The leaky translation process

New perspectives in cognitive translation studies

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May 13, 2014
1. Goals and methodological development of the study of cognition in translation

2. Research design and results of a field study
   1. Translator activities
   2. Externalization and interaction
   3. Iterative operation patterns

3. 10 hypotheses:
   new perspectives in cognitive translation studies
Project
Extended translation: Socio-cognitive translation processes in the workplace (ExTra)

Translation: Cognition and Cooperation (TCC) Research Group, Department of Translation Studies, University of Graz, Austria 2014 - 2017
Cognitive Translation Studies

- Modeling translation-relevant cognitive processes
- Understanding how translations are produced
- Identifying main factors and their correlations
“A broad outline of Translator Studies would cover sociology, culture and cognition, all looking at the translator’s agency, in different ways.”

Chesterman 2009:13
Main methodological approaches to date

- EEG brain activity measurements (Kurz)
- “Thinking aloud” (Krings, Lörscher, Jääskeläinen, Tirkkonen, Kußmaul)
- Retrospection (Hansen, Englund Dimitrova & Tiselius)
- Tracking/logging of translation process on computer screen (Jakobsen, Schou et al.)
- Eye-tracking (Dragsted, Shreve, Lacruz, Angelone, Rüdning, Lachaud, O´Brien)
- …Triangulation
The experimental approach

- Defining the variables
- Hypothesizing a correlation between them
- Manipulating a particular variable
- Establishing an experimental sample and a control sample
- Involving a sufficient amount of data in order to test the hypothesis
- Controlling the confounding variables
- In laboratory settings
Situated Cognition
The brain as a part of a network
Situated Cognition
The brain as part of a network

input

output
The ethnographic approach

- Perspective of the participants
- Authentic situations of action
- Construction of meaningful action by the participants
- Structuring of the research object by the participants
- Factors identified through empirical research
- Research object: incl. unknown factors
Symbol Manipulation
The brain as a computer

cognition (C)

input → cognition (C) → output

brains

computers
Symbol Manipulation
The brain as a computer
Symbol Manipulation
The brain as a computer

\[ 3+2+10:6-9 = ? \]

\[ E = mc^2 \]

Man = Human\Woman
Connectionism
The brain as a network
Connectionism
The brain as a network

Pattern Recognition
Situated Cognition
The brain as part of a network
Situated Cognition
The brain as part of a network
Artefacts
Information and media infrastructures
Architecture and spatial/geographic context
Biological and ecological environment
Social spaces and areas of interaction
Cultural and historical context
**Dynamic network model**

- Cognition
- Action
- Social network
- Artifacts
- Environment
- Time
The case study

• Full-time freelance translator
• Direct contact to clients
• GER – ENG (mother tongue)
Field study

Data acquisition methods:

• Qualitative interviews
  • Client: 1h09min
  • Translator: 1h20min; & short interviews

• Participant observation
  • Day 1: 2h25min
  • Day 2: 2h25min

Data analysis methods:

• Qualitative content analysis
• Network visualization
Results

1. Translator activities
2. Externalization and interaction
3. Iterative operation patterns
A working day – chronologically

**Editing a newsletter**
1. Reflection
2. Organization/Contents & Layout
3. Research
4. Contents & Layout
5. Research
6. Organization/Contents & Layout
7. Writing/Editing
8. Organization/Contents & Layout
9. Writing/Editing
10. Research
11. Organization/Contents & Layout
12. Writing/Editing
13. Organization
14. Reflection
15. Organization

**Translating a report**
1. Research
2. IT processing
3. Contents
4. Writing/Editing
5. Research
6. Writing/Editing
7. Research
8. Writing/Editing
9. Research
10. Writing/Editing
11. Organization/Reflection
12. Reflection
13. Organization/Reflection
A working day – by volume

Editing a newsletter
1. Organization
2. Contents & Layout
3. (Reflection)
4. IT processing
5. Writing/Editing
6. Research

Translating a report
1. Writing/Editing
2. Research
3. Organization
4. Reflection
5. IT processing
6. Contents
Interaction: reconfiguring the cognitive space
Externalization

- Remembering ⟷ using external memory aids
- Formulating in the head ⟷ manipulating the externalized words
- Writing ⟷ editing
- Keeping track of the flow of text ⟷ following the cursor
- Closing a task ⟷ generating a break (a turning point)
- Imagining ⟷ hearing
Iterative operation patterns

1. Alternating of attention between left screen (resources) and right screen (writing)

2. Text production routines:
   - [writing, rewriting]
   - [reading, rewriting, adding context]
   - [mumbling, rewriting]
   - [deleting ST passage, changing position, marking the completed work verbally or para-verbally]
Hypothesis 1

