

EVALUACIÓN CIERRE

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6/23/22

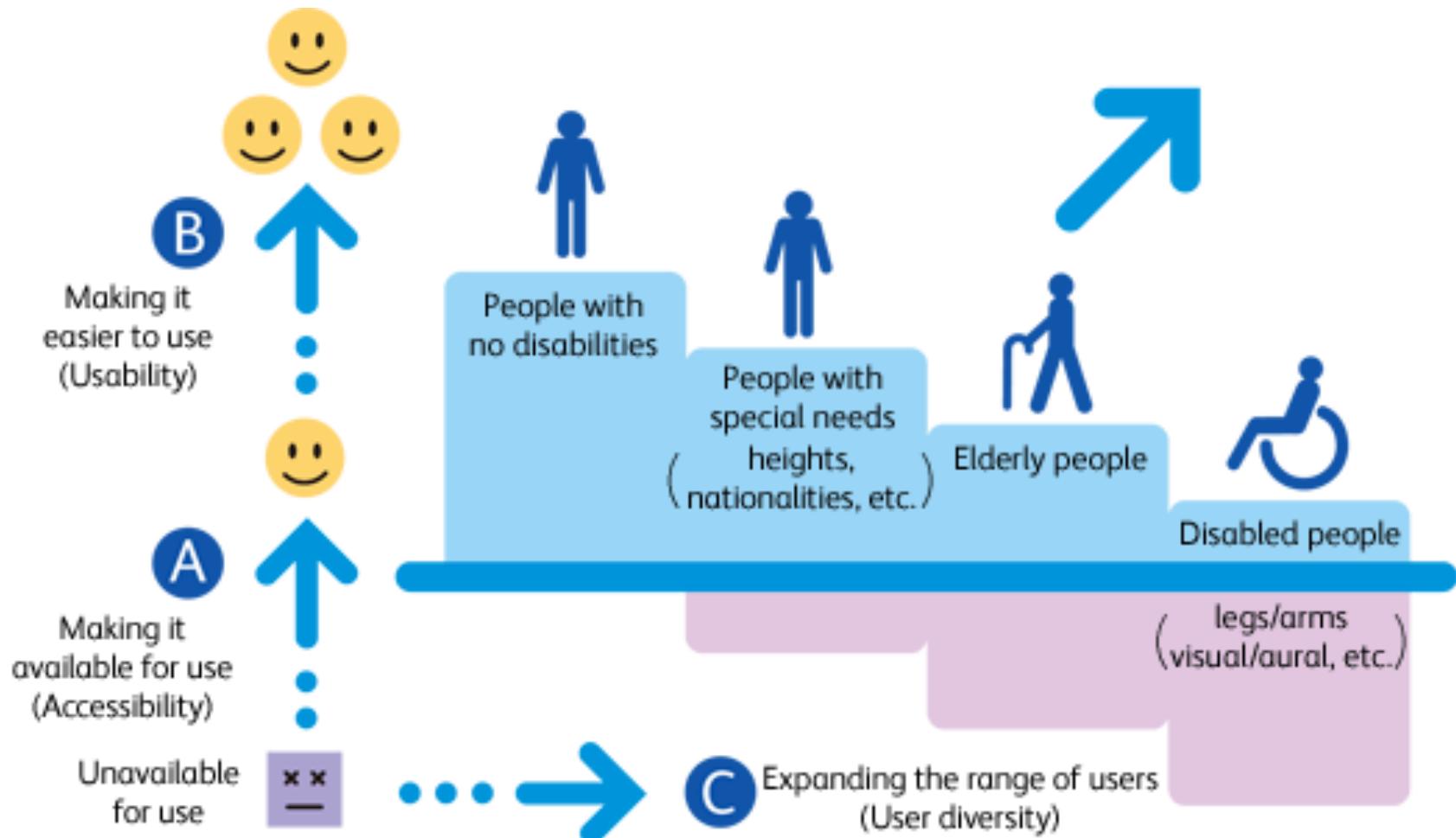
Referencias:

- Research Methods in Human-Computer Interaction. Lazar, Feng and Hochheiser – capítulo 14

