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Strange Loops and Complexity in Higher Education Reform

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GEDA Project

Academy for Educational Development (AED)

Before Psychology

- In the darkness of academia before psychology, there were some developments that remain important today.
- The principles that evolved bear on the PhD program in psychology and other areas.
- The principles also relate to reform in general, and we'll look at the GEDA project within these parameters.

Dmanisi U – first European University

- First came university professors, then came the invention of the wheel – efficient transport, added value for carrying goods along the new Silk Road, and new markets for carts. And a possible publication and patent!
- Of course, it took a long time to work out the bugs, so the first “wheels” were SQUARE!
- People complained about the bumpiness of the ride ...^ ...^ ...^ ...^
- So more research funds were expended, RFPs written, and proposals peer reviewed...

Power of the Triangle

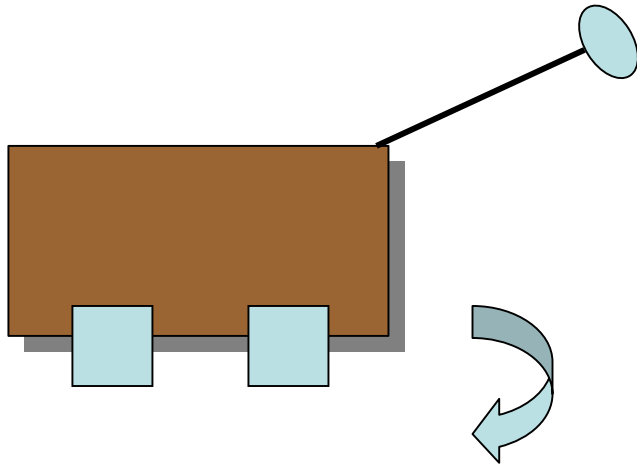
- One mathematics professor worked through the geometry and won the praise of his colleagues.
- He displayed his newest invention at a trade fair, and announced it was called the “roll easy.”
“Isn’t it a beauty?”
- “Ten skins I’ll charge but for you my friends, a bargain if you buy a set and spare for each of the carts you sell.”
- The audience was baffled. Eventually, one said, “ But the ‘wheels’ are triangular!”

OLB

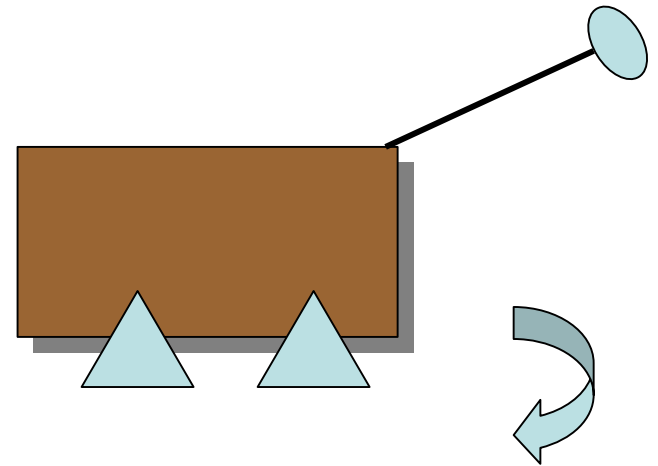
- “Of course,” replied the professor.
- “How can that be an improvement?” asked the crowd.
- “Don’t you see?” expostulated the erudite mathematician.

- **ONE LESS BUMP!**

OLB (one less bump!)



Four bumps with each revolution



Three bumps!

From the outside = one less bump!
From the inside = ?

