Curation Model for Grounded Theory Research Processes

Dr. Genoveva Vargas-Solar *Director of Thesis, Thesis Supervisor*

Dr. Regina Motz *Director of Study, Thesis Supervisor*

Alejandro Adorjan

@aleadorjan

Alejandro Adorjan @aleadorjan

PEDECIBA
MEC-UDELAR

CONTEXT: GROUNDED THEORY (GT)

"A **research methodology** for studying social phenomena that enables the **development of theory** empirically **grounded in data**"

Seminal book: Glaser and Strauss's 1967 *The Discovery of Grounded Theory*

GROUNDED THEORY (GT)

Data Collection

Given a Context

**Define
Data Collection
Strategy** (Survey,
Observation, Interviews,
Participant Observation)

Filtering & Refining

Team of
Researchers

GROUNDED THEORY (GT)

Data Collection

Given a Context
(Problem Statement,
Research Questions,
Theoretical Framework)

**Define
Data Collection**
Strategy (Survey,
Observation, Interviews,
Participant Observation)

Filtering & Refining

Team of
Researchers

Result:

GROUNDED THEORY (GT)

Data Collection

Given a Context
(Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Team of Researchers

Result: **Data Collection**

GROUNDED THEORY (GT)

GROUNDED THEORY (GT)

Data Collection

Given a Context
(Problem Statement,
Research Questions,
Theoretical Framework)

Define
Data Collection
Strategy (Survey,
Observation, Interviews,
Participant Observation)

Filtering & Refining

Team of
Researchers

Result: Data Collection

Definition of Categories

Categories Criteria

Define Coding Procedures

Refinement of Categories

Result: Agree Set of Categories

GROUNDED THEORY (GT)

Data Collection

Definition of Categories

Coding

Given a Context (Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Categories Criteria

Define Coding Procedures

Refinement of Categories

Coding of Data

Team of Researchers

Result: **Data Collection**

Result: **Agree Set of Categories**

GROUNDED THEORY (GT)

Data Collection

Definition of Categories ∞

Coding ∞

Given a Context (Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Categories Criteria

Define Coding Procedures

Refinement of Categories

Coding of Data

Constant Comparison

Team of Researchers

Result: **Data Collection**

Result: **Agree Set of Categories**

Result: **Coded Data Collection**

GROUNDED THEORY (GT)

Data Collection

Given a Context (Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Team of Researchers

Result: **Data Collection**

Definition of Categories ∞

Categories Criteria

Define Coding Procedures

Refinement of Categories

Result: **Agree Set of Categories**

Coding ∞

Coding of Data

Constant Comparison

Result: **Coded Data Collection**

Analysis

Conceptualization and Analysis behind the Coded Data Collection

GROUNDED THEORY (GT)

Data Collection

Team of Researchers

Given a Context (Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Result: **Data Collection**