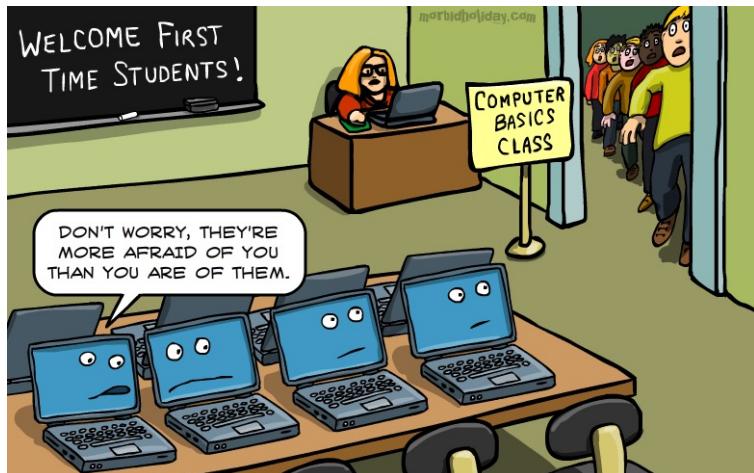
DIVERSIDAD EN USUARIOS



USABILIDAD UNIVERSAL

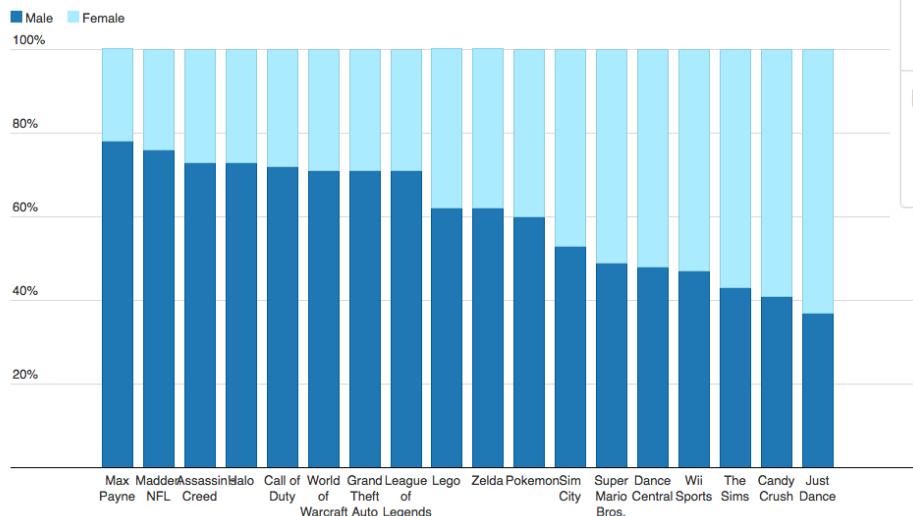


DIFERENCIAS DE EXPERIENCIA, DE PERSONALIDAD, DE GÉNERO



The games men and women play

Popular game franchises, broken down by gender of their players in the U.S., U.K., France and Germany.



Textual summary of your report

The Big Five Factors	Describing a low range scoring person...	Percentile	Range	Describing a high range scoring person...
Openness to experience	Traditionalist • down-to-earth • practical • conservative	4	Very low	Imaginative • open-minded • experimental
Conscientiousness (Work Ethic)	Spontaneous • disorganised • prefers flexible plans	10	Low	Conscientious • disciplined • efficient • well organised
Extraversion	Reserved • formal • serious • quiet	21	Low	Outgoing • friendly • assertive • likes working with others
Agreeableness	Hard-headed • sceptical • competitive • proud	24	Low	Compassionate • eager to please • good natured
Natural reactions	Not easily upset in stressful situations • relaxed	47	Middle	Experiences negative emotional reactions and feelings of anxiety • prone to worry

DIVERSIDAD CULTURAL/INTERNACIONAL

員工的報酬福利問題
在美國一般公司行號對員工之酬勞通常有三種方式：

1、薪資制：最常見之酬勞方式，也是最受員工歡迎。因為員工按時（一月或週薪）有固定帶回家糊口及支付其他支出，公司方面樂於此種方式，因為省時省力容易控制預算及成本支出。管理學上並不鼓勵公司按時（一月或週一）發薪，因為對員工無法發揮鼓舞作用。員工表現好壞無從區別對士氣影響大，通常銷售部門或市場開發部門並不採用此種計酬方式，但一般文書部門人事部門因不涉銷售推廣可採用此種方式。

人事管理的問題

陳英男

投資創業
致富之道



6/23/22

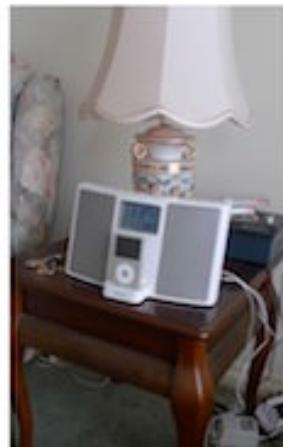
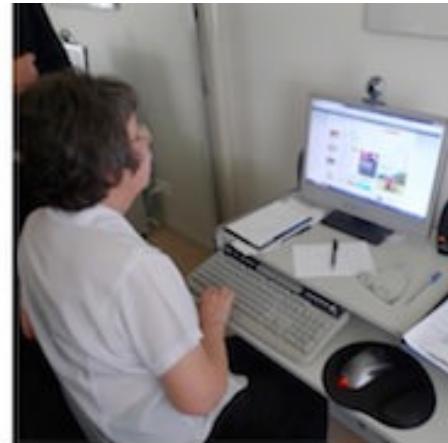
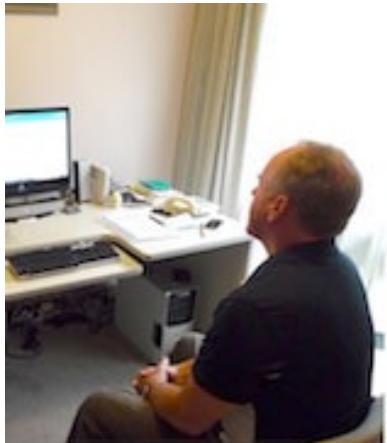


