the students asked to receive a failing grade on the activity rather than have to face strangers (a request that was not granted)!

This was no longer a case of time, opportunities, resources or priorities. The interviews were a part of the class and were considered essential. The students were presented with a clear set of expectations, provided with aid in planning and writing questions, and taken to the location (a college) to conduct the interviews.

When all of the usual obstacles were removed, what was laid bare? A strong fear of approaching strangers, made even stronger by the fact that so many interactions nowadays are done online, rather than face to face. Ask someone to create an online survey and they're all over it — ask that same person to pose those same questions to a stranger face to face and they'll freeze up.

One might assume that the problem afflicts only those in high school, but such a deep-seated reaction is felt by many working adults who are suddenly responsible for requesting something from strangers — even when the thing being requested is a relatively low commitment, like 10 minutes for an interview.

Are you at the point in a project when you would benefit from insights gained from face-to-face discussions with potential users but find yourself blocked by a fear of asking? Read on for techniques to help you approach people for research, the first step to gaining the knowledge you need.

"I'm Afraid I'll Be Bothering People."

I'm sure you've been approached by a stranger at one time or another. The negative occasions stand out the most, when you were annoyed or felt guilty because you didn't want to say no to a request for money or personal information or a signature.

When a stranger approaches, the person being approached has several concerns at once:

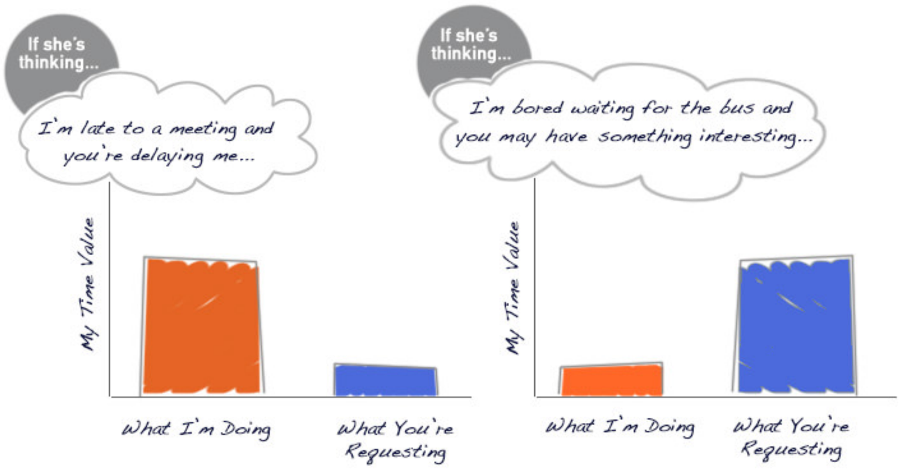
- "Who is this person?"
- "Are they trying to scam me?"
- "Are they going to ask me for money?"
- "Are they going to ask me to sign something that I don't agree with?"
- "Am I going to have to figure out how to get rid of them?"
- "How long is this going to take?"

Your memories of being approached could make you uncomfortable if you're the one approaching others.

The good news is that approaching people for interviews can be a lot easier than requesting a donation. If you make it clear quickly that their time is voluntary and that you won't ask for anything they don't want to give, then you'll generally get a positive response. After all, you're not asking people for money, just for their time and attention. Time is valuable, but its value varies according to the person's situation at that moment — and you can do certain things to communicate the value of agreeing to your request.

INCREASE THE VALUE OF PARTICIPATION

Interview requests are accepted when participation is perceived to be as or more valuable than what the person is doing at the time. People calculate that value in their heads when you ask for their time.



People calculate that value in their heads when you ask for their time. (Large version[81])

Below are some of the factors that can swing the calculation in your favor.

FIND THE RIGHT TIME

If someone is in a rush to get somewhere, then making your research seem more valuable than their desire to get to their destination will probably be difficult. Someone who is walking briskly, looking tense and not making eye contact is not the ideal candidate.

Approach people who appear to be one or more of the following:

- **Between tasks**
  If you're asking about a particular activity, go to areas where people tend to be finishing up that activity, and

81. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/Value-opt.jpg

talk to them as soon as they're done with it. You'll get a fresh perspective on the whole experience, and they likely won't be in a rush to get to their next activity. For example, if you want to interview runners, wander the finish line of a race. Look for runners who are cooling down and checking out their swag but not yet heading home.

- **Bored**
  Waiting in line, waiting for a bus or waiting for an elevator — if someone seems to be idly swiping their phone or staring off into space, they might actually welcome a distraction.

- **Procrastinating**
  Some activities take a long time. The human brain needs a change of focus every now and then, and your research could be just the thing. If your target audience is students, visit a study area. When a student comes up for air, ask for some time. They might need the mental break!

Regardless of whom you approach, give them an idea of how long the interview will take (about 10 minutes, for example), so that they can do the mental math of calculating the value of saying yes.

BE AWARE OF BODY LANGUAGE

As mentioned, pay attention to the candidate's body language. Do they seem tense? Are they frowning at their phone? Are they power-walking? They might be late for a meeting, so the timing would be wrong. Someone gazing around or strolling casually is a better bet. People on phones are a bit harder to read because many check their phone when bored or procrastinating — still, their facial expression might tell you whether they're open to being interrupted for something more interesting.

Your own body language is important, too. Planting yourself in the middle of a person's path and facing them squarely will come off as aggressive, likely triggering a negative reaction. They might feel like they'd have a hard time getting rid of you if they're not comfortable with your request.

Being aware of your own body language and the body langauge of others is important.

