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# community of practice

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practices

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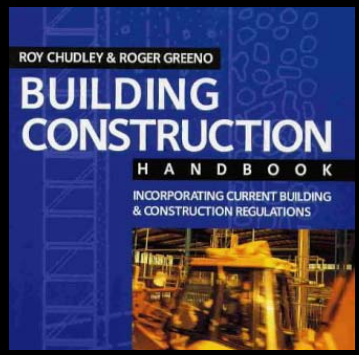


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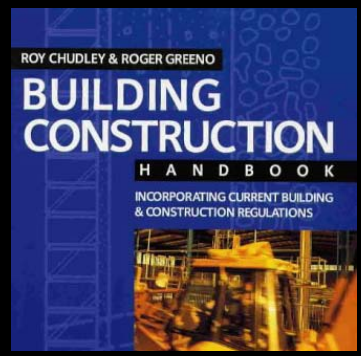


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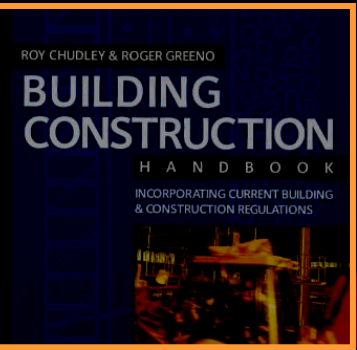


islands of expertise

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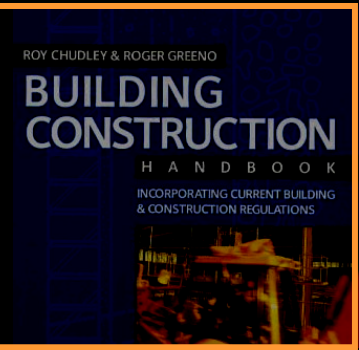
representations

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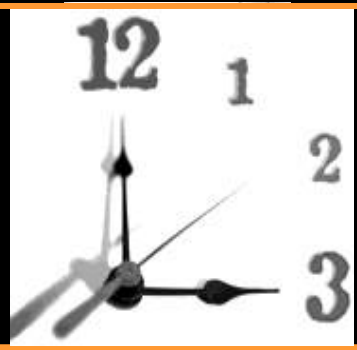


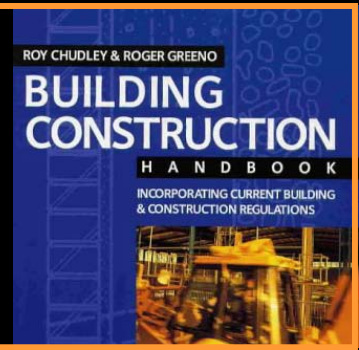


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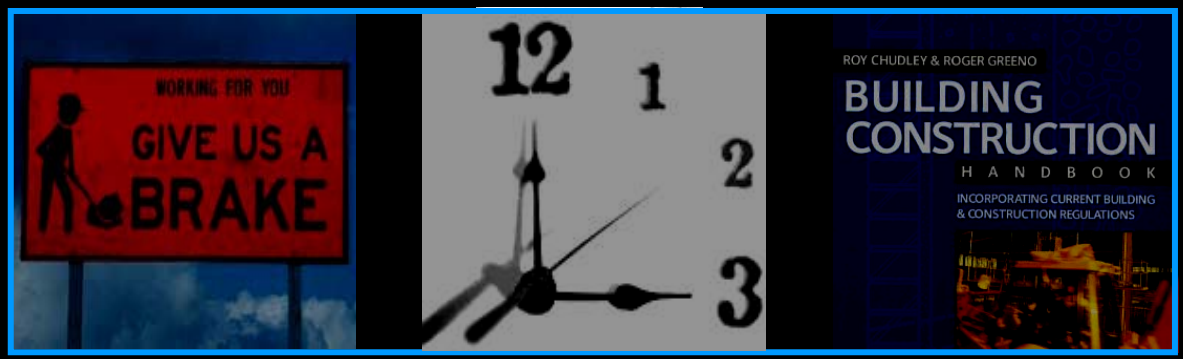


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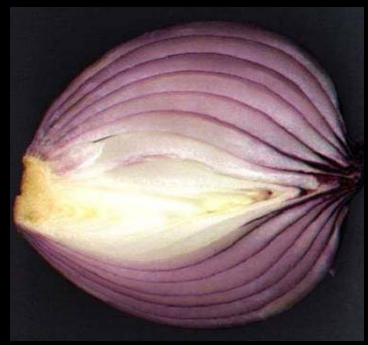

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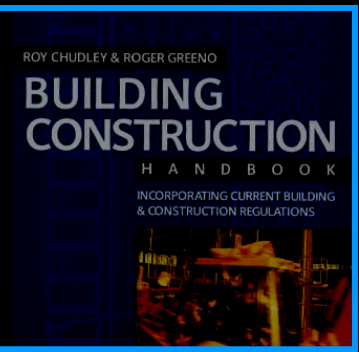


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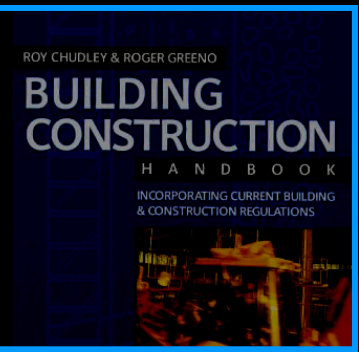


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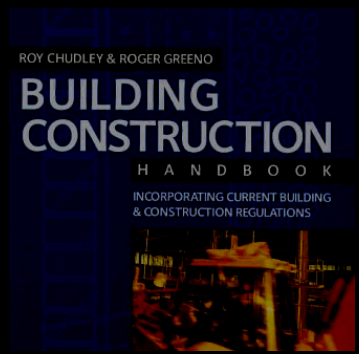
identity ⟷ skills

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identity ⟷ skills

values ⟷ knowledge

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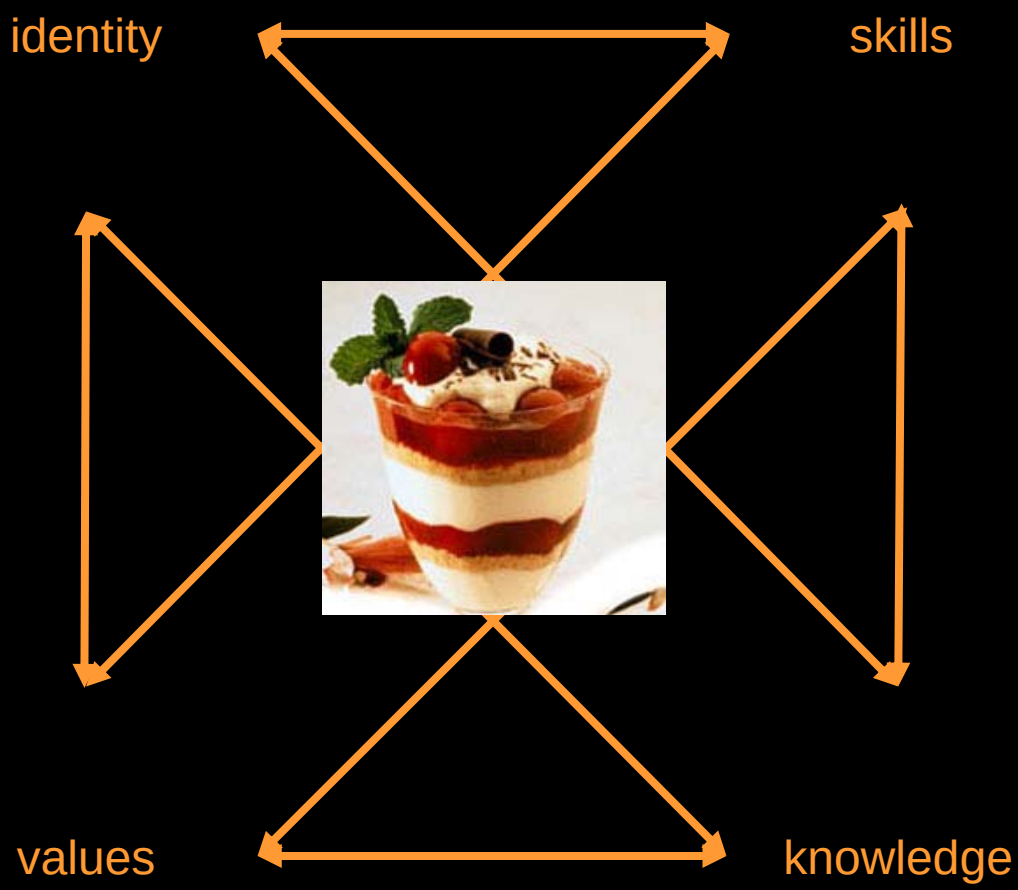


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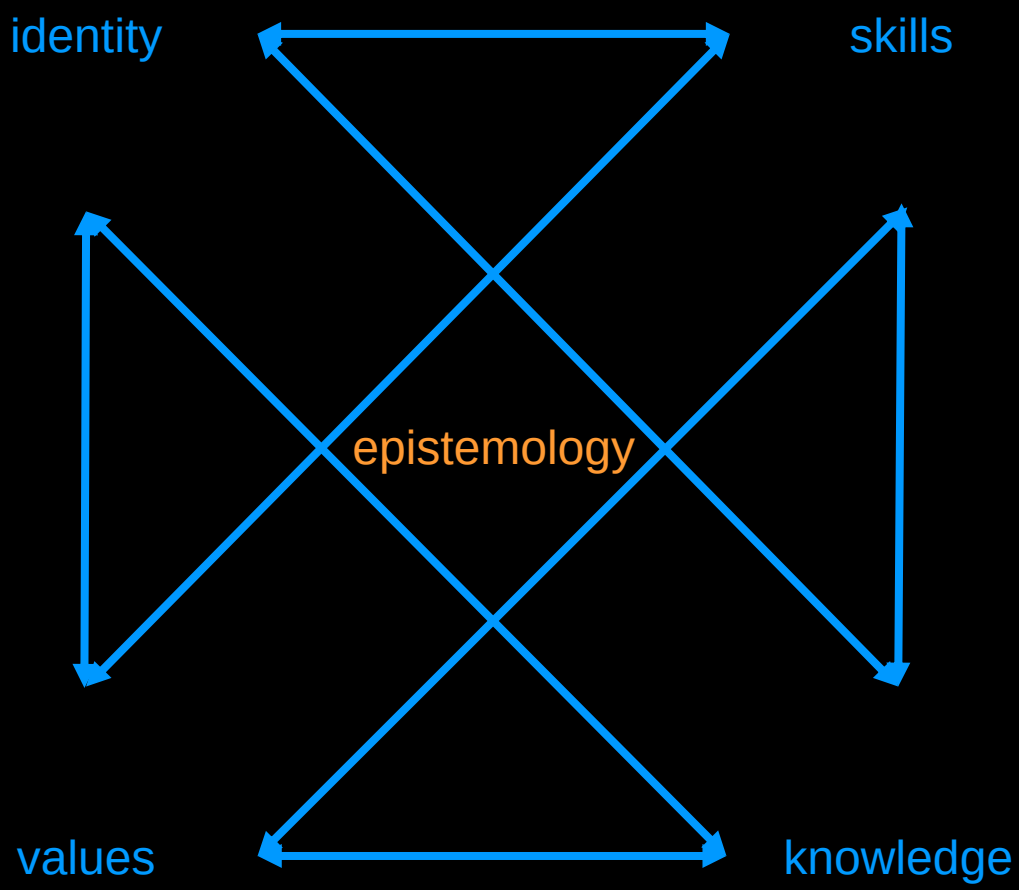


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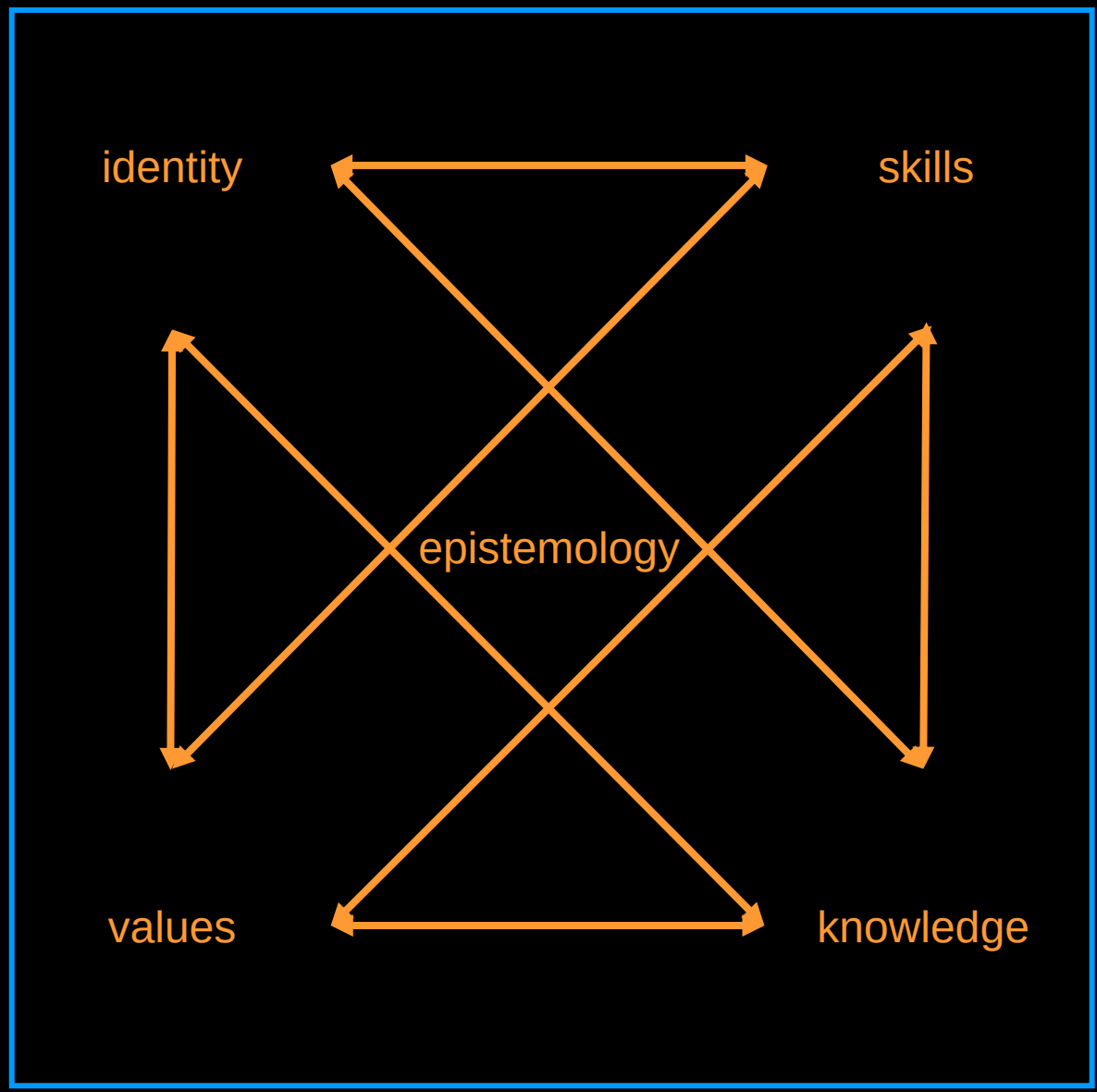


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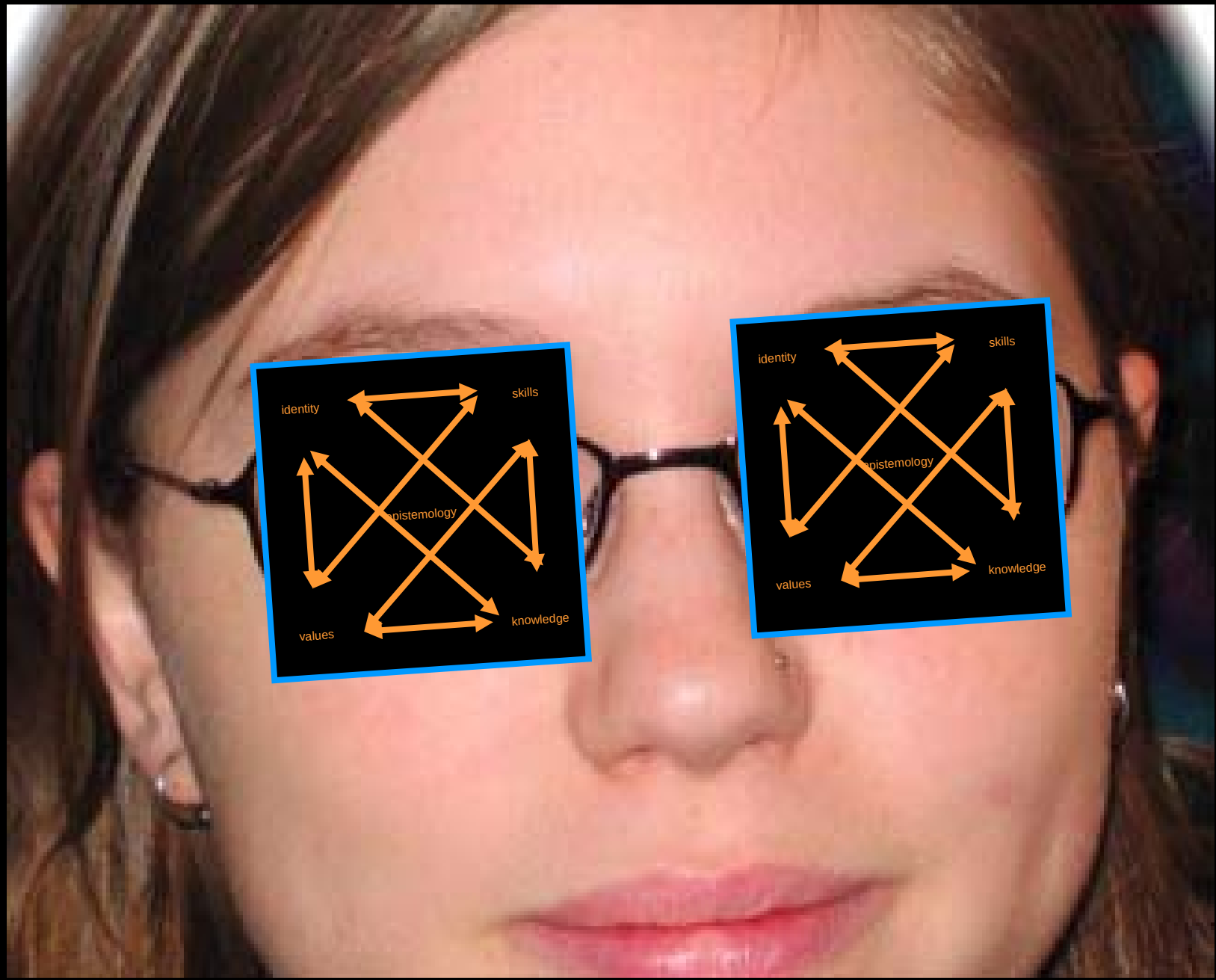