Definition of Categories

Categories Criteria

Define Coding Procedures

Refinement of Categories

Result: **Agree Set of Categories**

Coding

Coding of Data

Constant Comparison

Result: **Coded Data Collection**
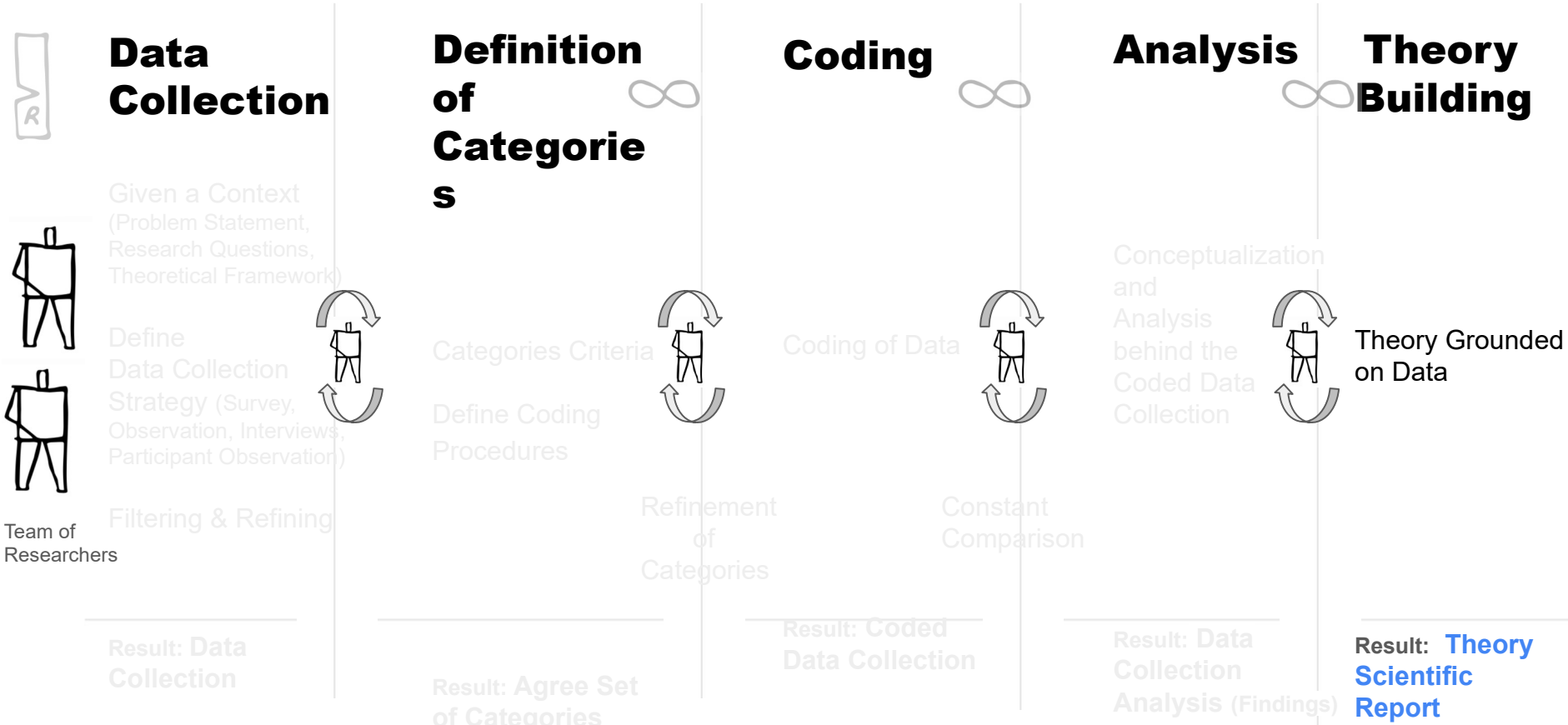
Analysis

Conceptualization and Analysis behind the Coded Data Collection

Result: **Data Collection Analysis** (Findings)

GROUNDED THEORY (GT)

Data Collection

Definition of Categories ∞

Coding ∞

Analysis ∞

Theory Building

Given a Context (Problem Statement, Research Questions, Theoretical Framework)

Define Data Collection Strategy (Survey, Observation, Interviews, Participant Observation)

Filtering & Refining

Team of Researchers

Categories Criteria

Define Coding Procedures

Refinement of Categories

Coding of Data

Constant Comparison

Conceptualization and Analysis behind the Coded Data Collection

Theory Grounded on Data

Result: Data Collection

Result: Agree Set of Categories

Result: Coded Data Collection

Result: Data Collection Analysis (Findings)

Result: Theory Scientific Report

SIMPLIFIED EXAMPLE OF GT PROCESS

Data Collection

Definition of Categories ∞

Coding ∞

Analysis ∞

Theory Building

Research Study: Analyzing Political Content in Montevideo Graffitis

Junior Researcher (JR)

Senior Researcher (SR)

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection

Context: Political Graffiti Research

Activity 1
- Define Zones Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

Result: Graffitis Photos DC

Junior Researcher (JR)

Senior Researcher (SR)

Definition of Categories

Coding

Analysis

Theory Building

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection

Context: Political Graffiti Research

Activity 1
- Define Zones of Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