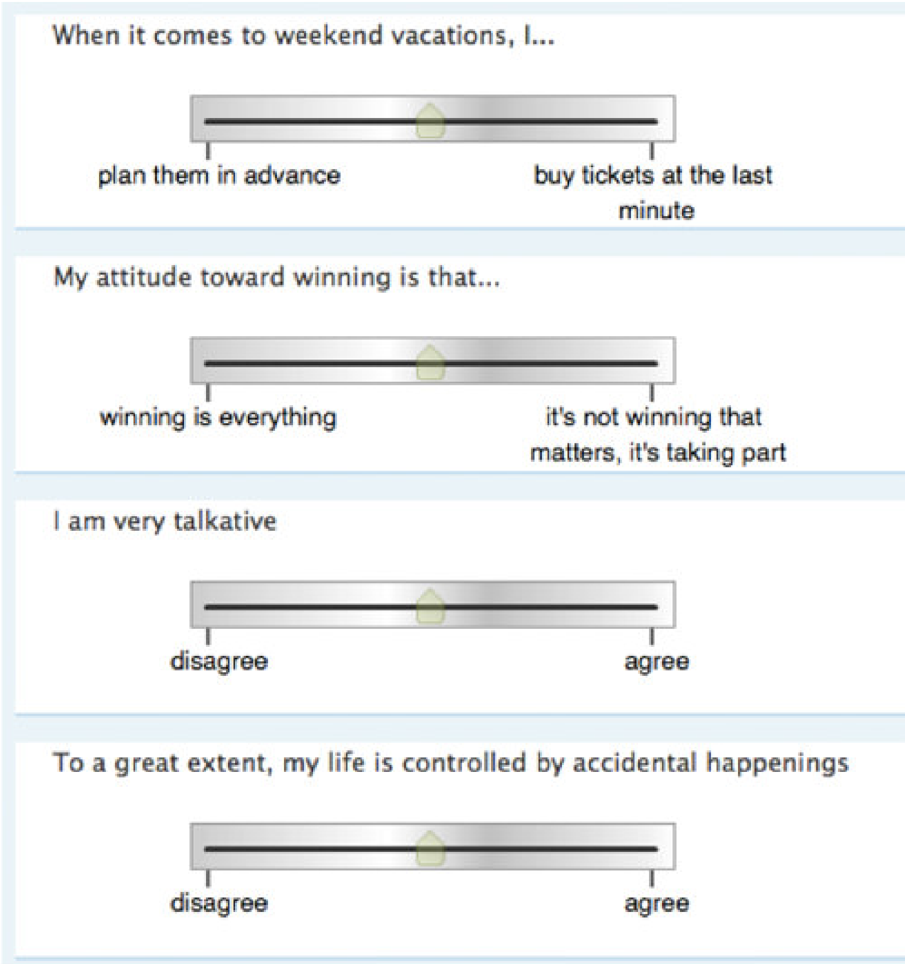
Approach within clear view, but from the side. Also, try angling your body slightly away from the person. You want to seem engaged but also make them feel like they could end the conversation if desired. This will give them a greater sense of control and increase the likelihood that they'll give you those precious seconds you need to make your request.

FOSTERING INTEREST

The feeling one gets from participating in research can be rewarding in itself. Interest is one positive feeling that leads people to say yes to research, which you can emphasize when approaching strangers.

Mention early on that you're conducting research, which makes clear that you're not asking for money and tends to generate interest.

Being approached to participate in research is fairly unusual for most people. The fact that you're conducting a study might inspire a healthy curiosity. People will often be curious about what topic is being researched, what kinds of questions might be asked, and what they might find out about themselves in answering. The prevalence of quizzes and personality tests online is a good indication of this interest; those researchers are gathering data from the tests, but many of the respondents feel like they are learning about themselves (and potentially others) by considering the questions being asked.



People will often be curious about what topic is being researched, and what they might find out about themselves in answering. (Image: Personal DNA[82]) (View large version[83])

The person might not be expecting to learn whether they're a "benevolent inventor" or an ENFP[84] by the end of the interview, but they might still find your questions interesting to consider.

82. http://personaldna.com/tests.php
83. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/Personaldna-opt.jpg
84. http://en.wikipedia.org/wiki/ENFP

Will the interviewees be shown something that others don't have access to yet, like a new product or campaign? If so, bring that up quickly. It really boosts curiosity!

Furthermore, people might be flattered that you're interested in their thoughts and opinion. Build on that! If there's a reason you approached that person, share it. If you're interviewing people about healthy food choices near a health food store and you stop someone who has just purchased something at the store, you could mention that their interest in health is one reason you approached them. Stick to obvious observations — you don't want to come across as creepy!

FOSTERING GOODWILL

Donating to a cause feels good, and volunteering time for research is no different. If your efforts are for a worthy result, like making texting easier for the elderly, share that benefit.

Another magic phrase? "I'm a student." If you are, say so quickly to allay the person's suspicion about your motive. Your effort on the path of learning will appeal to their goodwill.

If you're not a student and your topic doesn't sound particularly socially relevant, people might still be willing to help out if they connect with you. If you're friendly and enthusiastic about the topic, then they're more likely to say yes.

To keep the goodwill flowing, express your gratitude for their time and thoughts. Let them know before and after the interview that their time will have a great impact on the success of the research.

OFFER INCENTIVES

This one might seem the most obvious: You can increase the value of participation by offering an incentive. A $10 or $20 gift card from a popular vendor like Amazon or Starbucks can incline someone to accept a 15 to 30 minute interview. As the inconvenience to the participant increases, so should the incentive — whether that inconvenience is the length of the interview, the location or the time of day.

The incentive doesn't have to be monetary. Be creative in what you offer. It could be access to a service that most people don't have or a fun gadget that's related to your topic (like a pedometer if the topic is health).

Offering an incentive can be useful, but don't let it turn into a crutch. The point is to get comfortable with approaching people; associating a cost with that adds pressure that you don't need. Learning to request participation without an incentive — and learning to increase the perceived value of participation without one — will take the cost out of the equation. Nevertheless, if you're conducting formal research with a specific audience for a lengthy period of time, offering an incentive is definitely a best practice.

"I'm Afraid Of Rejection."

Rejection is people's number one fear when approaching strangers. Hearing no has always been difficult, whether it's a polite no or an angry no followed by a rant. Either way, it stings. Your response to that sting, though, is what matters. How do you explain the rejection to yourself, and does your explanation help or hurt you?

Martin Seligman, one of the originators of positive psychology, conducted a study in the '70s that gives insight into the types of mindsets that make people feel helpless. Seligman found that those who exhibit long-term "learned helplessness" tend to view negative events as being personal, pervasive and permanent. In other words, if a person is rejected, they might rationalize that the rejection is a result of their own failing, that everyone else is likely to reject them as well, and that they can do nothing to lessen the likelihood of rejection.

Your mindset is important. (Image: Leathers Milligan[85])

85. http://www.leathersmilligan.com/2011/your-explanatory-style-explains-your-success-the-choice-is-yours/

When you prepare to approach someone, consider instead that, if they say no, they aren't really rejecting you, but rather rejecting your request. It's not personal. Maybe they're in the middle of something, or maybe they're just not in the mood to talk. The rejection is fleeting, and the next person might be perfectly happy to participate.

Even knowing this, your first attempt will be the most difficult. Think of it like jumping into a pool: The initial shock is certain, but you'll quickly get used to the water and will be swimming in no time!

TURN IT INTO A GAME

When my brother was in college, he had a friend — let's call him Bob — who had been single for a long time. Bob wanted to develop his ability to approach a woman and strike up a conversation, but he constantly froze up because of his fear of rejection.

One night at a lively bar, the two of them decided to make a game of it. If an approach led to a conversation — fantastic! He got 1 point. If the approach led to rejection, he still got 1 point for making the attempt. This turned failure into a small win and encouraged Bob to try and try again. The person with the most points at the end of the night won a free drink from the other. This shifted the focus and value onto the attempt, not the result.

Try this technique with someone who also wants to practice approaching people for research. Award a point for each approach, and reward the winner. Choose a prize that you both value but that doesn't outweigh the good feeling of a successful approach. Not that you want to be turned down, but it helps to have a reward for plucking up the courage to try.

VARIATION: FOOTBALL RULES

If you find the incentive to approach is still not enough, award a field goal (3 points) for every unsuccessful approach and a touchdown (7 points) for each successful one. Because interviews take time, the person who is trailing in points could pull ahead even if they're mostly getting rejections.

