

18-02-2022

Classification of Types of Research according to the Type of Data Used



Qualitative

Quantitative

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Qualitative methods are often used in the social sciences to collect, compare and interpret information, has a linguistic-semiotic basis and is used in techniques such as discourse analysis, interviews, surveys, records and participant observations.

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In order to use statistical methods to validate their results, the observations collected must be evaluated numerically. Qualitative research, however, tends to be subjective, since not all data can be fully controlled. Therefore, this type of research design is better suited to extracting meaning from an event or phenomenon (the 'why') than its cause (the 'how').

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For example, examining the effects of sleep deprivation on mood.

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Quantitative

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Quantitative research study delves into a phenomena through quantitative data collection and using mathematical, statistical and computer-aided tools to measure them. This allows generalised conclusions to be projected over time.

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For example, conducting a computer simulation on vehicle strike impacts to collect quantitative data.

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QUANTITATIVE – based on positivism, uses deduction (Theory – forming hypotheses – observation – testing hypotheses – interpretation and generalization). It is based on theory and presupposes a research project.

QUALITATIVE – based on phenomenology, ethnomethodology, symbolic interactionism (interpretative paradigm), uses induction (observation – revealing regularity – conclusions – theory). The aim is to reveal the meaning of information (narrative sociology).

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Qualitative VS Quantitative: Qualitative research methods focus on words and meanings, while quantitative research methods focus on numbers and statistics.

So ask yourself and answer the question first. Is your research more concerned with measuring something or interpreting something?

One can also create a mixed methods research design that has elements of both.

Examples of quantitative research methods	Examples of qualitative research
experiment, (quasi-experiment) correlative examination more specialized normative examination longitudinal study time series analysis Q-methodology Cluster analysis One-dimensional and multi-dimensional scaling Operative research	Case study Ethnography (including observation and participation observation) Grounded theory Examining narrations based on language examination Ethnomethodology and conversation analysis Discourse analysis, semiotics Document and text analysis

	Quantitative research	Qualitative research
Philosophical source	positivism	Phenomenology, anthropology, hermeneutics
Aim	Gaining an objective proof, verifying theory / hypotheses	Understanding human behavior in natural environment
Character	objective	subjective
Relationship to a theory	Verifying or rejecting a theory	theory creation
Thought procedure	deduction	induction
Starting point/ the beginning of research	Draws on theory and hypotheses	Starts with entering the ground space
Planning research	Is thoroughly prepared at the beginning, written project following a given structure	The plan is formed during work, research questions and methods may be subject to change => more flexible
Course of research	Systematically tests hypotheses for being correct, finds causal relationships	Gathers a large number of data on specific human behavior and its context, it is recorded and interpreted; hypotheses spring up along the way
Number of examined persons	Representative sample, large number (usually)	Student, class, school
Techniques, methods	experiment (manipulating with variables), questionnaire, testing, standardized observation etc.	Long-term practical research, observation with different levels of participation, the researcher communicates with informants during gathering data without interfering in events

	Quantitative research	Qualitative research
Data processing	Quantitative, computer, statistical, data interpretation	Qualitative encoding, analysis, interpretation
Reliability of results	Done with standard procedures, found statistically (validity, reliability); the research can be repeated	Problematic - the results are subjective; secured via a triangle of data, methods, researchers, theory (data are interpreted by more researchers, comparing with similar results, similar individuals in similar context, using more methods, participants' approving of final report)
Results Form of final report	Generalization of results for population, finding rules; Brief, apposite research report following widely accepted structure: 1/ research topic 2/ methodology 3/ data analysis 4/ results discussion	Explaining human behavior in a certain context; detailed, ether interpretation or only descriptive report, deep narration
Validity of results	Attempt to arrive at results valid for the whole population	Validity for a given class, student or school
Meaning	Prediction, rules	Description, understanding, meaning

