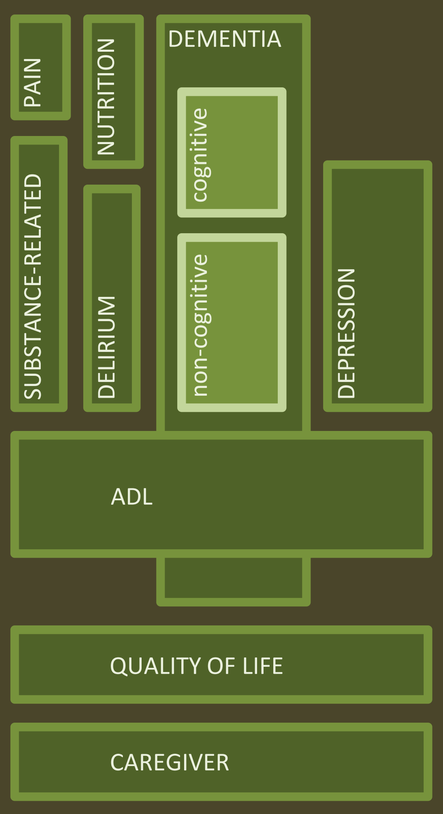
*The Logic of*

# Assessment Scales and Consensus Guidelines

Text based assessment scales
and consensus guidelines

| | |
|---|---|
| GerDepS, GDS-4 | DEPRESSION |
| GerDepS, GDS-10 | DEPRESSION |
| GerDepS, GDS-15 | DEPRESSION |
| GerDepS, GDS | DEPRESSION |
| BASDEC | DEPRESSION |
| Hamilton | DEPRESSION |
| BDI | DEPRESSION |
| MADRS | DEPRESSION |
| Cornell | DEPRESSION |
| SELFCARE | DEPRESSION |
| Mania | DEPRESSION |
| House | DEPRESSION |
| Zung | DEPRESSION |
| Hackinski | DEMENTIA |
| SMMSE | cognitive |
| Clock | cognitive |
| CAPE | cognitive |
| IQCODE | cognitive |
| BEHAVE-AD | non-cognitive |
| NPI | non-cognitive |
| CERAD | non-cognitive |
| NOSGER | non-cognitive |
| RAGE | non-cognitive |
| ABMI | non-cognitive |
| BARS | non-cognitive |
| CMAI | non-cognitive |
| BEAM-D | non-cognitive |
| ADAS | (non-)cognitive |
| *RAVA* | ADL (*Finland*) |
| *AGGIR* | ADL (*France*) |
| IADL | ADL |
| Barthel | ADL |
| RDRS-2 | ADL |
| FDS | ADL/DEMENTIA |
| FAST | ADL |
| GlobDetS, GDS | DEMENTIA |
| CDR | ADL/DEMENTIA |
| ADFACS | ADL/DEMENTIA |
| ADCS-ADL | ADL/DEMENTIA |
| DSI | DELIRIUM |
| DRS | DELIRIUM |
| DI | DELIRIUM |
| CAM | DELIRIUM |
| DAD | ADL/DEMENTIA |
| QOL-AD | QUALITY OF LIFE |
| GHQ | CAREGIVER |
| Gilleard | CAREGIVER |
| Vitaliano | CAREGIVER |
| MNA | NUTRITION |




| | |
|---|---|
| Major depressive episode | DEPRESSION |
| Manic episode | DEPRESSION |
| Major depressive disorder, single episode | DEPRESSION |
| Major depressive disorder, recurrent | DEPRESSION |
| Dementia of the Alzheimers type | DEMENTIA |
| Vascular dementia | DEMENTIA |
| Dementia due to other general medical conditions | DEMENTIA |
| NINCDS-ARDRA, Alzheimer | DEMENTIA |
| NINDS-AIREN, vascular | DEMENTIA |
| Delirium due to general medical condition | DELIRIUM |
| Substance intoxination delirium | DELIRIUM |
| Substance withdrawal delirium | DELIRIUM |
| Delirium due to multiple etiologies | DELIRIUM |