"Only Extroverts Are Good At This."

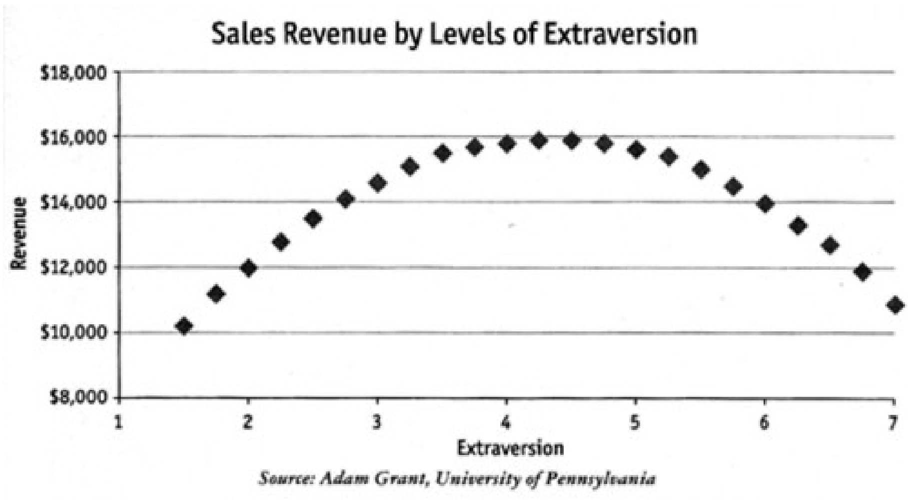
Google tells us that an introvert is "a shy, reticent and typically self-centered person." Not a pretty picture! (An extrovert is defined as "an outgoing, overtly expressive person" — a more positive description, at least in the US).

Introversion has been erroneously associated with characteristics like being "bad with people" or being unsuccessful in approaching others.

In psychology, the field that gave us the terms "introvert" and "extrovert" (thanks to Carl Jung), the definitions are fairly different. The focus is on how people recharge their energy. Introverts tend to recharge by spending time with their own thoughts and feelings; extroverts recharge with external stimulation, such as time with friends or adventures in new destinations.

Jung stated that, "There is no such thing as a pure introvert or extrovert. Such a person would be in the lunatic asylum." We all fall somewhere along the continuum. It turns out that some of the most fantastic researchers out there fall almost in the middle (called “ambiverts”). They balance an extrovert’s drive to interact others with an introvert’s skill in observation and reflection.

Daniel Pink explores this in his book *To Sell is Human*, which summarizes a variety of studies that find no link between high extroversion and major success in sales. (Pink defines sales as “persuading, convincing and influencing others to give up something they’ve got in exchange for what we’ve got” — a broad definition that could include asking someone to give up their time to participate in research.)

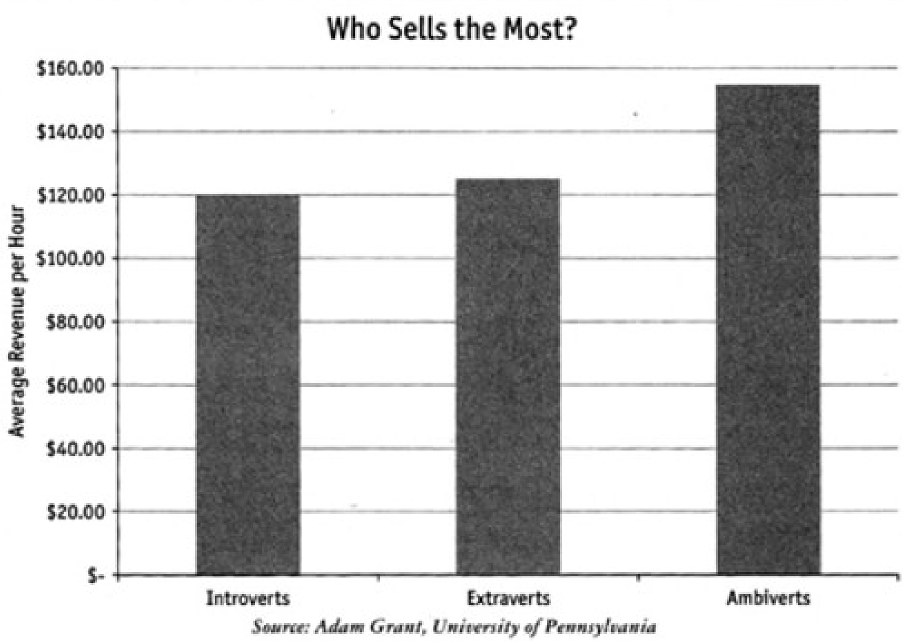


There is no link between high extroversion and major success in sales. (*Large version*[86])

In fact, in the studies Pink cites, such as one by Adam Grant of the University of Pennsylvania, the highly extroverted — who tend to talk too much and listen too little —

86. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/SalesExtraversion-opt.jpg

performed only slightly better than the highly introverted. Who did the best by far? The ambiverts, who balanced a drive to connect with an ability to observe and inspect.



Ambiverts are good sellers because they balance a drive to connect with an ability to observe and inspect. (Large version[87])

If you consider yourself an introvert, then you're probably relieved to hear that you don't have to swing to the other side of the scale to be successful in interviews. You can use your skill in observation to pay attention to the environment and identify people to approach. You might need to tap into your extroverted side to approach someone, but once the conversation begins, you can call on your skill in observing and listening intently. With practice, this introverted quality will become an important

87. http://media.mediatemple.netdna-cdn.com/wp-content/uploads/2014/06/WhoSells-opt.jpg

part of the process that leads to the payoff: generating important insights.

Let's explore a few techniques to ease gently into the ambiversion zone, exercising your interviewing muscles!

PRACTICE PLAYFULLY

Practice your requests with a friendly audience and in a comfortable location to make the experience more playful and less stressful. Learning and playing go together!

Set challenges for yourself that expand your skills but that don't have serious consequences. Instead of waiting for an intense, highly visible project at work to make your first attempt at approaching people, give yourself a short interview challenge. Pick a friendly location and choose a topic of research that would be of interest to most interview candidates and whose results you would not formally present.

Can you think of a local restaurant or cafeteria? Try interviewing its employees about their experience with the lunchtime rush to identify ways to better manage lines (of course, wait until after the rush to approach them). Taking a taxi? Interview the cab driver about their use of technology and how it has changed in the last three years. Do this as though you were conducting research for a real project (for example, ask to interview them, rather than launching right into your questions).

Here are two introductions you can practice:

> *"Excuse me! I'm a student, and today I'm conducting research on ways to improve transportation information for commuters. Hearing about your experience would be*

really valuable. Do you have 10 minutes to answer some questions?"

"Hi! We're conducting some research today. Would you like to be interviewed on your lunchtime eating habits? It'll take about 10 minutes, and your thoughts will help us improve the availability of nutritional information."