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ADULTOS MAYORES



ADULTOS MAYORES



NIÑOS

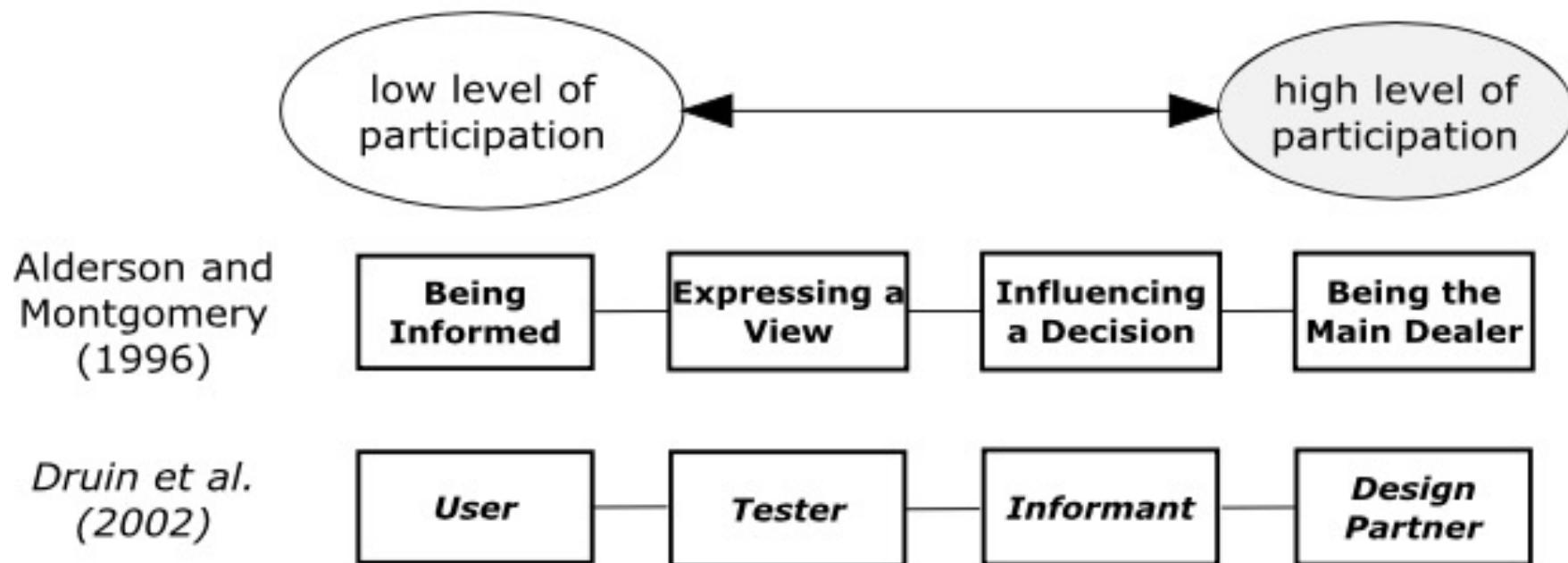


Figure 1: The four levels of participation as discussed in HCI and healthcare

NIÑOS

Method	Potential barriers
<p style="text-align: center;">Cooperative inquiry</p> <p>This is a method used to implement participatory design (PD) theories. Within the method the child should become a co-researcher and designer. PD is a highly iterative approach, where researchers listen to children and collaborate to create low-tech prototypes. There is no direct set practice or time frame [72]</p>	<ol style="list-style-type: none"> 1. Alternative means of gathering responses are required for children presenting communication impairments 2. Need to consider alternative means of developing low-tech prototypes for children with physical disabilities
<p style="text-align: center;">Cooperative evaluation</p> <p>Participants complete evaluation sessions alongside a usability specialist. The participant is encouraged to think aloud during the completion of tasks. The participant is allowed to make mistakes and the usability specialist documents any unexpected behaviour caused by technology as this can identify potential usability problems [105]</p>	<ol style="list-style-type: none"> 1. If used with a computer, relevant accessibility equipment must be in place 2. Alternative means of communication may be required to gather responses of participants with communication impairments
<p style="text-align: center;">Co-discovery</p> <p>The method involves two users working collaboratively on a task that has been set by a usability specialist. The premise for using two users is the promotion of greater natural data regarding the expectations and opinions of the users [106]</p>	<ol style="list-style-type: none"> 1. Working collaboratively requires the adoption of a strategy to account for any physical or communicative disabilities that may impede communication between two children with disabilities
<p style="text-align: center;">Think-aloud protocol</p> <p>Think-aloud methodology involves a participant verbalising their thoughts and opinions regarding a task, product, or software whilst completing tasks on the relevant medium [107]</p>	<ol style="list-style-type: none"> 1. Accessibility equipment needs to be in place 2. Need to determine the verbal competence of participants
<p style="text-align: center;">Peer tutoring</p> <p>Based on an approach that derives from child education, the method involves children teaching other children how to use technology that is being evaluated. In doing so, the process that occurs between the children highlights usability flaws in the technology [108]</p>	<ol style="list-style-type: none"> 1. Need to ensure collaborative work is possible 2. Need to provide accessibility equipment where required

USUARIOS CON DISCAPACIDAD

 WAI: Strategies, guidelines, resources to make the Web accessible to people with disabilities

Web Content Accessibility Guidelines (WCAG) Overview

Web Content Accessibility Guidelines (WCAG) is developed through the [W3C process](#) in cooperation with individuals and organizations around the world, with a goal of providing a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally.