MATHEMATICS

ANALYSIS
STATISTICS

Continuum (”values”)
Evidence base

ALGEBRA
LOGIC

Symbol (”standards”)
Decision base

Logic is ***inference***
{ C1, …, Cn } |- { D1, …, Dm }
not *implication*
If … then … else

Reasoning is ***canonic***, not *ad hoc*

{
supported home care
possible depression
MMSE at 23, collected last year
no signs of other cognitive disorders, except that …
stroke three years ago
medication for hypertension
vascular dementia possible? (Hackinski)
RDRS-2 at …, from last week
Social ability is …
Environmental issues measure to …
}
|-
{
update service level …
continue with the following scales:
GDS-15
for higher scores, consider
testing for *Major Depressive Episode*
new MMSE and CLOCK TEST
for updated cognitive decline assessment
}

✓Guidelines and rules written in formal logic
✓Logic based on terms and principles of logical consequence
✓Signatures (operator domains) producing the terms of the logical language

## ICT Service Provider

Web solutions (Microsoft .NET aspx with AJAX)
and databases (MS SQL Server, Oracle, …)
are tailored for municipality health and social care.
Can be integrated with existing medical records.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**Ground category defining notions of 'sets of objects'**

Presentation

Logic and Assessment

Representation

Data and Things

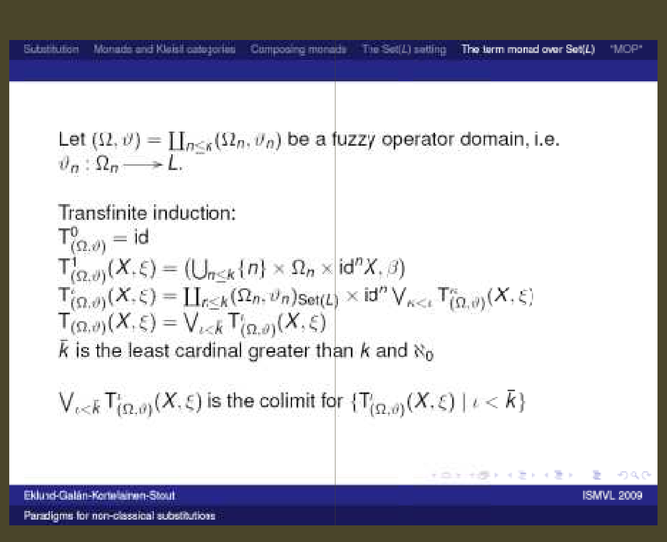
*When doing assessments,*
*don't speak English, speak* Assessment.
*When making decisions,*
*don't say anything, just think* logic.

**Paradigm**

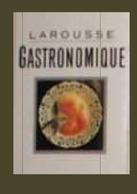
*Morphisms* $f : X \to Y$ *in* $\mathrm{Set}_{\mathbf{T}_\Omega}$ *capture the notion of variables being substituted by terms.*

*Morphisms* $f : X \to Y$ *in* $\mathrm{Set}_{\mathbf{L}_{id} \bullet \mathbf{T}_\Omega}$ *capture the notion of variables being substituted by many-valued sets of terms.*

*Morphisms* $f : (X, \xi) \to (Y, \chi)$ *in* $\mathrm{Set}(L)_{\mathbf{T}_{(\Omega,\vartheta)}}$ *capture the notion of a many-valued set of variables being substituted by terms over a many-valued set of variables.*



patient
relative
practical nurse
social worker
medical social worker
nurse
public health nurse
physiotherapist
occupational therapist
dietician
psychologist
psychotherapist
psychiatrist
general practitioner
neurologist
geriatrician

OBSERVE – ASSESS – DECIDE

home
home, supported by relative
regular home service
home nursing
services provided in ordinary residential living
services provided in intensively supported residential living
nursing homes
health care centres with short term care
health care centres with long term care
hospital wards