MAKE IT MEANINGFUL

Whether you're interviewing for practice or for work, tap into the aspects of the topic that make it deeply meaningful and personal to you. Genuine enthusiasm for a topic is hard to fake and will override fear to a large extent.

Remember the high-school students who were so afraid of approaching people? The class ended up going through the research process a second time with different topics. Instead of being told to interview college students about financial planning, students picked their own topics, like helping other students complete their homework, eating healthier meals and handling peer pressure.

The class picked students to interview, a mixture of friends and strangers. Because they were passionate about the topics (and had practiced once already), the second round of requests was much easier.

Likewise, consider practicing with more than one round of interviews:

- **Round 1**
  Choose a topic that you know will be of interest to the people you're interviewing.

- **Round 2**
  Choose a topic that you're passionate about. (Try to be objective, though!)

- **Round 3**
  Take on a challenge for a product or project with support from other team members. (See the section below, "Pair Up Personalities," for an example.)

If you're on a team that wants even more practice, you could take turns suggesting practice challenges for each other. The more you practice, the easier it gets — promise!

PAIR UP PERSONALITIES

If you consider yourself an introvert, pair up with someone who considers themselves an extrovert, and play to each other's strengths for the first few interviews.

Using your observational skill, you could identify candidates to interview, and the extrovert could approach the first three people.

After the first three or four approaches, take a break and share your techniques with each other. You could share your insight from observing the environment and suggest tips on which people in which location might be best to approach. The extrovert could share tips on conversation openers that seem to be working well. When you're both comfortable, switch roles to exercise the other's skills.

This method situates you as mentors to each other, bringing you both closer to the middle of the introversion-extroversion scale.

Go Face To Face

Now that you've learned some techniques to get started, don't let another week go by without trying one of them out! A good first step? Think of topics that you're passionate about, the ones that are intriguing enough to propel you forward. You'll find that the skills you develop will give you confidence to pursue the answers you need, leading you to better experiences for yourself and others.

RESOURCES

- AdventuresXD[88] has sample challenges that you can work with. ❧

88. http://www.adventuresxd.com/adventure-blog/2014/4/13/the-toocooks-sample-challenge

Considerations When Conducting User Research In Other Countries: A Brazilian Case Study

BY CLAIRE CARLSON ❧

Following a recent economic windfall[89], Brazilians are faced with more choices of how to spend their money. This provides a situation for good UX to make a huge impact and sway customers to buy new products or services. Companies inside and outside Brazil are interested in capturing a part of this new market.

My company, *Blink UX*, had the opportunity to conduct in-home user interviews in São Paulo on behalf of a Brazilian real estate company called Zap Imóveis[90]. This project provided me with invaluable insider knowledge on how to best conduct in-home user interviews in Brazil and, more broadly, how to conduct field research in foreign countries using the same underlying principles.

89. http://www.forbes.com/sites/ivancastano/2011/11/28/brazils-booming-economy-is-creating-19-millionaires-every-day/
90. http://www.zapimoveis.com.br/

Construction in the growing Morumbi neighborhood of São Paulo.

To understand target users' approach to the process, we interviewed eight people who had either just bought a home or were looking for a home. It made sense to interview people where they lived for this study; seeing their neighborhoods and the characteristics of their homes helped us better understand their motivations for buying homes in general and what they looked for in their next home. For example, security is an issue in most parts of São Paulo, which is why '24-hour doorman' was a popular search criterion for apartments. Many homes where there is not a doorman on duty have metal bars on the front door, which made it hard for us to knock. Instead, we would clap loudly outside the door to let a participant know we were there. This, among many other cultural nuances, could only be truly understood by immersing ourselves in the user's environment.

This article presents my tips for foreigners planning to conduct in-home user interviews in Brazil, including parallels with research in India, China, and Spain.

Start The Planning And Visa Application Process Early

Before the project officially landed we were already investigating applying for visas. The process comprises many steps (in my case, I needed to collect ten different pieces of documentation to prove that I was, in fact, planning to do business in Brazil). If you're traveling to Brazil with a passport from North America, Asia, or Africa, you're going to need to start the visa process[91] right away.

We needed to rush order my visa, which set us back about $1,000 USD, because we were going to travel soon after the project started. For anybody who has a few weeks to wait to get a visa then feel free to mail it to a consulate. If you're like me and need to rush order your visa, your application will need to be hand-delivered to a Brazilian embassy or consulate. This is likely inconvenient for most people because you won't find embassies and consulates in every city. The good news is that there are a lot of companies out there that will deliver your paperwork for you.

91. http://www.lonelyplanet.com/brazil/visas

Partner With A Great Local Firm

We needed to find a research firm to help us moderate the interviews and we needed to find it fast. Within four days, we interviewed three companies via Skype to understand their processes, experience, and services. We knew a contact at one of the firms and found the other two through an Internet search. At the end of the interview process, we decided to partner with Insitum[92], an innovation consulting company which we learned about through an existing contact. We chose them because they had extensive experience with ethnographic research and seemed thoroughly excited about working with us. The day after signing the contract they were already helping us with study planning.

Insitum exposed us to cultural nuances we needed to consider during the research and future design phases. We learned nearly as much from the Insitum team as we did from the research itself. On our way to interviews, they gave us background information on how the neighborhood we were visiting had evolved in recent years. This helped us better understand the perspective of the participants who we interviewed. For example, we interviewed a participant who lived in an area where crime had increased rapidly in the previous few months, so we understood why she was looking to move into a new apartment so quickly.

Hosting three to four strangers in your home is awkward, especially when you're telling them about very per-

92. http://www.insitum.com

sonal things such as your dream home. Our research partners made participants feel at ease. They brought expertise to the table that we simply wouldn't have been able to achieve by communicating with participants through a translator without a native moderator. I am confident that Insitum's presence contributed to how open participants were with us, and helped us capture high-quality data.

Interviewing participants in their homes.

Remember that when selecting a research partner you're not only looking for a team with expertise in gathering data, you also want to consider how they can help you synthesize and report the data. They are likely to catch themes you will not simply because they are more familiar with the culture. It is important to discuss the strategy for reporting data well in advance because what is considered standard to one party could be considered non-standard to another. Tip: The size of the research firm doesn't matter. My colleagues who have conducted research in Brazil, Spain, Japan, Germany, India, and the UK all agree that even small and independent foreign firms produce very high-quality work.

Hire A Real-Time Translator

I cannot stress highly enough the value of a high-quality translator. Neither my colleague nor I spoke Portuguese. We knew we needed someone to moderate the interviews, and we knew it would be important for us to be able to ask follow-up questions. We requested that when each of the three firms sent us a quote they included the cost of a real-time translator for ten 90-minute sessions. The quotes for translation ranged from $5,600 to $8,500 USD and it was worth every penny. The translator has a unique role not to be confused with someone who is simply fluent in two languages. Experienced translators are able to comprehend and verbalize meaning very quickly. If the subject matter of your study is very specific, like healthcare for example, you need to find a translator with experience translating on those topics.

