Systems Intelligence Inventory

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Starting point:
Thinking about thinking
We live in systems

• We always live and act as a part of a whole with interactions i.e. a system (family, school, work, community, etc.)

• We cannot avoid the influence of the system on us and our influence on the systems and stay outside of it
Systems Intelligence (SI)

• Intelligent behaviour in the context of complex systems involving interaction, dynamics and feedback

• Acting as part of the system, trying to understand and look for constructive ways from within the system

SI research in different contexts

- Articles and theses
  - Systems Thinking
  - Communication
  - Leadership
  - Positive organizational scholarship
  - Psychoanalytic therapy
  - Mother – child interaction
  - SI in conflict resolution
Can I improve in SI?
The SI self-test

• SI Inventory is a self-report questionnaire:
  – 50 questions/items
  – 7-point scale from “never” to “always”
  – Takes 5 to 10 minutes
  – Results compared to distribution of scores of over 2000 participants

• Questionnaire is available on the web in English and Finnish: http://systemsintelligence.aalto.fi/
Some of the questions

I quickly get a sense of what matters

I critically evaluate my ways of thinking

I view things from many different perspectives

I praise people for their achievements

I am willing to take advice

I successfully manage problematic situations
Studies

• Study 1: Developing the inventory and testing
  – Students, public and private employees
  – Identification of SI factors with exploratory analysis
  – Validation of the resulting inventory with confirmatory analysis

• Study 2: Comparison of the results to Emotional Intelligence and the Five Factor Model of personality
Results

• Confirmed the existence of the eight factors of Systems Intelligence
• Some factors are correlated with Emotional Intelligence, some are related to other personality traits
• The SI Inventory is capable of measuring new skills over the other measurements
Factors of SI

Perceiving
- Systemic Perception
- Attunement

Attitude
- Positive Attitude
- Spirited Discovery

Thinking
- Reflection
- Wise Action

Acting
- Positive Engagement
- Effective Responsiveness
Perceiving

• **Systemic Perception**
  Seeing, identifying and recognising systems, patterns, and interconnections, having situational awareness

• **Attunement**
  Engaging intersubjectively, being present, mindful, situationally sensitive and open
Attitude

• **Positive Attitude**
  Keeping a positive outlook, not getting stuck on negative impressions and effects

• **Spirited Discovery**
  Engaging with new ideas, embracing change
Thinking

• **Reflection**
  Reflecting upon one’s thinking and actions, challenging one’s own behaviour

• **Wise Action**
  Exercising long-term thinking and realising its implications, understanding that consequences may take time to develop
Acting

• Positive Engagement
  Taking systemic leverage points and means successfully into action with people

• Effective Responsiveness
  Taking systemic leverage points and means successfully into action with the environment, being able to dance with systems
Personal SI results

Your style

Based on your answers, it seems that your strengths include

- **Wisdom**: You can face things maturely and consider your actions.
- **Reflection**: You are able to analyze your own thinking and acting. This is a remarkable strength of yours.
- **Attunement**: You have an open mind. You listen and understand other people.

If you're interested in developing yourself, here are a couple of suggestions:

- **Engagement with People**: Show more interest towards people and their doings. Ask, listen, praise and cheer!
- **Effective Responsiveness**: Think what would be the real solution in difficult situations and take/seize the challenge.
Who is high in SI?

• How do different groups of people differ:
  – Males versus females?
  – Young people (<30y) versus older people (>30y)?
  – Managers versus non-managers?
## Gender: Little difference

<table>
<thead>
<tr>
<th>Factor</th>
<th>Male</th>
<th>Female</th>
<th>Sig.¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic Perception</td>
<td>4.33</td>
<td>4.19</td>
<td>*</td>
</tr>
<tr>
<td>Attunement</td>
<td>4.28</td>
<td>4.52</td>
<td>***</td>
</tr>
<tr>
<td>Positive Attitude</td>
<td>3.62</td>
<td>3.46</td>
<td>**</td>
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<tr>
<td>Spirited Discovery</td>
<td>4.14</td>
<td>4.14</td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>4.25</td>
<td>4.33</td>
<td></td>
</tr>
<tr>
<td>Wise Action</td>
<td>4.24</td>
<td>3.97</td>
<td>***</td>
</tr>
<tr>
<td>Positive Engagement</td>
<td>3.76</td>
<td>3.97</td>
<td>*</td>
</tr>
<tr>
<td>Effective Responsiveness</td>
<td>4.16</td>
<td>4.29</td>
<td></td>
</tr>
</tbody>
</table>

¹ Mann-Whitney U test statistical significance values:

* p < 0.05;  ** p < 0.01;  *** p < 0.001
Age improves your SI

<table>
<thead>
<tr>
<th>Factor</th>
<th>&lt;30 years old</th>
<th>&gt;30 years old</th>
<th>Sig.¹</th>
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</thead>
<tbody>
<tr>
<td>Systemic Perception</td>
<td>4.21</td>
<td>4.38</td>
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<tr>
<td>Attunement</td>
<td>4.34</td>
<td>4.50</td>
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<tr>
<td>Positive Attitude</td>
<td>3.48</td>
<td>3.72</td>
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<tr>
<td>Spirited Discovery</td>
<td>4.06</td>
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</tr>
<tr>
<td>Reflection</td>
<td>4.22</td>
<td>4.44</td>
<td>**</td>
</tr>
<tr>
<td>Wise Action</td>
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<td>Positive Engagement</td>
<td>3.75</td>
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<tr>
<td>Effective Responsiveness</td>
<td>4.16</td>
<td>4.37</td>
<td>**</td>
</tr>
</tbody>
</table>

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## Are managers high in SI?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Manages</th>
<th>Non-managers</th>
<th>Sig. (^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic Perception</td>
<td>4.51</td>
<td>4.26</td>
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</tr>
<tr>
<td>Attunement</td>
<td>4.77</td>
<td>4.66</td>
<td>*</td>
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<tr>
<td>Positive Attitude</td>
<td>3.97</td>
<td>3.79</td>
<td>*</td>
</tr>
<tr>
<td>Spirited Discovery</td>
<td>4.43</td>
<td>4.24</td>
<td>**</td>
</tr>
<tr>
<td>Reflection</td>
<td>4.46</td>
<td>4.20</td>
<td>***</td>
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<tr>
<td>Wise Action</td>
<td>4.43</td>
<td>4.24</td>
<td>*</td>
</tr>
<tr>
<td>Positive Engagement</td>
<td>4.44</td>
<td>4.07</td>
<td>***</td>
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<tr>
<td>Effective Responsiveness</td>
<td>4.72</td>
<td>4.52</td>
<td>***</td>
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Future research

• How does the context affect the results?
  – Do people evaluate themselves differently in their personal life compared to their professional life?

• How to improve one’s systems intelligence in different environments
  – Leadership, schools, and everyday life

• SI as a tool for developing/evaluating social innovations and technology?
SI web site
http://systemsintelligence.aalto.fi/

• Papers and publications
• Link to the questionnaire

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Distribution of SI scores among people who have completed this self-evaluation