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# Meta-Data

## Lesson Goals

* Students will understand the focus of HCI on tasks rather than merely tools.
* Students will understand the scope of a task.
* Students will understand the notions of usefulness and usability.
* Students will understand the different views on a person’s role in a system.
* Students will understand the existence of user experience at the group and societal level.

## Lesson Outcomes

* Students will be able to identify a task at the proper scope.
* Students will be able to describe the different views of the user in different human-computer systems.
* Students will be able to describe how the different views influence interface design.
* Students will be able to describe the effects of interface design at the group and societal level.

## Assessments

* Students will reflect on their experience being treated by interfaces as the different view of the users.
* Students will reflect on the application of the lesson’s concepts to their chosen area of HCI.
* Students will engage in a short design task based on the lesson’s concepts.
* Students will complete a short answer assignment in which they (a) critique a provided interface, (b) select an interface to critique, and (c) design a revision of one of the critiqued interfaces.

## Lesson Plan

* Students will first be introduced to HCI’s emphasis on tasks, not interfaces or tools.
* Students will then be introduced to the three views of the human in a human-computer system, focusing on how the predictor and participant views emphasize task design over interface design.
* The participant view of the user will then be used to explain user experience at the individual, group, and societal levels.

# Script

## 2.1.1 Introduction to Design Principles

### 2.1.1.1 Headshot Studio

* [C] David talking
* [A] Lesson clips playing
* For this portion of our conversation about human-computer interaction, we’re going to talk about some established **principles** that we’ve uncovered after decades of designing user interfaces.
* We want to understand the fundamental building blocks of HCI.
* [B] Coming later: Unit 3: HCI Methods
* Then, separately, we’ll talk about how to build on these foundations to do new **research** and development in HCI.
* To get started, though, let’s first define some of the overarching ideas of design principles.
* [B] Topic; Focusing on the task
* In this lesson, we’re going to talk about the way we **focus** on users and tasks in HCI, not on tools and interfaces on their own.
* [B] Topic; Role of the interface in mediating users and tasks
* We’re going to talk about the role of the **interface**, and how it mediates between the user and the task.
* [B] Topic; The role of the user: Processor? Predictor? Participant?
* We’re going to discuss different **views** on the user’s role in this system.
* [B] Topic; User experience at multiple levels
* We’re going to talk about **user** experience more generally, and how it exists at several different levels.
* Along the way, we’ll tackle some design challenges, reflect on our own experiences, and try to apply what we learn to the broader field of HCI.

## 2.1.1A Interfaces: Between Users and Tasks

### 2.1.1A.1 Tablet Studio

* [V] Feedback cycle diagram from 1.1
* At the heart of human-computer interaction is the idea that users use interfaces to accomplish some task.
* Generally, that interface wouldn’t have to be technological -- this cycle exists for things like using pencils to write or using a steering wheel to drive a car.
* But in HCI, we’re going to focus on interfaces that are in some way computational or computerized.
* What’s most important here is that our focus is on the user and the task, not the user and the interface.
* We’re designing interfaces, sure, but to design a good interface, we need to understand both the user’s goals and the task they’re trying to accomplish.
* [V] Visual of a thermostat on the left
* Understanding the task is very important -- one of the mistakes many novice designers make is jumping too quickly to the interface without understanding the task.
* For example, think about designing a new thermostat: if you focus on the interface, the thermostat itself, you’re going to focus on things like the buttons and the screen layout.
* [V] Nest thermostat
* But the *task* is controlling the temperature in an area. When you think about the task rather than just the interface, you think of things like the Nest, which tries to learn to act more autonomously.

## 2.1.2 Identifying a Task

### 2.1.2.1 Headshot Studio

* [C] David talking
* Let’s try identifying a task real quick.
* We’re going to watch a short clip of Morgan.
* Watch what she does, and then identify what task she was performing.

### 2.1.2.2 David’s House (Breakfast Room)

* [C] Morgan at the counter
* Morgan purchases something and swipes her credit card

### 2.1.2.3 Headshot Studio

* [C] David talking
* What was the task in that clip?