The real-time translation worked just about as you think it would if you were at the United Nations. The participant, moderator, translator, and myself would all sit around the participant's kitchen table or in their living room. The translator wore a headset with a microphone and would speak very softly in English, which would come through on my headphones. The speech was very nearly real-time and incredibly effective – most importantly, it didn't disrupt the conversation between the participant and the moderator.

It was imperative for us to understand exactly what was said. There were many colloquial phrases that did not have direct translations into English. For example, one participant used a common Brazilian phrase that goes something like, "If a cat gets burned once he will never get burned again." The participant followed up by saying "Good luck translating that one!" Our translator did a great job helping us understand these colloquial phrases, which in turn helped me better understand the participant's reactions. Make sure you use a translator who comes recommended – and remember that Brazilian Portuguese is different from European Portuguese.

Real-time translation.

Limit The Number Of Observers And Make Sure Your Client Observes A Few Sessions

It's always a good idea for clients to observe user interviews because watching in real time usually means they are more focused and catch more detail – it's easy to get distracted by other tasks when watching a recording on a laptop after the fact. However, there is such a thing as too many observers. Aim to bring only two to four people to each interview, otherwise the participant can feel overwhelmed and uncomfortable. If you're not fluent in Portuguese then two of those people will likely be the moderator and translator; beyond that, plan to either bring a client observer or colleague, but not both.

This goes for research in other countries as well. My colleague recently conducted in-home user interviews in Hyderabad, India where participant homes were very small. In addition, it's typical for extended families to live under one roof in India (parents, kids, aunts, uncles, grandparents). In her case she could only bring one observer to each session because there simply wasn't enough space for a third person to sit.

Plan More Time Than You Think You Need Between Interviews

If you ever find yourself in São Paulo conducting interviews in varied locations, plan at least 90 minutes between interviews to navigate traffic. Similarly, if you are conducting a lab study, I also recommend planning extra time between sessions to account for participants who are running late because of traffic. In 2013, CNN published an article[93] noting that São Paulo is the "seventh most congested city in the world." It didn't take long for us to understand just how bad it was. On one occasion Google Maps informed us that it would normally take 22 minutes to get to our next interview, but in current traffic it would take over an hour. Unexpectedly, this was one of the most important takeaways from the trip because it helped us understand why locals are so motivated to find homes near the subway.

Over-Recruit In Anticipation Of No-Shows

Owing to heavy traffic congestion and a generally laid-back culture, participants cancelling interviews or starting very late is not uncommon. We had a couple of last minute cancellations that we struggled to fill until the very end. It would have been a major missed opportunity to not reach our quota after spending so much time, energy and money to travel to Brazil and plan for the research. For these reasons you need to over-recruit your study. Plan to tack on an extra couple of participants for every 10 whom you would normally recruit and be prepared to go with the flow. Trust me, it's worth the expense to have that security. My colleague avoided this problem during his research in Brazil by setting aside a half-day at the end of the study that he could fill with people who need-

93. http://money.cnn.com/gallery/news/2013/11/06/global-traffic-congestion/7.html

ed to reschedule. Below are additional tips about recruiting:

INCENTIVES

When recruiting, you will want to encourage candidates to participate with some sort of compensation. Our research partner explained in some cases this could be a bottle of high-quality liquor. For our study we used $190 USD as the incentive. If you go the cash route, you will want to make sure the amount reflects both the duration and location of the interview. Our interviews were 90 minutes each, so a 60-minute interview might be $125 USD. Similarly, it would be appropriate to compensate participants more for in-home research rather than lab research because they are allowing you and your colleagues to visit their homes.

CLASS STRUCTURE

Brazil is different from the U.S. in that they have a well-defined and widely understood class structure based on income level[94]. Levels range from A (the super rich) to E (the very poor). Don't be afraid to ask candidates what class level they fall into when you're recruiting. We were looking for a mix in class levels, yet wanted to focus on those who would likely search for homes online; thus we recruited participants from A, B and C level classes. When you're in Brazil, the class structure will become clearer when you see extremely low-income communities side-

94. http://thebrazilbusiness.com/article/social-classes-in-brazil

by-side with the super rich, especially in urban areas. Note: it may be easier to recruit participants in A, B and C classes since it is more likely that they have a phone where you can reach them.

GEOGRAPHY

Participants were intentionally recruited from among different types of neighborhoods across the city of São Paulo. Because the economy was improving rapidly across the board, low-income families were moving into the homes of middle-income families and middle-income families were moving into the homes of high-income families. A majority of Brazil was affected and, in turn, a majority of Brazil's population were target users of the Zap website. We also sought a mix of single people, families, and couples.

HOLIDAYS

Consider that Brazilians celebrate a lot of holidays where offices and businesses are closed. Make sure you familiarize yourself with these dates so you don't risk trying to recruit participants during the week of Carnival, for example.

Keep An Open Mind During Your Research For Unexpected Lessons

It turned out that our unfamiliarity with Brazilian culture was an enormous advantage for us because it allowed us to approach the project with open minds. For example, people use maps in a different way in Brazil than we do in the States – among the eight participants we interviewed, most explained that landmarks are more important than geographical direction. A cab driver wouldn't tell you to walk a half-mile north, he would tell you to keep walking until you get to that really busy intersection with a gas station.

Interviewing participants in their homes.

We couldn't assume we understood behavior based on our experience in our labs back home. This is why in-person, in-home research was imperative. My tip for you: don't assume that behaviors or interaction trends you've seen among participants in your own country would translate to a Brazilian audience. For that matter, don't assume behaviors or interaction trends apply for any study. Even our Brazilian client was proven wrong once or twice: They informed us that Zap's users are not interested in using maps at all; however, nearly all participants explained that they liked to view a property on a map before they visit a home to get an understanding of the surrounding area.

Learn About Brazilian Customs And Culture

It is always a good idea to learn about the customs and culture of the country you're visiting[95]. Here are a few observations I made while I was there that those new to UX research in Brazil might find helpful:

GREETINGS

As in many European countries, physical closeness is more prominent than in countries like the U.S[96]. It is traditional for Brazilians to kiss each other on the cheek once upon first meeting, even in professional settings. You can expect to greet participants in this way especially for in-home research. For Americans this may take a little getting used to, but rest assured, Brazilians are extremely friendly people and will make you feel at ease. Of the participants and members of the research team that we interacted with, every single one of them was very friendly and open. Strangers talk like old friends. I witnessed this first-hand during the interviews and it helped us gather some extremely valuable findings.