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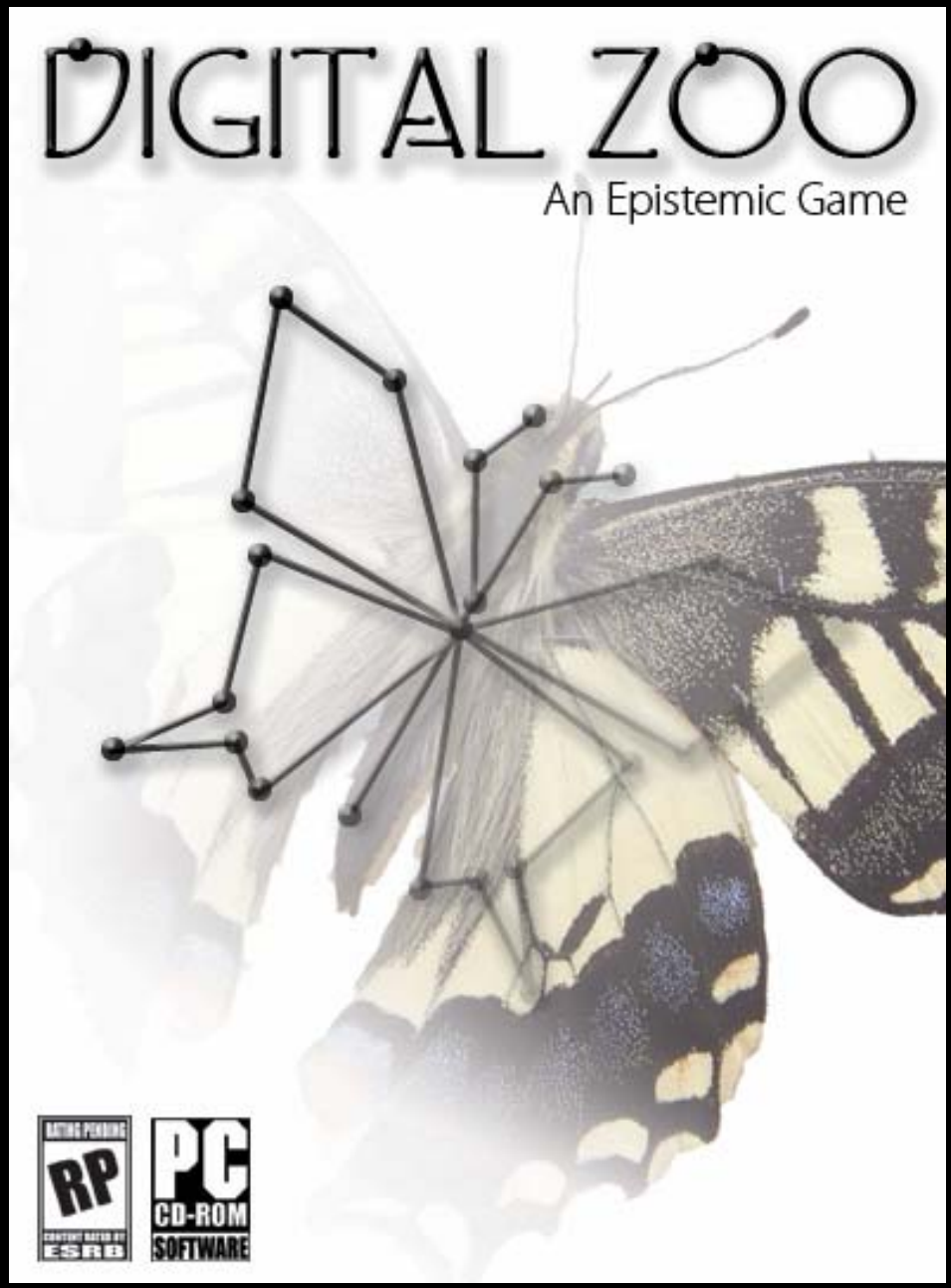


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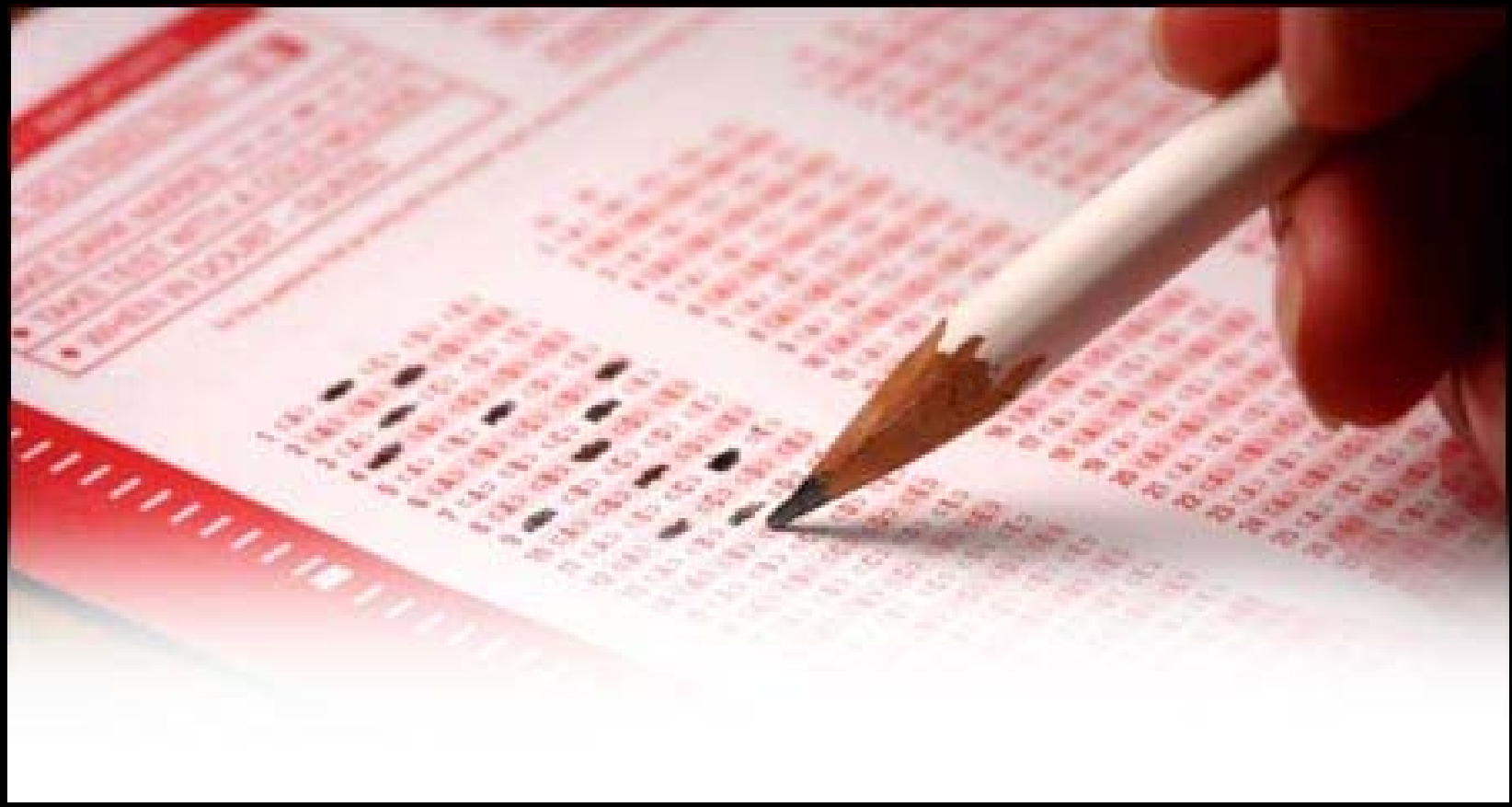

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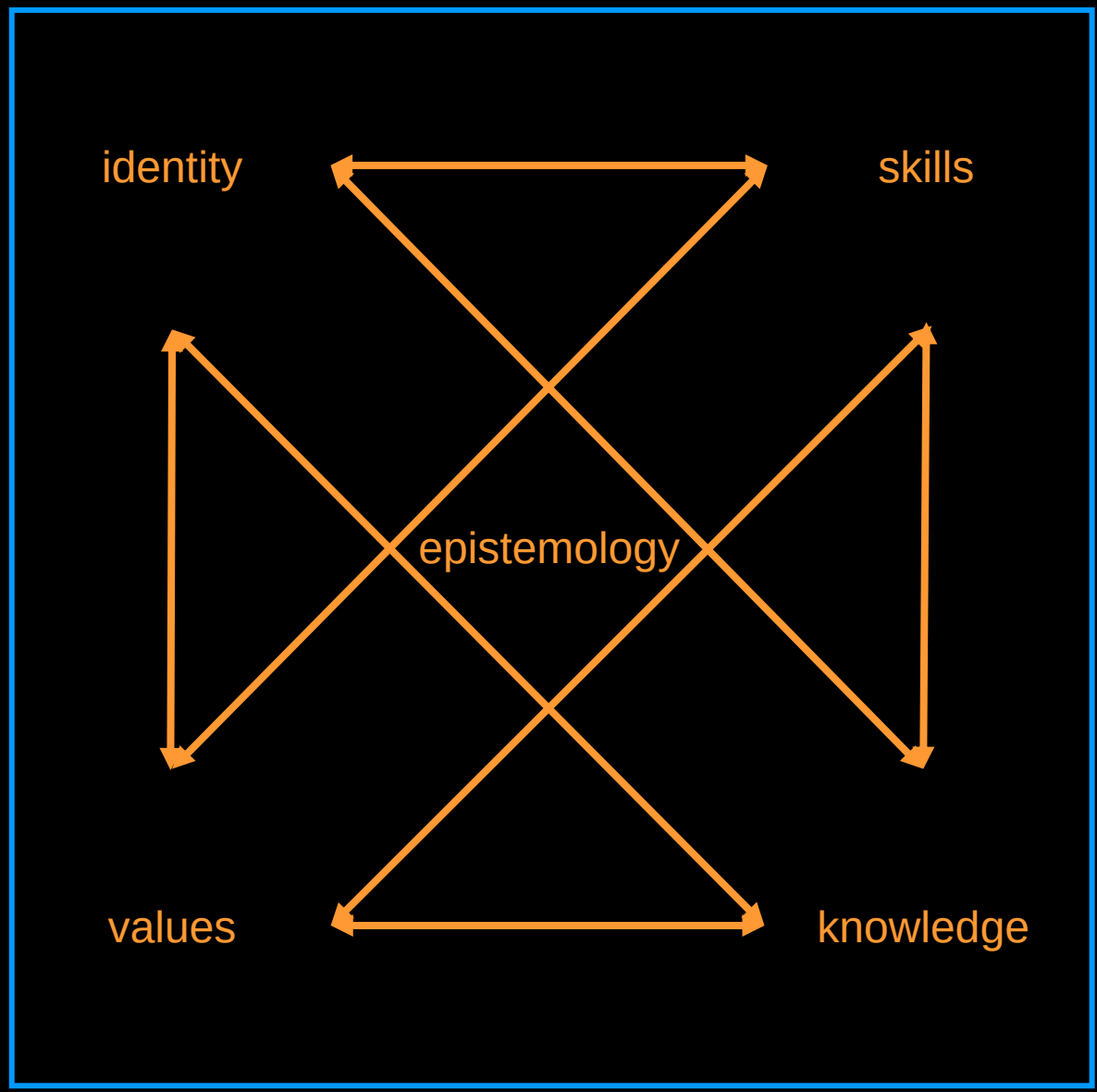


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Design process

Statics- CoM

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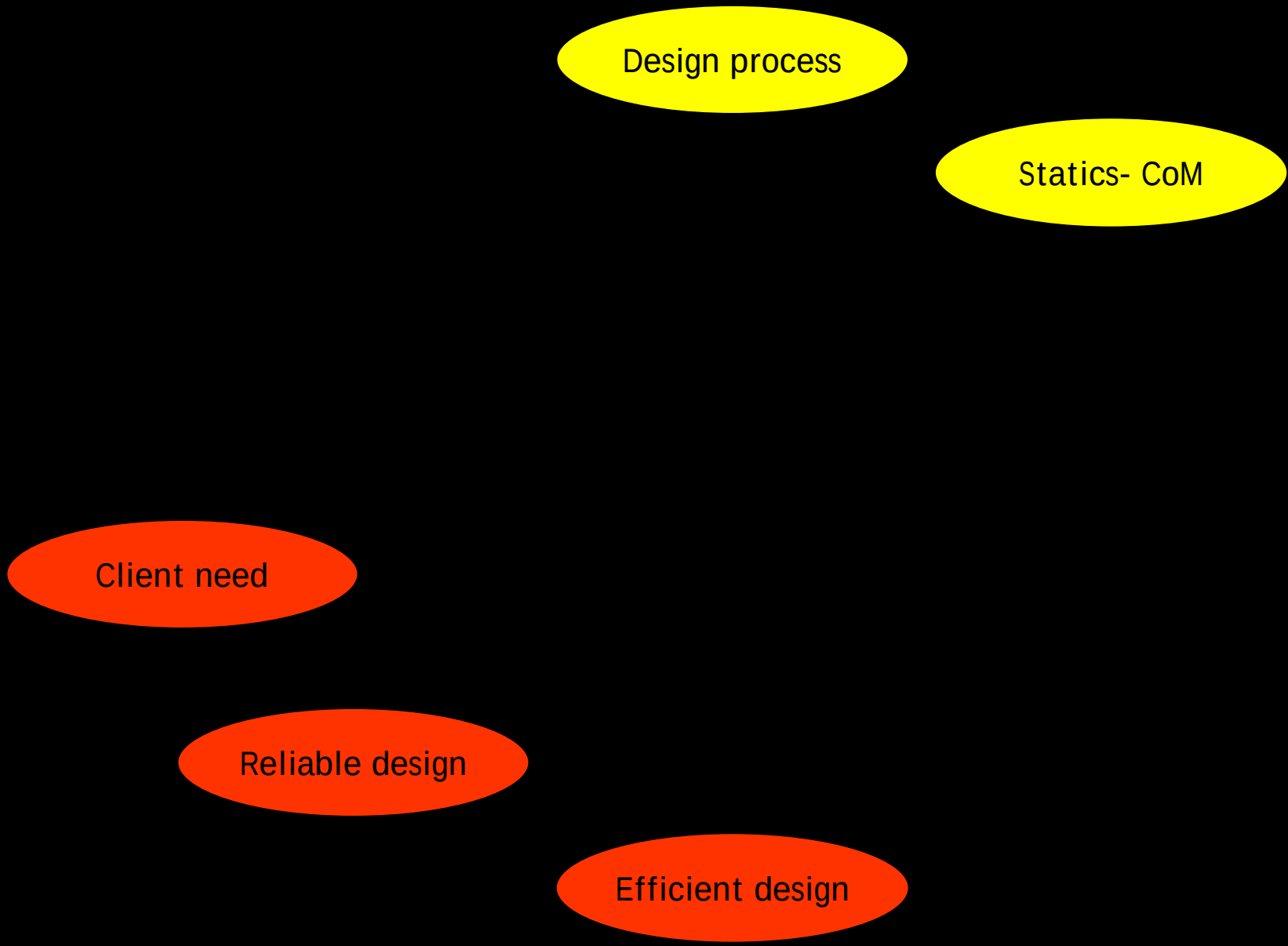


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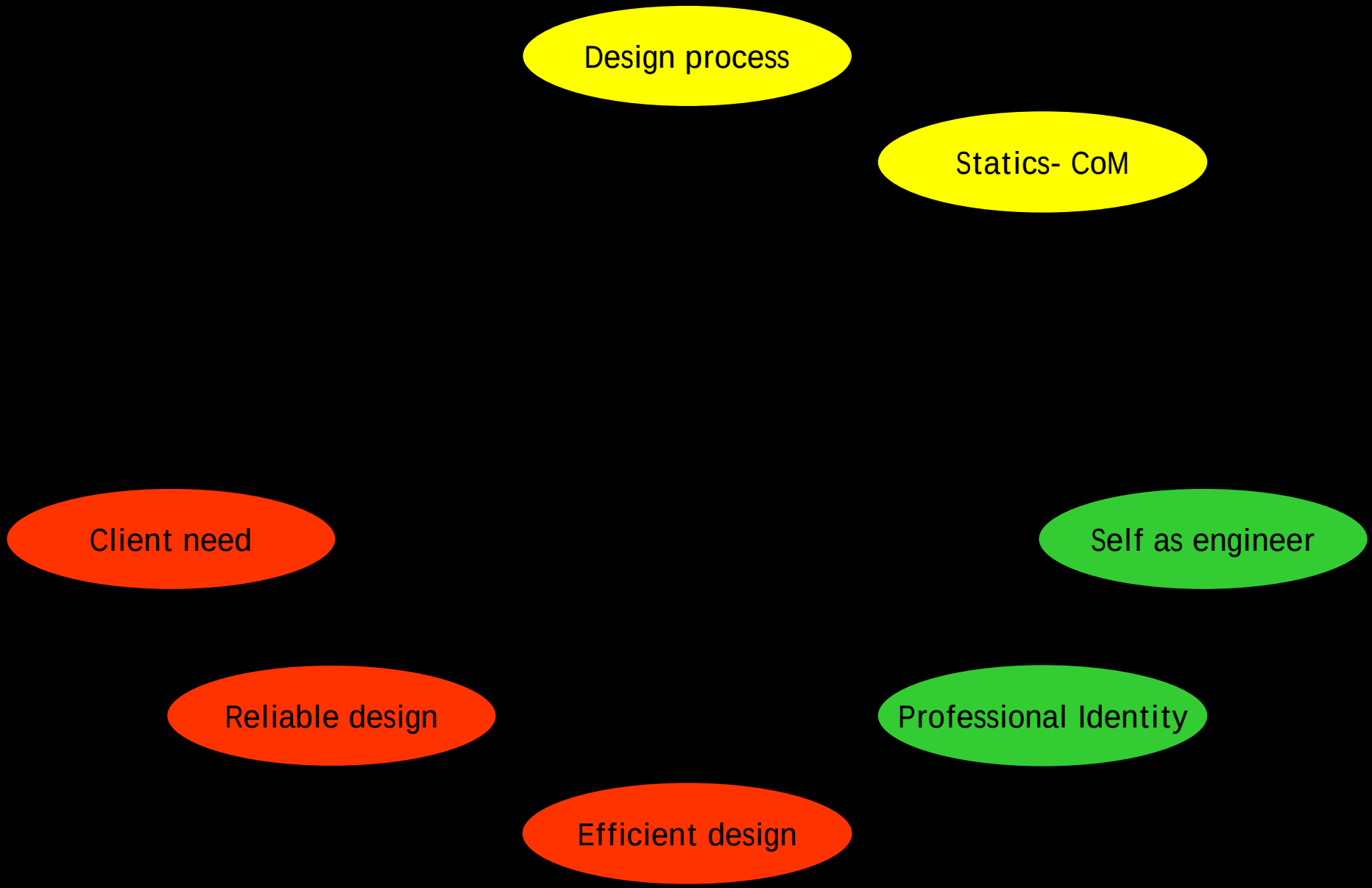