### 2.1.2.4 Exercise

* [V] “What was the task Morgan was performing?”
* [V] (box for answer)

### 2.1.2.5 Headshot Studio

* [C] David talking
* [A] Clip of Morgan buying something
* If you said she’s swiping her credit card, then you’re thinking a little too narrowly.
* Swiping her credit card is just how she accomplishes her task.
* We’re interested in something more like: she’s taking a purchase. She’s purchasing an item. She’s exchanging goods.
* Those all put our emphasis on the actual task she’s accomplishing, and let us think more generally about how we can make that interface better.

## 2.1.3 5 Tips: Identifying a Task

### 2.1.3.1 Headshot Studio

* [C] David talking
* Here are five quick tips for identifying a user task.
* [B] 1. Watch real users.
* **1. Watch real users.** Instead just speculating or brainstorming, get out there and watch real users performing in the area in which you’re interested.
* [B] 2. Talk to them!
* **2. Talk to them!** You don’t have to just watch them. Recruit some participants to come perform the task and talk their way through it. Find out what they’re thinking, what their goals are, what their motives are.
* [B] 3. Start small.
* **3. Start small.** Start by looking at the individual little interactions. It’s tempting to come in believing you already understand the task, but if you do, you’ll interpret everything you see in terms of what you already believe. Instead, start by looking at the smallest operators the user performs.
* [B] 4. Abstract up.
* **4. Abstract up.** Working from those smaller observations, then try to abstract up to an understanding of the task they’re trying to complete. Keep asking why they’re performing these actions until you get beyond the scope of your design. For example: what is Morgan doing? Swiping a credit card. Why? To make a purchase. Why? To acquire some goods. Why? To repair her car. Somewhere in that sequence is likely the task for which we want to design.
* [B] 5. You are not your user.
* **5. You are not your user.** Even if you yourself perform the task for which you’re designing, you’re not designing for you: you’re designing for everyone that performs the task. So, leave behind your own previous experiences and preconceived notions about it.
* These five quick tips come up a lot in the methods unit of HCI. HCI research methods are largely about understanding users, their motivations, and their tasks.
* So, we’ll talk much more about this later, but it’s good to keep in mind now.

## 2.1.4 Usefulness and Usability

### 2.1.4.1 David’s House (Car)

* [C] David talking, sitting in the driver’s seat
* [B] Goals of HCI: usefulness and usability
* The ultimate goal of design in HCI is to create interfaces that are both **useful** and usable.
* Useful means that the interface allows the user to achieve some task.
* But usefulness is a pretty low bar.
* <David holds up a paper-folded map>
* For example, a map is useful in finding your way from one place to another, but it isn’t the most usable thing in the world.
* You have to keep track of where you are, you have to plot your own route, and you have to do this while also driving the car.
* So before GPS navigation, people would often manually write down turns before they actually started driving somewhere they hadn’t been before.
* So, our big concern is usability.
* <David holds up a navigation app>
* And that’s where we get things like navigation apps.
* Notice how we have to focus on understanding the task when we’re performing design.
* If we set out to design a better map, we probably wouldn’t have ended up with this navigation app.
* [B] Definition; Cognitive load: the total mental effort being used in working memory
* It was through understanding the task of navigation itself that we realized we could offload a lot of the cognitive load of navigation onto an interface, closing the loop between the user and the task of navigation.

## 2.1.5 Exploring HCI: HCI Principles

### 2.1.5.1 Headshot Studio

* [C] David talking
* At the beginning, we asked you to choose an area of HCI that you want to keep in mind as you go through this class.
* So, pause for a moment and reflect on that area.
* First, what does usefulness look like in the area that you chose? What are the fundamental things the user might need to accomplish?
* Second, what does usability look like in that area? How can you make the user experience more efficiency, or more satisfying, or just more enjoyable?
* For me, my passion is for educational technology, and that’s a place where usability has a unique importance.
* Very sadly, education is not a well-loved endeavor for many students. For many, school and homework have negative connotations.
* In creating educational technology, we’re fighting against that negative perception.
* Usability, however, can help us combat that. If we create interfaces that are actually pleasant and enjoyable to use, we can help students enjoy the learning process again.
* And more generally, that reflects the need to design for multiple stakeholders.
* Teachers and administrators may be the ones to decide to use our tools, but students are the ones that actually use them. So, we have to keep all these different stakeholders in mind.
* We explore that more when we talk about HCI research methods.