Result: Graffitis Photos DC

Definition of Categories

1. Criteria Graffiti or not (JR)

Coding

1 Coding (JN)
Classification of Graffities (JN)
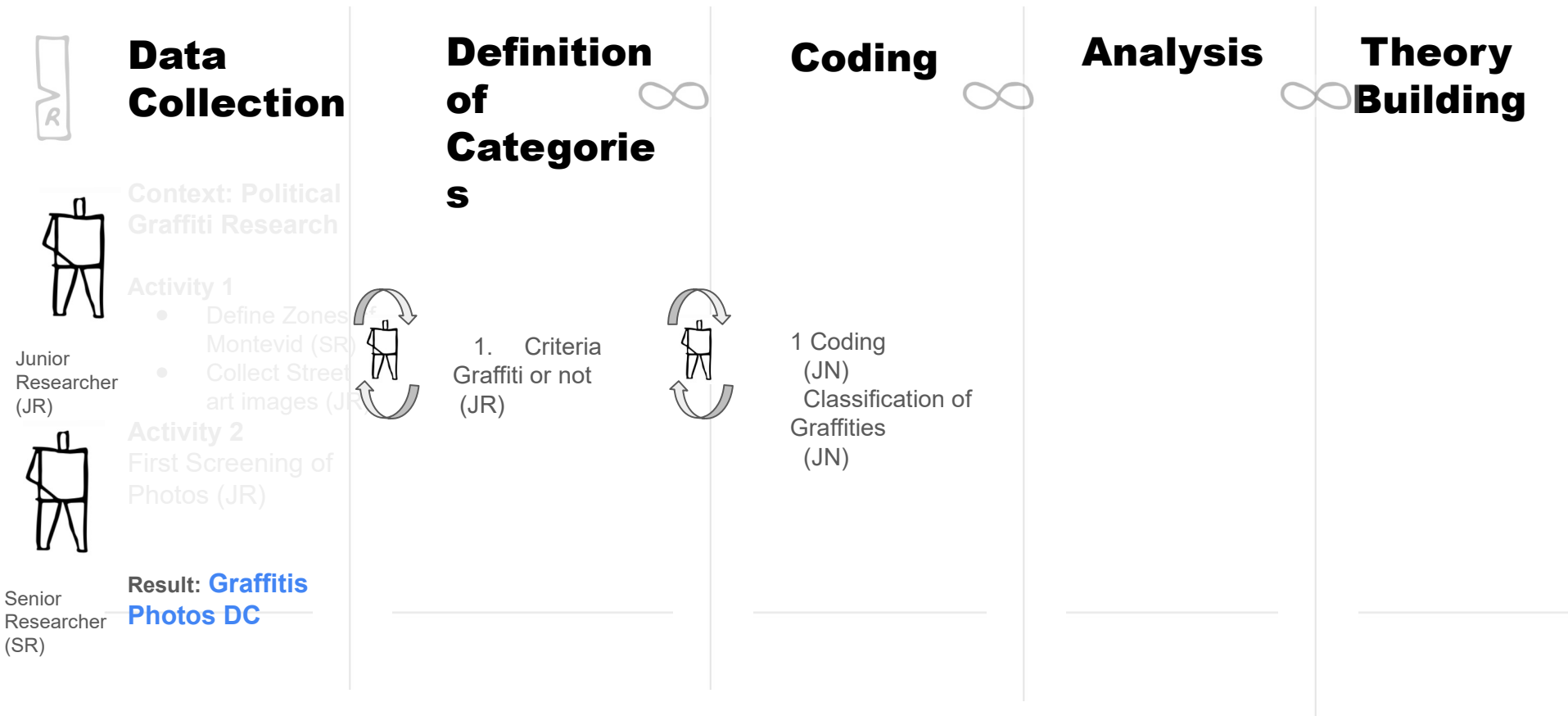
Analysis

Theory Building

Junior Researcher (JR)

Senior Researcher (SR)