The WCAG documents explain how to make web content more accessible to people with disabilities. Web "content" generally refer to the information in a web page or web application, including:

- natural information such as text, images, and sounds
- code or markup that defines structure, presentation, etc.

Who WCAG is for

WCAG is primarily intended for:

- Web content developers (page authors, site designers, etc.)
- Web authoring tool developers
- Web accessibility evaluation tool developers
- Others who want or need a standard for web accessibility, including for mobile accessibility

Related resources are intended to meet the needs of many different people, including policy makers, managers, researchers, and others.

WCAG is a technical standard, not an introduction to accessibility. For introductory material, see [Where should I start? in the FAQ](#).

What is in WCAG 2.0

WCAG 2.0 is a stable, referenceable technical standard. It has 12 guidelines that are organized under [4 principles: perceivable, operable, understandable, and robust](#). For each guideline, there are testable [success criteria](#), which are at [three levels: A, AA, and AAA](#).

For a short summary of the WCAG 2.0 guidelines, see [WCAG 2.0 at a Glance](#).

To learn about web accessibility principles and guidelines, see [Accessibility Principles](#).

The WCAG 2.0 supporting technical materials include:

- [How to Meet WCAG 2.0: A customizable quick reference to Web Content Accessibility Guidelines 2.0 requirements \(success criteria\) and techniques](#) is essentially the [WCAG 2.0 checklist](#). Most people use this quick references as the main resource for working with WCAG.
- [Techniques for WCAG 2.0](#) gives you specific details on how to develop accessible Web content, such as HTML code examples. The techniques are "informative", that is, you do not have to use them. The basis for determining conformance to WCAG 2.0 is the [success criteria](#) from the WCAG 2.0 standard, not the techniques. Read more in [Techniques in the FAQ](#).
- [Understanding WCAG 2.0](#) has additional guidance on learning and implementing WCAG 2.0 for people who want to understand the guidelines and success criteria more thoroughly.

For more details on how these document are related and how they are linked, see [The WCAG 2.0 Documents](#).

Technical document format

The WCAG, Techniques, and Understanding documents follow the [W3C](#) format for technical reports, which has several sections at the beginning, including links to different versions, editors, abstract, and status.

WCAG 2.0 is ISO/IEC 40500

ISO/IEC 40500 is an ISO standard. ISO/IEC 40500:2017 ISO/IEC 40500 is exactly the same as the original WCAG 2.0, which is introduced above along with the new ISO standard.

NUEVOS TEMAS EN HCI



ALGUNOS DESAFÍOS DEL FUTURO (SEGÚN SCHNEIDERMAN)

Handbook of human needs contemporáneo para guiar e inspirar a diseñadores

Paso de experiencia de usuario a experiencia de comunidad

Mejorar teorías de persuasión

Promover conservación de recursos

Impulsar sistemas de salud

Mejorar diseño de dispositivos médicos

Apoyar estrategias para ‘envejecer bien’

Promover life-long learning

ALGUNOS DESAFÍOS DEL FUTURO (SEGÚN SCHNEIDERMAN)

Mejorar el aprendizaje de nuevas interfaces

Crear nuevos modelos de negocio

Crear nuevos dispositivos de input y output

Acelerar claridad analítica de big data

Mejorar empatía, compasión, y cuidado

Ciberseguridad

Promover reflexión, calma, mindfulness

Aclarar responsabilidades y accountability

ZERO UI

Reconocimiento de Voz/Pensamientos

Personalización (conocer a los usuarios!)

