

5i: Sociale Navigatie en e-Learning



Colin Tattersall & Jocelyn Manderveld

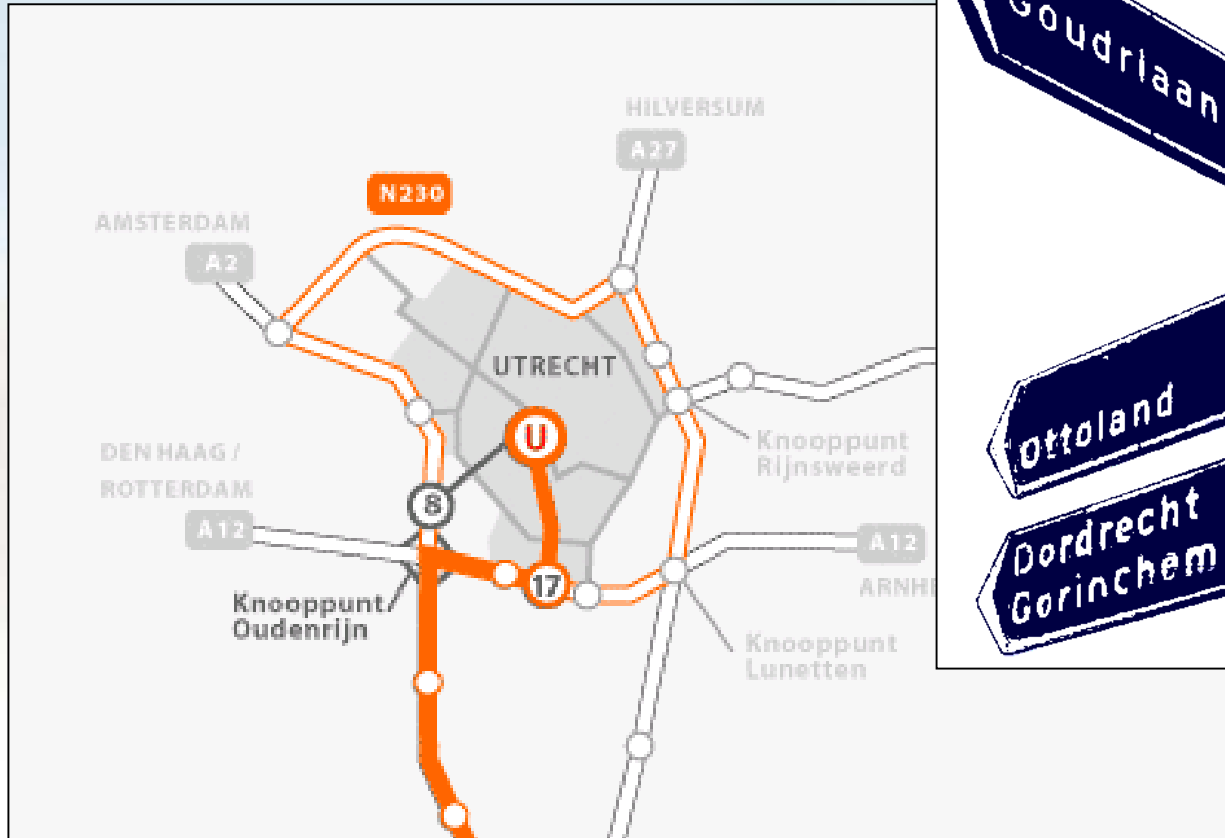
Agenda

- De wat, waarom en hoe van sociale navigatie
- Experimentje
- R&D bij Open Universiteit Nederland

Navigeren


- “Een schip of vliegtuig vakkundig besturen”
(Van Dale)
- “the process of determining a path to be travelled by any object through any environment”
Darken & Silbert (1993)
- “wayfinding”: cognitief proces/doelgericht;
Hoe kom ik van waar ik nu ben tot waar ik wil zijn?
 - Vergelijk met “exploratie”

Hulpmiddelen



Sociale Navigatie

- “Navigation is a social and frequently a collaborative process” (Hutchins 1995)
- **Social Navigation:** Gebruik van informatie van/over anderen tijdens het navigatie proces
- Vergelijk met “Recommender systems”
 - Amazon
 - MovieLens (movielens.umn.edu)

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DVD Recommendations

Harry Potter and the Prisoner of Azkaban (Two Disc Edition) [2004]



Amazon.co.uk Review

Some movie-loving wizards must have cast a magic spell on *Harry Potter and the Prisoner of Azkaban*, because it's another grand slam for the Harry Potter franchise. Demonstrating remarkable versatility after the arthouse success of *Y Tu Mamá También*, director Alfonso Cuarón... [Read more](#)