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection

Definition of Categories

Coding

Analysis

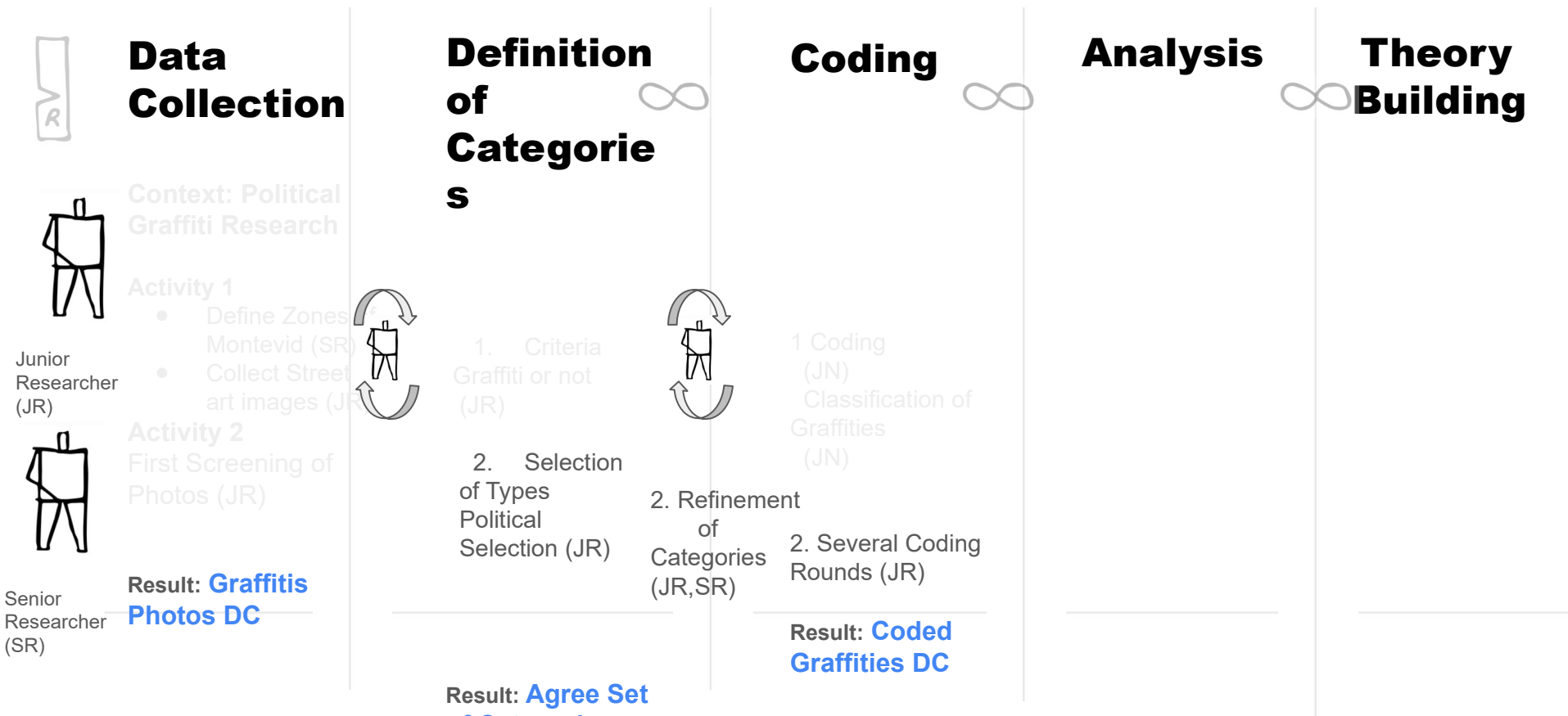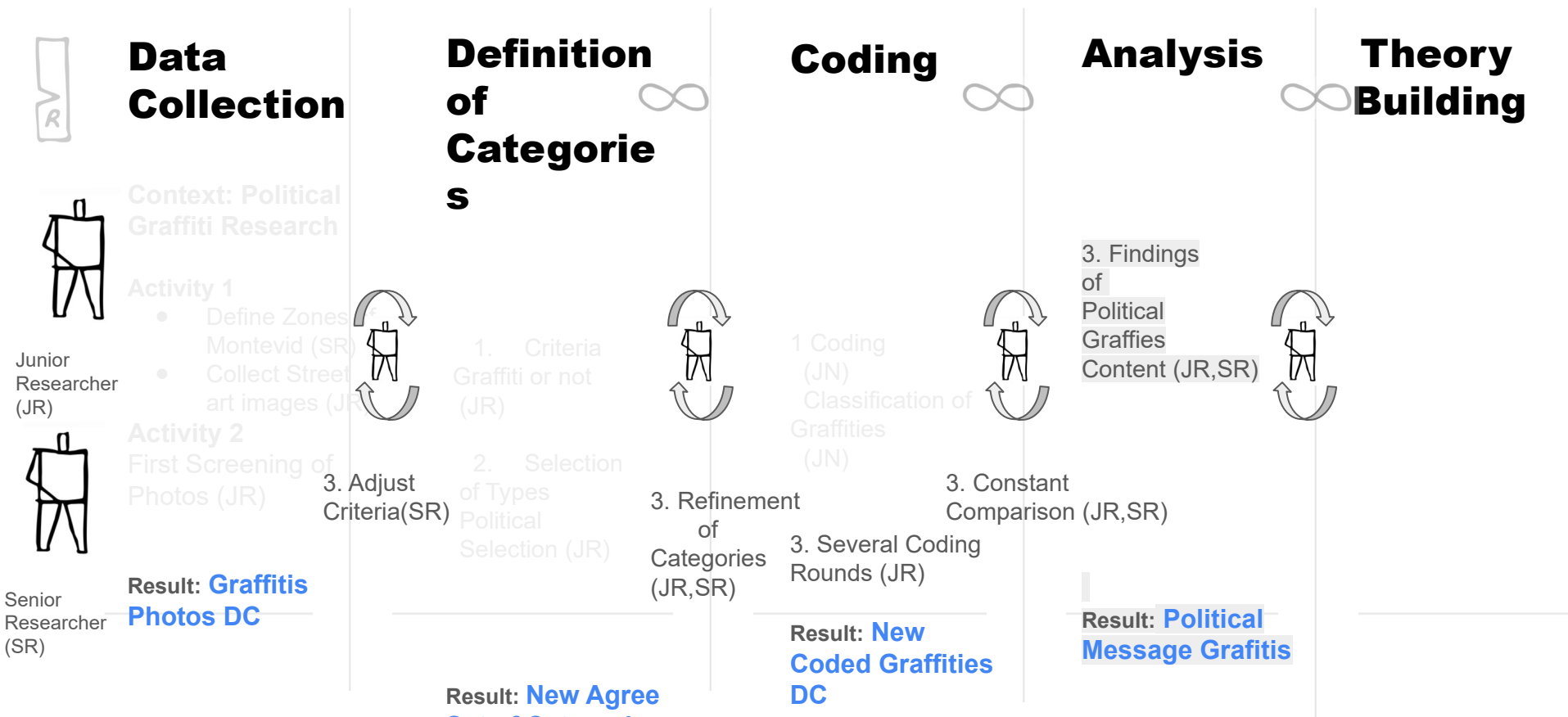## Theory Building