95. http://www.globalsmes.org/news/index.php?func=detail&detailid=558&catalog=28&lan=en
96. http://www.ldldproject.net/cultures/brazil/differences/nonverbal.html

BUILDING TRUST

Building trust is important for in-home research in any country. In Brazil, relationships and loyalty are incredibly important to building trust. Make an effort to build relationships with your participants, research partners, and clients in Brazil by not rushing them into making decisions or by making recommendations without fully understanding the problem. Building trust will be different in different countries. During an India-based study, my colleague learned that building trust requires equality between the participant and the researcher — that means equality in socioeconomic status and in dress. Similarly, it was important that at least one female researcher was present any time they interviewed a female participant. Whatever country you're visiting, be sure to find out ahead of time how to build trust with the people you will be interacting with.

PORTUGUESE

English is not spoken as widely in Brazil as you might think and locals often appreciate it when you put the effort into learning a few common phrases. That goes for people at restaurants and shops, and the participants you interview. Each time we entered a participant's home we greeted them by saying "Obrigada por me receber em sua casa," which means "Thank you for having me in your home."

WORKING LATE

You may end up working late into the night on research days. The workday in Brazil typically ends around 19:00, so catching the after-work participants may mean you don't get to your hotel until 22:00 or later.

TECHNOLOGY

Social networking is a big deal in Brazil. The Wall Street Journal reported[97] that in September 2012, Brazilians spent 208% more time on Facebook than they did one year earlier. This "sharing culture" translates to in-person interactions as well. You can expect to hear participants explain that they rarely make decisions about what house to buy or even what T-shirt to buy without consulting with family, friends, and their contacts on social media.

Lastly, don't expect to see a lot of new devices. Tariffs on imported technology are extremely high (an iPhone costs three or four times what it does in the U.S.), so many Brazilians use mid-to-low end Windows and Android devices. Similarly, don't assume your participants will use the same digital tools for tasks like email, shopping, or information gathering. My colleague conducted in-home research in multiple countries and discovered that in Shanghai, China, where online help content was minimal, participants relied on other sources such as print articles; whereas in Barcelona, Spain, the help content was very robust and relied upon heavily.

97. http://www.wsj.com/articles/SB10001424127887323301104578257950857891898

Conclusion

The findings from our research informed a redesign of Zap's web experience. As a UX consultancy, sometimes it takes years to see the impact of our work out in the wild, which is why, one year after we finished the project, it was especially rewarding to hear our client say "the main KPI for this project, which is leads per visits, has improved 35% since we launched the new design."

The site's success would have been impossible if we had simply been given research data collected by a third party. We needed to be there to see how bad traffic was, to see the look on someone's face when he told us how frustrating it was to find a new home, and to see the client's reaction to participants' comments. There is tremendous value in immersing yourself in research abroad. I hope the lessons I learned will help you prepare to take the leap.

In summary, if you're new to in-home user research in Brazil, keep the following in mind:

- Start the planning and visa application process early
- Partner with a great local firm
- Hire a real-time translator
- Limit the number of observers to four, but make sure your client observes a few sessions
- Over-recruit in anticipation of no-shows
- Plan more time than you think you need between sessions

- Keep an open mind during your research for unexpected learnings
- Learn about Brazilian customs and culture before you go

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How To Run User Tests At A Conference

BY DANIEL SAUBLE ❧

User testing is hard. In the world of agile software development, there's a constant pressure to iterate, iterate, iterate. It's difficult enough to find time to design, let alone get regular feedback from real users.

For many of us, the idea of doing formal user testing, is a formidable challenge. There are many reasons why: you don't have enough lead time; you can't find enough participants, or the right type of participant; you can't convince your boss to spend the money.

In spite of this, user testing is the best way to improve your designs. If you rely on anecdotal data, or your own experience, you can't design a great solution to your user's problems. User testing is vital. But how do you make the case for it and actually do it?

What Is User Testing?

Let me start by defining what user testing is, and what it is not.

USER TESTING *IS*…

- **Formal**
  Your goal is to get qualitative feedback on a single design iteration from multiple participants. By keeping the sessions identical (or as similar to one another as possible),

you'll be able to suss out the commonalities between them.

- **Observational**
  Users don't know what they need. Asking them what they want is rarely a winning strategy. Instead, you're better off being a silent observer. Give them an interactive design and watch them perform real tasks with it.

- **Experimental**
  At the core of any user study is a small set of three to five design hypotheses. The goal of your study is to validate or invalidate those hypotheses. The next iteration of the design will change accordingly.

USER TESTING IS *NOT*…

- **Ad-hoc**
  Don't accept what a single person says at face value. Until you get signal from several people that a design is flawed, withhold judgment. Once five or six participants have given consistent feedback, change the design.

- **Interrogative**
  Interviews are useful for learning about users, their roles, and their experiences. But keep it brief. Interviews tend to put the focus on what people say they do, not what they actually do.

- **Quantitative**
  Because the sample size is small, you can't make strong statistical extrapolations based on numbers alone. If you

care about numbers, look into surveys, telemetry, and self-guided usability tests instead.

What Is A User Study?

A user study is a research project. It starts with a small set of design questions. You take those questions, reformulate them as hypotheses, devise a plan for validating the hypotheses, and conduct five or six user tests. Once done, you summarize the results and decide on next steps. If the findings were clear, you might make improvements to the design. If the findings were unclear, you might conduct an additional study.

You won't get it right the first time. Test your design, iterate, and repeat. (Image: raneko[106])

A GOOD USER STUDY HAS CLEAR AND MEASURABLE OUTCOMES

If you have clear expectations, it will be much easier to take action on what you learn. This is often accomplished

106. https://www.flickr.com/photos/raneko/4204026836/

with hypotheses: testable statements you assume to be true for the purposes of validation. Examples of good hypotheses include:

- Users can add an item to their shopping cart and check out within five minutes.
- Users want to click on server-related error messages to see additional details.
- Users are not frustrated by the lack of a dashboard in the product.

A GOOD USER STUDY IS EASY TO FACILITATE

This is especially important if you are not the facilitator. If the facilitator is inexperienced with user testing, you'll need to provide a test script which is easy to understand, keeps the test on track, and explains what you are trying to learn from the test.

A GOOD USER STUDY MUST BE SUFFICIENTLY DETAILED AND INTERACTIVE

If you want to measure a user's reaction to an on-screen animation, you probably need a coded prototype. If you need to decide whether a particular screen can be omitted from the final design, a set of PSD mockups will do. Needless to say, this is a lot of moving pieces. Effective user studies are rigorous, and rather expensive to pull off as a result. If you cut corners, you may second-guess your results and need to run another study to be sure.

Self-Evaluation

That's what user testing is. Now, ask yourself the following questions:

- Do you conduct user tests?
- Are they a regular part of your practice?
- Would you like to do more of them?
- What's keeping you from doing more of them?

I ask these questions often. It's amazing how few of us do user testing with any consistency, myself included. Everyone wishes they did more of it. That's both a problem and an opportunity.

User Testing In An Agile World

The agile mantra is "fail fast, fail early". The faster you fail, the faster you'll converge on the right solution. This equates to a lot of tight iterations. Agile teams traditionally have two-week sprints, with the goal of releasing a running (read: testable) build at the end of each sprint.

