

# HUMAN-COMPUTER INTERACTION

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## ETHNOGRAPHY

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# SCHEDULING

December 14

Last class

December 16, 9:00-11:00 am

Final project presentations to be held in the usual classroom

December 16, 4:00-5:00 pm

Poster session to be held at the CS building lobby

December 17

Finals start

December 23, 5:00 pm

Final project reports due (by email)



LAST WEEK



# LAST WEEK

Why use an ANOVA instead of multiple t-tests?

What error occurs when null hypothesis is not true and we fail to reject it?

Describe the F ratio.

What does Tukey's HSD test do?

Verbally describe the difference in liking of a robot across genders ( $F[1,34] = 3.12, p=0.09$ ).

What test is appropriate for 2+ dependent samples?

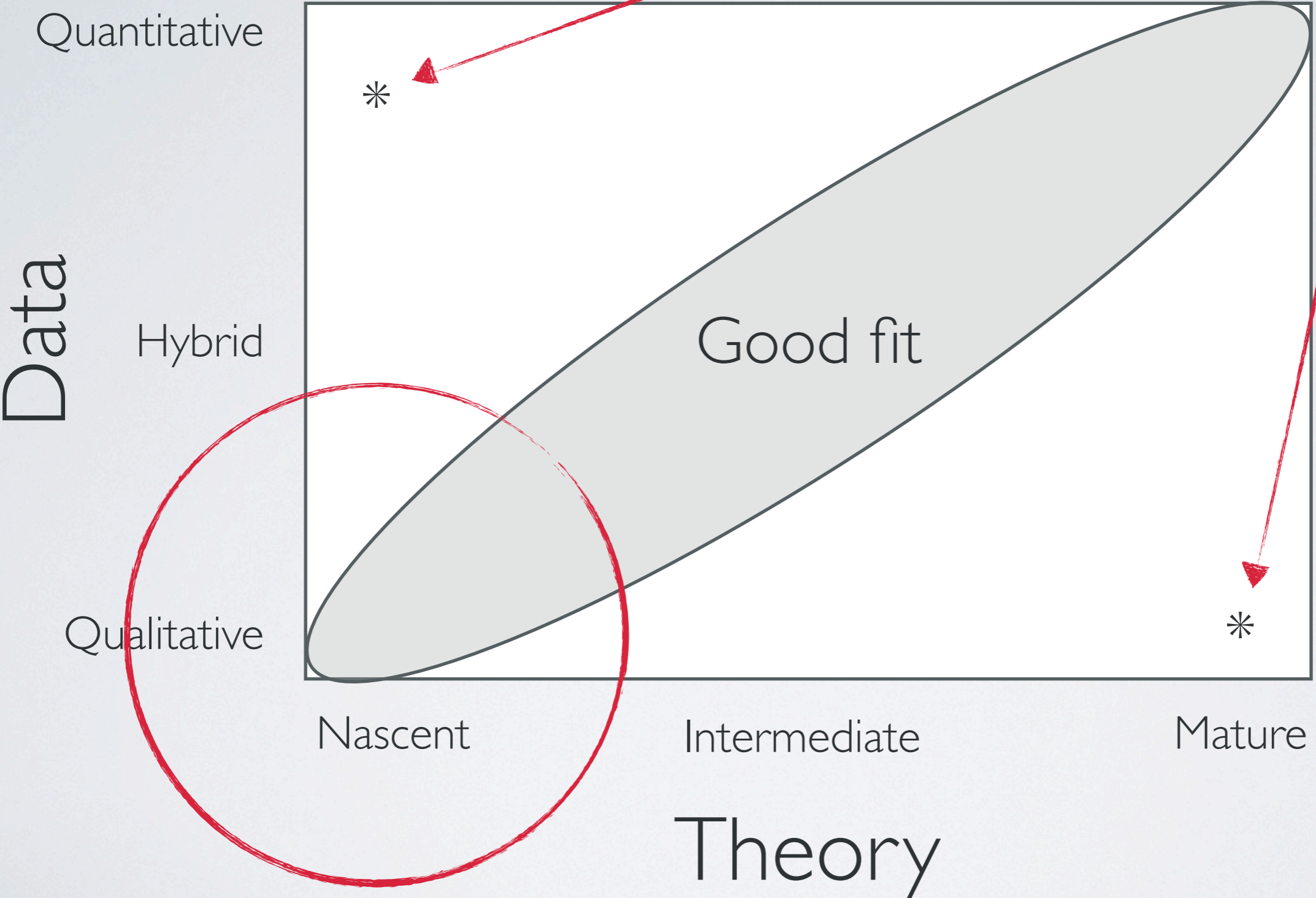
What test is involved in contingency analysis?

What does a mosaic plot show?