Advantages of qualitative research

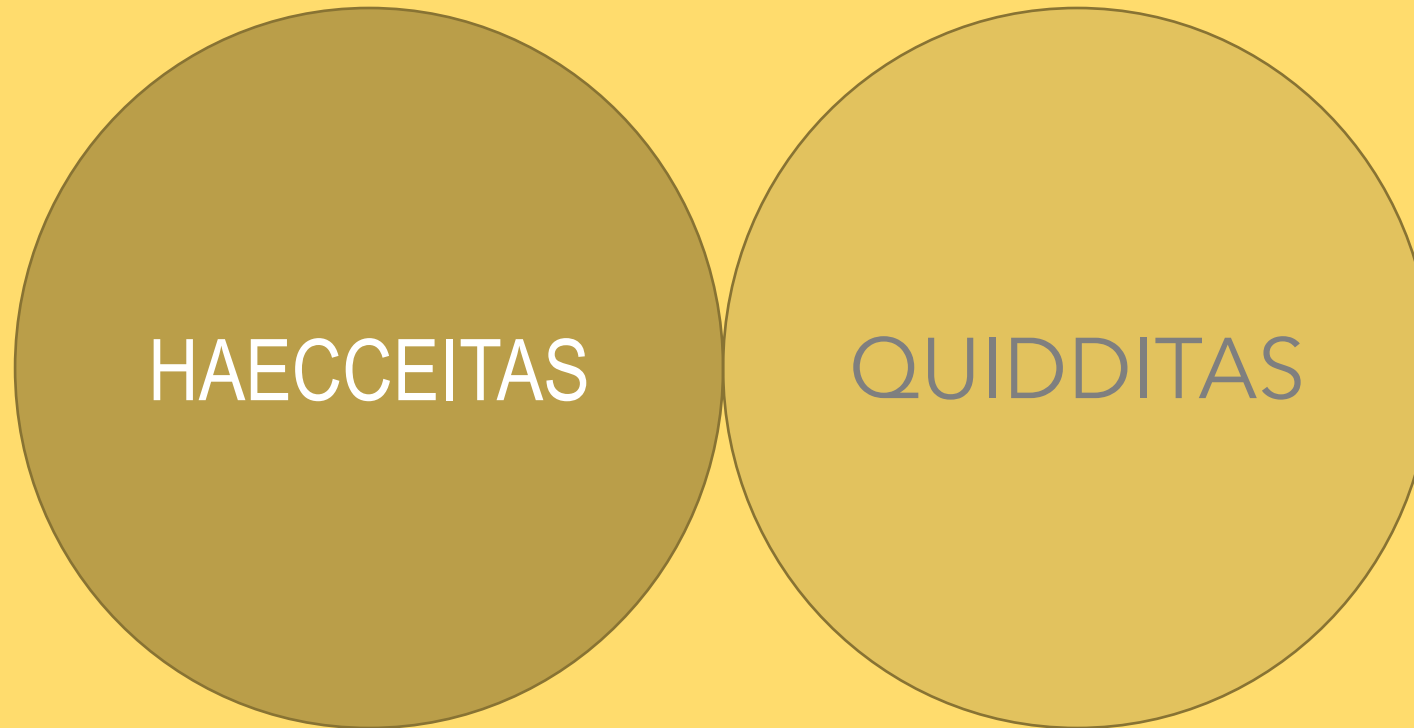
- I. It provides detailed description and form during examining an individual, group, event or phenomenon.
- II. It treats a phenomenon in natural environment.
- III. It makes it possible to study processes.
- IV. It makes it possible to propose theories.
- V. It reacts well to local situations and conditions.
- VI. It looks for local (idiographic) causative relationships.
- VII. It assists in initial exploration of phenomena.

