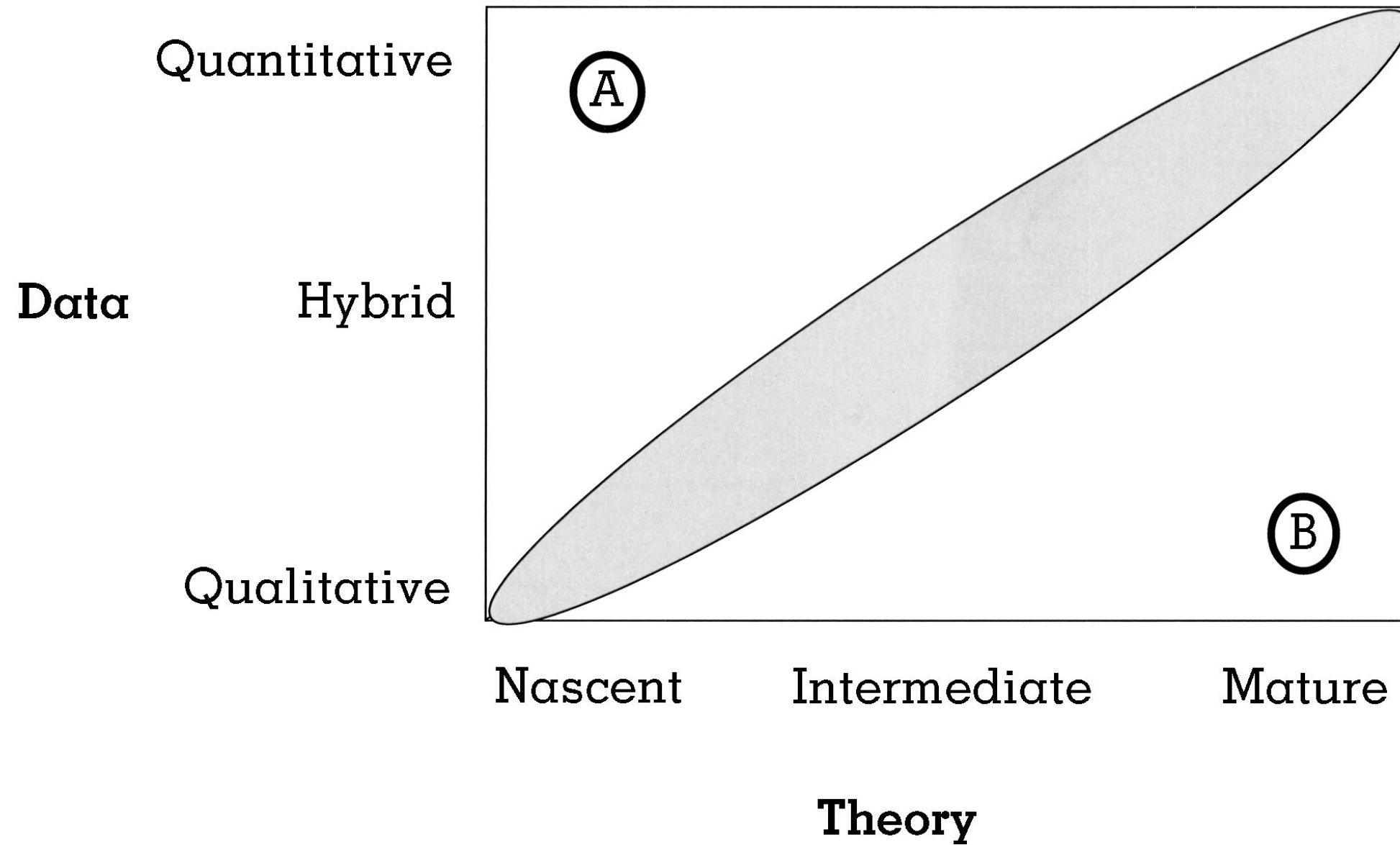


Human-Computer Interaction

Qualitative Research

Professor Bilge Mutlu

What do we do when theory is nascent in an area or if you'd like to take a fresh look at a mature topic?



¹Edmondson & McManus, 2007, Methodological fit in management field research

We use qualitative research methods.