Junior Researcher (JR)

Senior Researcher (SR)

Context: Political Graffiti Research

Activity 1
- Define Zones of Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

Result: Graffitis Photos DC

1. Criteria Graffiti or not (JR)

2. Selection of Types Political Selection (JR)

2. Refinement of Categories (JR,SR)

Result: Agree Set

1 Coding (JN) Classification of Graffities (JN)

2. Several Coding Rounds (JR)

Result: Coded Graffities DC

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection | **Definition of Categories** | **Coding** | **Analysis** | **Theory Building**

Junior Researcher (JR)

Senior Researcher (SR)

Context: Political Graffiti Research

Activity 1
- Define Zones of Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

3. Adjust Criteria(SR)

Result: Graffitis Photos DC

1. Criteria Graffiti or not (JR)

2. Selection of Types Political Selection (JR)

3. Refinement of Categories (JR,SR)

Result: New Agree [cut off]

1 Coding (JN)
Classification of Graffities (JN)

3. Several Coding Rounds (JR)

Result: New Coded Graffities DC

3. Findings of Political Graffies Content (JR,SR)

3. Constant Comparison (JR,SR)

Result: Political Message Grafitis

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection

Definition of Categories

Coding

Analysis

Theory Building

Junior Researcher (JR)

Senior Researcher (SR)

Context: Political Graffiti Research

Activity 1
- Define Zones of Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

Result: Graffitis Photos DC

1. Criteria Graffiti or not (JR)

2. Selection of Types Political Selection (JR)

2. Refinement of Categories (JR,SR)

Result: Agree Set of Categories

1 Coding (JN) Classification of Graffities (JN)

2. Several Coding Rounds (JR)

3. Constant Comparison (JR,SR)

Result: Coded Graffities DC

3. Findings of Political Graffies Content (JR,SR)

4. Final Findings (JR,SR)

4. Deep Analysis (SR)

Result: Political Message Grafitis

SIMPLIFIED EXAMPLE OF GT PROCESS

Research Study: Analyzing Political Content in Montevideo Graffiti

Data Collection

Definition of Categories

Coding

Analysis

Theory Building

Junior Researcher (JR)

Senior Researcher (SR)

Context: Political Graffiti Research

Activity 1
- Define Zones Montevid (SR)
- Collect Street art images (JR)

Activity 2
First Screening of Photos (JR)