## 2.1.6 Views of the User: Processor

### 2.1.6.1 Tablet Studio

* [V] Feedback cycle diagram from 1.1
* In looking at human-computer interaction, it’s important that we understand what role we expect the human to play in the system.
* [V] Headings for ‘processor’, ‘predictor’, and ‘participant’ come up. They can be symbolized by icons as well. For ‘processor’, it could be a brain with arrows pointing into and out of it. For ‘predictor’, it could be the same brain, but with a circular arrow inside it. For ‘participant’, it could be three brains with arrows pointing between/amongst them.
* Let’s talk about three different possible types of roles humans can play: processor, predictor, and participant.
* [V] Show just ‘processor’ heading and icon on the left
* First, we might think of the human being as nothing more than a sensory processor.
* They take input in, and they spit output out.
* They’re like another computer in the system, just one that we can’t see inside of.
* [V] “**Interface must** fit within human limits.” appears on top right
* In this case, ‘usability’ means that the interface is physically usable.
* The user can see all the colors, touch all the buttons, etc.
* [V] “**Evaluated by** quantitative experiments.” appears on bottom right
* We then evaluate this simply by measuring user interaction quantitatively.
* How long does it take them to execute a task? How quickly can they react?
* [V] Text on right disappears
* Now, as you might have guessed, the processor view is not the one we’ll generally take when we talk about good design.
* Instead, we’ll probably divide our time somewhat equally between the other two paradigms.

## 2.1.7 Views of the User: Predictor

### 2.1.7.1 Tablet Studio

* [V] ‘Predictor’ heading and icon appear on the left
* A second way of viewing the human is to view them as a predictor.
* Here, we care deeply about the human’s knowledge, experience, expectations, and thought process.
* That’s why we call them the predictor: we want them to be able to predict what the outcome will be for some input, and thus choose the input that will cause the desired output.
* We want to understand what is going on in their head as they perform some task, and create interfaces to make that task easier.
* [V] “**Interface must** fit with knowledge” appears on top right
* In this case, the interface must be designed with the user’s knowledge in mind.
* It must help the user learn what they do not already know, as well as efficiently leverage what they do already know.
* [V] “**Evaluated by** qualitative studies” appears on the bottom right
* Toward that end, we’ll generally evaluate these through qualitative studies.
* [B] Definition; Ex situ: in a controlled or otherwise inauthentic environment
* These are often **ex situ** studies.
* We might perform task analyses to see where users are spending their time, or perform cognitive walkthroughs to understand the user’s thought process throughout the task.
* [V] Text on the right disappears.
* We can see pretty clearly that this view gives us an advantage over viewing the user simply as a sensory processor, another computer in the system.
* However, we’re still here focus on one individual interacting with one task.
* Sometimes that’s useful, but many times we want to look even more broadly than that.

## 2.1.8 Views of the User: Participant

### 2.1.8.1 Tablet Studio

* [V] ‘Participant’ appears on the left with icon
* A third view on the user is to look at the user as a participant in some environment.
* That means we’re not just interested in what’s going on inside the user’s head; we’re interested in what’s going on around them at the time as well.
* For example, what is competing for their attention? What are their available cognitive resources? What is the importance of the task relative to everything else going on?
* [V] “**Interface must** fit with the context” appears on the top right
* In this view, the interface cannot just accomplish a task when analyzed in a vacuum; it must meet the needs of the context in which it is used.
* [B] Definition; In situ: within the authentic context.
* [V] “**Evaluated by** *in situ* studies” appears on the bottom left.
* So to evaluate this, we can’t simply look at the user and the interface.
* We have to actually view and evaluate them in the real world, using the interface in the context where it is most relevant.
* These are in situ studies, studies of the interface and the user within the real, complete context of the task.