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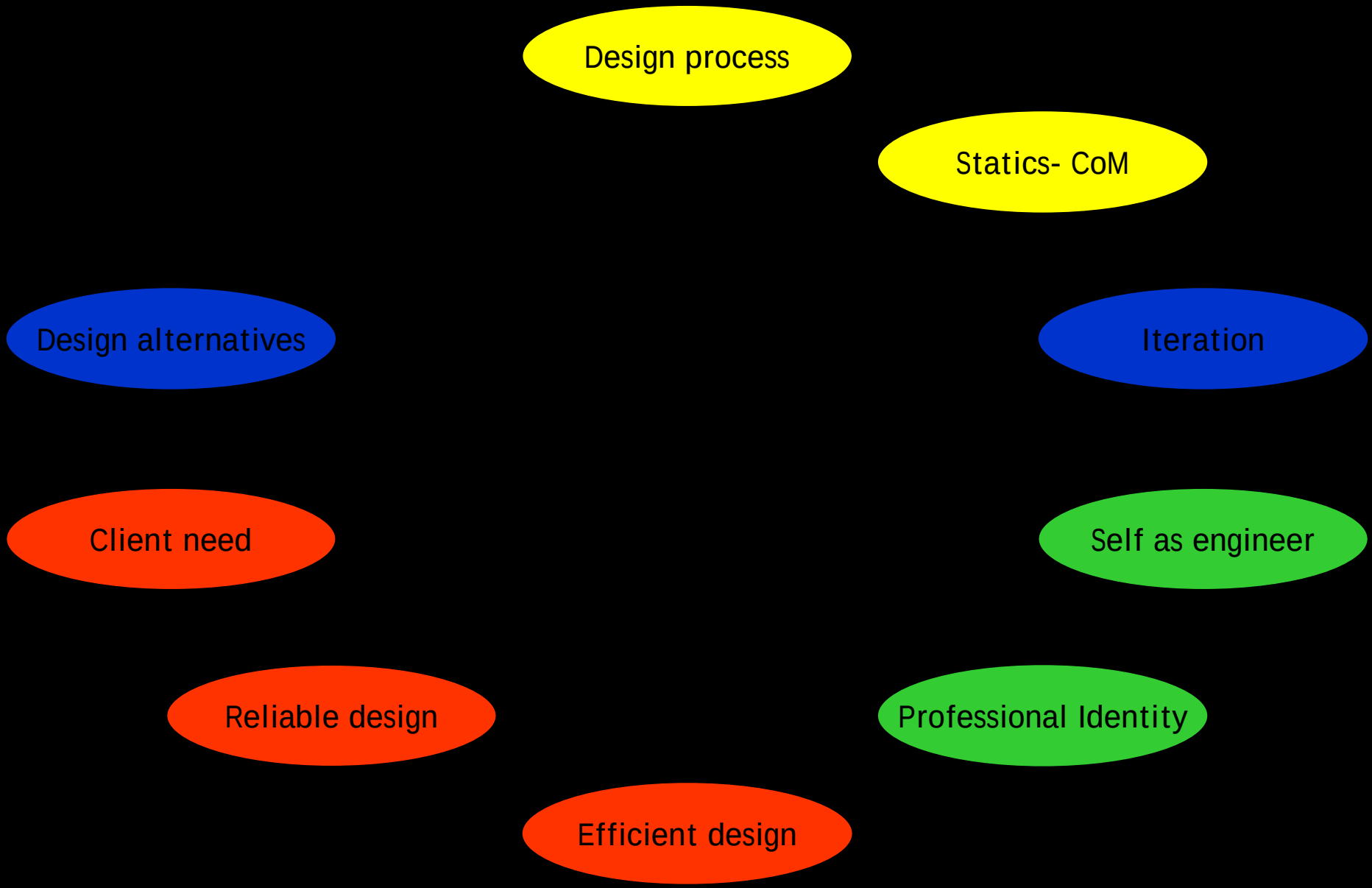


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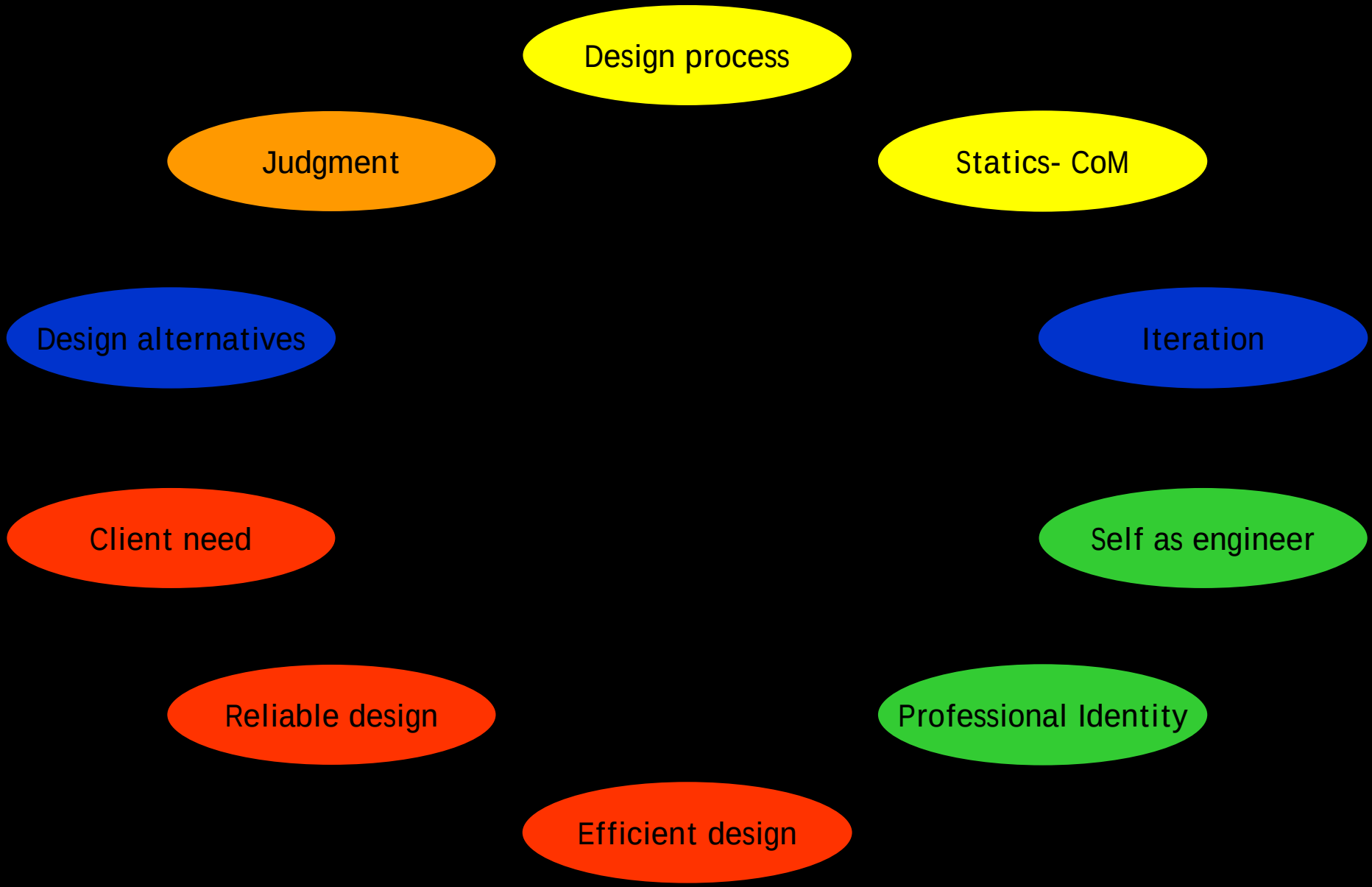


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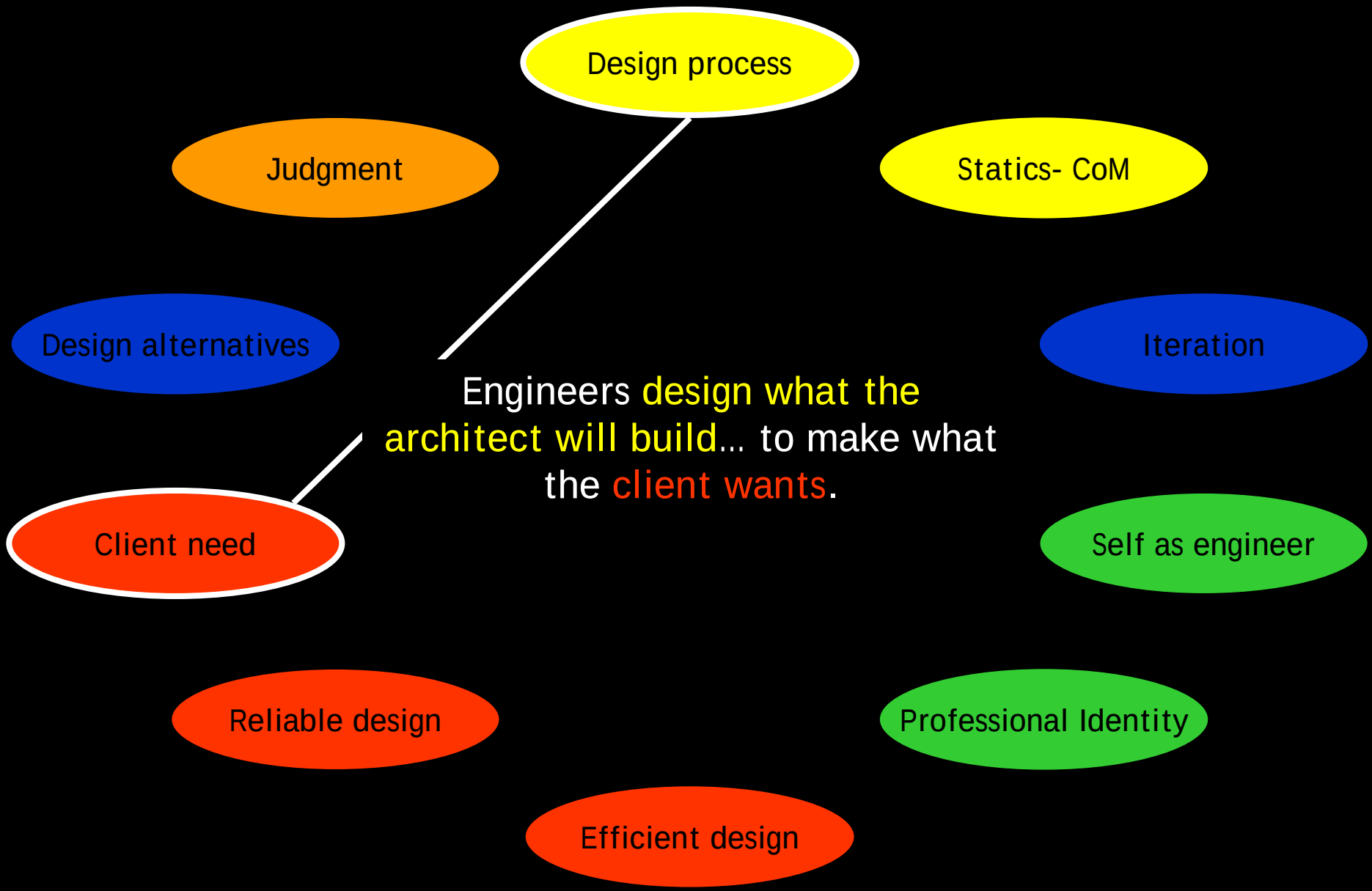


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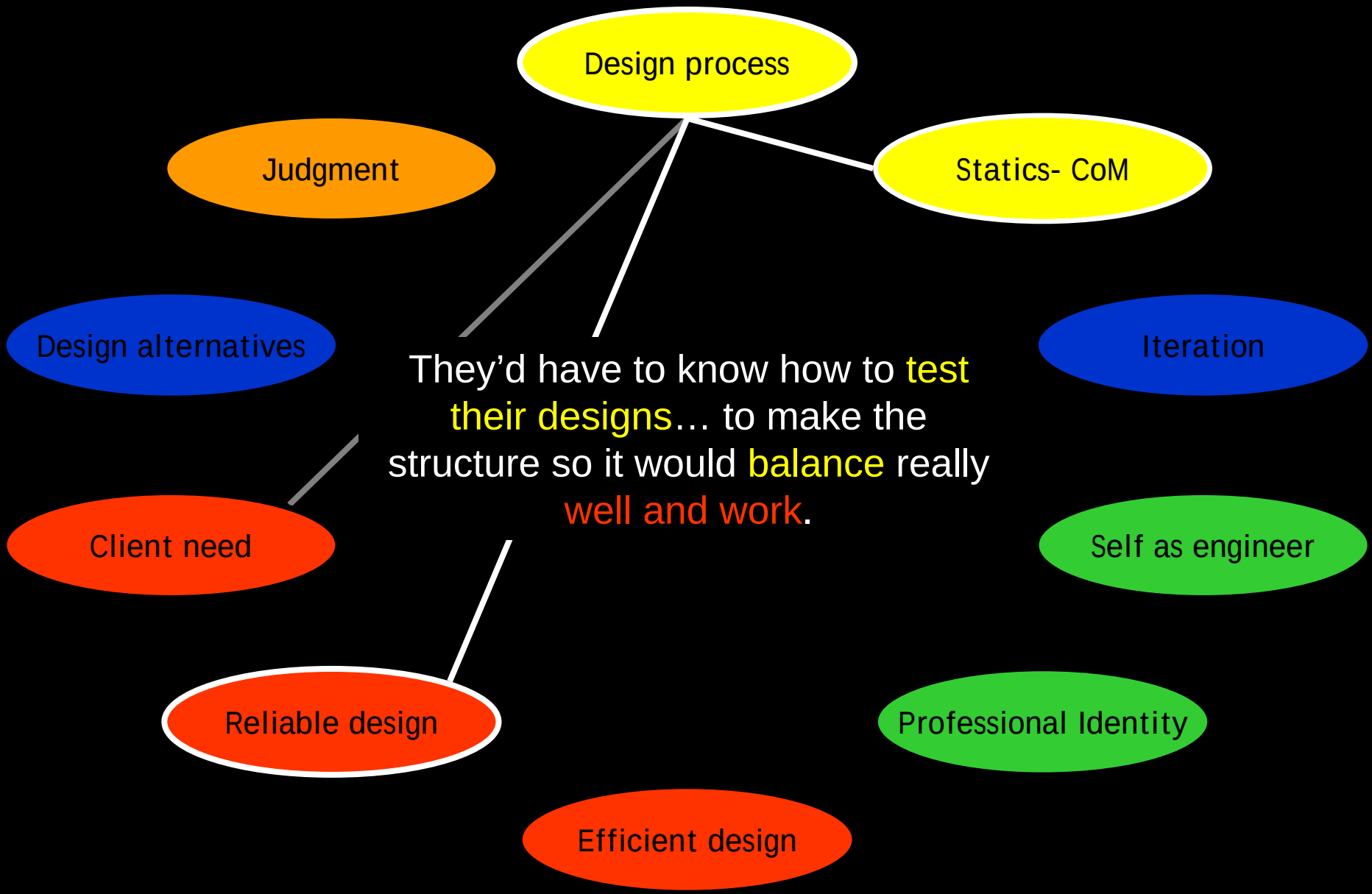


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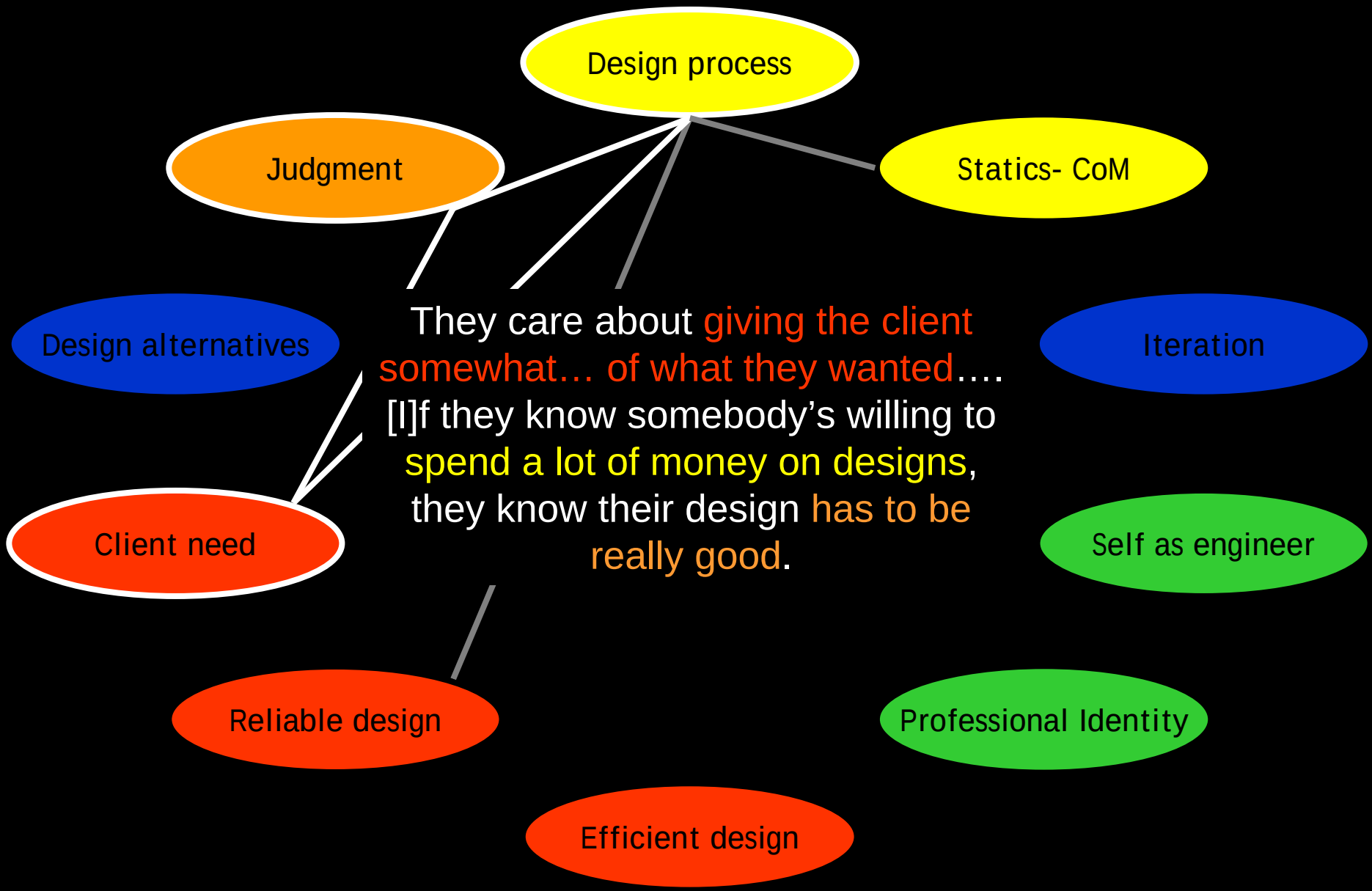