Disadvantages of qualitative research

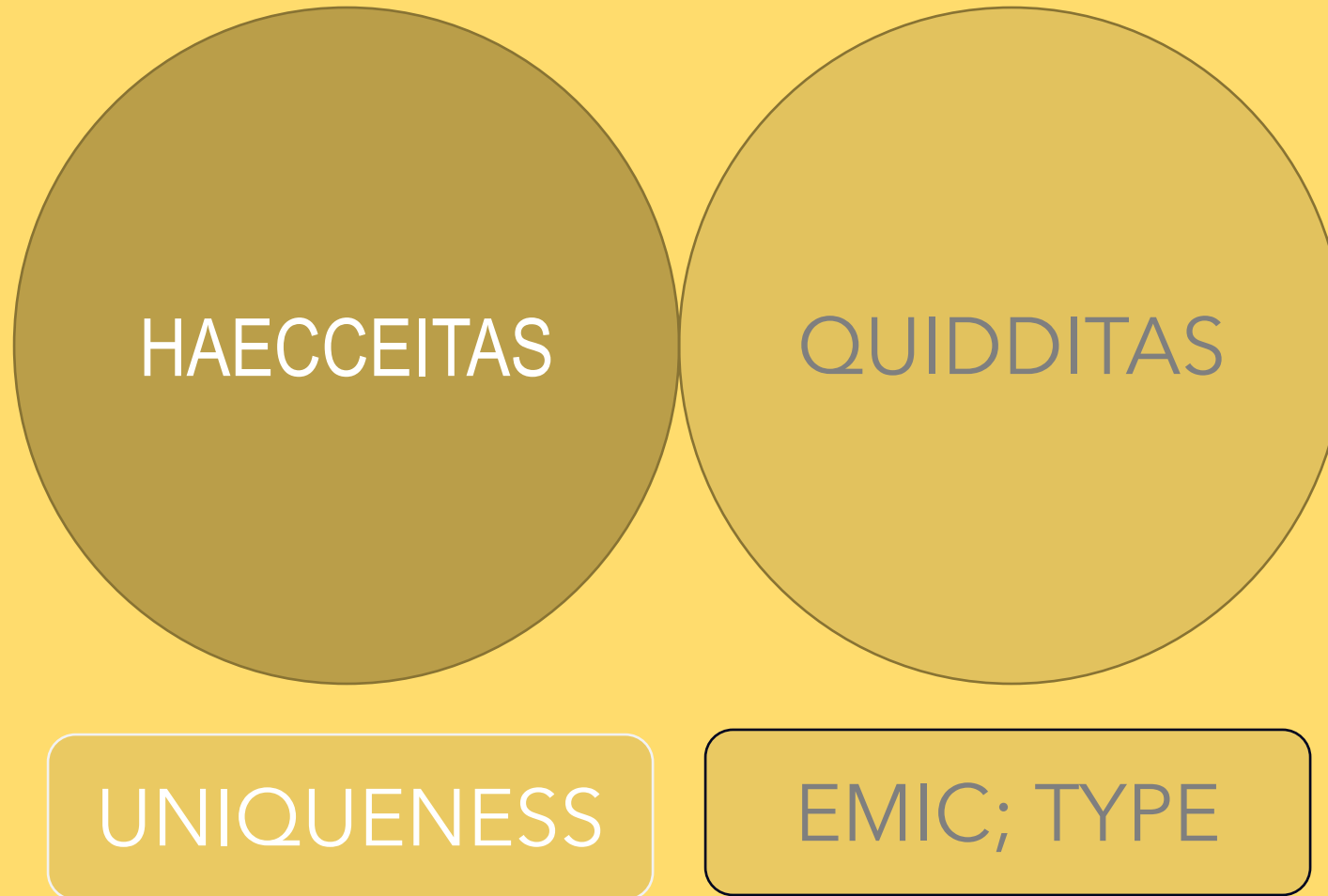
- I. It may not be possible to generalize the acquired knowledge for population and in different environment.
- II. It is difficult to make quantitative predictions.
- III. It is more difficult to test hypotheses and theories.
- IV. Data analysis and collection are often time consuming stages.
- V. Results are easily influenced by the researcher and his/her personal preferences.