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LEGO Harry Potter 4755: Knight Bus



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| ★★★★★ | Not seen | Shaun of the Dead (2004) info imdb Action, Comedy, Horror, Romance | <input type="checkbox"/> |
| ★★★★★ | Not seen | Hero (Ying Xiong) (2002) info imdb Action - Mandarin | <input type="checkbox"/> |
| ★★★★★ | Not seen | I Heart Huckabees (2004) info imdb Comedy | <input type="checkbox"/> |
| ★★★★★ | Not seen | Infernal Affairs (Wu jian dao) (2002) info imdb Crime, Drama - Cantonese | <input type="checkbox"/> |
| ★★★★★ | Not seen | Sky Captain and the World of Tomorrow (2004) info imdb Action, Adventure, Mystery, Sci-Fi, Thriller | <input type="checkbox"/> |
| ★★★★★ | Not seen | Motorcycle Diaries, The (Diarios de motocicleta) (2004) info imdb Drama - Spanish | <input type="checkbox"/> |
| ★★★★★ | 4.0 stars | Collateral (2004) info imdb Action, Crime, Drama, Thriller | <input type="checkbox"/> |
| ★★★★★ | Not seen | Friday Night Lights (2004) info imdb Action, Drama | <input type="checkbox"/> |

Directe Sociale Navigatie

- Het inwinnen van navigatie advies van anderen:
 - “hoe kom ik bij de Jaarbeurs?”
 - “zou ik die kant op moeten gaan?”
- Synchrone communicatie



Indirecte Sociale Navigatie

- Gebruik van sporen die anderen achter gelaten hebben



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Is Navigatie een probleem in e-Learning?

- Modulaire opbouw van opleidingen

| | Geen vrijheid in selectie | Vrijheid in selectie |
|---------------------------|--|------------------------------------|
| Geen vrijheid in volgorde | Verplichte set modulen die in een vaste volgorde gedaan moeten worden | Kies, maar in deze volgorde |
| Vrijheid in volgorde | Je moet deze modulen doen, maar je mag zelf de volgorde bepalen | De keuze is aan jou ... |

De toekomst

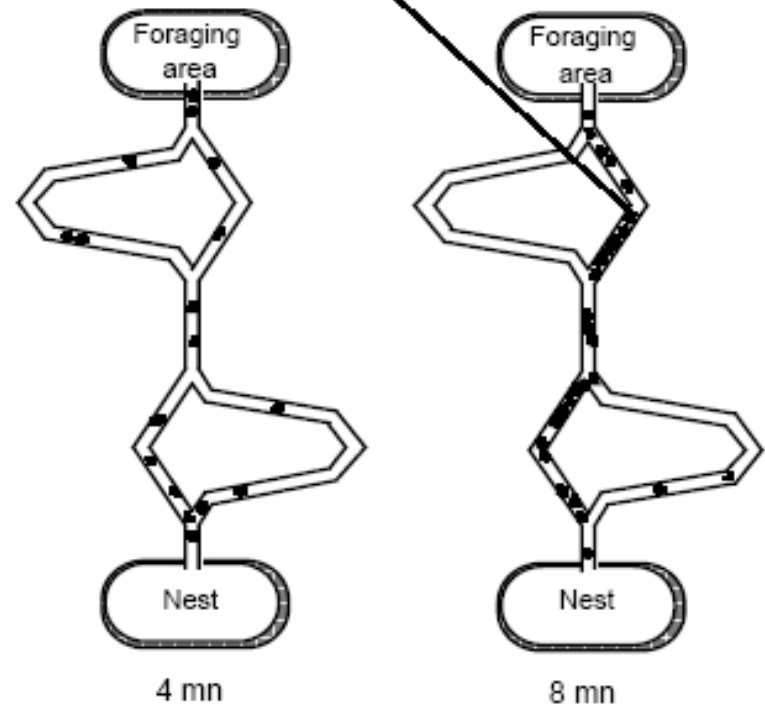
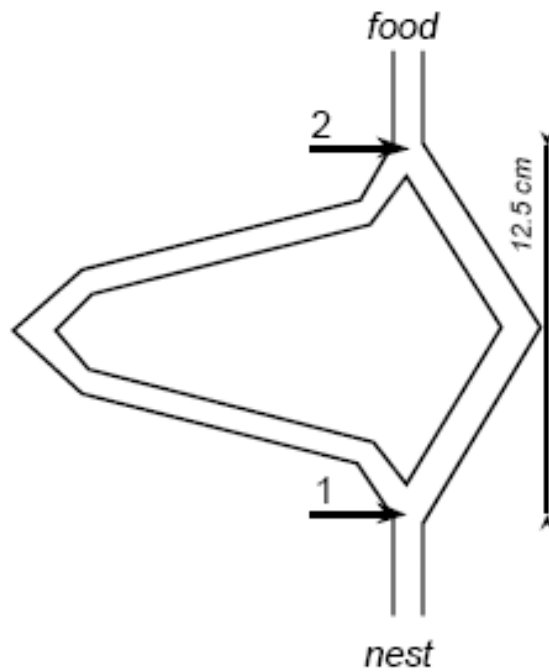
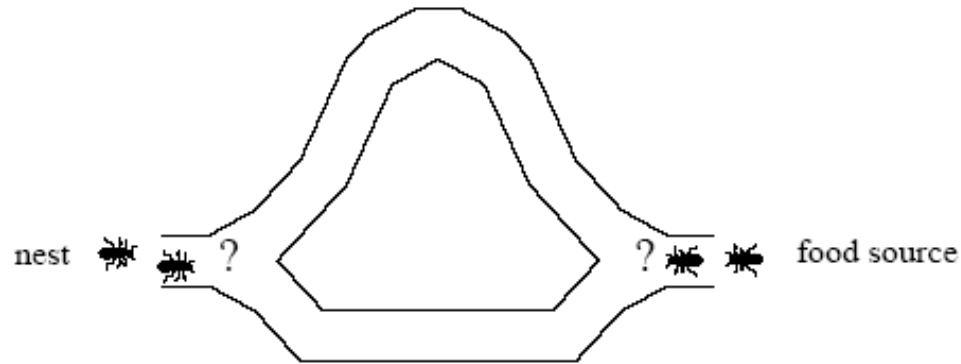
- De variëteit in leerwegen en leertrajecten zal de komende jaren verder toenemen
(OCW, Ontwerp Hoger Onderwijs en Onderzoek Plan 2000)
- Everyone should be able to follow open learning pathways of their own choice, rather than being obliged to follow predetermined routes to specific destinations.
(Commission of the European Communities, A Memorandum on Lifelong Learning, 2000);