OLB Change

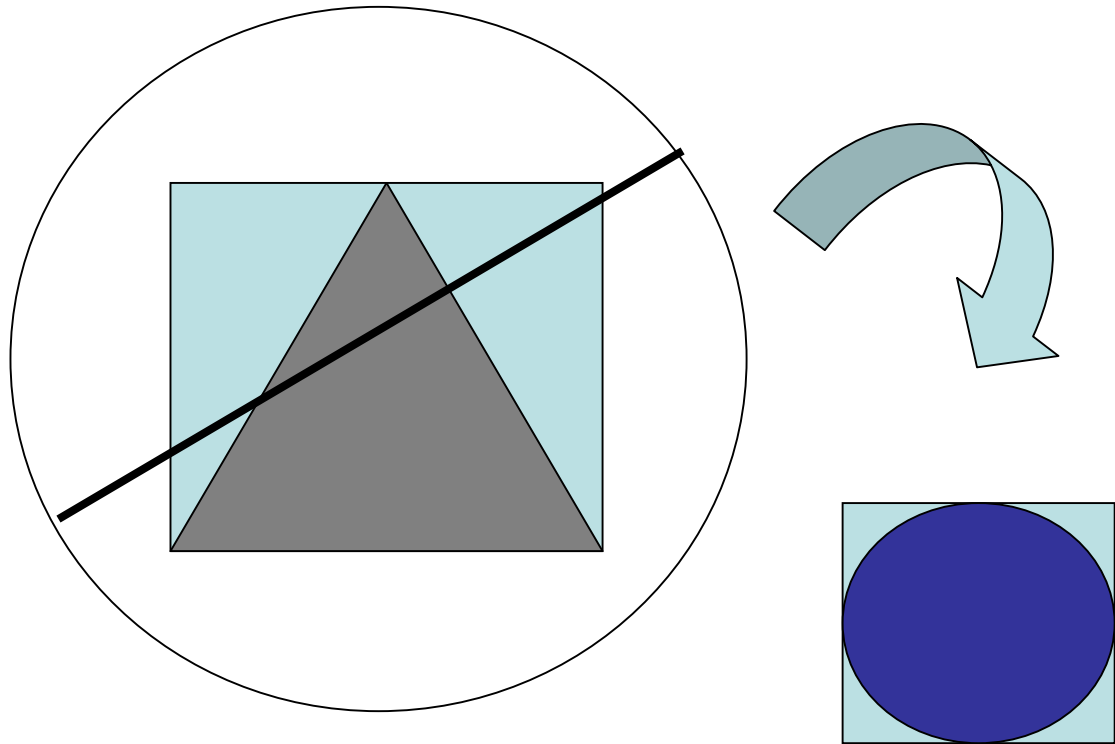
- Looks good
- Sounds good

- Doesn't Improve!

- We call this OLB Reform ...
- Many reforms are categorized as OLB – they are simplistic, rational, and fail to consider the complexities of the context.

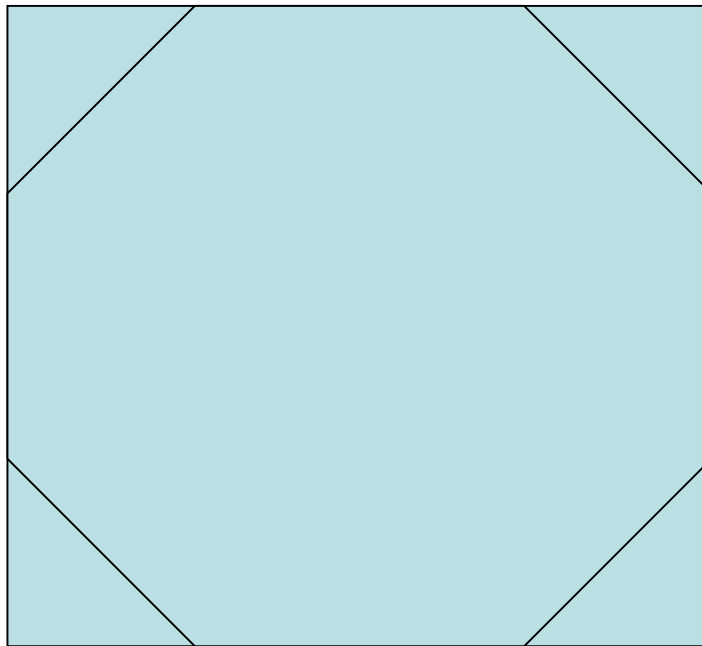
Answer?

- Beware of superficial simplification ...



Increase the sides ...

- Doubling cascade sides; therefore, more sides, not less! Square \approx Circle



4...8...16...32...64...

Eventually approaches
a circle!