1. Narrative (Inquiry)
2. Phenomenology
3. Grounded Theory
4. Case Study
5. (Participatory) Action Research
6. Ethnography

1. Narrative (Inquiry)²

Definition: A qualitative research method involving studying one or two individuals, gathering data through collecting their stories, reporting individual experiences, and chronologically ordering the meaning of those experiences.

Originates primarily from the humanities, e.g., literature, history, anthropology, sociology, sociolinguistics, and education.

Utilizes individual "stories" (told/journaled) and various other resources (documents, photos, historical accounts) and restories individual stories in chronological representation.

²Creswell et al., 2007. Qualitative research designs: Selection and implementation

2. Phenomenology

Definition: The study of the shared lived experiences of individuals that focuses on a particular phenomenon (e.g., anger) to capture the essence of these experiences.

Philosophical roots in Husserl, Heidegger, Sartre, Merleau-Ponty.²

Utilizes interview data, systematic reductive analyses, and generating textual statements of the essence of the experience.

²Creswell et al., 2007. Qualitative research designs: Selection and implementation

3. Grounded Theory

Definition: A qualitative research design in which the inquirer generates a general explanation (a theory) of a process, action, or interaction shaped by the views of a large number of participants.²

Primarily utilizes interview data and, through a systematic, analytical process, constructs a theoretical model of phenomena.

Two forms of grounded theory: *systematic*³ and *constructivist*⁴.

²Creswell et al., 2007. Qualitative research designs: Selection and implementation

³Strauss & Corbin, 1990, Basics of qualitative research

⁴Charmaz & Belgrave, 2007, Grounded theory

4. Case Study

Definition: A case study is a study in which (a) one case (single case study) or a small number of cases (comparative case study) in their real life context are selected, and (b) scores obtained from these cases are analysed in a qualitative manner.⁵

Forms of case studies: *exploratory, descriptive, explanatory*.⁶

Utilizes documents, archival records, interviews, direct observations, participant observations, and physical artifacts.⁴

⁵Dul & Hak, 2007, Case study methodology in business research

⁶Yin, 2003, Case study research; designs and method

⁴Charmaz & Belgrave, 2007, Grounded theory

5. (Participatory) Action Research

Definition: A qualitative research inquiry in which the researcher and the participants collaborate at all levels in the research process (participation) to help find a suitable solution for a social problem that significantly affects an underserved community (action).²

Involves participatory and collaborative reflection of people's relationships with other people or social structures.

²Creswell et al., 2007. Qualitative research designs: Selection and implementation

6. Ethnography

Definition: Ethnographic research projects use deep immersion and participation in a specific research context to develop an understanding that would not be achievable with other, more limited research approaches.⁷

Roots in anthropology and sociology, adopted by fields such as HCI.

Utilizes observation and interview data and systematic analyses to construct new understanding and theory.

⁷Lazar et al. (2017). Chapter 9: Ethnography. Morgan Kaufmann.

How do we conduct an ethnography?

Where do we start?

1. Identify a domain where theory is *nascent* and where new theory can have great impact
2. Developing a general *research question* and focus that can be updated
3. Find a *setting* to study the phenomena of interest from this domain
4. Conduct *fieldwork* where we ask the question: *What is going on here?*