## 2.1.8A Views of the User and Psychological Schools of Thought

### 2.1.8A.1 Tablet Studio

* [V] Icons for three views of the user appear
* So where did these different views of the user come from? To find that, we actually need to trace HCI back to its roots in psychology.
* [V] Predictor and participant disappear, behaviorism appears below processor
* The processor view of the user goes back to the behaviorist school of thought in psychology.
* Behaviorism was the dominant school of thought in psychology throughout the late 19th century. It aimed to provide a systematic way of investigating behaviors in humans and other animals.
* [V] Images emblematic of behaviorism appear
* It was established largely by John B. Watson, a psychologist at Columbia University that insisted psychology focus only on observable behavior, not introspection.
* John B. Watson himself was responsible for the Little Albert experiment, where a little boy was conditioned to be afraid of rabbits as they were repeatedly paired with loud noises.
* You might be familiar with some of the big names in behaviorism: Pavlov’s dogs gave us classical conditioning, where they would salivate at the sound of a bell, and Skinner’s rats gave us operant conditioning, where rats learned to press a button to get food.
* The important takeaway from this is that behaviorism focuses on observable behaviors and outcomes. It attempts to understand behavior by looking only at behavior, not at the cognition that underlies behavior: thus the name ‘behaviorism’.
* In HCI, this means looking at what designs create the right behaviors without paying a lot of attention to why.
* If we view the user as a ‘processor’, then our design process focuses on testing observable behaviors.
* [V] Processor disappears, predictor appears with cognitivism below it
* The predictor view of the user goes back to the next major school of thought in psychology: cognitivism or cognitive psychology.
* Where behaviorism was only concerned with what we could observe, cognitivism is concerned with what goes on inside the mind.
* This covers a lot: things like perception, attention, memory, and creativity all occur inside the mind.
* Cognitivism started out as more of a philosophical endeavor: philosophers like Rene Descartes and Immanuel Kant touched on questions like whether knowledge as in-born or developed solely by experience.
* But it wasn’t until the “cognitive revolution” of the 1950s that cognitivism really emerged as a foil to behaviorism, and then it was such a radical departure that in many places, you still see cognitive science classified as a different field entirely from psychology.
* Interestingly, this shift came in large part from the work of scientists working in artificial intelligence and computer science, as well as neuroscience and other areas with applicability to psychology that didn’t fall more squarely within its walls.
* Some of the big names in cognitivism are the linguist Noam Chomsky and the psychologist Susan Carey, but also several computer scientists: John McCarthy, Mavin Minsky, Allen Newell, and Herbert Simon -- many of which are names that might be familiar if you’ve read about classical AI.
* For us here in HCI, the key here is that we care about what the user is *thinking*. We call this the ‘predictor’ model because predicting is a mental process, and we want to know what the user is predicting: “What do they predict the outcome of that action will be? What do they predict is the right action to take next?”
* Notice that the *user* is doing the predicting, not the interface. We want to get inside the user’s head and understand how they predict the interface will behave.
* [V] Predictor disappears, participant appears
* While behaviorism and cognitivism are well-established schools of thought in psychology, the participant view is a little more nascent.
* It resembles the functionalism school of thought in psychology, which emphasizes examining mental behaviors in the context of broader environments.
* It also resembles systems psychology, which emphasizes human behavior within complex systems.
* But in both places, the coupling between the participant view of the user and the psychological community is less well-defined. In our work, the participant view largely comes out of original research in HCI and human factors engineering.
* The important thing here is that while the processor and predictor views emphasize only the interaction of the user with an interface, the participant view also looks at the interaction of both within the broader context of an environment in which they are situated.
* This model views the user and the interface as participants within a larger complex system.
* So, any time you’re looking beyond just the user and the interface, you’re likely adopting the participant view in some way. We’ll talk a lot more about this when we reach our lesson on distributed cognition.
* [V] Three models with their analogues appear
* This has been a super-quick recap of these three schools of thought in psychology -- there are entire classes available that focus exclusively on each of these. So, if you want to learn more, you should check out some of the links we’ve provided below.