Gestos

Haptic feedback

Glanceability

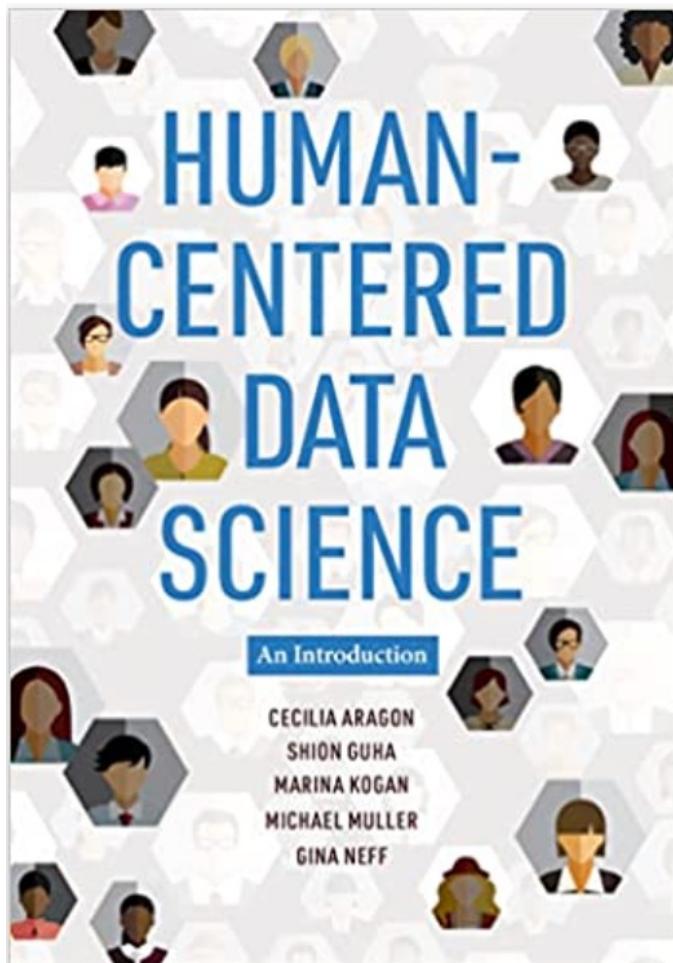
Artificial Intelligence



<https://careerfoundry.com/en/blog/ui-design/what-is-zero-ui/>

Project Soli: <https://www.youtube.com/watch?v=0QNiZfSsPc0&t=144s>

HUMAN-CENTERED DATA SCIENCE (2022)



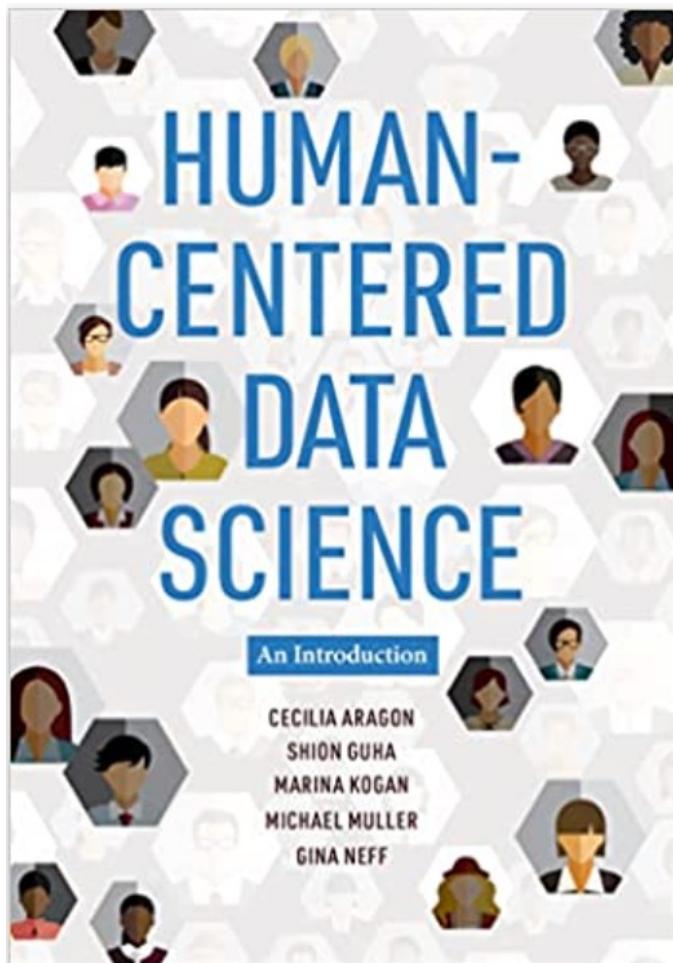
Los algoritmos reflejan decisiones de sus creadores – incluyendo prejuicios (conscientes o inconscientes) (Algorithmic bias)

Consecuencias de los algoritmos en la sociedad

Entender modelos mentales que se usaron para diseñar algoritmos

Understandability para deep learning

HUMAN-CENTERED DATA SCIENCE (2022)



Cómo hacerlo:

Análisis cualitativo para desarrollar mejores algoritmos (eg. Entender bien los requisitos)

Entender temas sociológicos

Combinar trabajo cuantitativo a gran escala con cualitativo a pequeña escala

HUMAN-CENTERED DATA SCIENCE (BIASES)



Bernard Parker, left, was rated high risk; Dylan Fugett was rated low risk. [Josh Ritchie for ProPublica]

Machine Bias

There's software used across the country to predict future criminals. And it's biased against blacks.