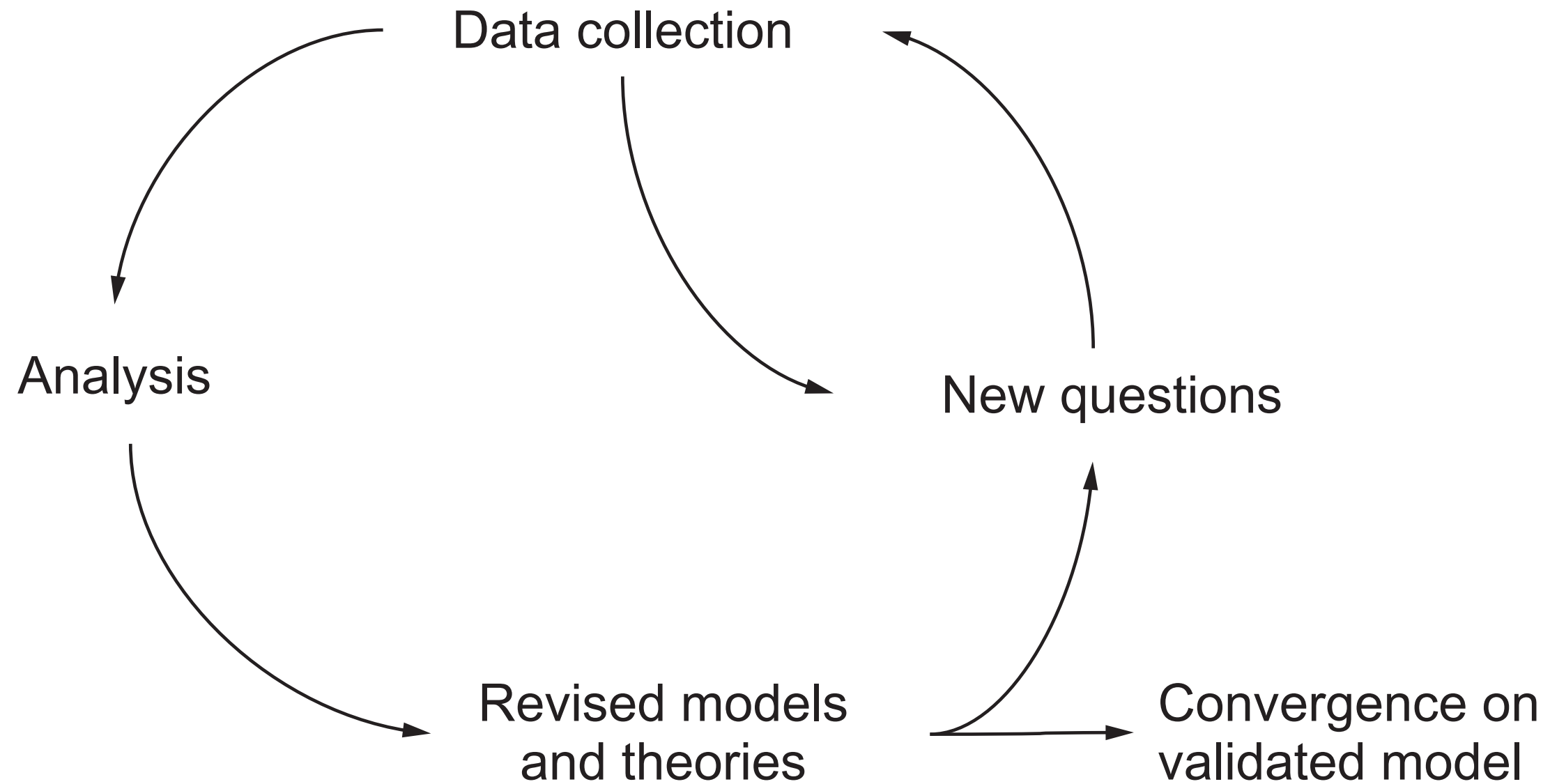
What is a setting?

Definition: A site where the phenomena of interest can be observed.

What is fieldwork?

Definition: An organic process where data *collection* and *analysis* develop symbiotically and becomes increasingly more focused over time.

- >> Obtaining access to the site, informed consent
- >> Identifying *stakeholders*, choosing a *role*
- >> Discovering groups, situations for comparison
- >> Writing up detailed *fieldnotes*



⁷Lazar et al. (2017). Chapter 9: Ethnography. Morgan Kaufmann.