THE SUBJECT OF QUALITATIVE VERSUS SUBJECT OF QUANTITATIVE RESEARCH

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THE TYPE OF RESEARCH WE

SUBJECT OF QUANTITATIVE RESEARCH

Ideographic
HAECCEITAS

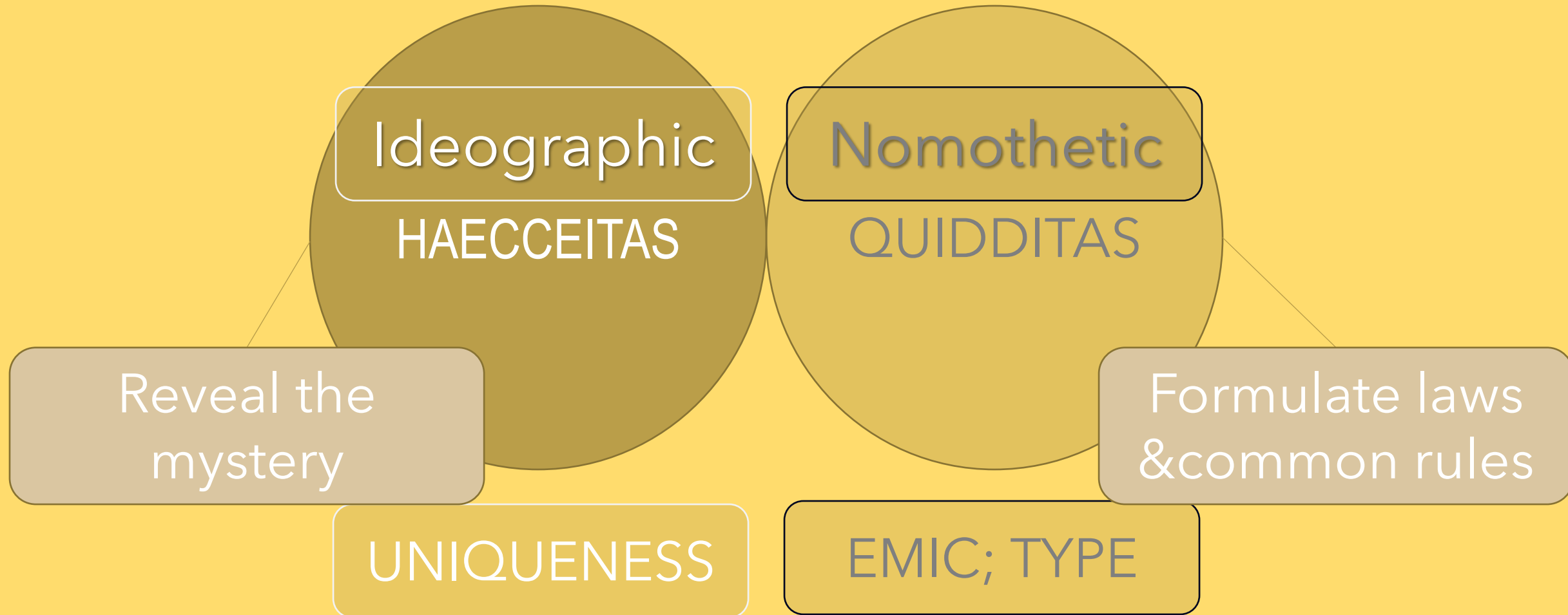
Nomothetic
QUIDDITAS

UNIQUENESS

EMIC; TYPE

THE TYPE OF RESEARCH WE

SUBJECT OF QUANTITATIVE RESEARCH



Rules of qualitative research

Openness

Towards tested persons, including their irregularities

Towards used methods

In creating a plan when hypotheses are finalized only during research

Including subjectivity

The researcher's identification with the examined phenomenon; this approach should be of a critical and dialectic distance

Processuality

Both social processes and communication are of a processual character; its features changes (methods, ways of researcher's interpretation etc.).

Reflexivity

Interpretative understanding; ability to react to new and unexpected situations.

Case-focus

Attention paid to individual cases, detailed description; with the help of cases, theories are proposed and tested.

Rules of qualitative research

History and context

All conclusions must be validated for a given context.

Questioning determinedness

Determinism can be overcome by human interpretation. A certain system must be regarded as a guessed order within which people continuously argue while mutual communication about their intentions and expectations.

Plans of qualitative research (research conception, basic research arrangement)

case study

document analysis

biographical research

ethnographic terrain research

active and critical research

evaluation

See you later!

THANK YOU!