<https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

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HUMAN-CENTERED DATA SCIENCE (LATANYA SWEENEY)

It was found that 87% (216 million of 248 million) of the population in the United States had reported characteristics that likely made them unique based only on {5-digit ZIP, gender, date of birth}

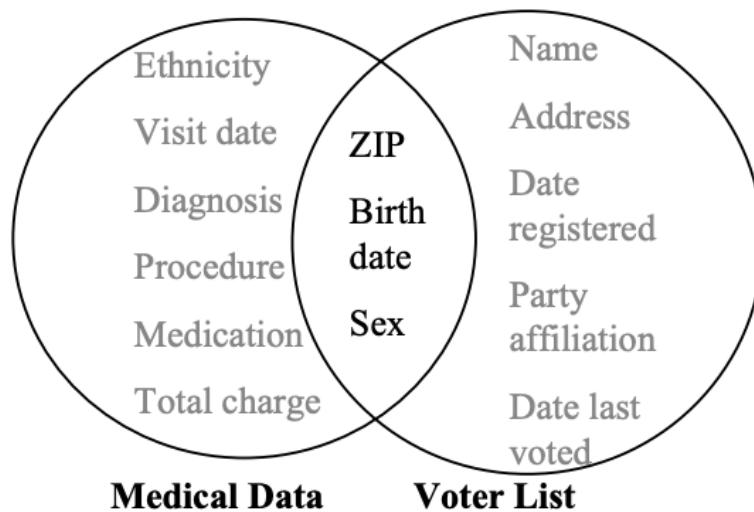


Figure 1 Linking to re-identify data

<https://privacytools.seas.harvard.edu/files/privacytools/files/paper1.pdf>

HUMAN-CENTERED AI (2022)



AI + human-centered => empoderar en vez de reemplazar

Proceso: HCAI usa métodos de diseño UX (observación, usabilidad, evaluación)

Producto: HCAI busca aumentar y empoderar la performance de los humanos, manteniendo el control en las personas

CIERRE





INTERACTION DESIGN

Diseñar productos interactivos que apoyan a las personas se comunican e interactúan en su trabajo)

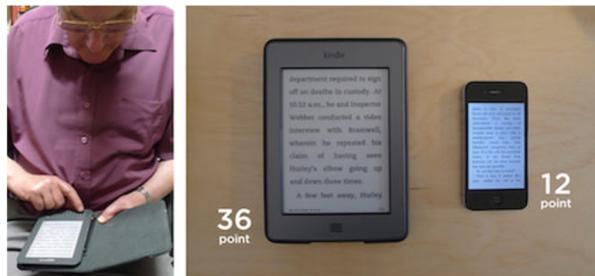
El arte de facilitar la interacción entre humanos y servicios

AFFORDANCES



17 WEARABLE

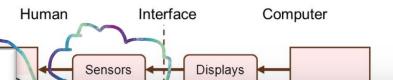
ADULTOS MAYORES



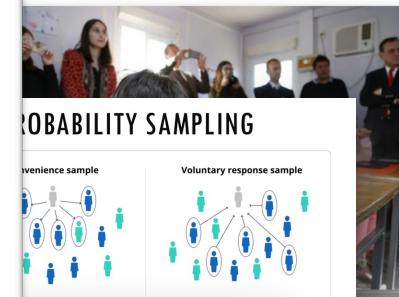
36 point

TIPOS DE INTERACCIÓN CONVERGENTE

HUMAN FACTORS MODEL



LES PARTICIPANTES?



STRUCTURADO/NO/SEMI

1. Historia de HCI
2. Principios de Diseño de Interacción
3. Interfaces y Tipos de Interacción
4. Seres humanos, cognición y percepción
5. Estudios cualitativos y cuantitativos
6. Diseño para seres humanos
7. Prototipos y Diseño de Interacción
8. Usabilidad y Evaluación
9. Nuevos temas y desafíos en HCI

CATEGORÍAS

- Control (Usabilidad)
- Usabilidad
- Experiencias

Natural settings involving users (online communities, products used in public places)

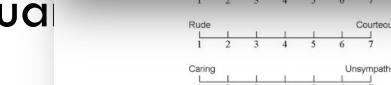
Ver cómo se usa tecnología en settings real
• Field studies

Difícil de realizar, largos

Any settings not directly involving users

- Inspections
- Heuristics
- Walk-throughs
- Models
- Analytics
- Rápidas o sútiles
- ¿Qué?
- Por qué?

7/3/21

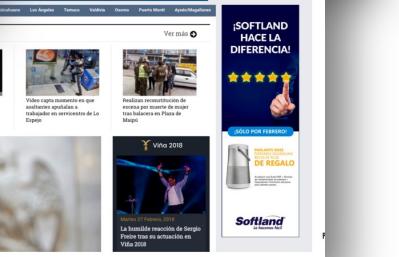
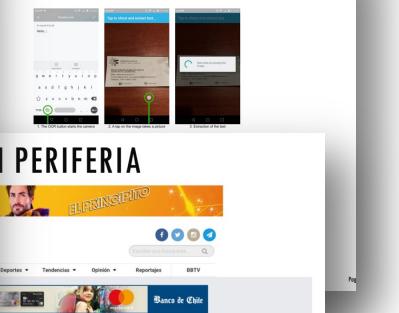