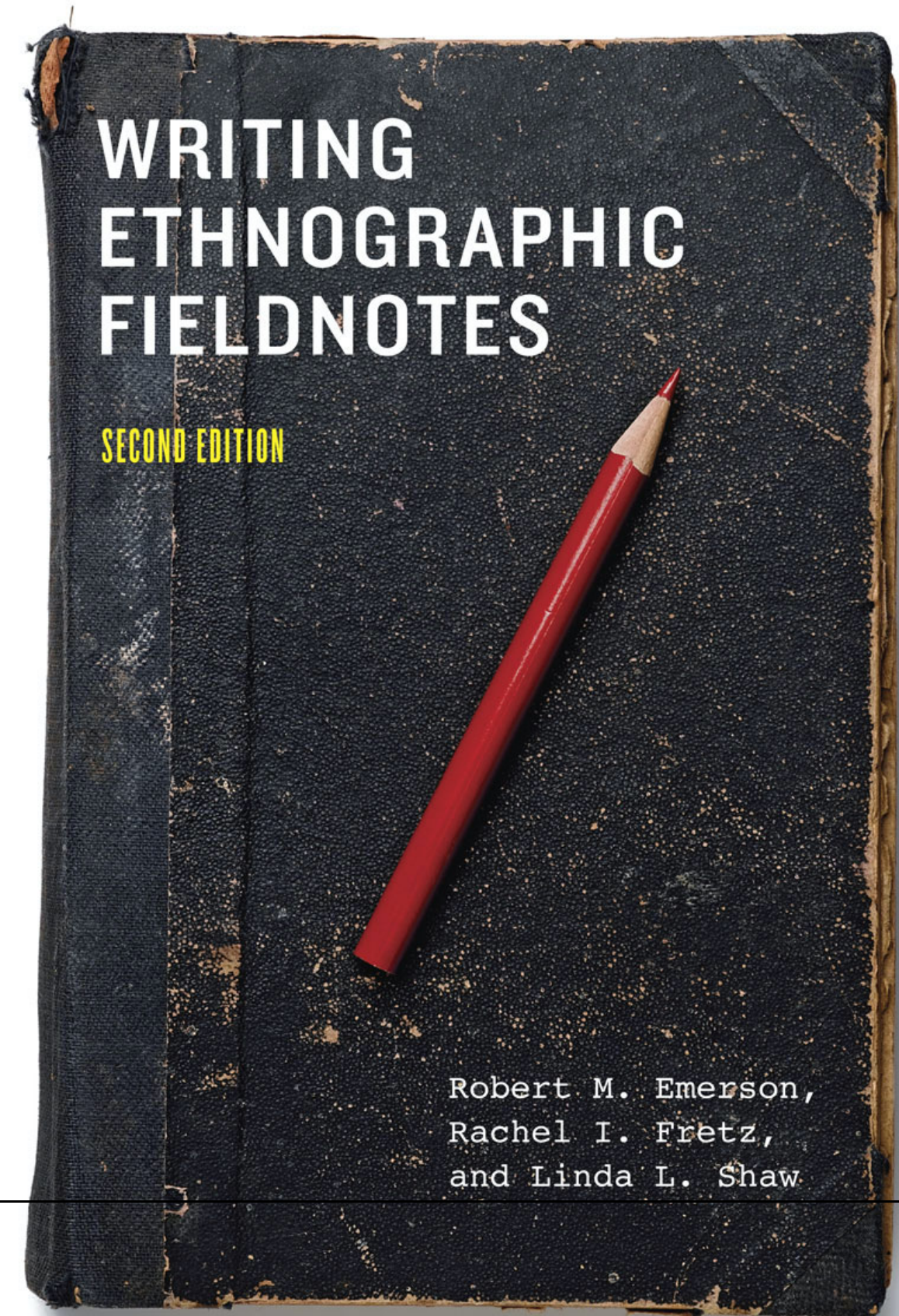
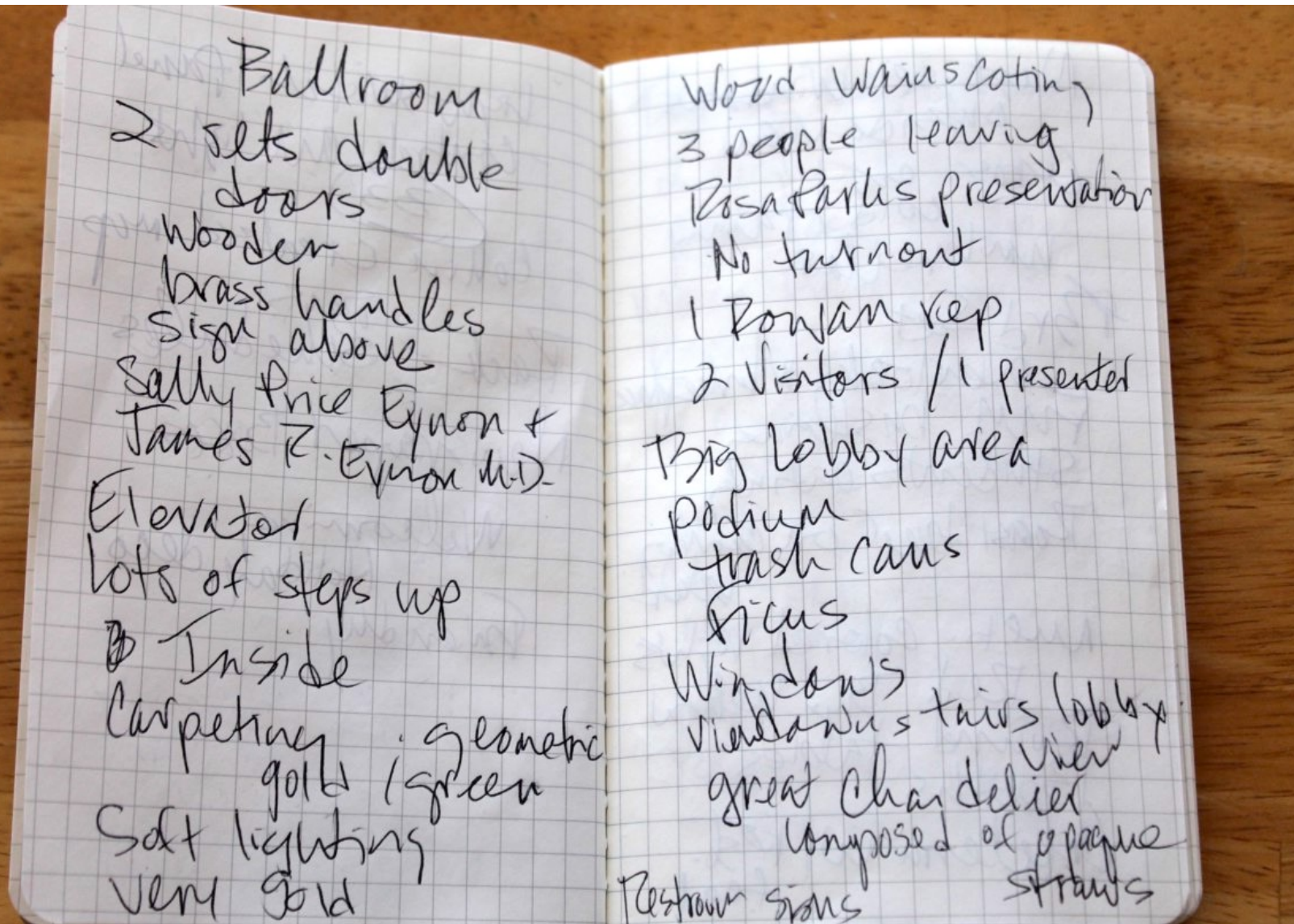
How do we collect data?