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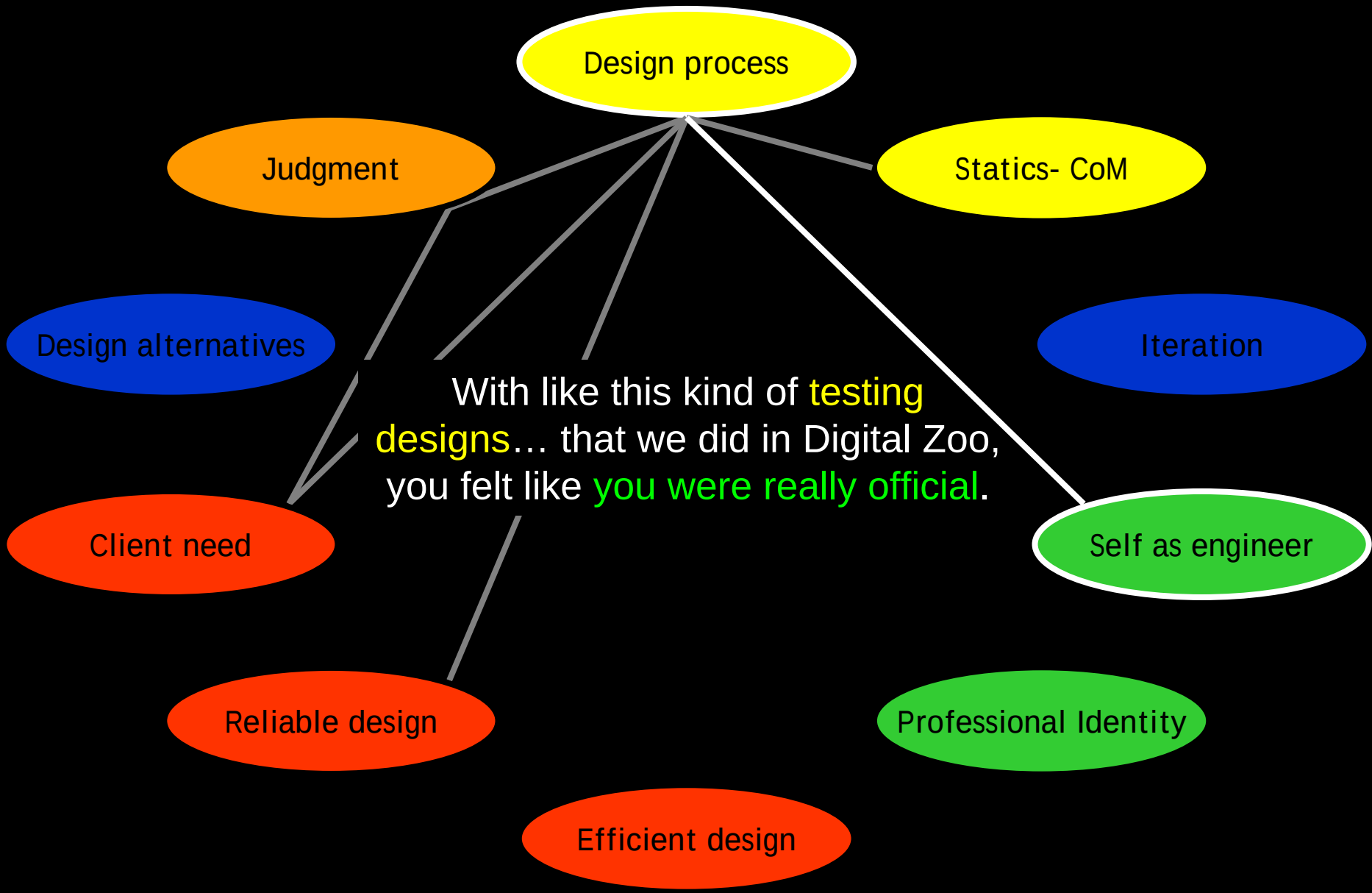


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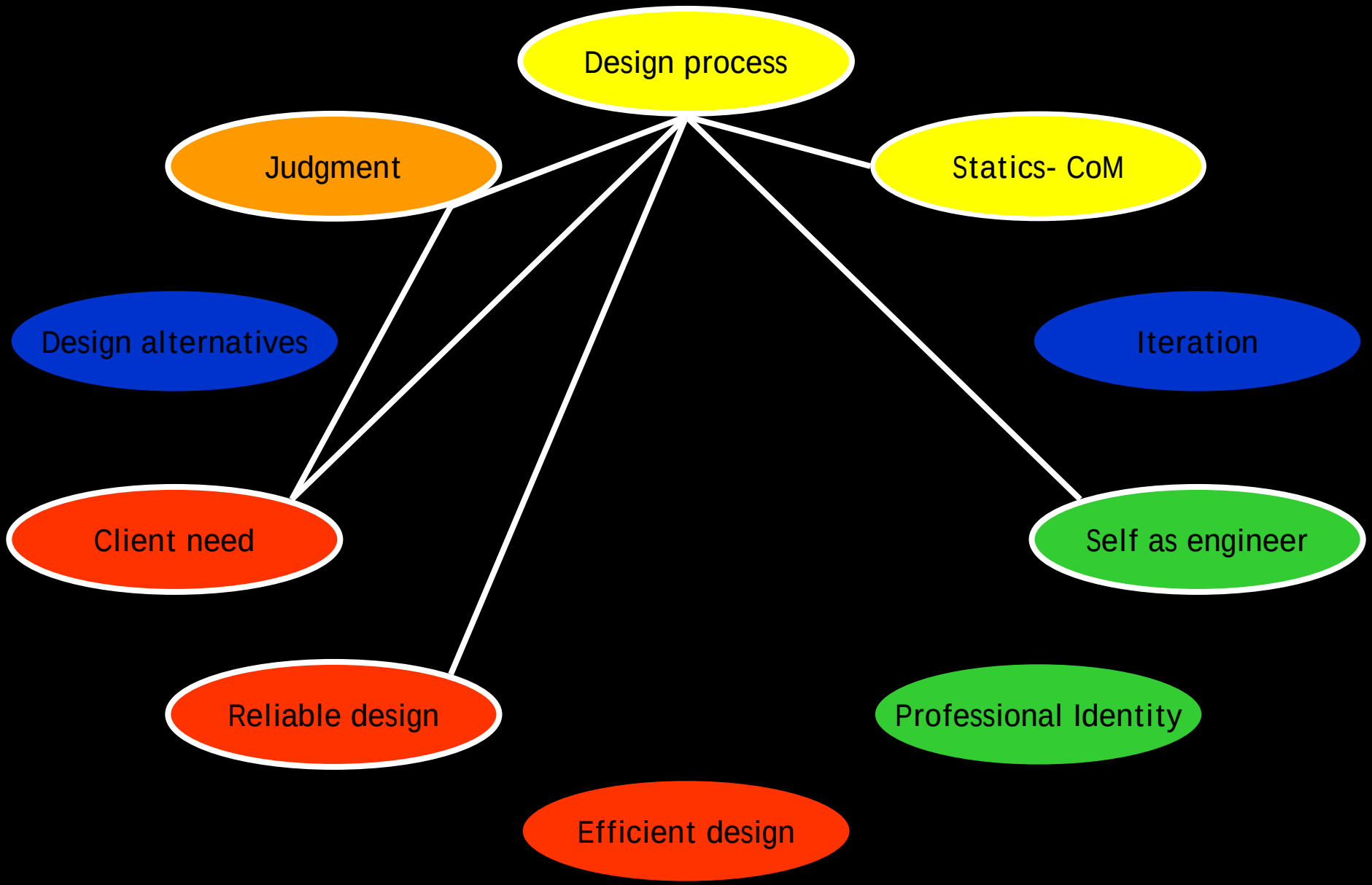


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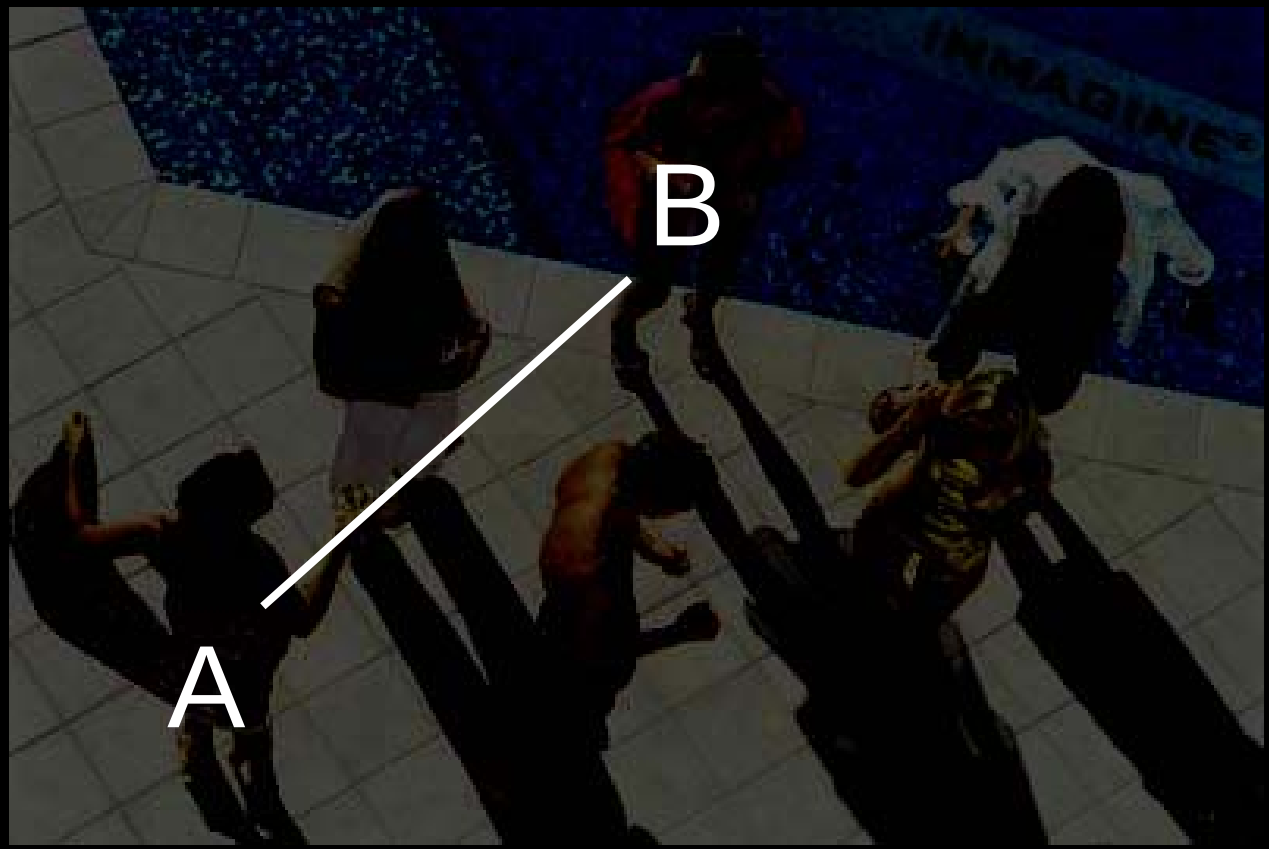


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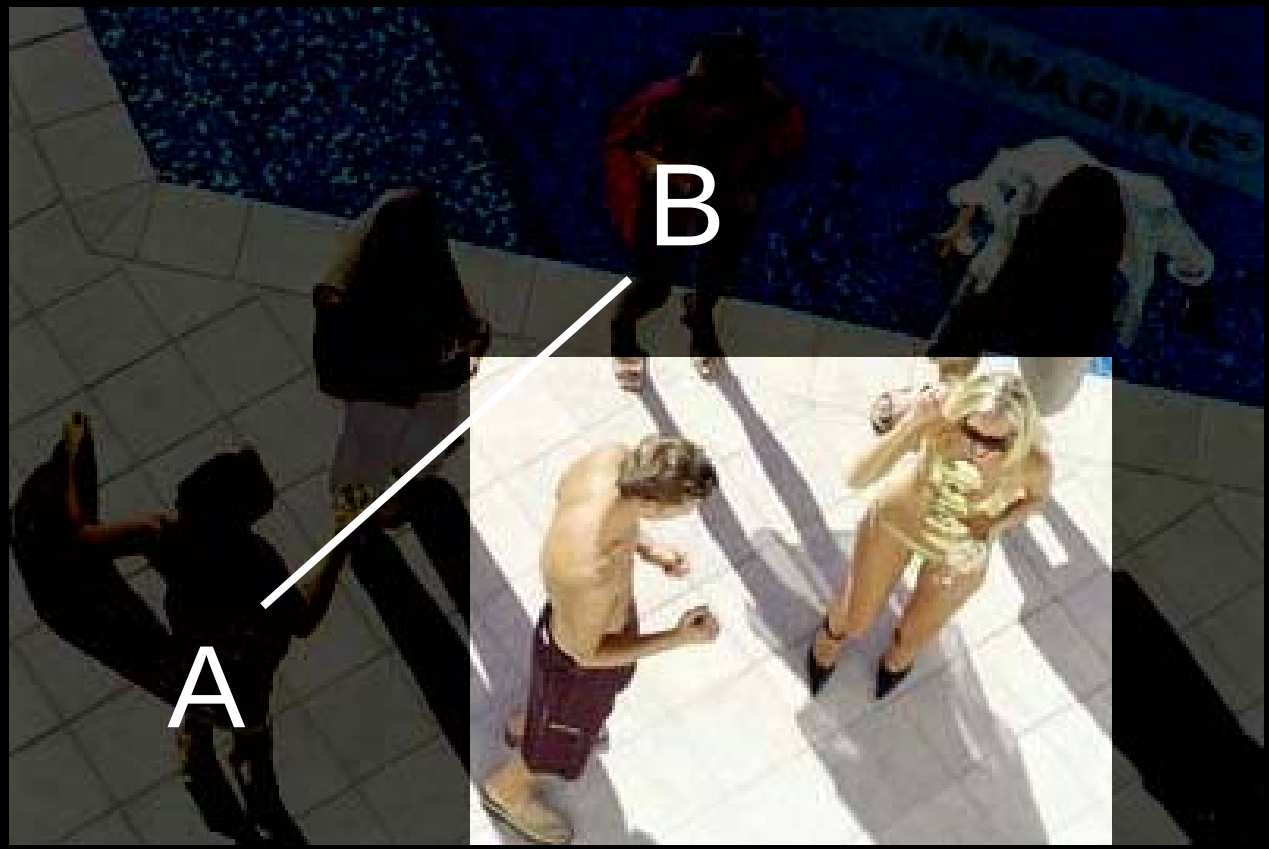


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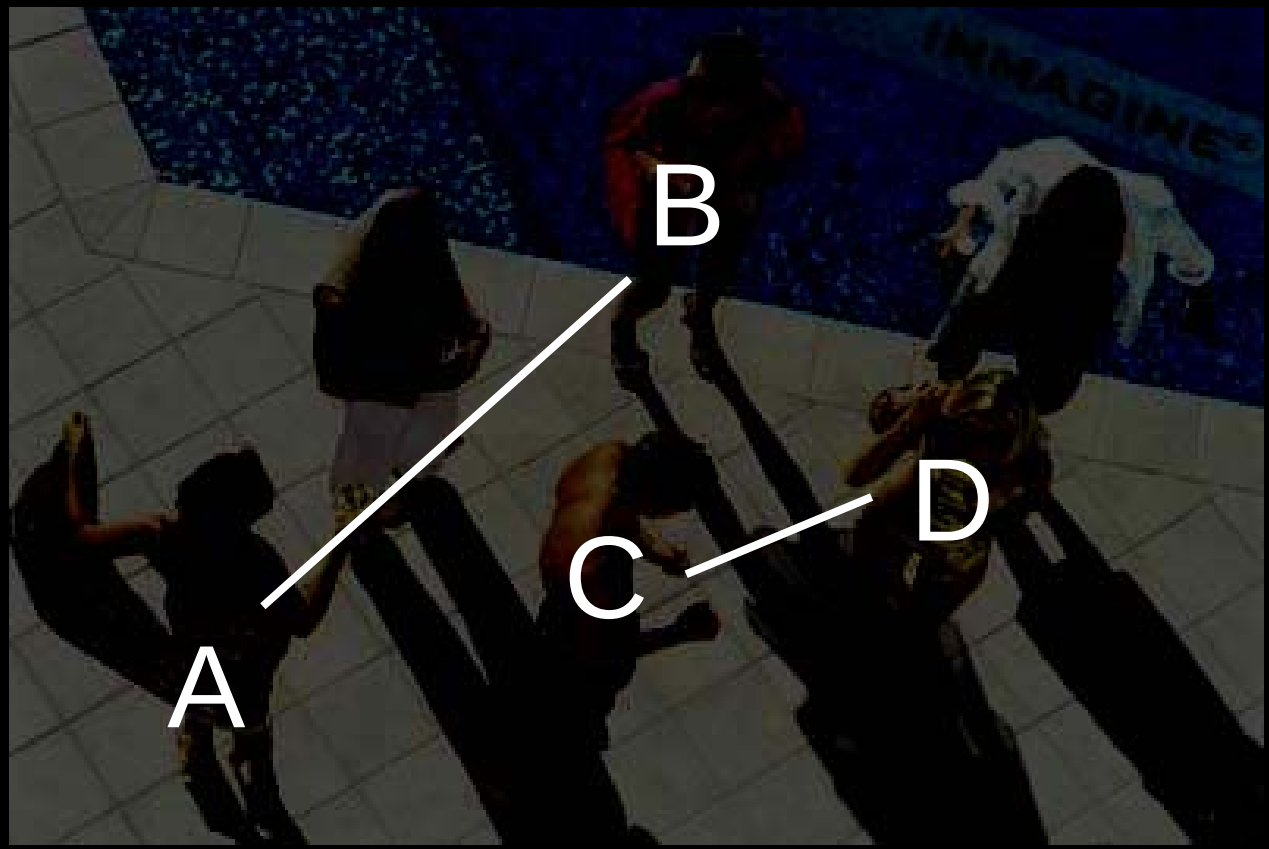


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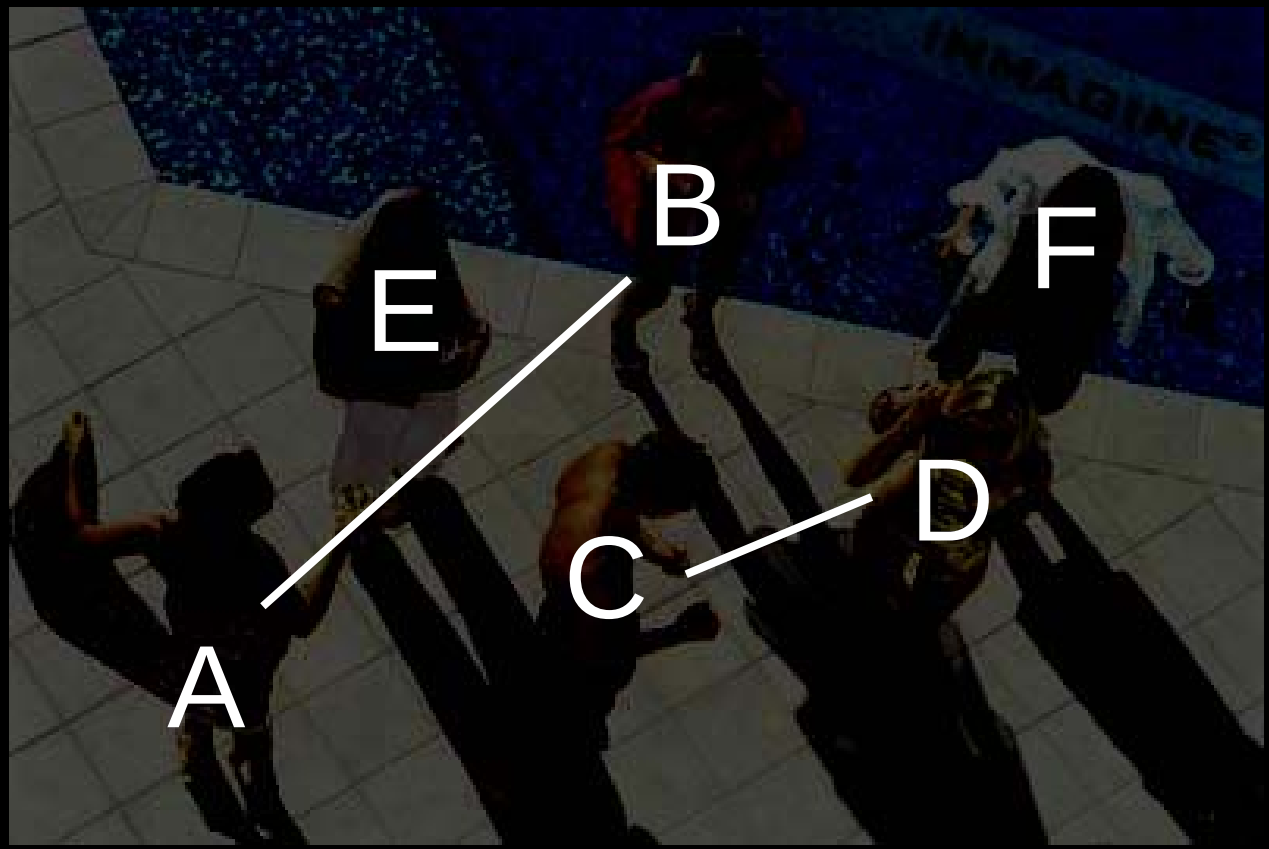