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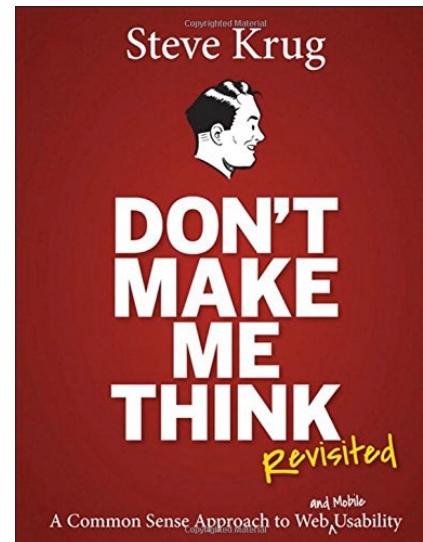
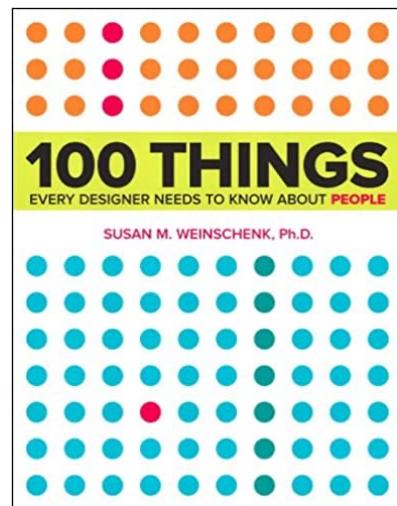
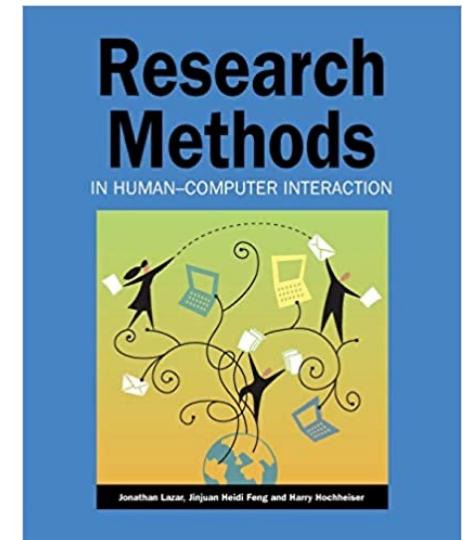
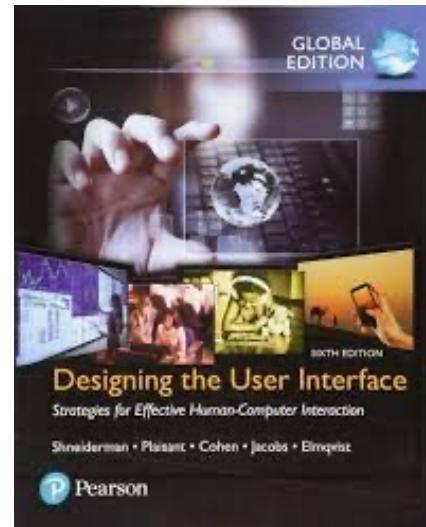
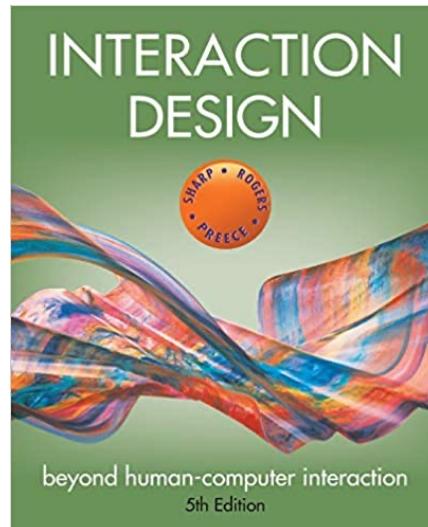
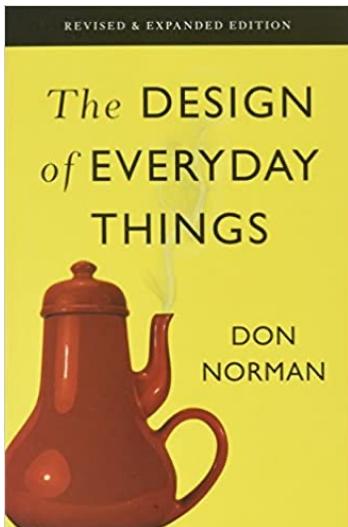
1 concreta de una idea



REFERENCIA EN WITHIN-SUBJECTS



QUÉ “LEÍMOS” (ENTRE OTROS)



REFERENCIAS RÁPIDAS DE MÉTODOS HCI



Local Orbits

Cultivating the art of observing a place

EXERCISE YOU WILL NEED: A smart phone

In this exercise, you will observe two spaces, and plot your observations using the template on the companion website to reveal the unique aspects that the spaces present. If you wish, you can follow the 'Future Campus' lead (p.206).

1 Choose two spaces: one indoor, one outdoor, and sit or stand in the first of your chosen spaces at the university library at the university campus.