1. Fly-on-the-wall observations
2. Participant observation
3. Interviews

Fly-on-the-wall Observation

Definition: Observing social interactions in the setting without influencing the context in order to gain familiarity with the physical and social context of the study.

Produces *fieldnotes* of observations that can be captured in written, audio, or video form.



⁸Image sources: [Left](#), [Right](#)

Participant Observation

Definition: Gaining an in-depth understanding of how the stakeholders in the setting interact with each other by participating in the activities that take place at the setting.

Produces *fieldnotes* of observations and personal reflections that can be captured in written, audio, or video form.

Interviews

Definition: Interviewing individuals to understand their perspectives, to understand how people see their world, and to validate findings from observations.

Open-ended, in-depth interviews with follow-up from observations and further probing.

Involves studying spoken language, body language, and coded speech.

Produces *transcripts* captured in written, audio, or video form.

What kind of data should I collect?

- >> Fieldnotes should capture everything observed and heard, researcher interpretations, including what one could not observe or understand.
- >> Audio/video recording is acceptable within limits. Transcription and reflection should happen immediately before interpretations are lost. Audio is recommended over video.
- >> Retrospective capture of field notes and interpretations should take place immediately.
- >> Photos can provide useful visual context to observations and interpretations.

Can I conduct an ethnography on the Internet?

Yes, the same methods can be used to study online behavior in social media, forums, gaming platforms, etc.

Studying behavior online brings up complex ethical questions.

Experimenter effect can be particularly strong.

What are some examples?

Some Well-known Ethnographies¹⁵

- >> Van Maanen, 1991, *The smile factory*
- >> Barley, 1986, *Technology as an occasion for structuring*
- >> Suchman, 1987, *Plans and situated action*
- >> Grudin, 1988, *Why CSCW applications fail*
- >> Bechky, 2006, *Gaffers, gofers, and grips*

¹⁵Compiled by Professor Sara Kiesler