## 2.1.8B Designing with the Three Views

### 2.1.8B.1 Tablet Studio

* [V] Left, a picture of the Tesla navigation screen
* To better understand how we might use these three views, let’s see how we might apply them to a design challenge.
* Here we have the address entry screen on Tesla’s Model S.
* Let’s imagine we’re trying to redesign it such that the user can enter the address of their target destination more quickly.
* [V] Processor model icon appears
* With the processor model, we’re strictly looking at the user’s observable behavior. So, we might construct a controlled study where we bring participants in, give them addresses to enter, and time them on different versions of our interface.
* Whichever interface has the fastest times would be the interface we might want to go with.
* [V] Pros start to appear
* Note a couple benefits here: one, because we’re not actually *talking* to our users, we might be able do this research within the data. We could just pull the data from thousands of times when users started to enter new addresses and find the average time.
* Note also this lets us compare against highly disparate interfaces. We could time the voice interface and the text interface.
* [V] Cons start to appear
* However, there are drawbacks. While this tells us what interface performs better, it doesn’t tell us why. There may be really obvious further enhancements we could make that we wouldn’t know about.
* This model also can’t differentiate based on expertise. It targets only experts who already know what to do and just need to be able to do it more easily.
* So, the processor model often thrives when we’re optimizing things for expert users, but it struggles when we’re dealing with novices or larger-scale modifications.
* [V] Predictor model icon appears
* If we shift to the predictor model, then we’re going to actually start asking our users for input. We could bring them in for interviews, conduct focus groups, or send out surveys.
* We could also show them prototypes for new interfaces and have them describe their thought process while trying to interact with them.
* We might find some simple changes that we wouldn’t have stumbled upon on our own, like issues surrounding button size.
* We might also find some information about why users choose different interfaces at different times; for example, users might prefer the voice interface while driving, but text while parked.
* So, the big advantage here is that we gather more robust data.
* Additionally, this model allows us to target novices as well as experts. Novices are typically engaged in more conscious thought, which means more conscious prediction. Experts tend to be interacting subconsciously.
* However, as before, there are drawbacks.
* One big risk is that it relies on users being accurate reporters of their own experiences, and studies show that they aren’t. Users often don’t know what they like or dislike, or why they struggle with an interface.
* Similarly, when users think out loud while using an interface or prototype, that process of thinking aloud often changes the way they interact with the interface.
* Second, in these instances we’re often investigating the interface in a vacuum: we’re not looking at the context in which the interface is used. So, situational factors don’t come up.
* Imagine we had an interface where if the user stops entering an address for 5 seconds, it quits and returns to the map. In a controlled lab setting, that probably would be fine. However, on the actual road, a user might start entering an address at a red light, then finish it at the next red light.
* So, the predictor model suffers from a lack of awareness of context.
* [V] Participant model icon appears
* That’s where the participant model comes in.
* With the participant model, we view the interface in the actual context in which it is used.
* We want to look at the user and the interface as participants in a broader complex system.
* [V] Pros start to appear
* The benefits there are obvious: we get even more complete data on the strengths and weaknesses of the interface.
* However, there are significant drawbacks as well.
* One, the nature of this model is that it’s usually only usable with real working interfaces.
* When we discuss prototyping, we talk about low-fidelity ways of prototyping new interfaces, like drawing them on paper -- but it’s far tougher to have someone use a non-functional interface in an authentic environment.
* Two, it also becomes more difficult to isolate the effect of our changes. There are too many other variables to control. That’s both the strength and the weakness of the participant model.
* [V] Tesla screen disappears, models reappear with pros and cons
* Hopefully you’ll notice that the pros of some of these models address the cons of others.
* The processor view doesn’t give us much insight into novices, but the predictor model does.
* The predictor model doesn’t let us compare interfaces very objectively, but the processor model does.
* Neither the processor nor the predictor models take into consideration context, but the participant model does.
* The participant model is difficult to use with non-functional interfaces, but the predictor model can be.
* The participant model doesn’t isolate variables very well, but the processor model does.
* So the major takeaway here is that we’ll likely use all these models at different times and in different contexts, and the data we gather from one will inform interface changes that might be tested in another.
* We might start with a participant model where we just ride around with users watching what they do.
* Based on that, we might observe that they spend a lot of time fumbling around to return to the same few locations.
* So, then we might redesign an interface to include some kind of ‘bookmarking’ system, and present it to users in interviews.
* There, they might tell us that they like the design, but further note that they don’t need a long list of bookmarks -- they really only need work and home.
* Based on that, we might then design an interface where a simple swipe takes them to work or home.
* Then, we might test that with users to see how much more efficiently they’re able to start navigation when these kinds of shortcuts are provided.
* The results of each design phase inform the next, and different phases call for different types of evaluation, which echo different models of the user.