Complexity

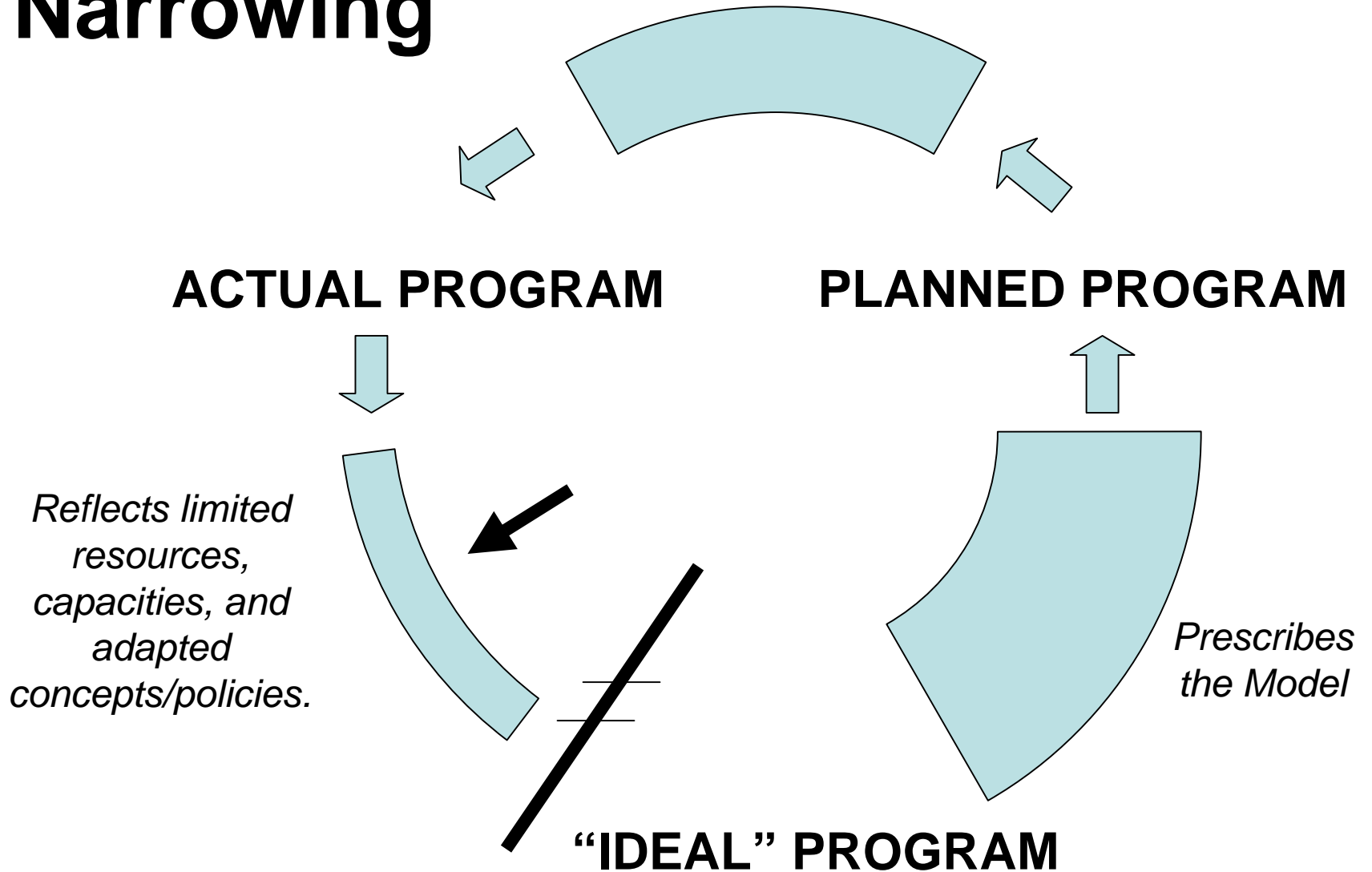
- Square “becomes” circle by increasing complexity ...
- ***Principle 1:***
 - Reform has many sides – It’s complex!
- ***Principle 2:***
 - Remember the goal! Universities need to address the inherent complexity of education in order to be of high quality.

Accreditation

- Doing what's right and doing it well.
- The process is about “quality assurance” and quality is a complex term – especially in psychology.
- Programs are sometimes copies of other traditions, other myths, other symbols, other ideas, and they incorporate the fractures in quality of these other programs.
- There are two terms that apply: *narrowing* and *institutionalization*.