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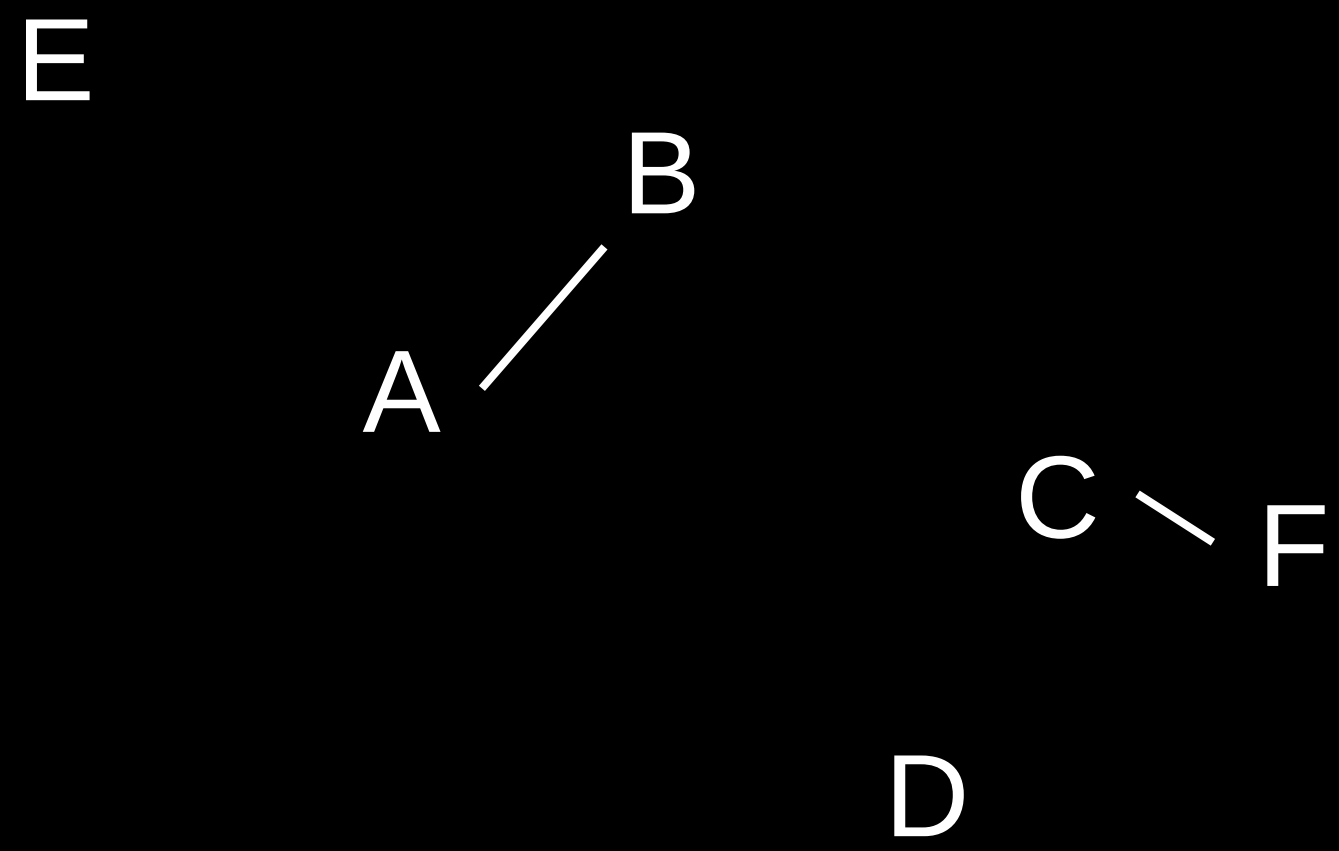


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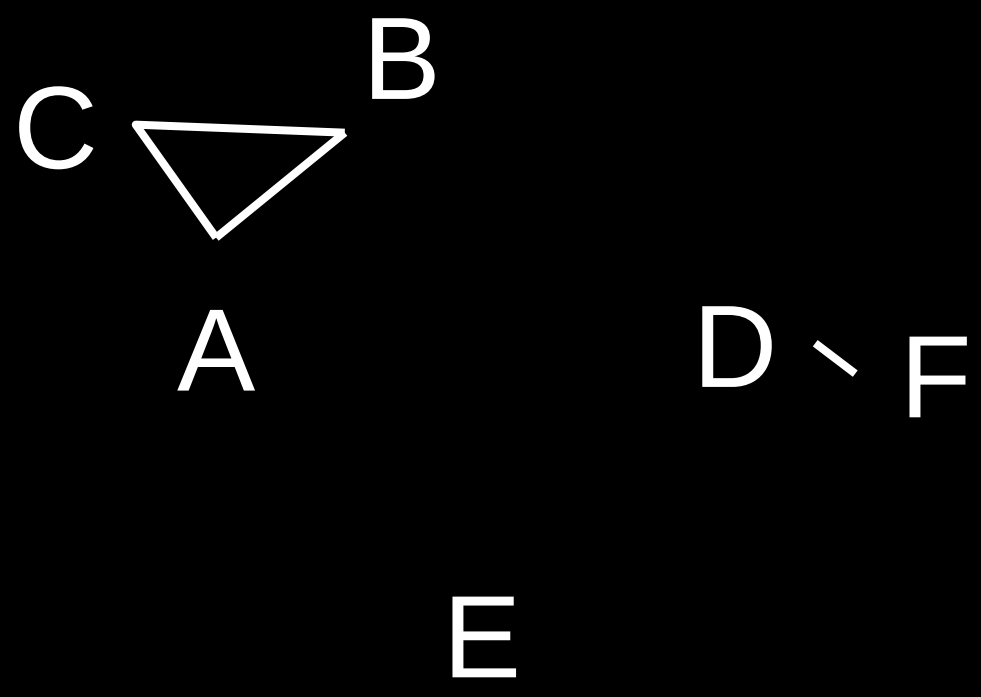


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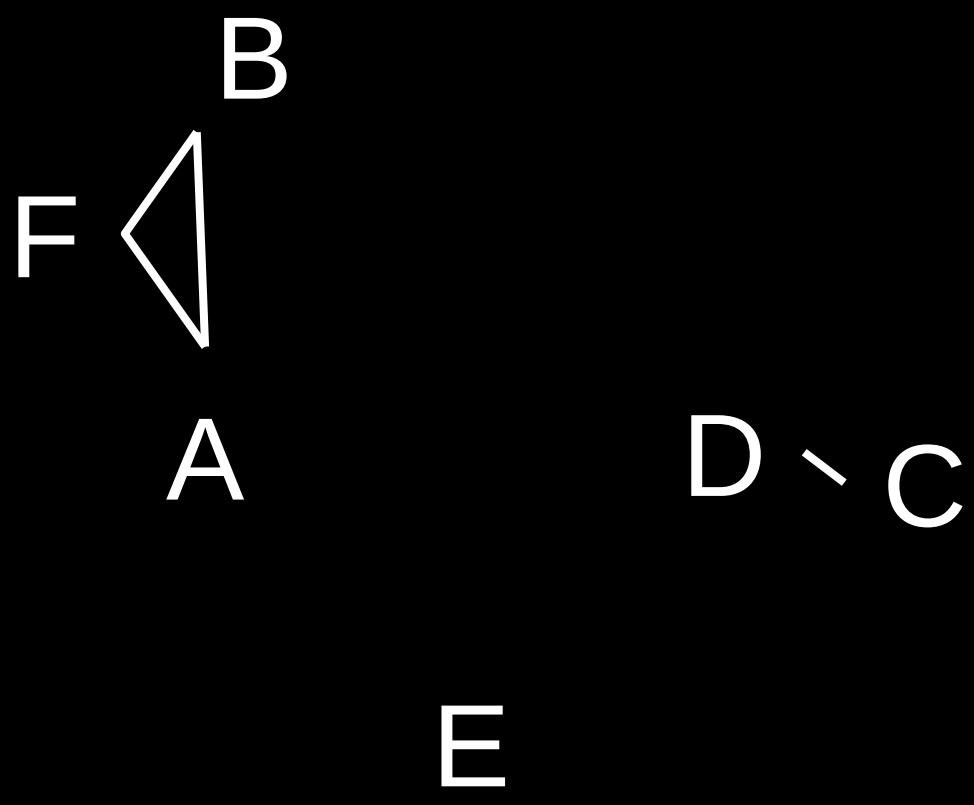


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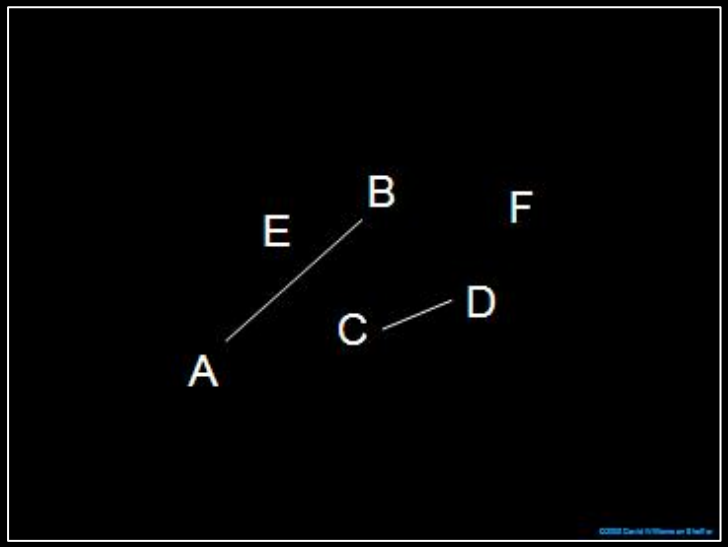


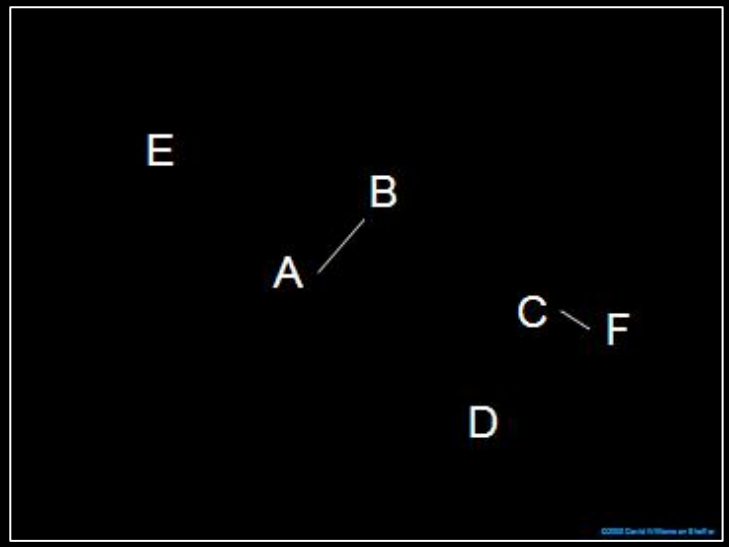


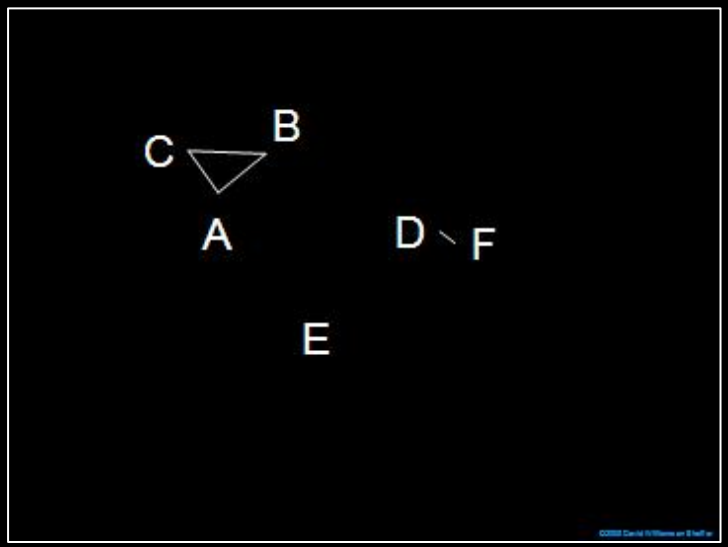


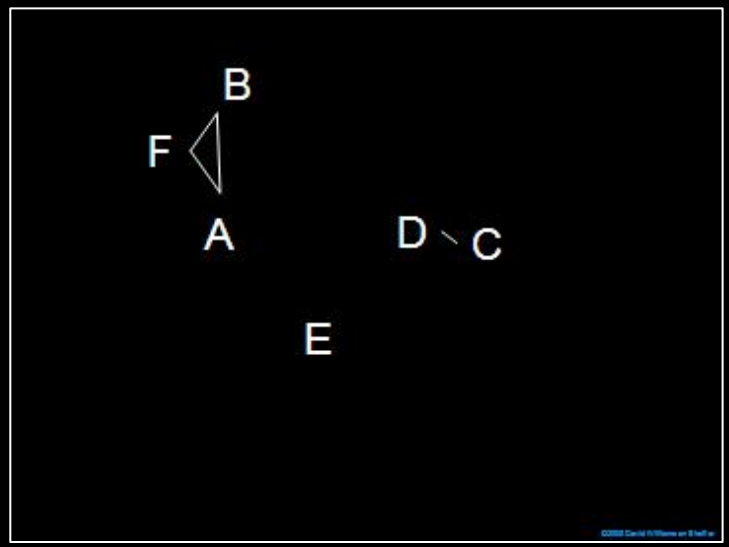


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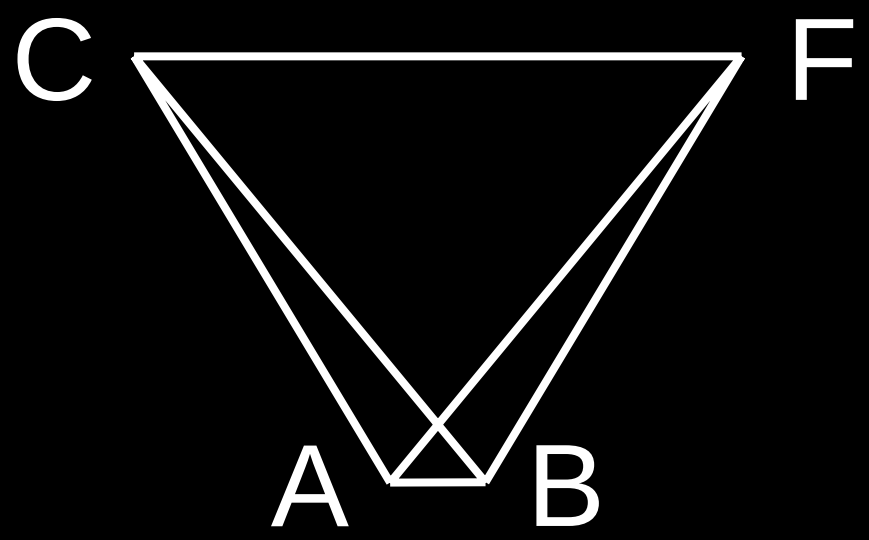


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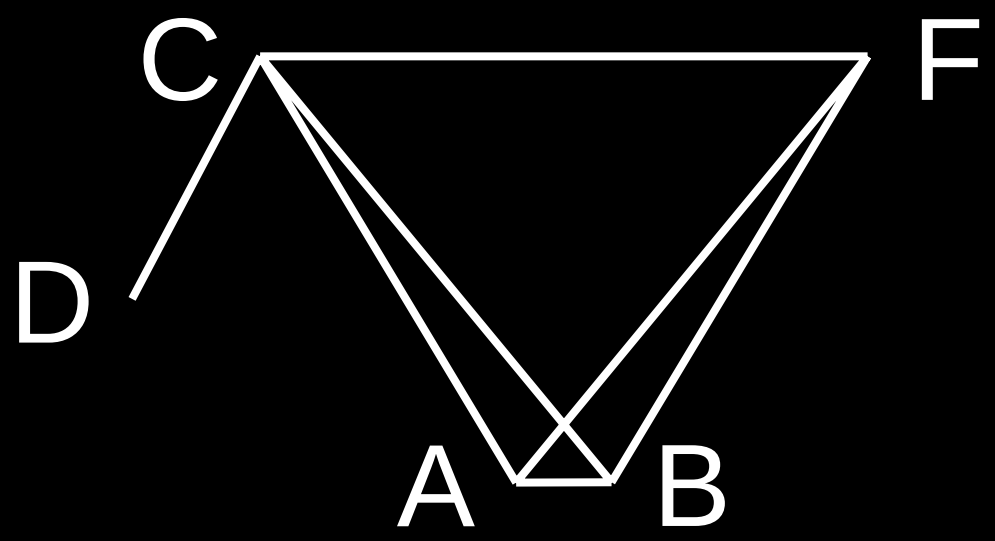


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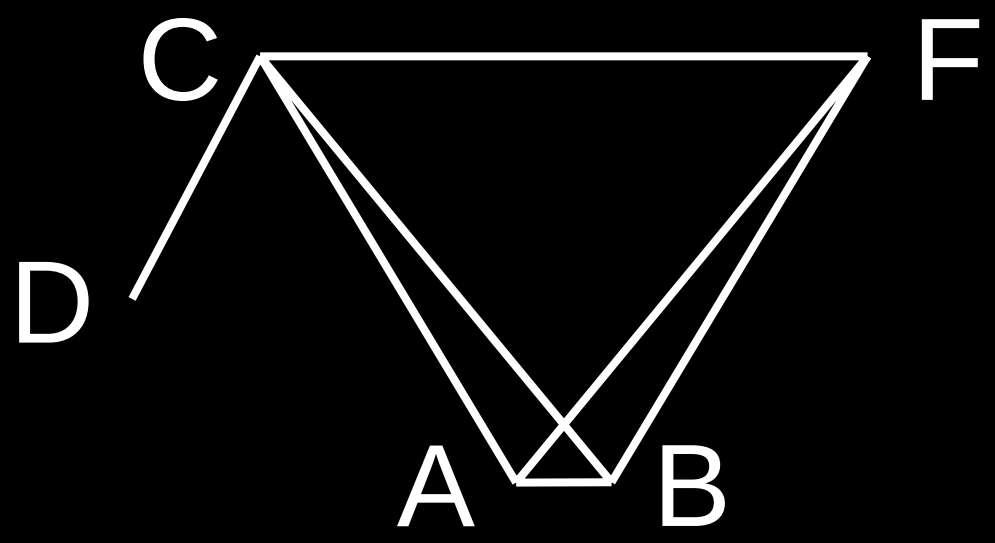