Result: Final Graffitis Photos DC

1. Criteria Graffiti or not (JR)

2. Selection of Types Political Selection (JR)

Result: Final Set of Categories

1 Coding (JN) Classification of Graffities (JN)

2. Refinement of Categories (JR,SR)

2. Several Coding Rounds (JR)

Result: Final Coded Graffities DC

3. Findings of Political Graffies Content (JR,SR)

4. Final Findings (JR,SR)

3. Constant Comparison (JR,SR)

4. Deep Analysis (SR)

Result: Final Political Findings

5. **Theory Grounded on Data**

Result: Theory Scientific Report

AGENDA

- Context: Ground Theory and Curation
- **Problem statement:** Curating GT Process Principle
- Curation Model
- Conclusions and Future Work

WHAT IS QUALITATIVE RESEARCH PROCESS CURATION?

Quality research process curation is the process of **identifying, systematizing, managing** and **registering** on the

- **researchers** working in the process,

Quality research process curation is the process of **identifying, systematizing, managing** and **registering** on the

Data Collection — Definition of Categories — Coding — Analysis — Theory Building

- **stages** of the process,

WHAT IS QUALITATIVE RESEARCH PROCESS CURATION?

Quality research process curation is the process of **identifying, systematizing, managing** and **registering** on the

- **arch**ers working in the process,
- **stag**es of the process,
- **content** produced along the stages of a research process

WHAT IS QUALITATIVE RESEARCH PROCESS CURATION?

Quality research process curation is the process of **identifying, systematizing, managing** and **registering** on the

- **researchers** working in the process,

- **stages** of the process,

- **content** produced along the stages of a research process

itions in which the stages are performed and

content are produced.

MOTIVATION FOR A GT PROCESS CURATION MODEL

- Manage **research process** **complexity**
- Make **process decisions** **traceable**
- Improve **reuse**, **reproducibility** and **transparency**

APPROACH: CONCEPTUAL MODEL

Create a **conceptual model** that represents a curated Grounded Theory **process**

QUALITATIVE RESEARCH PROCESS FIRST APPROACH (NON LINEAL)
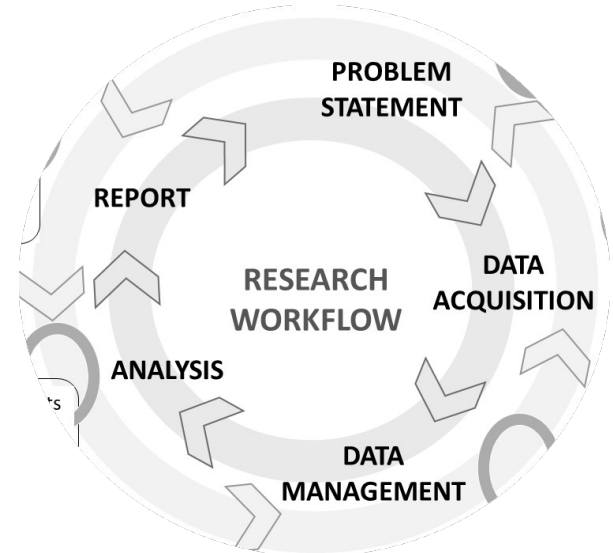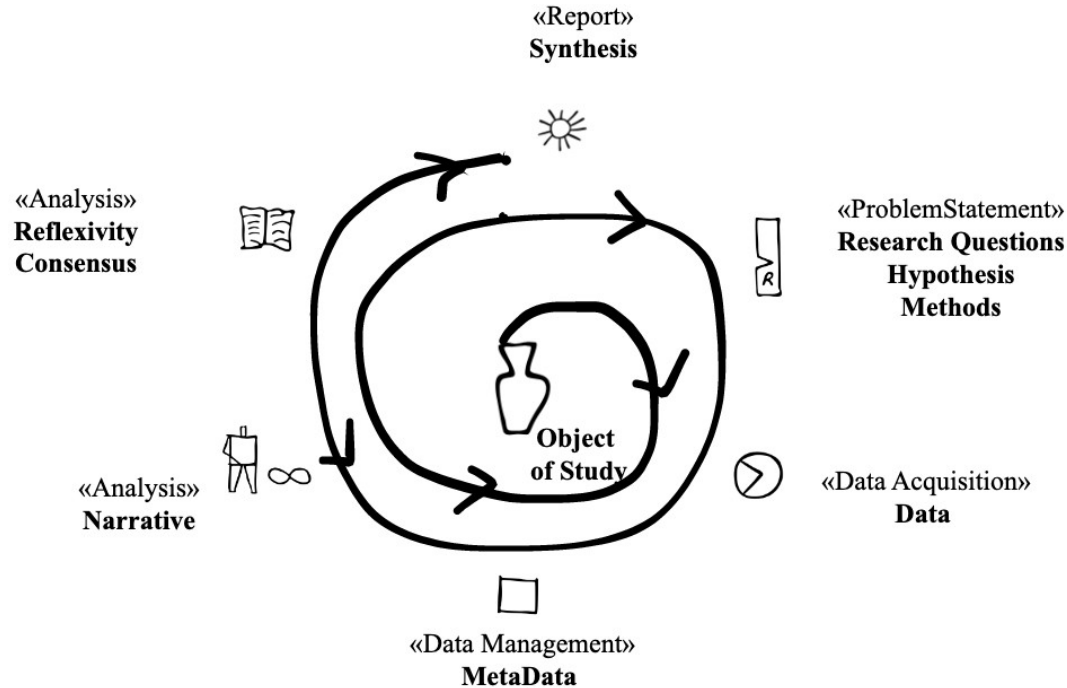
Adorjan, A., Vargas-Solar, G., & Motz, R. (2023, April). Towards a researcher-in-the-loop driven curation approach for quantitative and qualitative research methods. In *2023* 27th European Conference on Advances in Databases and Information Systems *(ABDIS)* .