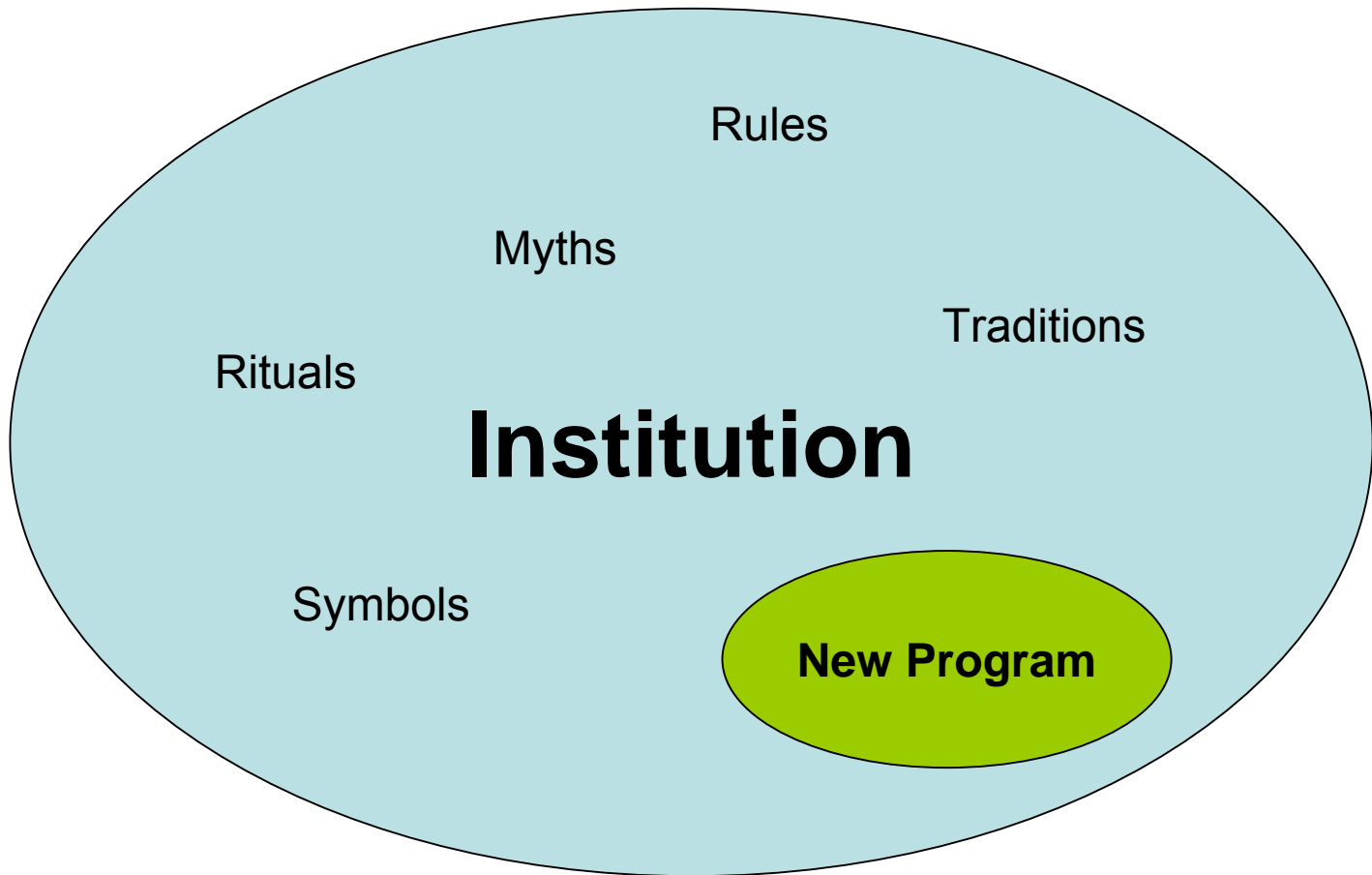
Narrowing

Diminished View of the Program



Institutionalization

Diminished View of the Program



Quality Assurance

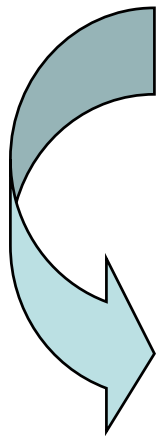
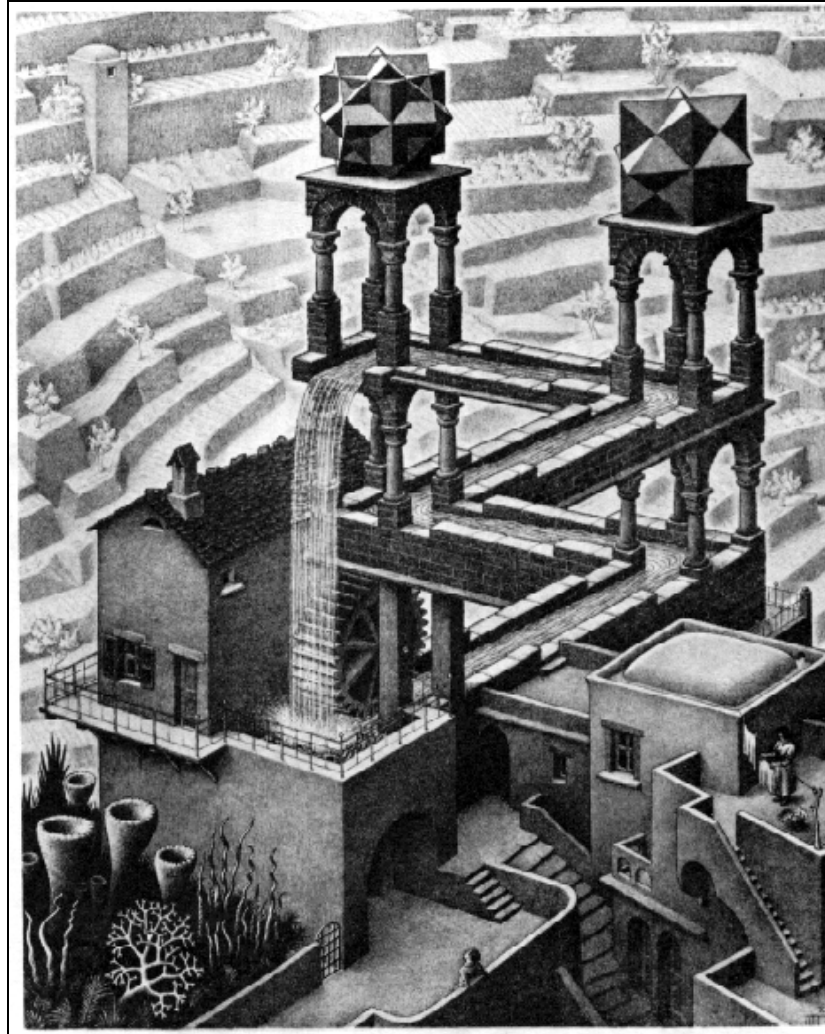
Needs to Recognize Inherent Complexity

- Inputs – Licensing
- Outputs and Outcomes – Accreditation
- Quality Assurance is a peer review mechanism that brings new perspectives to bear on the assessment of program quality.
 - Problem: If the peer pool is limited, QA may also contribute to Narrowing...
 - Power: If the internal review team of the University is competent and does a thorough job on quality assessment, the peer review team is better able to rise to a higher level of competence (possibly supplemented by external/foreign reviewers).

Complexity Honored

- **GEDA Project (USAID Funded)**
 - Offers training to University QA teams to enhance capacity.
 - Offers training to Peer Review Teams to ensure understanding of the process and their roles.
 - Monitors and evaluates the accreditation process to see what needs there are and how well the process is working (with SAS).