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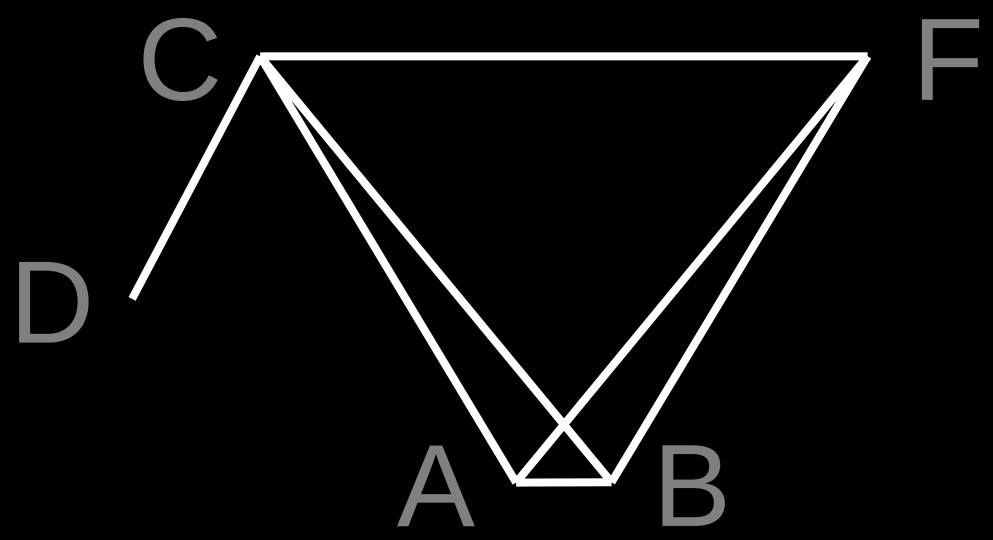


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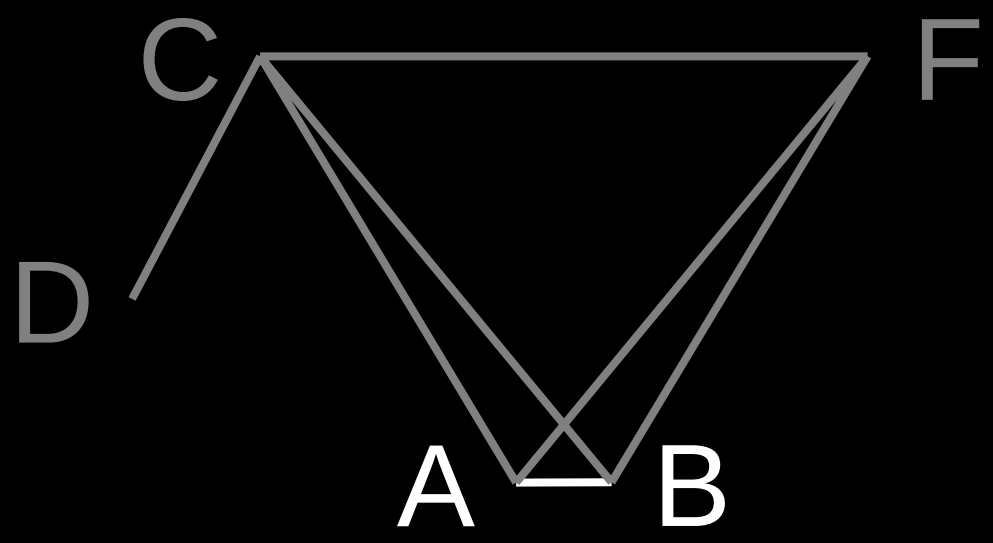


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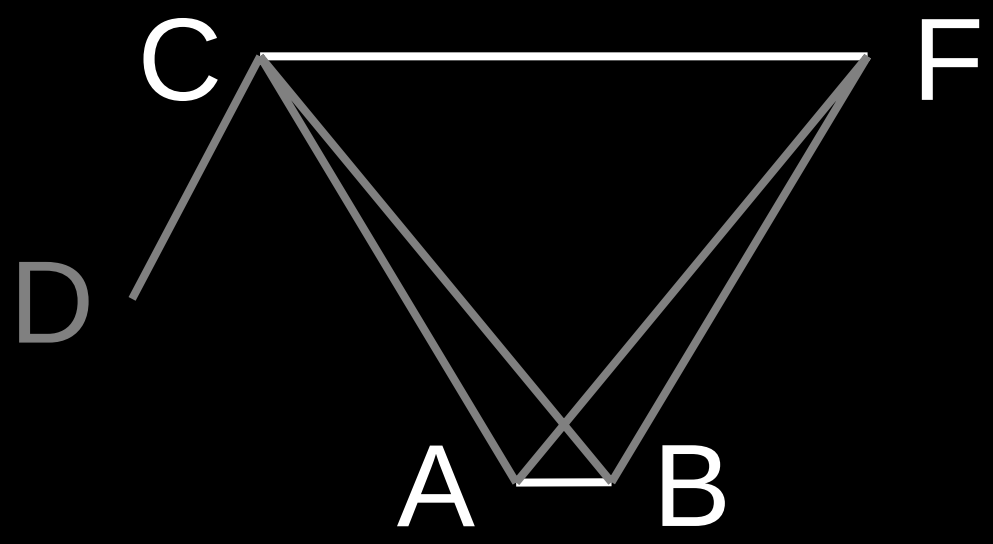


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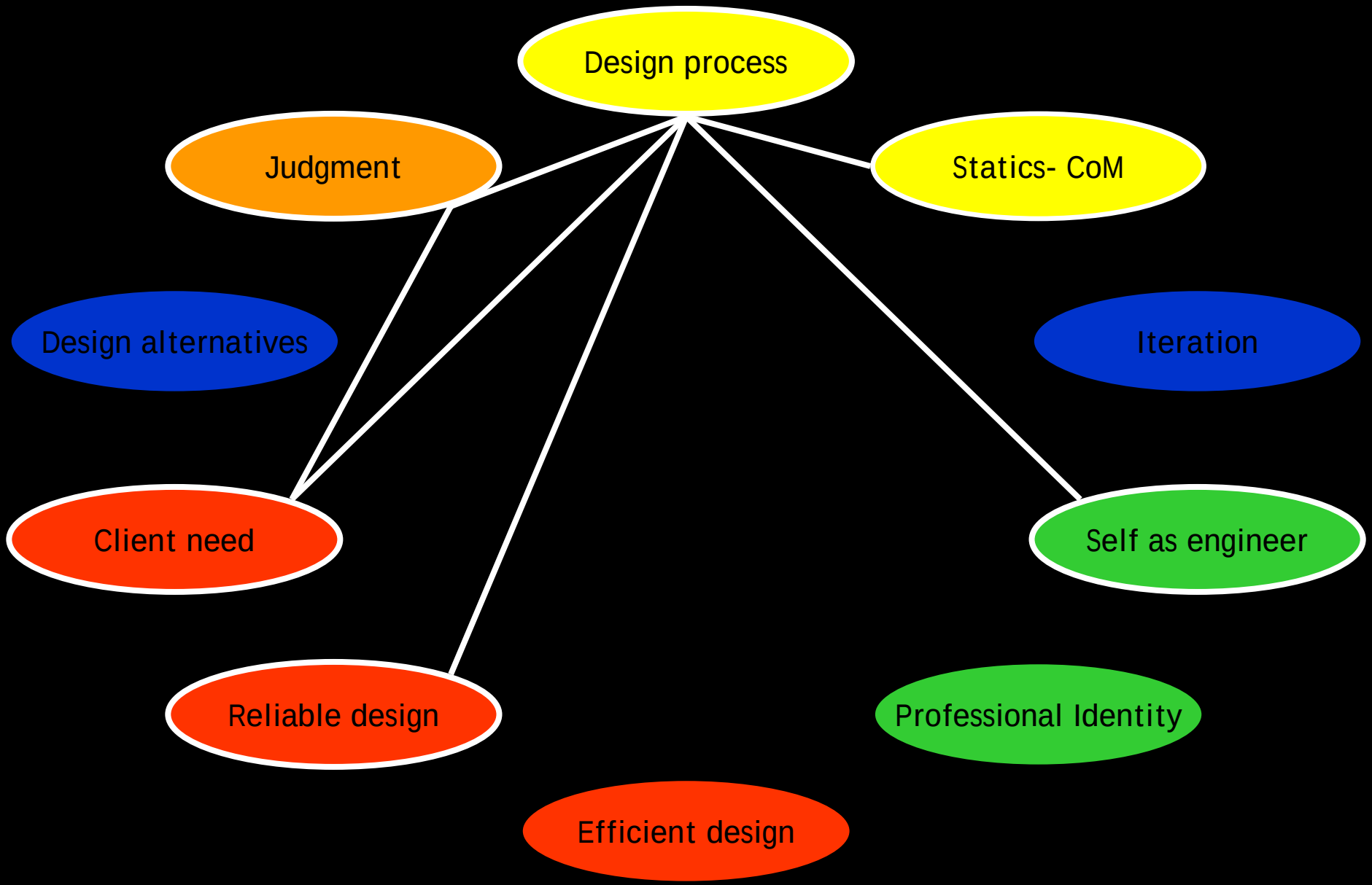


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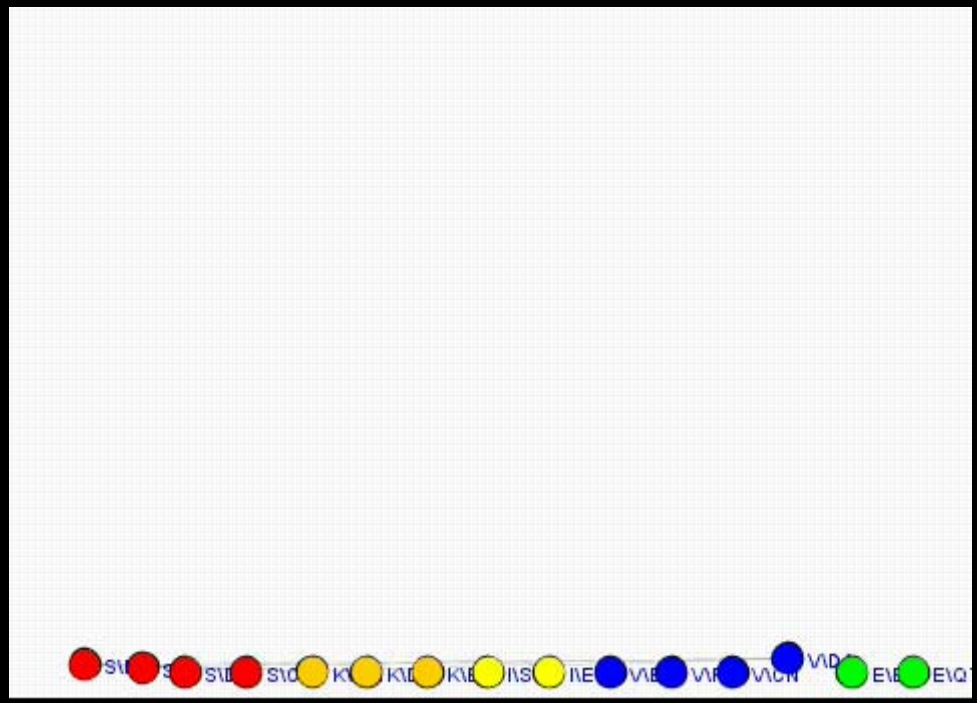

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$$W_{graph} = \sqrt{\sum_{nodes} (L_n)^2}$$

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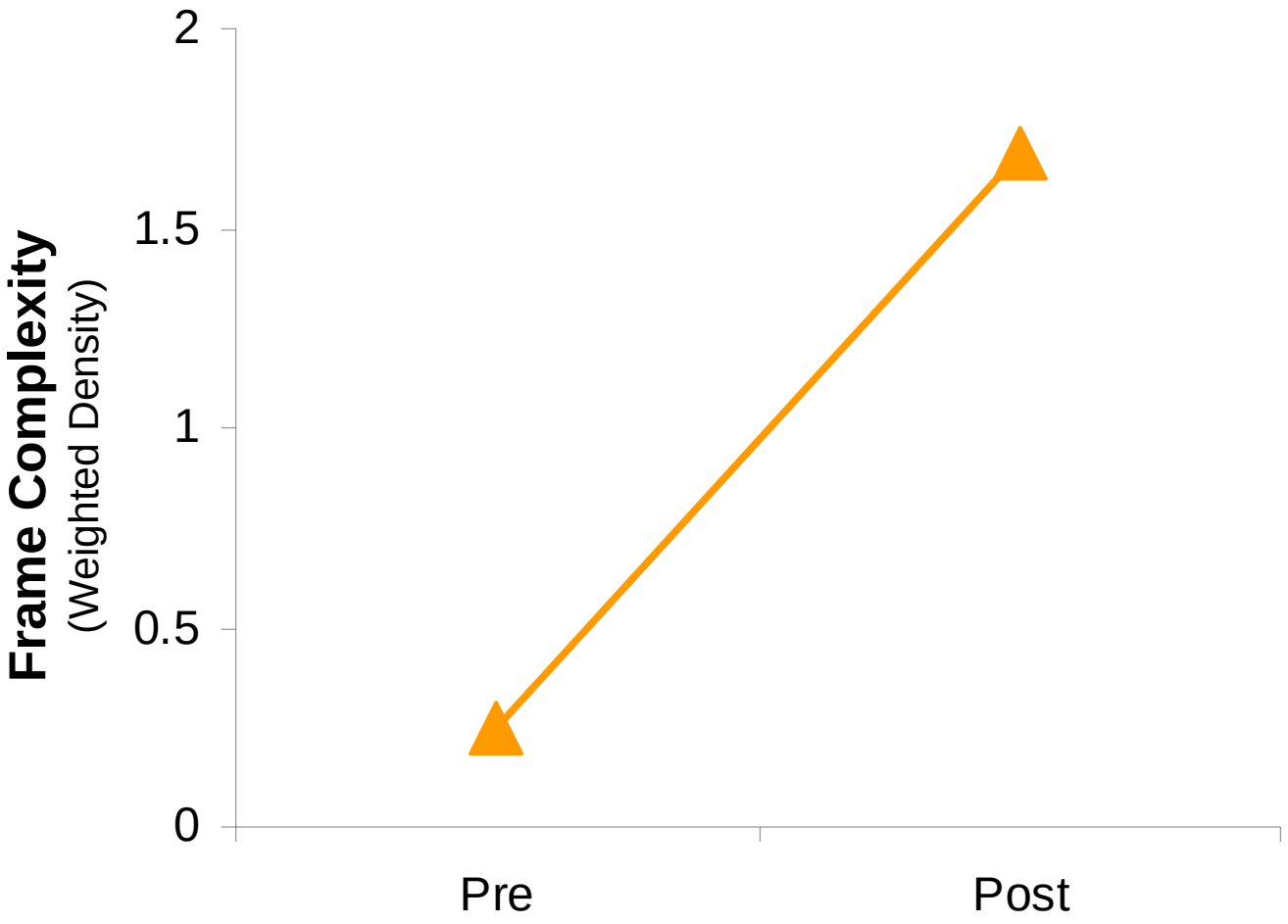


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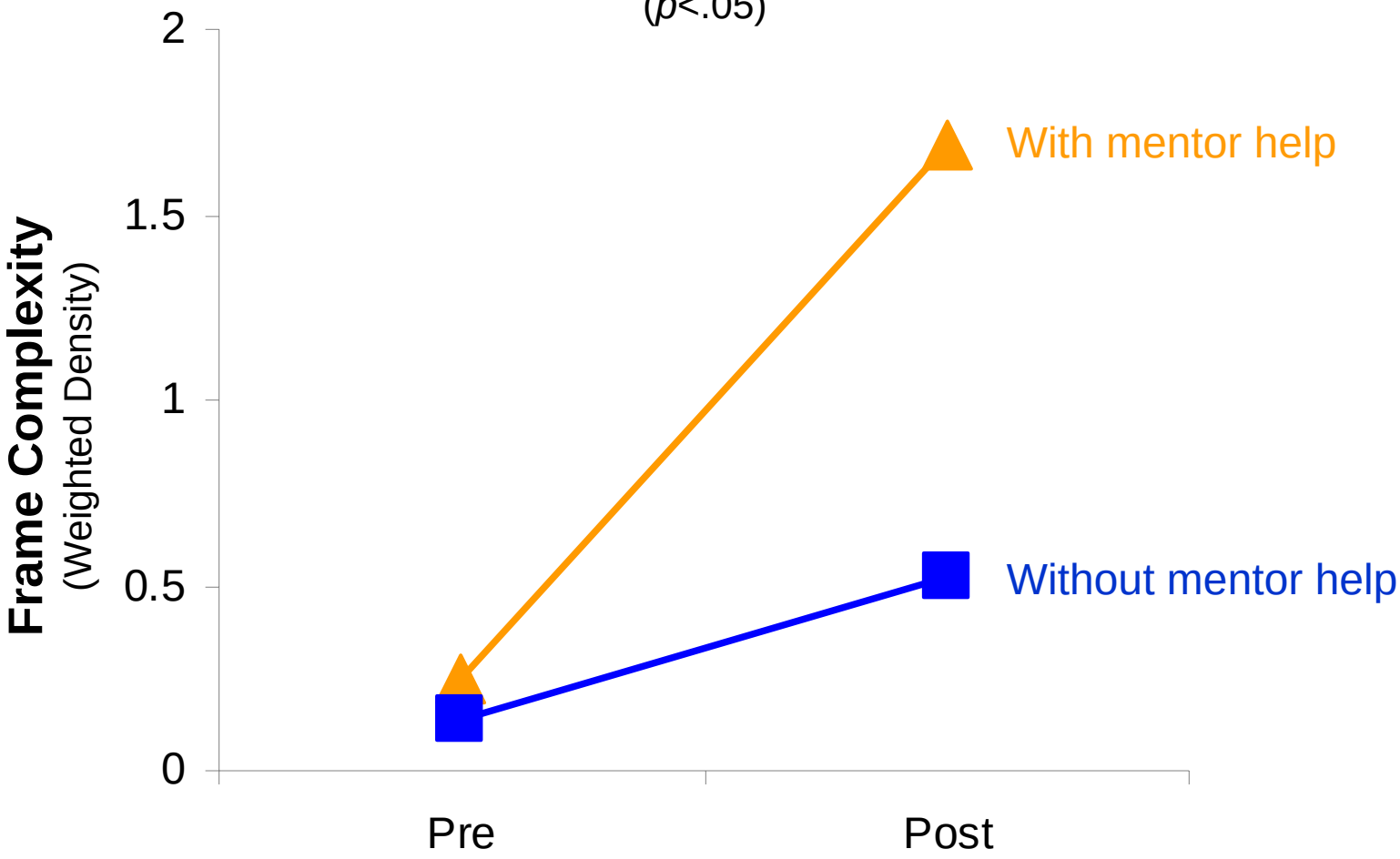
Players who get help from mentors develop more complex epistemic frames
($p$<.05)

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# Mentor Enacted Frame

| Activity | Skills | Knowledge | Identity | Values | Epistemology |
|---|---|---|---|---|---|
| Background Research | ● | | | | |
| Neighborhood Assessment | ● | ● | | ● | |
| Virtual Site Visit | ● | | | ● | |
| Preference Survey | ● | ● | | | ● |
| Preference Survey Feedback | | ● | | ● | |
| Final Plan | ● | ● | | ● | ● |
| Final Report | ● | ● | | ● | ● |
| Presentation | ● | ● | ● | | |
| After Action Report | | ● | | ● | ● |

# Player Enacted Frame

| Activity | Skills | Knowledge | Identity | Values | Epistemology |
|---|---|---|---|---|---|
| Background Research | ● | ● | | | |
| Neighborhood Assessment | ● | | | ● | |
| Virtual Site Visit | ● | ● | | | ● |
| Preference Survey | | | | ● | ● |
| Preference Survey Feedback | ● | ● | | ● | ● |
| Final Plan | ● | ● | | | ● |
| Final Report | | ● | ● | ● | ● |
| Presentation | ● | ● | | | |
| After Action Report | | ● | | ● | |

| Skills | Knowledge | Identity | Values | Epistemology |
|---|---|---|---|---|
| ● | ● | ● | ● | ● |