## 2.1.9 Good Design, Bad Design

### 2.1.9.1 After Effects

* [A] Good Design, Bad Design Intro
* Good Design: A GPS system that warns you 20 seconds before you need to make a turn
* Bad Design: A GPS system that warns you 2 seconds before you need to make a turn

### 2.1.9.2 David’s House (Car)

* [C] David sitting in driver’s seat
* It sounds funny, but which view you take on the user can have a huge impact on the success of the interface.
* If you view the user just as a sensory processor, you might think that we need only alert the user a second before they need to turn: after all, human reaction time is less than a second.
* If you view the user as a predictor, you understand that they need time to slow the car down and make the turn, so they need a few more seconds to actually execute the action of turning after being alerted about the upcoming turn.
* And if you view the user as a participant, you understand that this is happening while they’re going 50 miles an hour down the road with a screaming toddler in the back seat trying to merge with a driver on a cell phone and another eating a cheeseburger.
* So, they probably should have a couple reminders about the turn, and plenty of time to get in the right position.

## 2.1.10 Reflections: Views of the User

### 2.1.10.1 Headshot Studio

* [C] David talking
* Let’s take a moment to reflect on when you’ve encountered these different views of the user in your history of interacting with computers.
* Try to think of a time when a program, an app, or a device clearly treated you as each of these types of users, for better or for worse.

### 2.1.10.2 Exercise

* [V] When did an interface treat you as a processor?
* [V] (box for answer)
* [V] When did an interface treat you as a predictor?
* [V] (box for answer)
* [V] When did an interface treat you as a participant?
* [V] (box for answer)

### 2.1.10.3 Headshot Studio

* For me, we have a system at Udacity we use to record hours for those of us that work on some contract projects.
* It asks us to enter the number of hours of the day spent on a number of different types of work.
* The problem is that that assumes something closely resembling the processor model.
* A computer can track how long different processes take.
* For me, though, tracking the amount of time spent on different tasks can be borderline impossible.
* Checking my email involves switching between five different tasks a minute. How am I supposed to track that?
* The system doesn’t take into consideration a realistic view of my role in the system.
* Something more similar to the predictor view would be… well, the classroom in which you’re viewing this.
* Surrounding this video are a visual organization of the lesson’s content, a meter measuring your progress through this video, and representations of the video’s transcript.
* These are all meant to equip you with the knowledge to predict what’s coming next.
* This classroom takes the predictor view of the user. It offloads some of your cognitive load onto the interface, allowing you to focus on the material.
* For the third view, I personally would consider my alarm clock an example.
* I use an alarm clock called Sleep.
* It monitors my sleep cycles, rings at the optimal time, and tracks my sleep patterns to make recommendations.
* It understands its role as part of a broader system intended to help me sleep.
* It goes far beyond just interactions between me and an interface: it integrates into the entire system.