Strange Loops



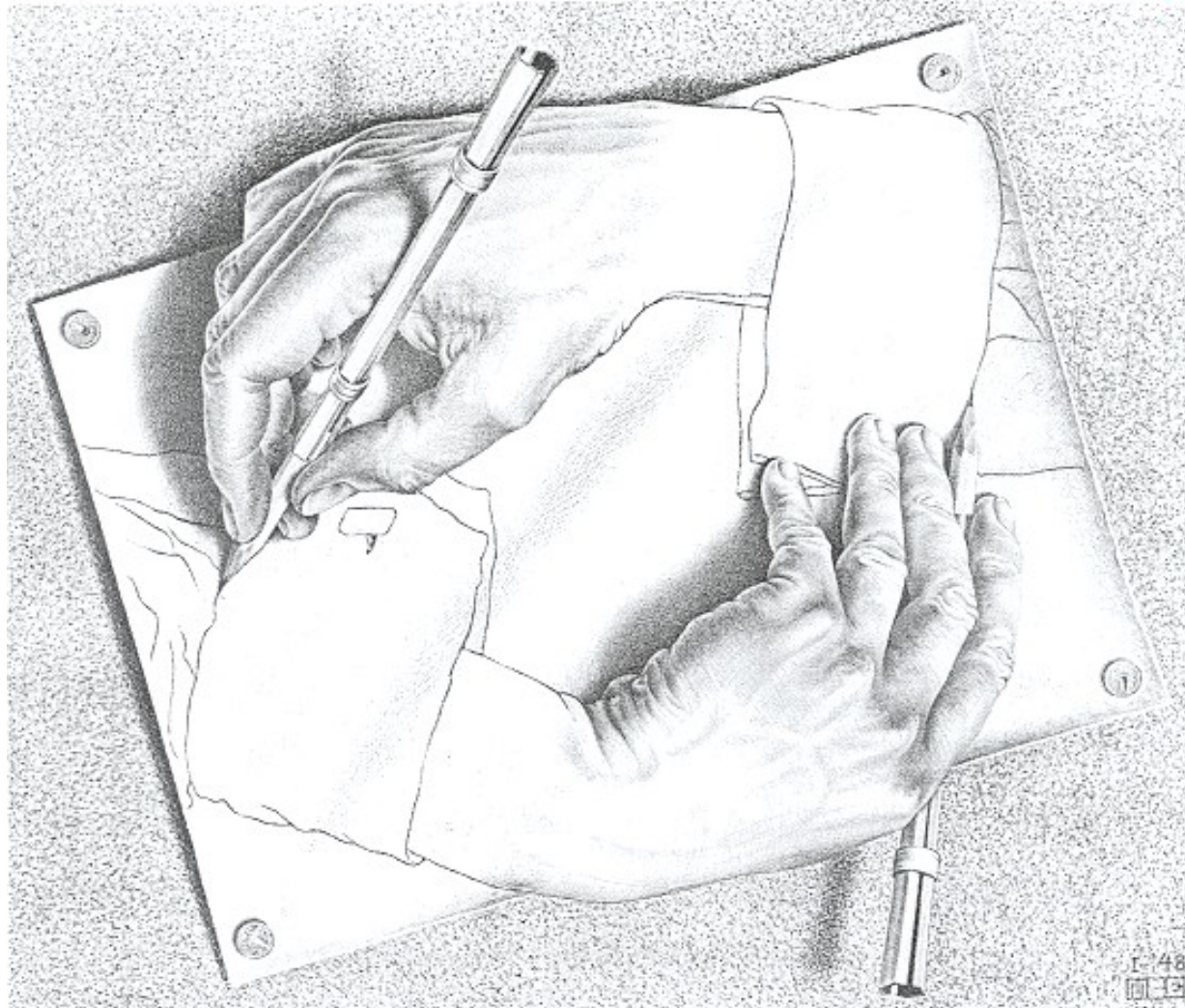
Reduced
dimensionality
creates an
infinity of action..
Mediocrity forever!.

Waterfall
Three dimensions
in two - reduced
dimensionality...