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Mentor Frame

Player Frame

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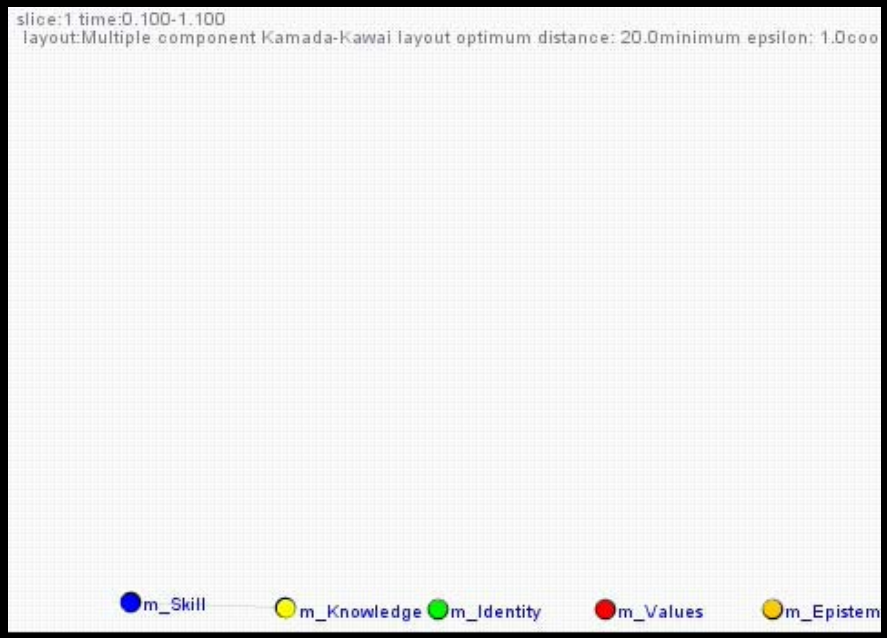
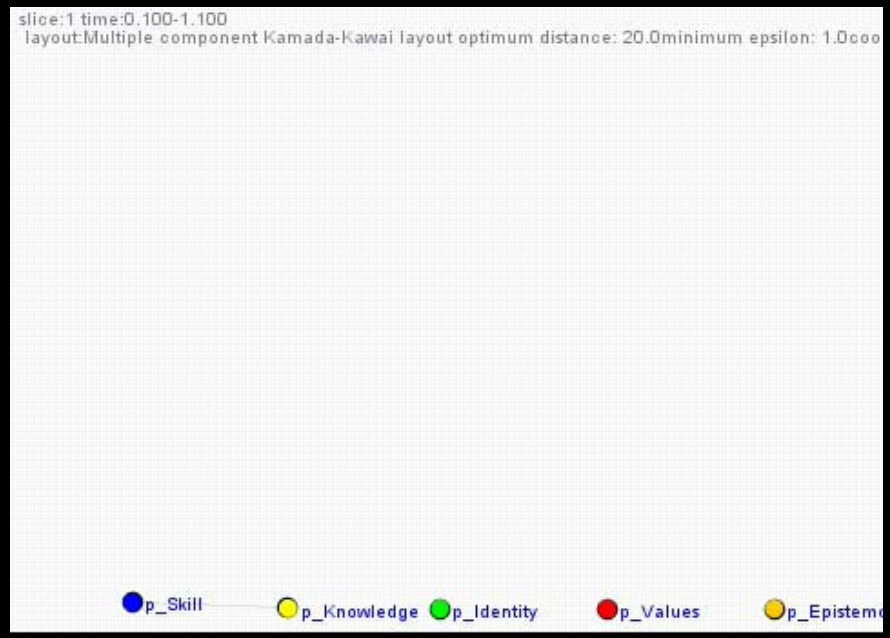
# Mentor Frame




# Player Frame




| Skills | Knowledge | Identity | Values | Epistemology |
|---|---|---|---|---|
| ● | ● | ● | ● | ● |

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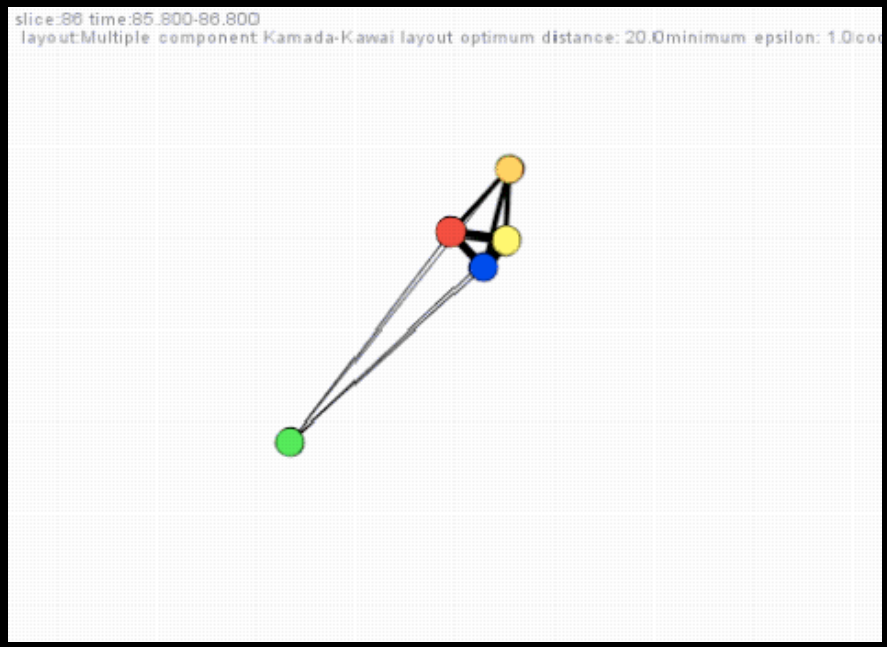
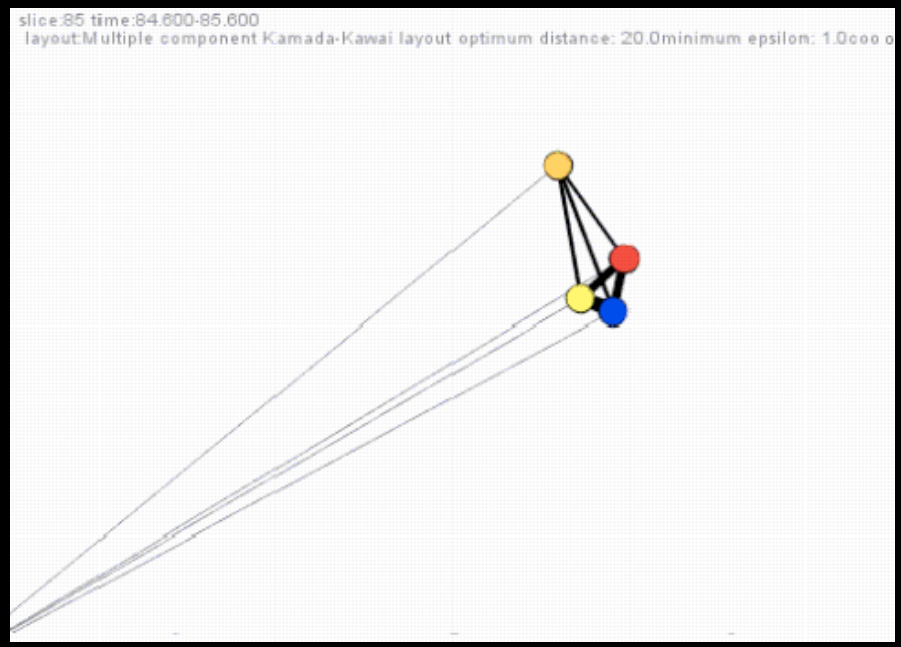
## Mentor Frame




## Player Frame




| Skills | Knowledge | Identity | Values | Epistemology |
|---|---|---|---|---|
| ● | ● | ● | ● | ● |

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$$C_{node}^{r} = \frac{\sqrt{\sum_{neighbors} (L_n)^2}}{C_{\max}}$$

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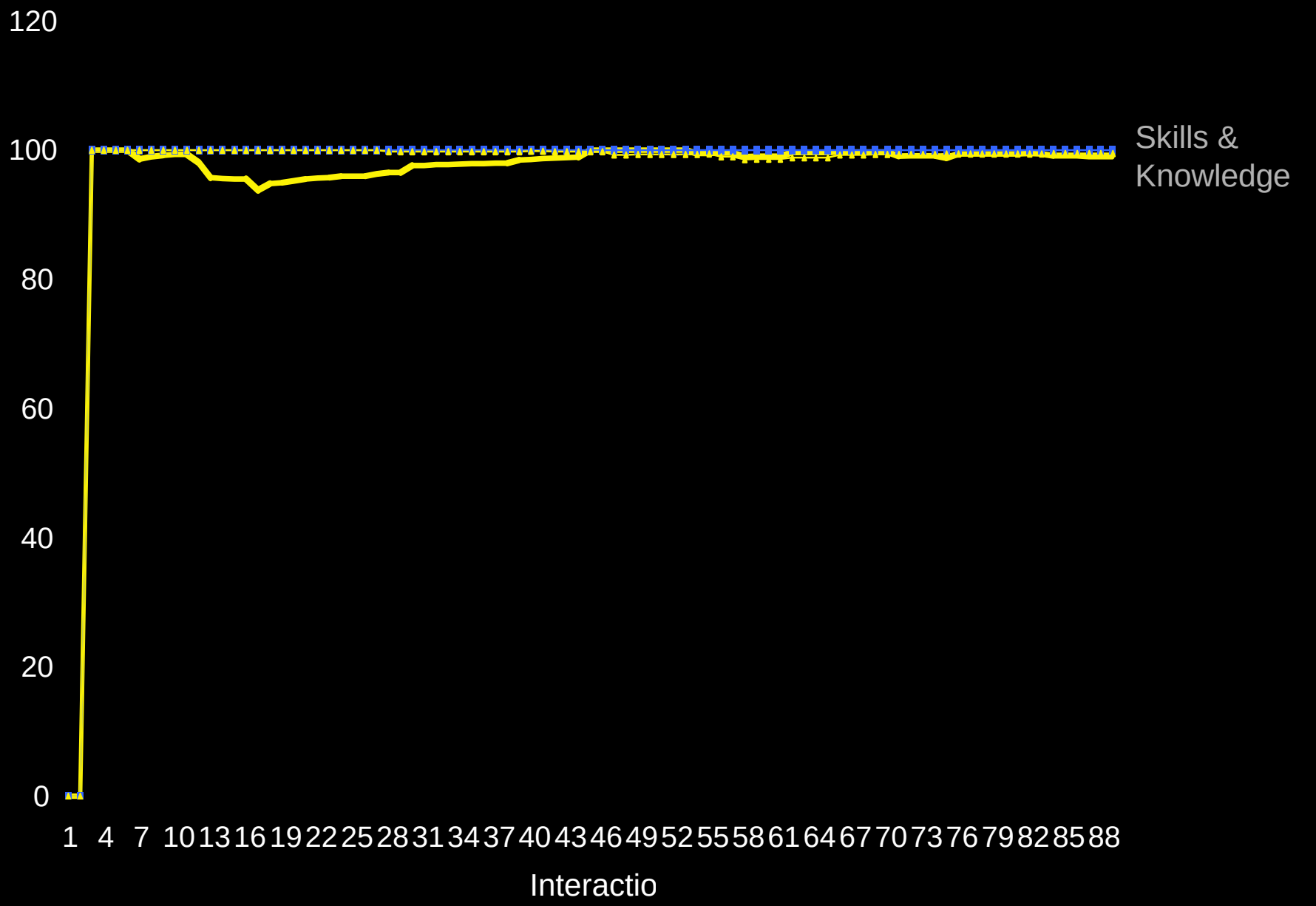


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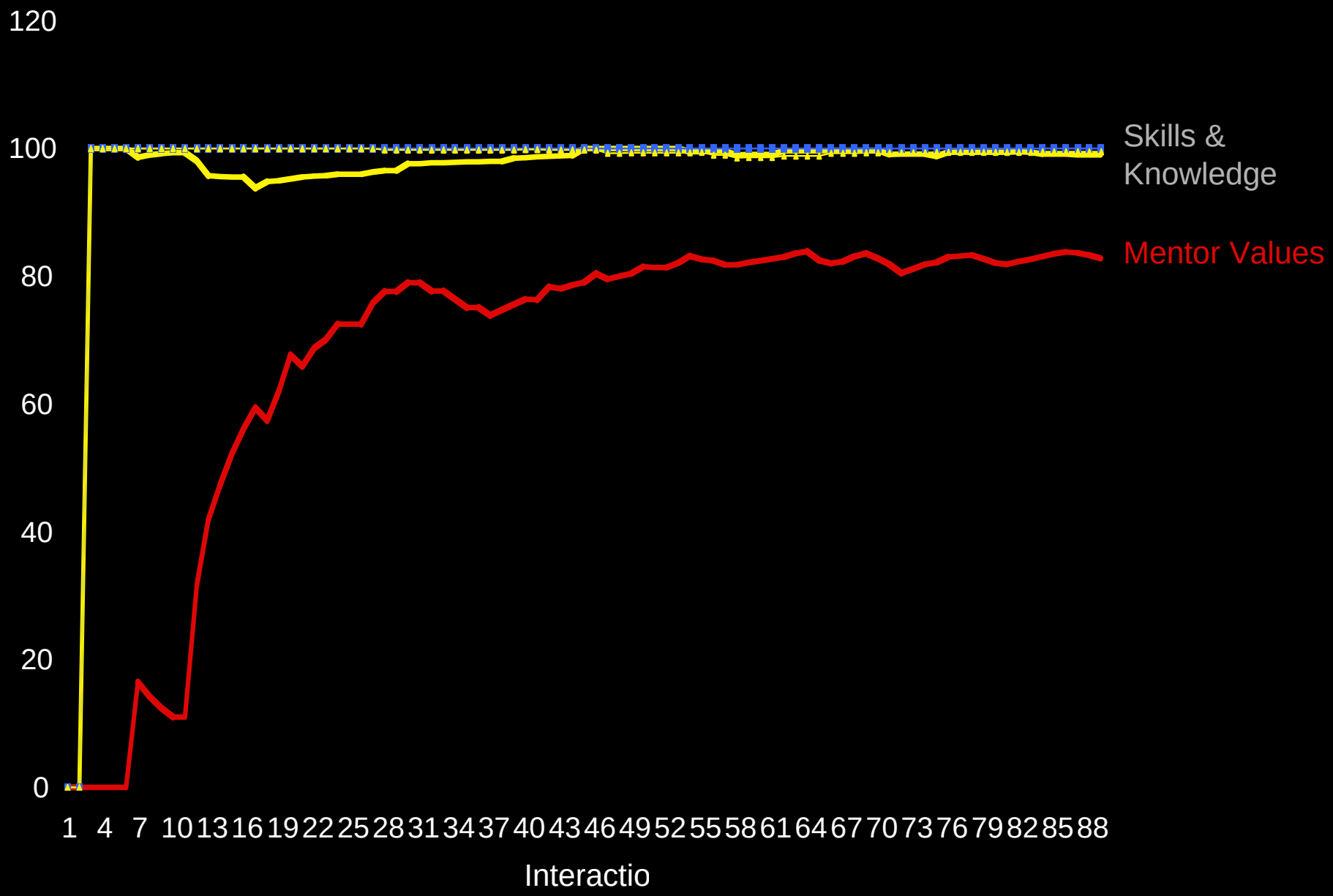


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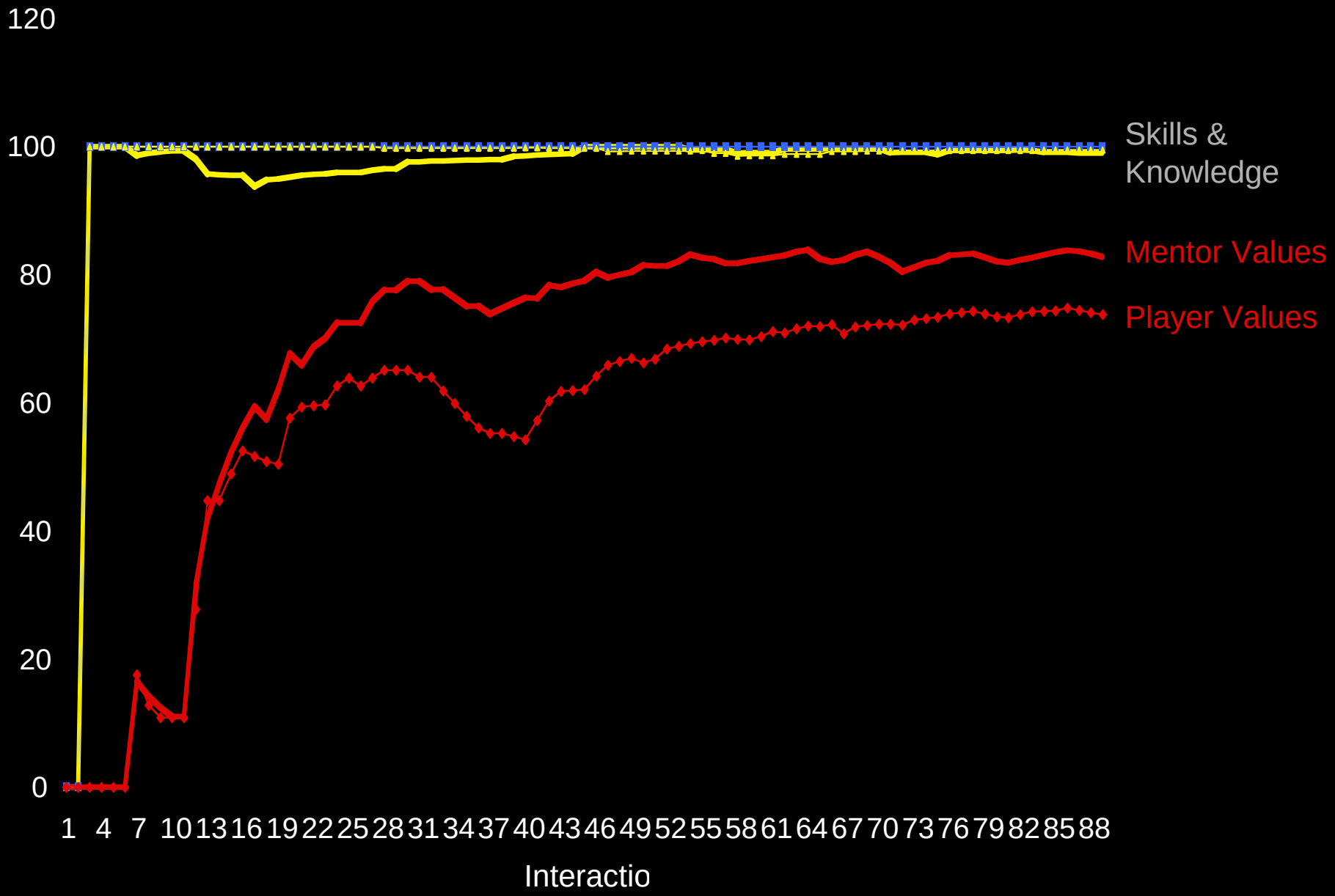