Objective: an adequate picture of authentic translation actions
Follow-up study

• Roles
• Competences
• Coordination

2001-2002: Interviews
  Participative observation
  Artifact analysis

2007-2008: Participative observation
  Artifact analysis
Study results: four areas in which changes had occurred

- Standardization
- Digitalization
- Specialization
- Networking

→ Computer-assisted network economy
Analog und digital translation objects
Hypothesis 2

Translation reception
Complexity of operating a ticket machine
Hypothesis 3

Theoretical and empirical research, pure and applied research
Bridging the divide between

1. Theory and empirical evidence
2. Theory and practice
Hypothesis 4

Link to developments in translation studies and cognitive science
Hypothesis 5

Cognitive science plausibility
Concept of “role”

Not assumed as given, but rather:

applied and negotiated based on everyday practices
Concept of “context”

No repository, no prescribed frame, but rather:

Part of and result of the cognitive process
Hypothesis 6

Development perspective:
description of processes and developments
Development perspective

Hendriks-Jansen (1996):

Not only “How would a rationally designed artifact perform that task?”

or “Why is it there?”

but also “How did it come to be there?”
Hypothesis 7

Description of translation expertise
Expert competence

Self-organization
- Role models
- Meta-cognition
- Cooperation models
- Communication models

Planning and deciding measures
- Comparative models
- Method
- Communication plan

Macro strategy planning
- Desired state of target situation
- Communication

Integration of information
- Task/order
- Target situation; communication
- Initial situation
- Research

cf. Risku 1998
Hypothesis 8

Description of translation knowledge
Knowledge as intellectual capital

- Country, culture
- Language, text
- Subject
- Management
- Technology

Knowledge

explicit
tacit
<table>
<thead>
<tr>
<th>Type of Knowledge</th>
<th>Codifiable Aspects</th>
<th>KM Instruments for Codifiable Aspects</th>
<th>Non-Codifiable Aspects</th>
<th>KM Instruments for Non-Codifiable Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Language, linguistic, text skills, communication competence</strong></td>
<td>Grammar, terminology, regional conventions, register, communication methodologies and strategies</td>
<td>Glossaries, translation memories, databases, style guides, guidelines, educational literature, handbooks</td>
<td>Tacit understanding of context, variations in meaning, understanding of the purpose of the communication, cultural and creative strategies</td>
<td>Mailing lists, online communities, associations, courses, collaboration, Communities of Practice, conferences</td>
</tr>
<tr>
<td><strong>Country and cultural knowledge</strong></td>
<td>Economic, legal, and regulatory requirements, conventional linguistic differences</td>
<td>Databases, websites, literature, media</td>
<td>Tacit knowledge of the cultures, underlying knowledge of complex contexts (attitude, history, etc.)</td>
<td>Associations and communities, Chambers /Embassies, mentoring, storytelling, learning journeys</td>
</tr>
<tr>
<td><strong>General and subject matter knowledge</strong></td>
<td>Reference material, journals, industry guidelines</td>
<td>Databases, publications, knowledge portals, expert systems, knowledge and topic maps</td>
<td>“Education”, general knowledge, constant willingness to learn, world experience, curiosity</td>
<td>Yellow pages, blogs, wikis, brainstorming, conferences, seminars</td>
</tr>
<tr>
<td><strong>Client and business knowledge</strong></td>
<td>Terminology, glossaries, contact, reference material, stylistic guidelines, industry information</td>
<td>CRM, PM tools, style guides, terminologies, translation memories, knowledge portals</td>
<td>Interaction strategies, long-term client-translator relationships, trust, marketing skills</td>
<td>Collaboration tools, yellow pages, coaching, networking, brainstorming</td>
</tr>
<tr>
<td><strong>Information technology and computer skills</strong></td>
<td>Communication and desktop publishing tools, formatting guidelines</td>
<td>User manuals, handbooks</td>
<td>Ability to solve complex problems</td>
<td>Courses, online forums, communities, mailing lists, conferences, seminars</td>
</tr>
</tbody>
</table>
Hypothesis 9

Interaction between translators and their environment
Overview of artifacts used

Physical artifacts
• Phone
• Fax
• Letters (for post and courier services)
• Document files
• Notes and Post-its
• Lists
• Checklists
• Dictionaries
• Order sheet
• Ring binders (quotes, source texts, translations, correspondence, etc.)

Electronic artifacts
• E-mail
• Address book
• Internet
• Databases
• Storage media
• Current order list
• Word processing & spreadsheet software
• Translation memory system
• Terminology management system
• Project management system
Hypothesis 10

Translation as network activity
Situative translation

Paepcke (1986): Libero, der "innerhalb der Regeln des Fußballspiels den Ball in fortgesetzt überraschenden Bewegungsformen (…) ins Tor bringt"
Hutchins: Cognition in the wild
The leaky translation process

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