Great, right? The problem is that this leaves very little time to validate a design, summarize the results, and do just-in-time design for the next iteration. Recruiting can take a week in itself, to say nothing of the testing.

And that's not tenable. At most, you'll have a few days to get some actionable insights before the next iteration starts. How might we solve this problem?

Let's make a few assumptions:

- Five iterations from the start to the end of the design process.
- Five participants in each user test (25 participants for all iterations).
- Four designs in flight simultaneously (five iterations each, 100 participants in total).

One way to solve the problem of getting out in front is to validate multiple iterations before any software is built. Not every design needs a live-code prototype to validate it. Sometimes, a clickable Balsamiq PDF is enough. Now, we've shifted the problem. The number of design iterations (and the number of test participants) is the same as before, but you can get a lot further before engineering starts building anything. You just need a lot of participants, fast.

User Testing At Conferences

Unless you're lucky enough to design a product that millions of people use, recruiting can be a challenge. Since I design software for system administrators, the best place to get qualitative feedback in a matter of days is at an IT conference.

The basic steps are:

1. Pick a conference
2. Write some studies
3. Set up your booth

4. Analyze the results (in real time)
5. Iterate on the design
6. Rinse and repeat

   Obviously, you'll need help, so bring some volunteers with you. Also, don't expect to nail this the first time you try it. Give yourself a chance to make mistakes and learn from them.

Conferences: the best place to conduct a lot of user tests in a very short amount of time. (Image: LeWeb[107])

The number of times you can iterate depends on what you're learning. If you're learning a lot, keep going. If you're running into tool limitations, it might be time to

107. https://www.flickr.com/photos/leweb3/6498827487/

stop and have your development team build you a live-code prototype.

Bonus: if you have software development skills, you might be able to build a prototype yourself. Better yet, bring some developers with you.

Disclaimer: I've done conference-based user testing twice, and haven't entirely nailed these steps (even though we've made great strides in the right direction). It might take a few tries to get it right.

Attempt #1: PuppetConf 2012

Once a year, Puppet Labs hosts PuppetConf, a tech conference for IT professionals. In 2012, it was held at the Mission Bay Conference Center in San Francisco and 750 people attended.

Mission Bay Conference Center at UCSF, the site of our 2012 user testing. (Image: Greentech Media[108])

Two of us prepared five studies and set up three user testing stations in a high-traffic hallway. Each user testing station consisted of a laptop, a stack of test scripts and NDAs, and a volunteer to help facilitate the tests. We had about 16 volunteers, and ran 50 user tests.

This was a great experience, but we didn't get much actionable research out of it. Our focus was on data gathering. We didn't bother to analyze that data until weeks after the conference, which meant it had gathered dust. In addition, the things we tested weren't on our product roadmap, so the research wasn't timely anyway.

Attempt #2: PuppetConf 2013

In 2013, we repeated our user testing experiment. That year, it was held in the Fairmont San Francisco hotel and 1,200 people attended.

Five of us prepared six studies and set up three user testing stations in a room adjacent to a high-traffic hallway. We added dedicated lapel mics and three-ring binders to keep our scripts organized. With the same number of volunteers (16), we ran almost twice as many user tests (95).

This year was vastly more successful than the previous year. We pulled analysis into the event itself, so we got actionable data more quickly than before.

108. https://www.flickr.com/photos/greentechmedia/5730027311/

Fairmont San Francisco, the site of our 2013 user testing. (Image: Brad Coy[109])

Unfortunately, we didn't go the extra step of iterating on what we learned during the conference. Our product wasn't affected until months later. It was a step in the right direction, but too slow to be considered agile.

What Did We Learn?

In 2012, we made a large number of mistakes, but we learned from those mistakes, improved our tests and testing process, and doubled both the quality and quantity of the tests in 2013. So, don't be afraid of failing. A poor user testing experience will only help you learn and improve for next time.

109. https://www.flickr.com/photos/bradfordcoy/4400862442/

Here are some of my observations from those experiences.

CONFERENCES LET YOU CUT THE FAT OUT OF RECRUITING

Recruiting is very time-consuming. We have a full-time position on our research team at Puppet for that very purpose. But at conferences, people are already present and willing to engage with you. All you need to do is show up.

In a typical user study, we send out a screener email to 50–100 people in our testing pool. A lot of people won't respond, and of those who do, only some will meet the requirements for the test. It takes time to get enough valid responses, and sometimes we have to widen the net, which takes more time.

CONFERENCES LET YOU VALIDATE YOUR ENTIRE ROADMAP

In both years we had more interest in testing than we could facilitate. In 2013, the 95 participants who tested with us were far more than we needed.

If you decide to conduct self-guided, quantitative usability tests, you can run even more tests. In 2014, our research team had over 200 people take a *single usability test*.

CONFERENCES ARE CHAOTIC, BUT PROCESS CAN HELP

In 2012, we had a simple four-stage process: greet, recruit, test, and swag.

1. **Greet**
   Every time someone came to our booth, we had a greeter volunteer who said Hi and told them what we were doing.

2. **Recruit**
   Next, we asked if they wanted to join our Puppet Test Pilot pool for testing opportunities throughout the year. If so, we scanned their badge.

3. **Test**
   If we had a test station available, we asked if they wanted to take a 15–20 minute user test. If so, the greeter introduced the participant to a facilitator at one of the stations.

4. **Swag**
   At the end of the testing, we thanked each participant, and gave them a limited edition T-shirt and a signed copy of Pro Puppet.

This process worked well, but there were a couple of obvious holes. First, we didn't have a good screening process, so there was no guarantee that a participant was a good match for the tests. Second, we didn't have a plan to quickly learn from the tests and act accordingly (see: agile).

To correct these shortcomings, we introduced two additional steps in our 2013 testing process: greet, recruit, *screen*, test, swag and *analyze*.

- **Screen**
  At the beginning of the testing process, the facilitator

asked the participant six questions, one for each user test. If the answer was yes, we knew they'd be a good match for the test.

- **Analyze**
  At the end of the testing process, the facilitator filled out a short form. Each user test was allocated a text field, with the study hypotheses alongside. The facilitator entered their notes, and marked the validity of each hypothesis.

CONFERENCES ALLOW YOUR COMPETITORS TO SNOOP

We used NDAs to counteract this. As an unintended side-effect, they made the testing seem more exclusive and special, so participants were eager to sign them.

In 2013, we switched from paper to digital forms, via DocuSign. From a logistical standpoint, this was a great move. We didn't have to keep track of loose stacks of paper after the conference. On the other hand, the signing workflow was rather cumbersome. People had to sign their initials three times and click multiple times to complete the NDA.

CONFERENCES ARE A GREAT WAY TO BUILD USER EMPATHY

Ultimately, user testing is about people, not testing. Both years, we recruited volunteers from non-UX departments within the company: engineering, product, marketing, and sales. It was great to give these people an opportunity to engage with our users over real problems.

And it goes both ways. People love to talk about their job, their pain points, and how your product or service falls short of easing that pain. No, anecdotal data isn't terribly useful in a design context, but it can help you build a mental model of real-world problems.