# ETHNOGRAPHY

*Exceptions with good fit*



Quantitative

Data

Hybrid

Qualitative

Nascent

Intermediate

Mature

Theory

Good fit

\*

\*



# WHY CONDUCT ETHNOGRAPHY?

To create substantive, explanatory theory

In the context of HCI, on technology use

This theory would serve as:

A foundation for future refined theory

Guidelines for the design of technology for the context of the study

Think of it as a study that will tell you “*what to study quantitatively in the lab*” or “*what to build*”

Because a lot of work will be built on this theory, it is very important that an ethnography is conducted and data is analyzed with the highest rigor





# HALLMARKS

Uses close observation & interviews in natural settings

Behavior in context

Meaning people attach to events & things in their everyday lives

Relies heavily on detailed field notes

“Qualitative” research

A systematic method, not impressionistic

Avoids “slicing” behavior into variables, and inferential statistics

Aims at “representation,” not “generalization”

All perspectives are worthwhile, especially those without a voice







# HALLMARKS

## Inductive

Researcher has a general research question or focus

Researcher is open to new questions, new focuses

## Interpretations linked to data

Roots in anthropology and sociology

Now applied in numerous fields



# WHERE TO START?

Find a domain where theory is nascent and improving knowledge might have great impact

Locate a context where you expect phenomena related to the domain might occur

Conduct fieldwork, asking high level questions such as “What’s going on here?”



# FIELDWORK

## Pre-field

Select “setting” rather than a “sample”

Obtain access to the organization

Informed consent & confidentiality for informants (IRB)

Make initial decisions: video, audio, archives, field notes

## Entry into the field

Get to know the setting and possible comparison groups or situations (no group is invisible)

Write up detailed notes and interpretations immediately afterwards



# AN ORGANIC PROCESS

Conducting fieldwork is an organic process in which data collection and analysis, identifying of themes, and writing might develop symbiotically

Data analysis starts with data collection

Data collection becomes more and more focused in the process



# DATA COLLECTION METHODS

Fly-on-the-wall observations

Participant observation

Interviews

*You will practice in this week's assignment*



# FLY-ON-THE-WALL

## Goals:

Gaining familiarity with the physical and social context being studied,

Observing social interactions without influencing the social context.

## Outcome:

Fieldnotes (written/audio/video)



# PARTICIPANT OBSERVATION

## Goal:

Gaining an intimate familiarity with and an in-depth understanding of how people work, relate to each other, share information, etc.

Gaining an insider's perspective on how an organization works and its members interact.

## Outcome:

Fieldnotes (written/audio/video)



# INTERVIEWS

## Goals:

Gaining an understanding of social phenomena from individual perspectives

Validating findings from observations

Use in-depth interviewing techniques with follow up (e.g., “can you give me an example,” “tell me about a time when that happened”)

Study the language and codes, how people see their world

## Outcome:

Transcripts (transcoded from audio)



# RECORDING DATA

Notes and records

Ideally, everything you see

Ideally, everything you hear

Your own interpretations (identified separately)

What you don't see, don't understand



# VIDEO ON INTERVIEWS



# SOME EXAMPLES

Van Manaan, 1991

“The smile factory: Work at Disneyland”

An ethnography of Disneyland workers



# SOME EXAMPLES

Barley, 1986

“Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments”

An ethnography of hospitals' adoption of CT scanners



# SOME EXAMPLES

Suchman, 1987

“Plans and situated actions: The problem of human-machine communication”

An ethnography of work-practices



# SOME EXAMPLES

Grudin, 1988

“Why CSCW applications fail: Problems in the design and evaluation of organizational interfaces”

An ethnographic study of the adoption of technology in organizations



# SOME EXAMPLES

Bechky, 2006

“Gaffers, gofers, and grips: Role-based coordination in temporary organizations”

An ethnography of movie crews



# THIS WEEK'S ASSIGNMENT

Conduct a *mini* ethnography

Choose a general research question and/or setting

e.g., How do baristas manage music at coffee shops?

Get permission (if necessary)