Escher, 1961

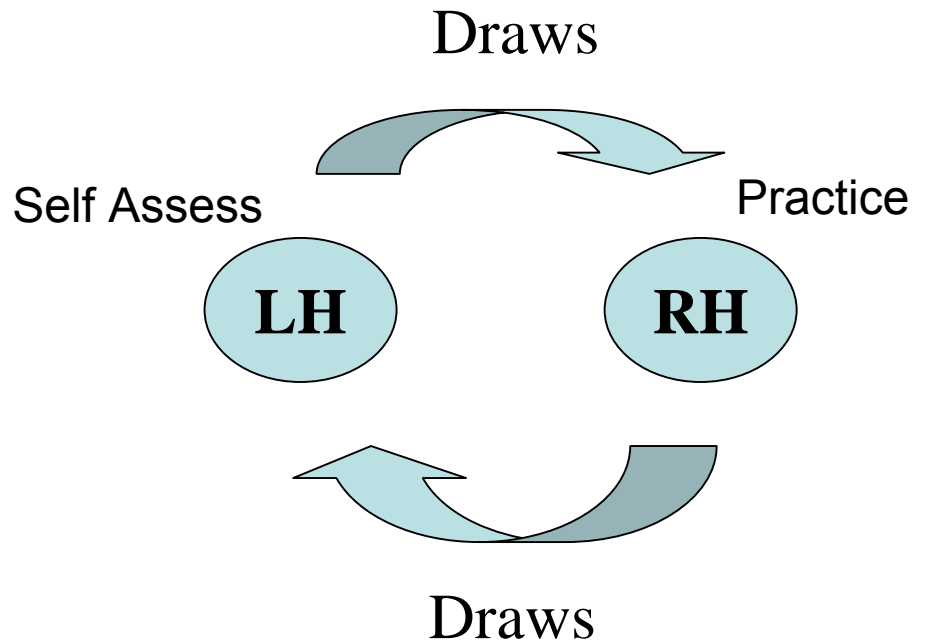
Strange Loops



Strange Loops

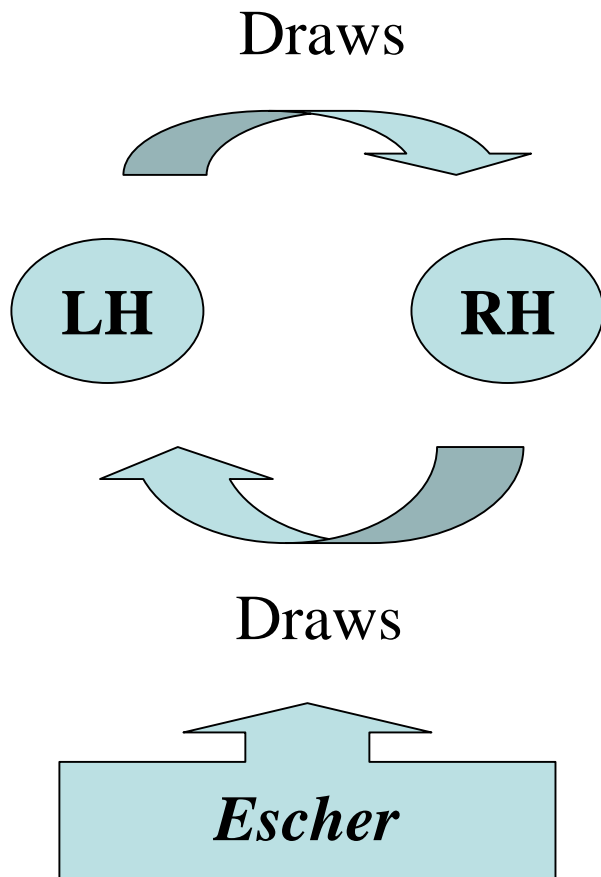
Better get the Mission right and do it right!

- Escher's *Drawing Hands* presents a two-step strange loop.
- “What goes around, comes around.”
- Moving through a hierarchical system, we find ourselves back where we started.



In higher education, ambiguous goals lead to competitive initiatives that temporarily drive the system. When realigned, the “advantages” are lost and we’re back to square one!