Hulpmiddelen?

- Als wij geen routebeschrijvingen hebben/kunnen maken hoe kunnen wij lerenden helpen navigeren?
- Indirecte sociale navigatie:
 - hoe hebben anderen het doel bereikt dat ik ook wil bereiken?
 - Zelf organisatie, feedback mechanismen

Efficiënte paden in de mierenwereld

FIGURE 2. Ants have a decision to make



Deel 2: Een illustratief experiment

Zie handout

Deel 3: R&D op dit terrein bij Open Universiteit Nederland

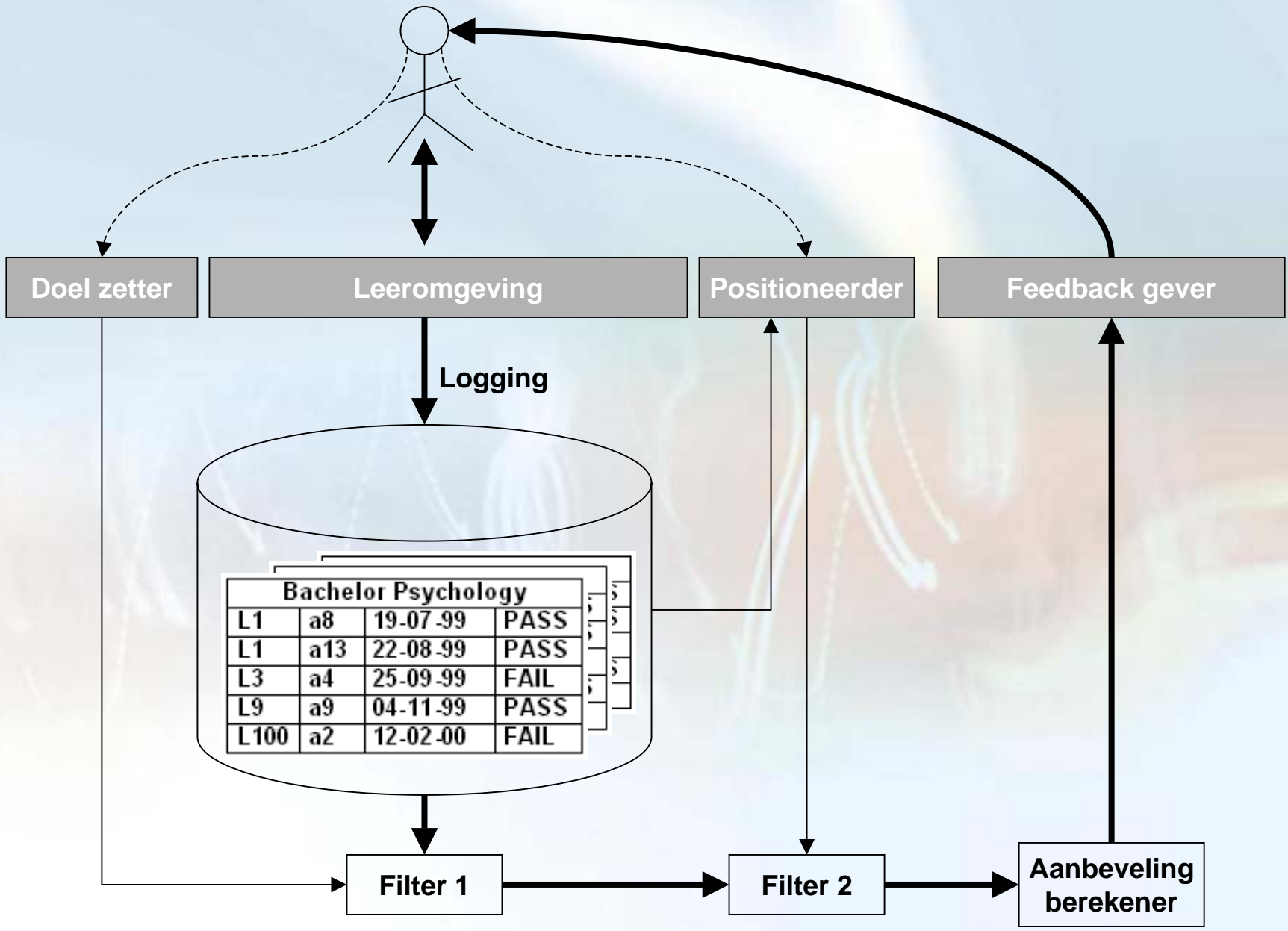
Het ROMA project

- **Uitgangspunt:**
 - Het bereiken van leerdoelen kan verbeterd worden door inzicht te geven in hoe anderen deze leerdoelen ook bereikt hebben.
- **Aanpak:**
 - Exploiting **collective learner interactions** to help learners select **efficient paths** to reach their **target** from their **position**.
 - “Others who went before you proceeded that way to reach the target”.
- **Hoe weten we of het werkt?**
 - Rendement verbetering

Interaction data

| Learner ID | Activity | Start | Completion attempt | Success? |
|------------|----------------------------|---------------------|---------------------|----------|
| A4872 | Introduction to Psychology | 2002-11-05T13:15:30 | 2003-01-04T10:14:00 | No |
| A4872 | Introduction to Psychology | 2002-11-05T13:15:30 | 2003-02-10T09:00:00 | No |