Scope out the setting, conduct observations, find informants

Write up field notes

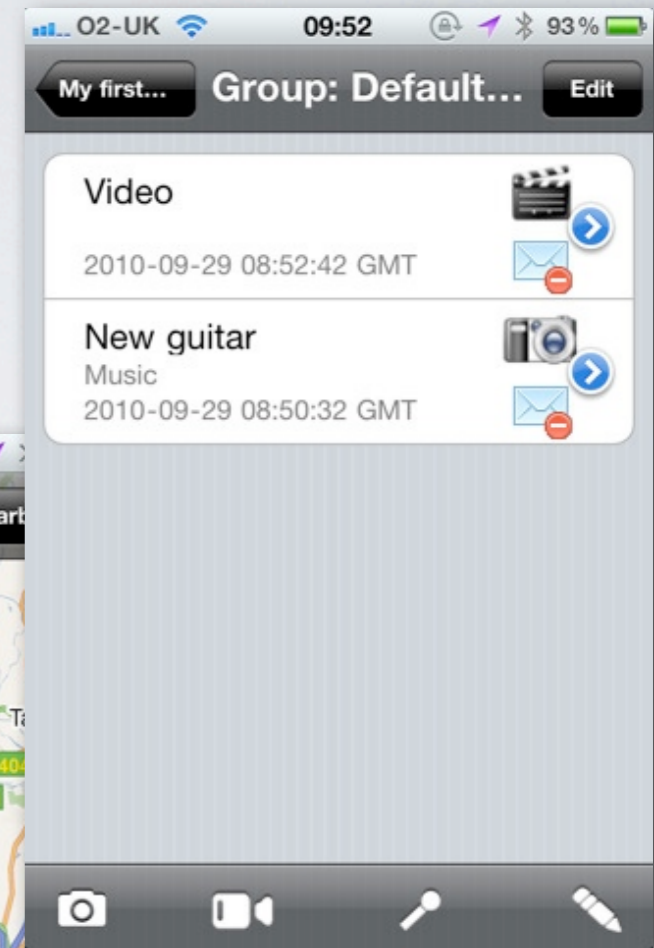
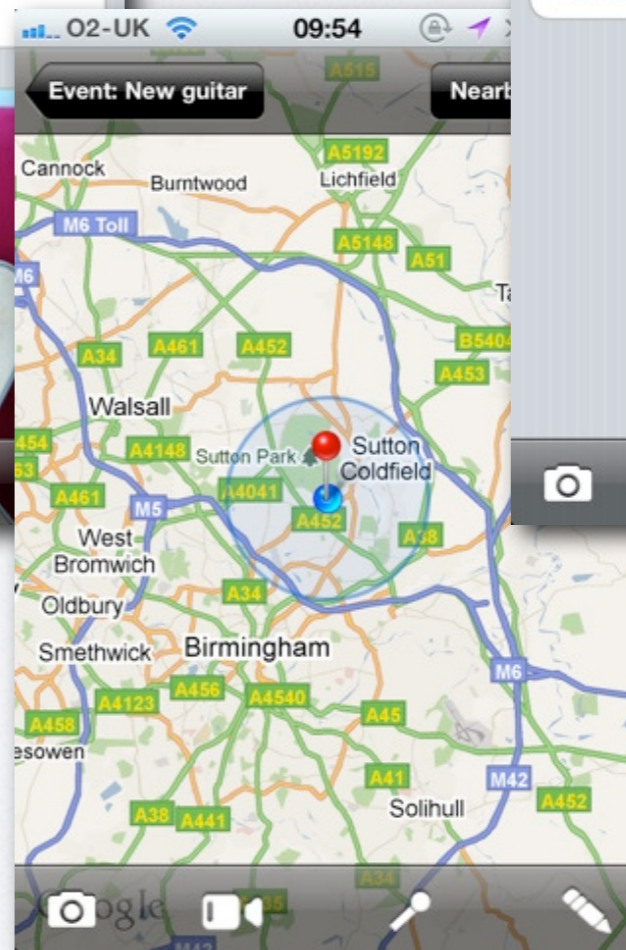
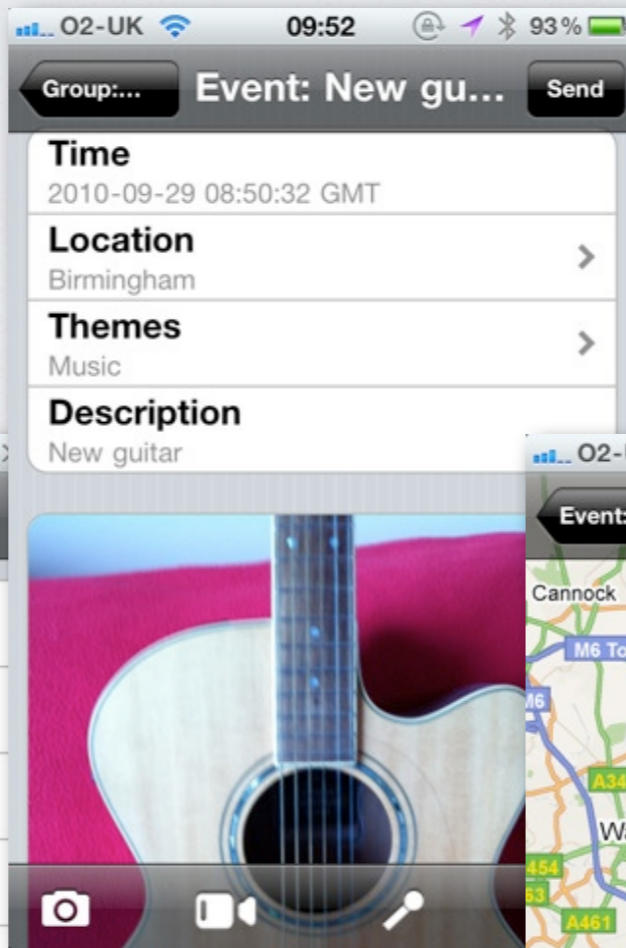
Conduct interviews

Type up all your fieldnotes and interview transcripts

Write a report of your process



# THERE IS AN APP FOR THAT!





# NEXT IN METHODS

“Grounded Theory” analysis of ethnographic data

Don't lose your data from this week's assignment





THANKS!

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