CONFERENCES + USER TESTING IS A SCARY COMBINATION

As I mentioned, we recruited volunteers from non-UX teams. Many of those volunteers had never conducted user tests before. It was a nerve-wracking experience for many of them.

In 2013, we instituted a training process to get our volunteers up to speed more quickly. To do this, we instituted a series of training meetings.

In the first meeting, we got everyone in the same room and talked through the testing process and the tests at a high level. Next, we broke up into small groups of two or three people apiece. In these groups, we had volunteers practice facilitating the tests with each other. The test author attended these as well, to spot areas in need of improvement or clarification.

If our volunteers were still nervous about the prospect of user testing, we met with them personally. In some cases, we convinced them to push forward and run user tests anyway. In other cases, we moved them to a less demanding role, usually the role of a greeter.

CONFERENCES ARE A BLACK HOLE FOR DATA

In the first year, one of our three test laptops was mysteriously wiped of data. The second year, two of our laptops were stolen. We lost all of the test recordings on those machines.

The silver lining was the post-test analysis we did in 2013. Because our facilitators took such rigorous notes, and saved those notes to the cloud, we retained the data, even though the actual recordings were lost.

PROCESS IS KING, BUT ORGANIZATION IS QUEEN

Keeping things digital as much as possible helps. If you must use paper, don't use manilla folders. Instead, use three-ring binders with labels to keep your papers collated.

On the digital side of things, consider having a single folder where all conference-related documents and data live. Use tools like Dropbox or Box to keep everything synchronized across machines. Having local copies is critical, in case the network goes down, which it probably will.

USE RETROSPECTIVES TO LEARN AND IMPROVE

After the conference, hold a meeting with the core testing team. For the first five or ten minutes, write ideas on sticky notes. These ideas should take the form of things to stop doing, keep doing, or try doing. Put these stickies on a whiteboard, under the appropriate column (keep, stop, or try).

Once everyone runs out of ideas, pick a volunteer. This person groups the stickies by theme (e.g. "communication", "process", "people"). Ideally, everything boils down to three to five groups. For each group, find an actionable way to improve that area, then assign each action item to a member of the group. It becomes that person's responsibility to own it.

Should You Add Conferences To Your Toolbox?

Having done this a couple of times, it's clear that there are pros and cons. No user testing tool or technique is a cure-all, and conference-based testing is no exception.

PROS

- **Lots of participants**
  Hundreds at a small conference, thousands at a medium conference, tens of thousands at a large conference. Take your pick.
- **Easy recruiting**
  Build it and they will come. It helps if you point your laptops into the room, and have the designs clearly displayed on their screens.
- **Enables rapid iteration**
  You can easily complete five or six tests in an hour or two. Faster if you have multiple test stations.

CONS

- **Chaotic testing environment**
  You know those quiet usability testing rooms with the mirrored glass? You won't find those at a conference.

- **Travel required**
  Unless you're lucky enough to have a relevant conference in your city, you'll probably need to fly somewhere. This can be expensive.

- **Difficult timing**
  Remember those roadmaps I mentioned earlier? If the design phase doesn't line up with a conference, find a different way to get the research you need.

In general, this approach works well when you have a predictable product roadmap. If you know what you're going to be building, and when, you can time the design phase to coincide with one or more conferences.

On the other hand, if you need the flexibility to run tests at a moment's notice, this approach won't work well. In that situation, I recommend having a dedicated room for testing at your company, containing all the equipment you'll need.

Tips To Make This Work For You

If you've read this far and think conference-based user testing is right for you, great! Here are some tips to help you succeed.

- **Pick a conference five months in advance**
  You don't have to know exactly what you'll be testing, but it's a good idea to have a target date and venue in mind, so you can start thinking about it.

- **Pick a conference with people who don't know you exist**
  Because we ran testing at our own conferences, everybody knew about us. This self-selection bias prevented us from getting a good cross-sample of our potential market.

- **Don't pick a booth in the busiest hallway**
  As tempting as it might be to get maximum visibility, ask youself if the additional chaos is worth it. In 2013, we picked a booth in a room separated by a half wall from a busy hallway. As a result, we had good visibility without being in the middle of the chaos.

- **Don't write every study yourself**
  The first year, I wrote four of the five user studies. As a result, they were difficult to facilitate and didn't result in actionable data. It's time consuming to write a good user test that validates your hypotheses and is easy to facilitate.

- **Don't schedule people in advance**
  When your testing stations fill up, it's tempting to start a waiting list. Don't do that. You'll become beholden to the list and have to turn people away, even when there appear to be empty test stations. Be serendipitous about it.

- **Practice running each test on each machine before the conference**
  Murphy's law. Need I say more?

- **Go forth and user test**
  The only thing worse than a poor user testing experience is not doing it at all. If you fail, at least you'll learn how to do it better next time. If you don't do anything, you've learned nothing.

And that's it. If you have any questions, please get in touch through Twitter. Thank you for reading.

Resources

When I first proposed conference-based user testing to my team, I was an intern straight out of school. If I could pull this off, so can you. If you're still intimidated, start small. You can grow your efforts, but you have to start somewhere.

Here are some of the resources we used in testing:

TOOLS

- DocuSign[110] for e-signing of NDAs
- Silverback[111] for recording user tests

110. http://www.docusign.com
111. http://www.silverbackapp.com

ARTICLES AND EXAMPLES

- Everything written by Jakob Nielsen[112]
- Puppet Labs' signup form for Puppet Test Pilots[113]

Since doing this, I've learned of others who have done user testing at events. Here's a list of articles with slightly different takes on the process:

- User Testing in the Wild: Research at Conferences and Other Events[114]
- 5 Considerations for User Testing at Events[115]
- Get Out of the Lab! Run Live User Testing for Omnichannel. We Dare You.[116]
- 2 Days, 200 Customers, and Conclusive Results: The New User Testing[117]
- Usability Testing at Conferences[118] ❧

112. http://www.nngroup.com/topic/user-testing/
113. https://puppetlabs.com/community/puppet-test-pilots-program
114. https://www.gv.com/lib/user-testing-in-the-wild-research-at-conferences-and-other-events
115. https://www.youeye.com/blog/user-testing-at-events/
116. http://joylab.co.uk/blog/run-live-user-testing-we-dare-you/
117. https://blogs.atlassian.com/2014/10/user-testing-atlassian-summit/
118. http://web.archive.org/web/20090321153629/http://www.dexodesign.com/2007/07/29/usability-testing-at-conferences/

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119. http://eightbitstudios.com/
120. http://school.admci.org/
121. http://www.amazon.com/gp/product/0321815386/ref=as_li_tf_tl
122. http://www.amazon.com/gp/product/0321934040/ref=as_li_tf_tl
123. http://www.twitter.com/chanan
124. http://www.twitter.com/TheNextUX

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137. http://www.twitter.com/boagworld
138. http://www.twitter.com/MoGoltz

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