AGENDA

- Context: Ground Theory and Curation
- Problem statement: Curating GT Process Principle
- **Curation Model**
- Conclusions and Future Work

ARTEFACT
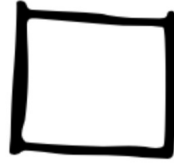
An **artefact** is an abstract representation of **context, data**, **role** or **knowledge** that is generated, transformed, or used throughout the Grounded Theory research lifecycle.

Simple Example :
> Raw Graffiti Photo

ARTEFACT PROPERTY
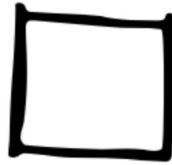
An artefact maintain the **traceability** of content, researchers, and stages by collecting, preserving, and registering associated metadata.

Example:

> Traceability of the **consensus** achieved among researchers through successive rounds of coding.

CURATION MODEL: RESEARCHERS AND CONSENSUS

Iterative process guided by researchers **decision making** **consensus** **patterns**

<Researchers>   **<Consensus>**   **<Phase>**

Data Collection   Definition of Categories   Coding   Analysis   Theory Building

Spiral Stages
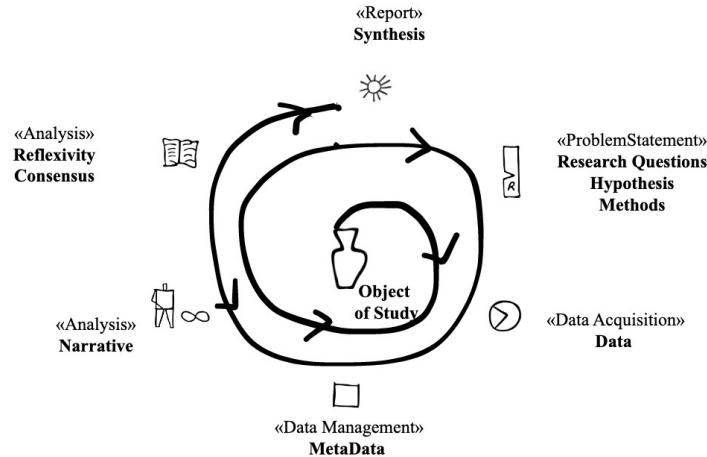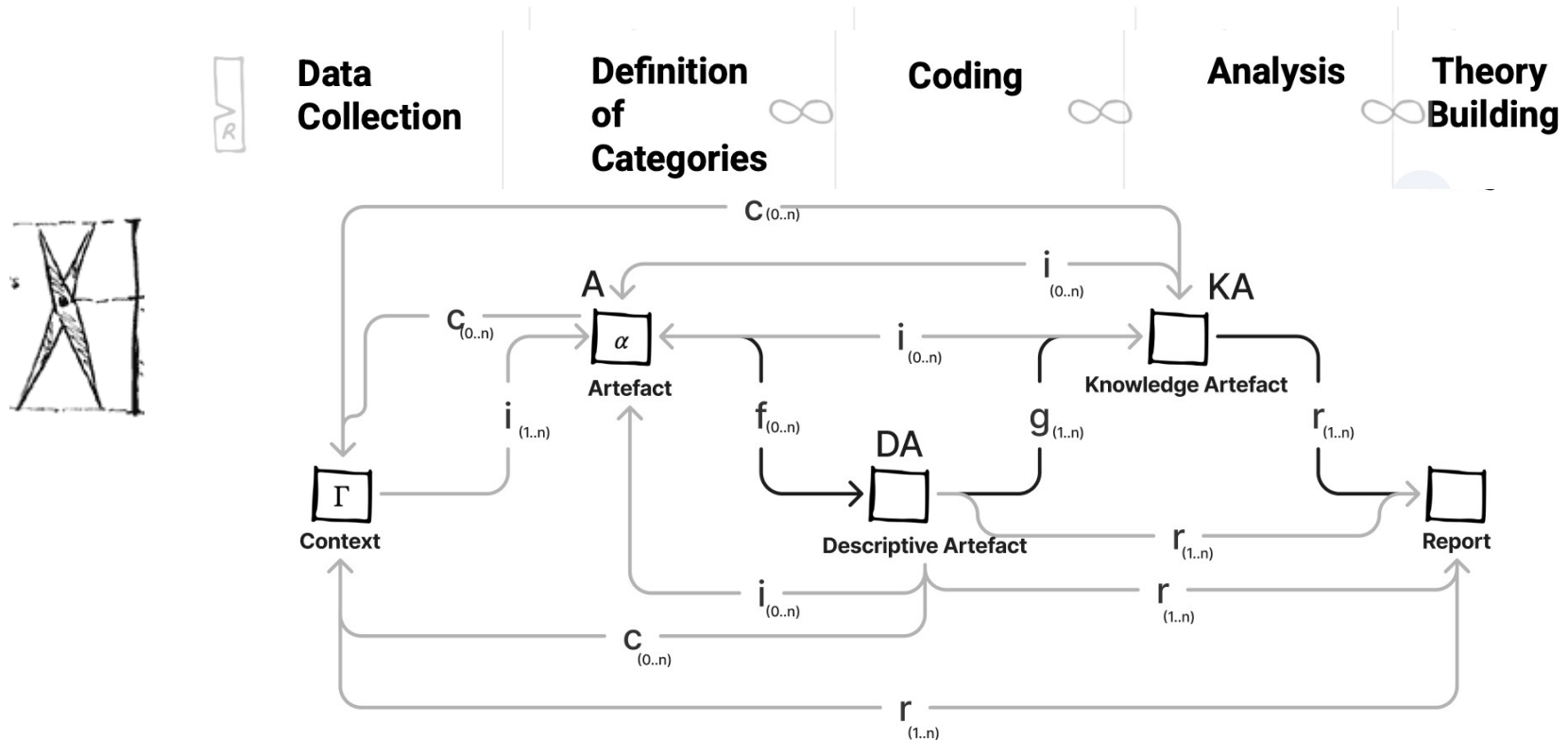
Qualitative Research Process Workflow

EXPLORING CURATED PROCESSES

- Transparency of the inductive process of the GT method
- Systematization and formalization of the process
- Improve reuse, reproducibility, and transparency with an inductive curational model

Types of responses that a **model** could be able to explain:

- How do artifact coding criteria evolve over time?
- What types of consensus are established among researchers?
- Which stages are the most complex in developing a theory?
- What types of decision-making were recorded by researchers as consensus, and how did they influence theory construction?
- Which stages of the traditional research process were not considered?

AGENDA

- Context: Ground Theory and Curation
- Problem statement: Curating GT Process Principle
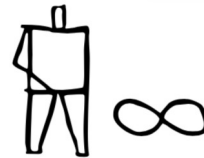- **Curation Model**
- **Conclusions and Future Work**

PROGRESS STATUS AND FUTURE WORK

- **PROGRESS Status**:
    - **Abstract modeling** of a qualitative methodology, such as Grounded Theory

    - Application through **real-world** existing research process.

    - Representation of the curation model through specific instances of MENTOR Use Cases

- **FUTURE Work**:
    - **Researcher-in-the-Qualitative-Loop** model

Thanks !!

Alejandro Adorjan

@aleadorjan

Alejandro Adorjan @aleadorjan