| A4872 | Introduction to Psychology | 2002-11-05T13:15:30 | 2003-03-01T11:11:11 | Yes |
| A4872 | Statistics 101 | 2002-12-02T11:00:00 | 2003-05-03T19:08:00 | No |
| Z3489 | Introduction to Psychology | 2002-11-05T09:15:30 | 2003-04-04T13:55:00 | Yes |
| M2229 | Introduction to Psychology | 2003-08-02T18:15:30 | 2003-09-09T10:10:00 | Yes |
| M2229 | Social Psychology | 2002-11-05T13:15:30 | 2003-10-04T21:00:00 | Yes |

- Data wordt al geregistreerd
- Sporen - Learning Tracks: sequenties van afgeronde modules



Transitie Matrix

Gem. tijd om af te ronden

| naar van | A | B | C | D | E |
|-------------|----|-----|----|----|----|
| A | | 39 | 42 | 55 | 71 |
| B | 42 | | 21 | 31 | 43 |
| C | 37 | 4 | | 10 | 22 |
| D | 49 | 122 | 34 | | 5 |
| E | 16 | 25 | 52 | 73 | |

ROMA - Stand van Zaken

- Experiment, twee groepen (met en zonder feedback)
- Korte cursus
 - Q1/Q2 2005
 - +/- 300 lerenden
 - +/- 10 modulen via Moodle (Open Source Leeromgeving)
- Als dit experiment positief verloopt, grotere pilot

Samenvatting

- Indirecte sociale navigatie & e-learning
 - het gebruik van sporen die lerenden achter zich laten
 - aanpak rust op automatisch gelogde gegevens
- Eerste aandachtsgebied gericht op het verhogen van efficiëntie (snelle leerpaden)
 - Later misschien ook leuke paden