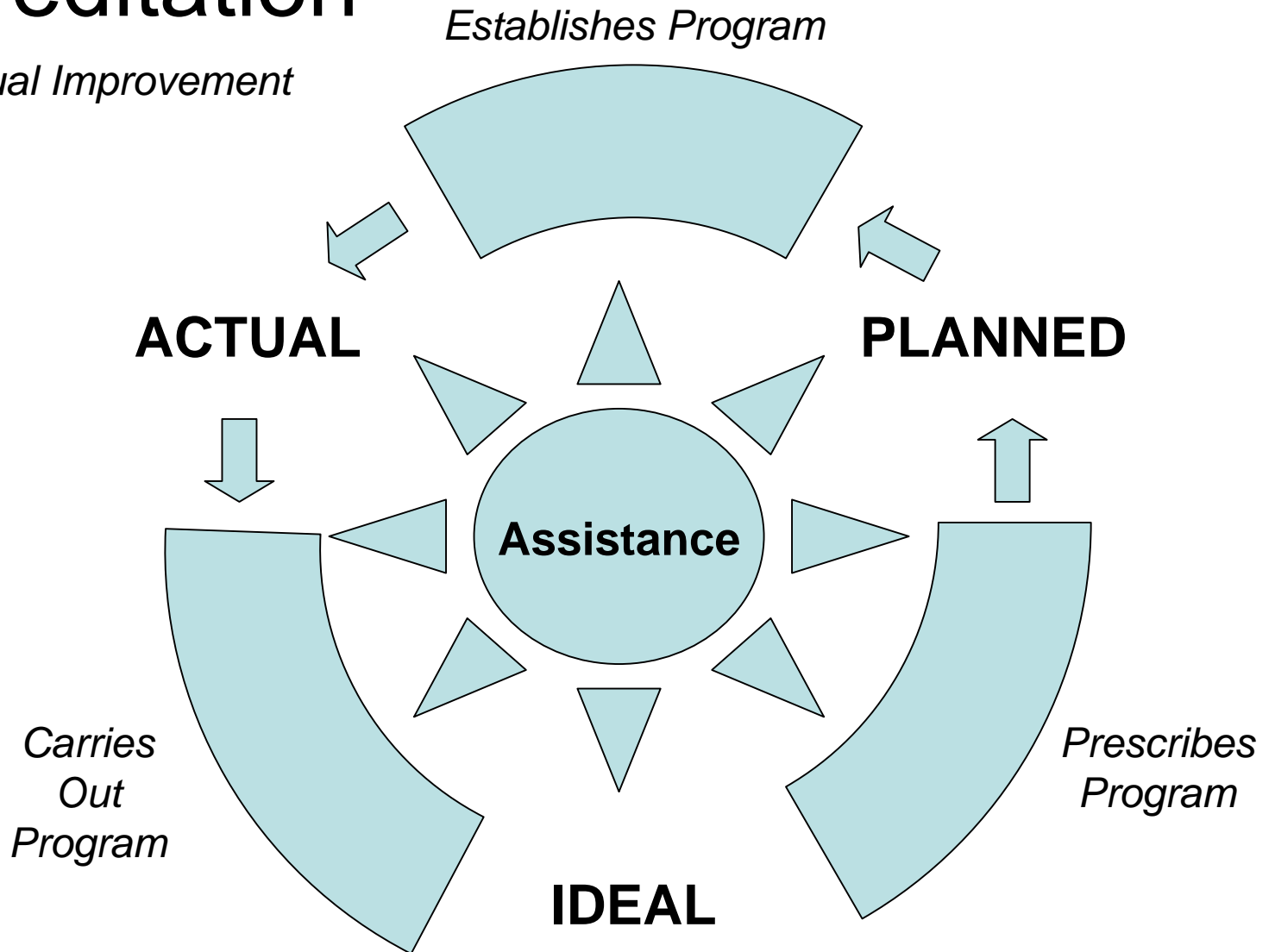
Move to Fundamental Level



- The way out of the strange loop is to move to an inviolate level, in this case, where Escher draws both hands (new dimension).
- For education, this means wider participation, diverse views, “other” experts’ opinions, new perspectives.

Accreditation

Continual Improvement



Psychology

- Even the concept is complex! Any program purporting to “teach” psychology will be complex.
- Prone to strange loops –
 - Unresponsive to contextual needs.
 - Self-fulfilling and regressive – not up to date.
 - Limited in scope and depth (perhaps due to resource constraints).
- Build in Reflection and Accreditation.

Strange Loops

- What are the chances of learning this new word, 'strange loops' on first presentation?
 - Ability
 - Low = 8 percent
 - Medium = 12 percent
 - High = 19 percent
 - Text Density
 - 1 new/10 words = 7 percent
 - 1 new/74 = 14 percent
 - 1 new/150 = 30 percent