2 Plot and list the resources within this space individually on the template: e.g. water, chair, laptop, charging cable, light, air, windows, sun, sunlight. First circle list three resources that are within reach.

3 Second circle: list three resources that you can see close by.

4 Third circle: list three resources that are within a short walk.

5 Deepen your understanding of the space and its relationships in two extra steps: - Compare your observations from step 2 with those from step 1. - Try the exercise in the second of your chosen spaces and compare results.

E.g. I have no recharging cable at all times in this space. The distance to the closest power point is 20 minutes.

6 Deepen your observations: by shifting your focus to abstract and non-tangible elements. Annotate your template with respect to the following:

- Do you have any specific relationships to these spaces?
- What resources aren't available to others in these spaces?
- What are the things you most often hear? How do you access them?
- How are these spaces used?
- What histories are celebrated? What histories are erased/limited? Why?

[30 minutes]

7 Consider how you could apply your findings to your design brief:

E.g. what do your observations teach you about changing perceptions in a library? What do they teach you about the inclusivity of university campuses?

8 Invent your own metrics: for this space based on the resources you listed. Measure the distance between yourself and a resource in the third circle using your metrics, and note down why.

E.g. as I sit here I notice my breathing. The time it takes to walk to the elevator is three full breaths.

Design, Think, Make, Break, Repeat. 99

Interviewing Users

Interviews are a series of open-ended questions designed to give you insight into what the user is thinking or feeling.

First, you must decide when the interview is to be conducted. For example you can interview users prior to a usability test before the user is biased by your design. In contrast you could interview users after a usability test with follow-up questions.

Second, create a plan for your interview. Write out the questions you want to ask each participant and leave space to fill in their responses. Having consistent questions makes it easier to assess the results after multiple interviews. Be mindful of the order of your questions in order to avoid biasing the participants' responses.

Finally, conduct the interview using the established questions that were planned out. Feel free to deviate from the interview plan and ask additional follow-up questions as it is appropriate. This loose structure is one of the benefits of conducting an interview.

A great combination is to use interviews for discovery and surveys to validate the findings that are true of a larger population. Also, if you record your interviews, there are services that will transcribe them for you so you can search and code them later.

When to use: Before and after UX methods that directly involve users.

Difficulty: Average **Time:** 1 Hour **Participants:** 1

Look for Patterns: Use these analysis techniques to identify patterns and themes.

Report Findings: Create a document that summarizes the key findings. This can be a summary document or a report that highlights the most important discoveries.

Local Orbit Example: Interview users about the local orbit exercise. Ask them what they think about the exercise. They also record their thoughts on the exercise.

Take Away and Record: Interview users about the take away exercise. Ask them what they think about the exercise. They also record their thoughts on the exercise.

Design. Think. Make. Break. Repeat. A Handbook of Methods

HERRAMIENTAS HCI



Métodos

HCI Tools (métodos): <https://www.usability.gov/how-to-and-tools/index.html>

Usability Methods <https://www.usabilityfirst.com/usability-methods/>

Patrones

UI Patterns (patrones para resolver problemas comunes de diseño)
<http://ui-patterns.com/patterns>

Colores

<https://accessible-colors.com/>

<https://informationisbeautiful.net/visualizations/colours-in-cultures>

HERRAMIENTAS HCI: INSPIRACIÓN (Y ANTI INSPIRACIÓN)

HCI Museum (Diseño inspirador): <https://hci-museum.iri.fr/all-techniques>

Mejores prácticas: <https://lawsofux.com/>

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Cómo no hacer una interfaz: <https://userinyerface.com/>

Bad Designs: <http://www.baddesigns.com/examples.html>

Frustración: <http://nauxui.com/en/>

¿ES IMPORTANTE?

El drama de usabilidad de las apps públicas entra en la lista de deberes del Gobierno para los fondos europeos

El Ejecutivo desarrollará un nuevo sistema de identificación personal para modernizar las apps de los servicios públicos, muy mal valoradas por los ciudadanos



Fuente (Mayo 2021): https://www.eldiario.es/tecnologia/drama-usabilidad-apps-publicas-entra-lista-deberes-gobierno-fondos-europeos_1_7949271.html

Ver más ejemplos: <https://w3-lab.com/bad-ux-choices-cost-companies-millions/>

QUÉ NOS QUEDA

Puntajes Lectura 4 (hoy)

Notas Tarea 4 (próximos días)

Examen (este viernes)

Entrega Informe Lecturas: 12/07

Por favor contestar la encuesta docente!

IMPACTO DE HCI

Salvar vidas – apoyar a familias y comunidades – permitir creatividad – mejorar comercio – acelerar educación – participación en política – entretenimiento compartido – reducir aislamiento – etc

haciendo la tecnología accesible para novicios y expertos – usuarios con baja alfabetización – diverso internacionalmente – niños y ancianos – personas con discapacidad...

pero

malos diseños frustran a los usuarios – empeoran privacidad – permiten que actores maliciosos hagan daño

El desafío es: mejorar los aspectos positivos, manteniendo los posibles daños bajos.

¡GRACIAS!