## 2.1.11 User Experience, Sans Design

### 2.1.11.1 Tablet Studio

* [V] Feedback cycle diagram from 1.1
* By my definition, user experience design is attempting to create systems that dictate how the user will experience them.
* User experience on its own, however, is a phenomenon that emerges out of interactions between users and tasks via interfaces.
* It goes beyond the simple interaction of the user with the interface to accomplish the task and touches on the emotional, personal, or more experiential elements of the relationship.
* We can build this idea as an expanding understanding of the scope of what defines the ‘user experience’. This visual I’ll use is based on Rosa Arriaga’s lesson on the same topic in her User Experience Design class.
* [V] An ‘individual’ circle appears around the cycle
* For an individual, this is based on things like the individual’s age, sex, race, personal experiences, expectations, and more.
* It goes beyond just designing an interface to help with a task.
* This touches on whether the individual feels like the interface is designed for them.
* It examines whether they’re frustrated by the interface or joyous about it.
* Those are all parts of the user experience.
* [V] A ‘group’ circle appears around the ‘individual’ circle.
* At the group level, we can start to think about how interfaces lead to a different user experience among social or work groups.
* For example, I’ve noticed that high school reunions seem much less important to people who graduated in the past 15 years.
* And I hypothesize it’s because Facebook has played such a significant role in keeping people in touch. It’s fundamentally changed the social user experience.
* [V] A ‘society’ circle appears around the ‘group’ circle.
* Those effects can then scope all the way up to the society level.
* These very often are unintended.
* For example, when Twitter started, I doubt the creators understood the role it would play in societal phenomena like the revolutions of the Arab Spring.
* These are all components of the general user experience that we should think about as we design interfaces.

## 2.1.12 Design Challenge: Morgan on the Street

### 2.1.12.1 Morgan on the Street

* So, keeping in mind everything we’ve talked about, let’s design something for Morgan.
* Morgan walks to work.
* She likes to listen to audiobooks, mostly non-fiction.
* But she doesn’t just want to listen, she wants to be able to take notes and leave bookmarks as well.
* What would designing for her look like from the perspectives of viewing her as a processor, a predictor, and a participant?
* How might these different designs affect the user experience as an individual, in her local group of friends, and in society as a whole if the design caught on?

### 2.1.12.2 Exercise

* [V] ‘Check to complete’ instructions for proceeding

### 2.1.12.3 Headshot Studio

* [C] David talking
* [V] Clips of Morgan
* [B] Processor: what is communicated, when and how.
* As a **processor**, we might simply look at what information is communicated to Morgan, when, and how.
* [B] Predictor: how the interfaces meshes with Morgan’s immediate needs
* As a **predictor**, we might look at instead how the interface meshes with Morgan’s needs with regard to this task: how easy it is to access, how easy the commands are to perform, and so on.
* [B] Participant: how the interface interacts with Morgan’s life as a whole
* As a **participant**, we might look at the broader interactions between this interface and Morgan’s other tasks and social activities. We might look at how increased access to books changes her life in other ways.
* But really, this challenge is too big to address this quickly.
* So instead, let’s return to this challenge throughout our conversations and use it as a running dialog to explore HCI principles and methods.

## 2.1.13 Introduction to Design Principles 2

### 2.1.13.1 Headshot Studio

* [C] David talking
* [A] Video clips appearing
* [B] Topic; Basics of HCI principles
* In this lesson, we’ve covered some of the **basic** things you need to understand before we start talking about design principles
* [B] Topic; Interfaces mediate between users and tasks
* We covered the idea that interfaces **mediate** between users and tasks, and the best interfaces are those that let the user spend as much time thinking about the task as possible.
* [B] Topic; Usability: efficiency and user satisfaction
* We covered the idea of **usability**, and how we have to keep in mind the efficiency and user satisfaction of using an interface.
* [B] Topic; Three views of the user
* We covered three **views** on the user, and how those different views affect how we define usability and evaluation.
* [B] Topic; User experience at group and societal levels
* And we covered how the user experience does not exist just at the user level, but also at **group** and even societal levels.