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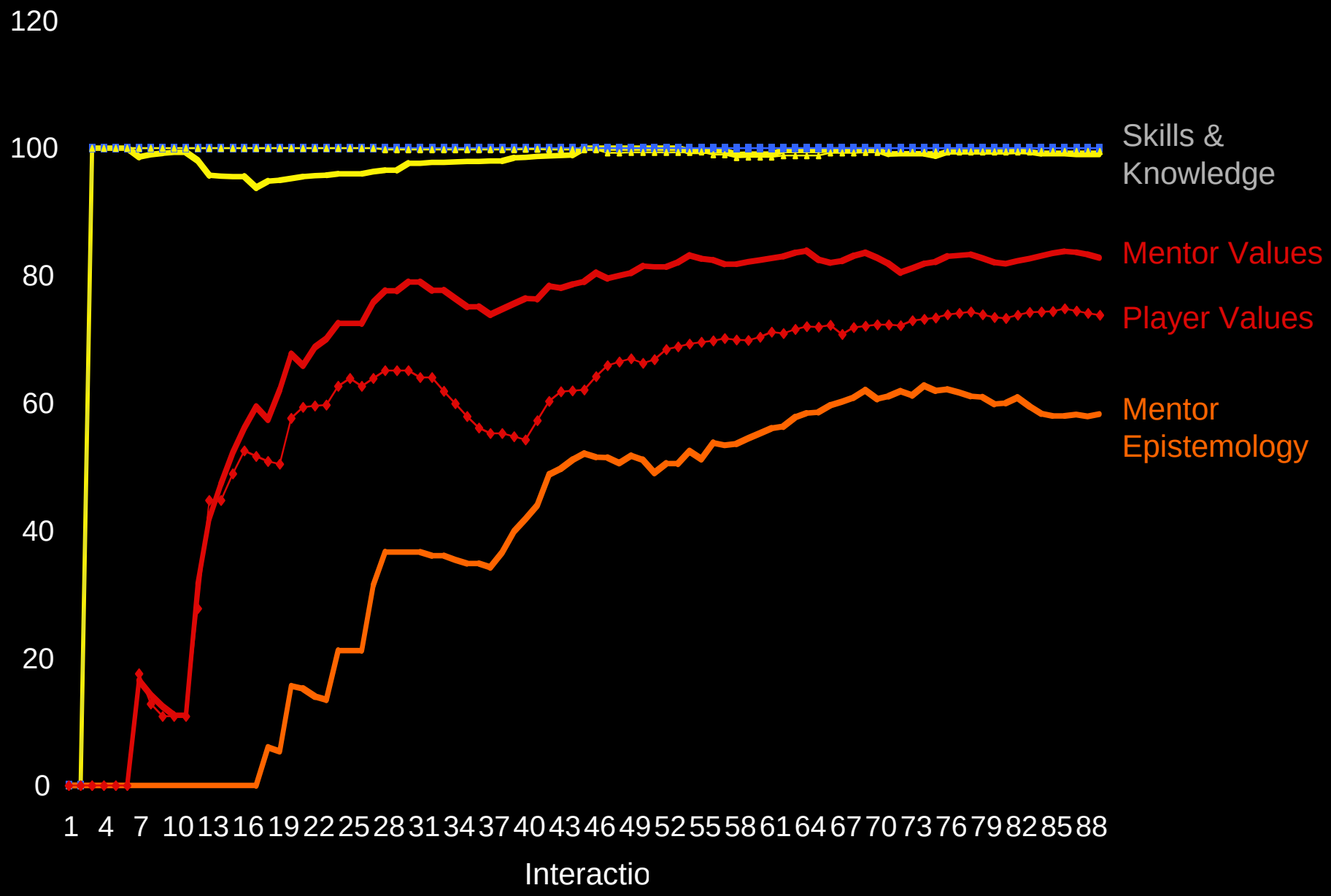


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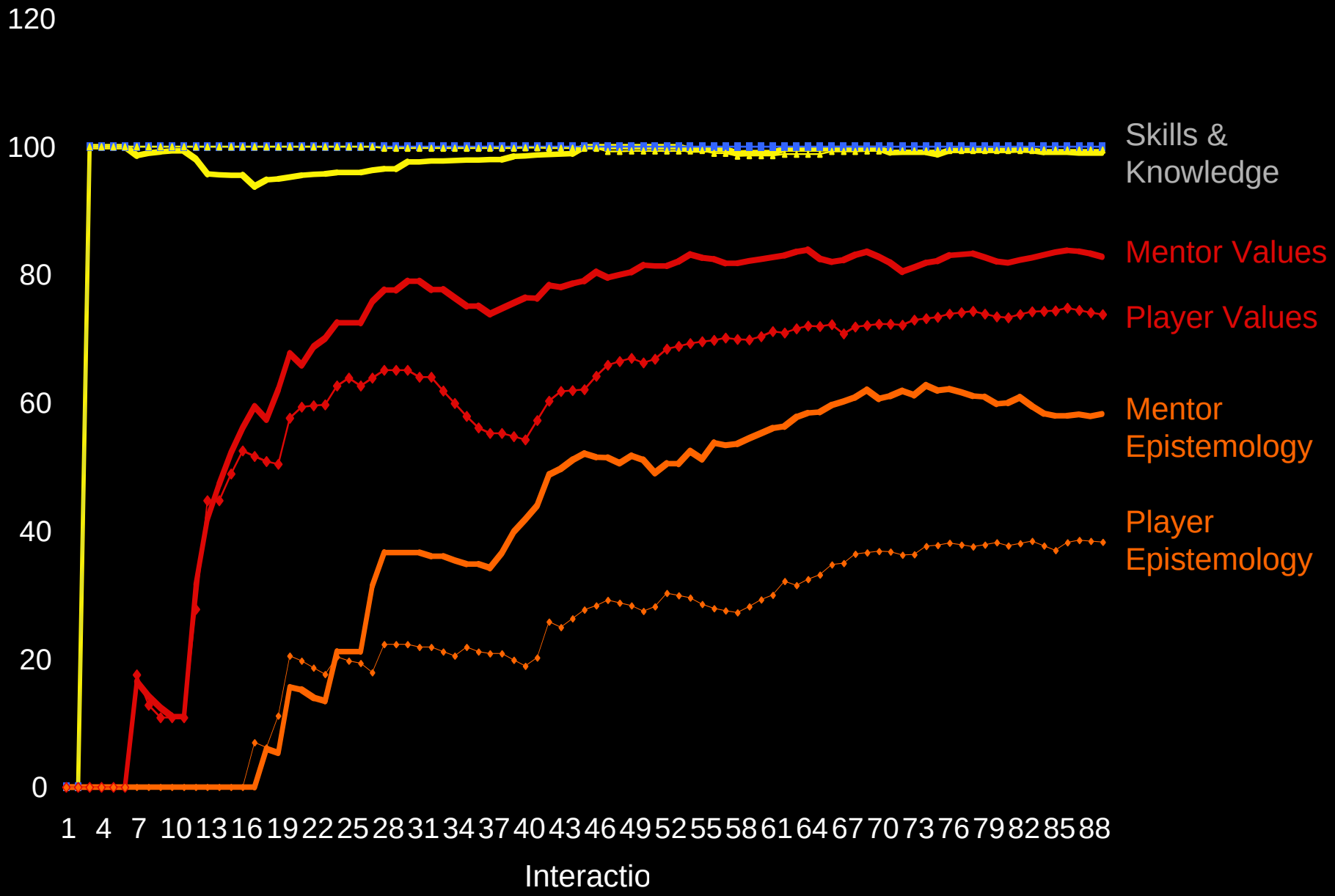


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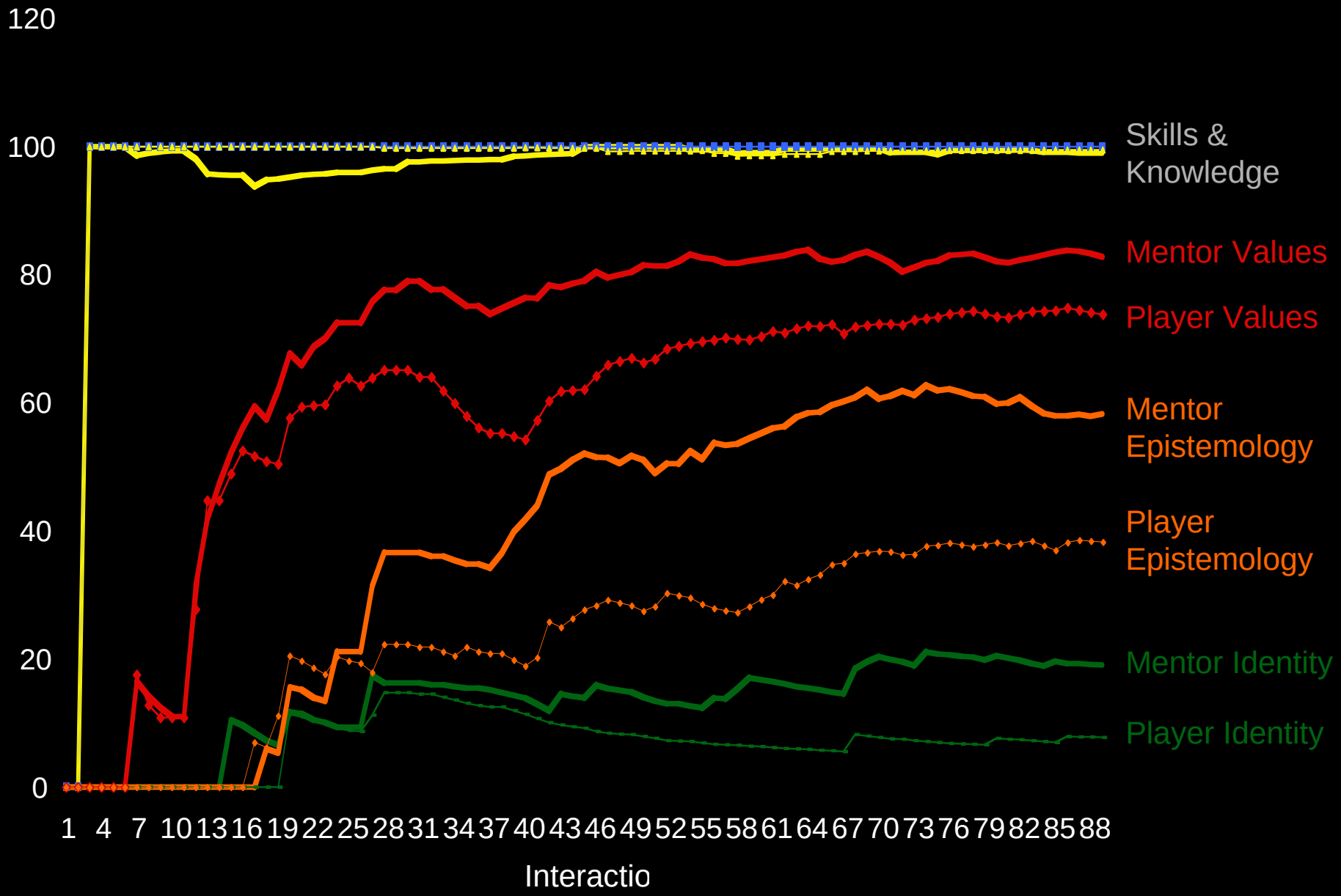


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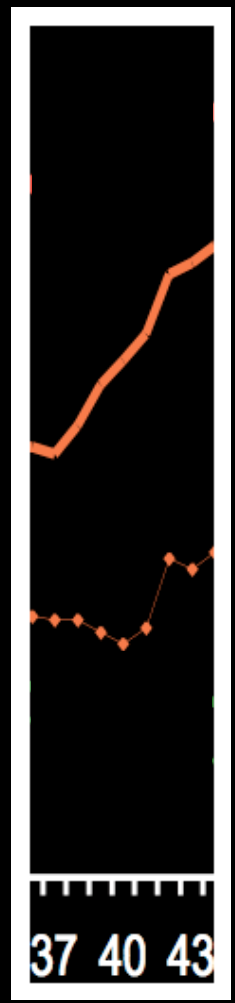


Skills & Knowledge

Mentor Values

Player Values

Mentor Epistemology

Player Epistemology

Mentor Identity

Player Identity

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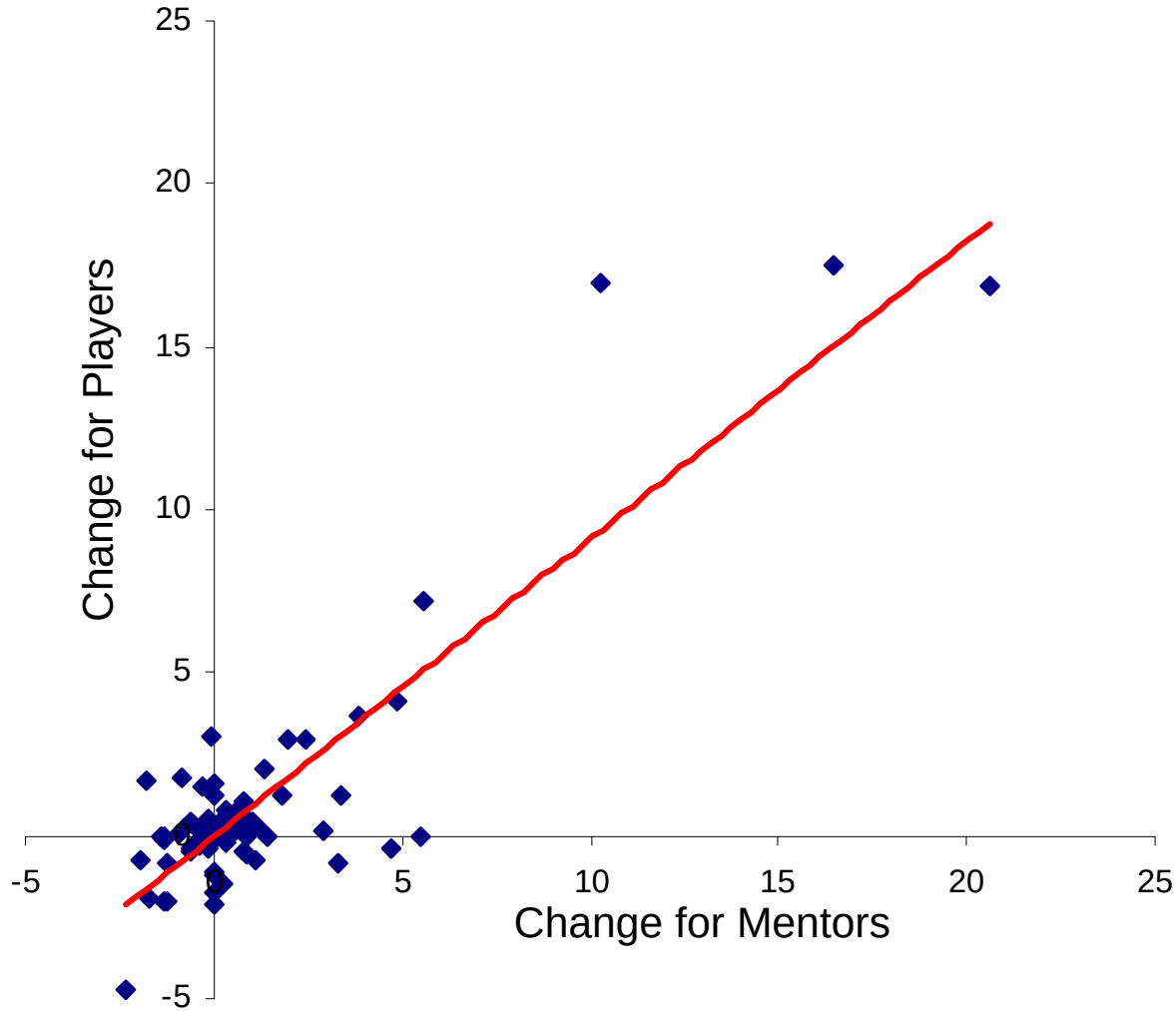
Change in relative centrality of values for mentors in an interaction predicts change in relative centrality of values for players ($p$<.001)

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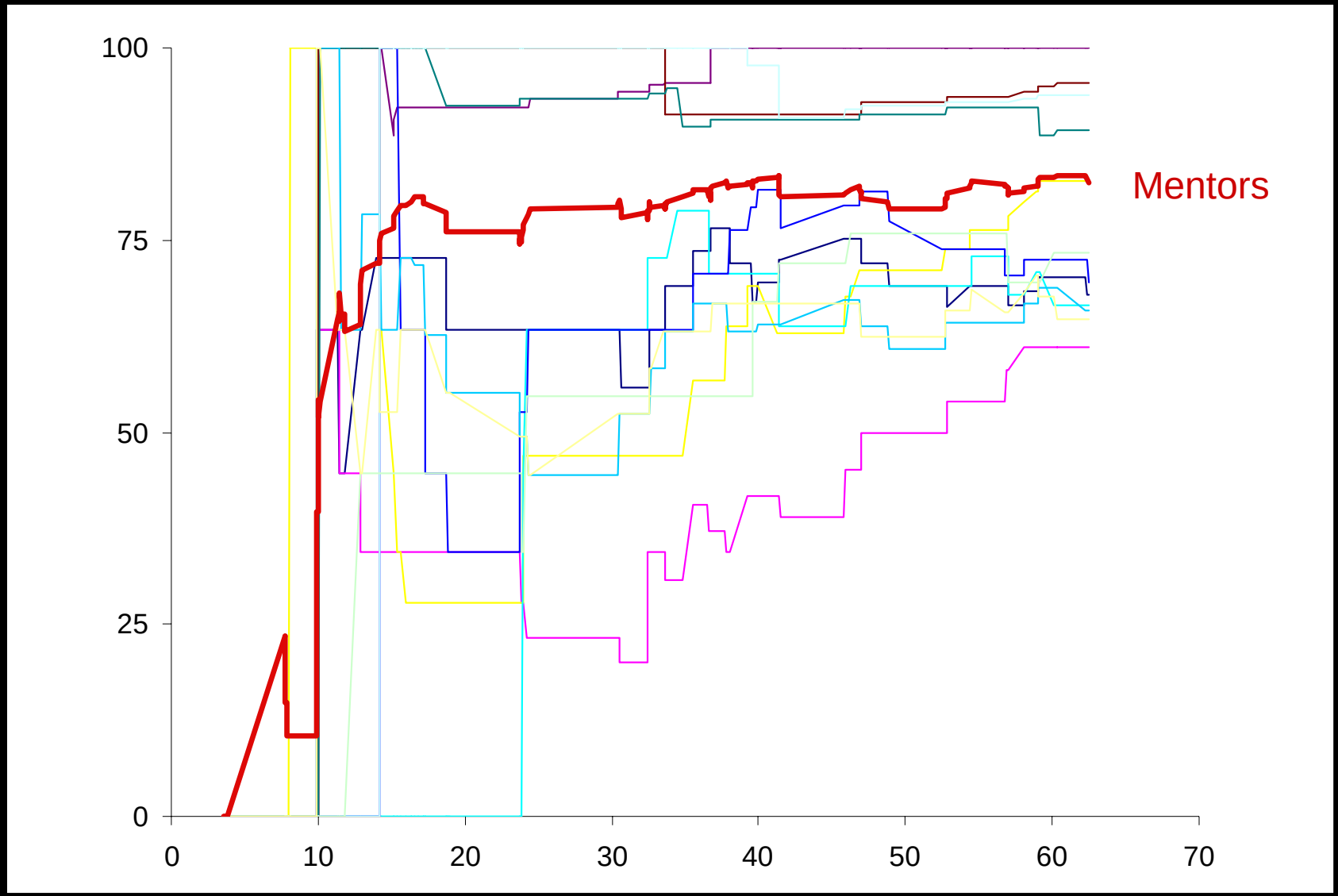


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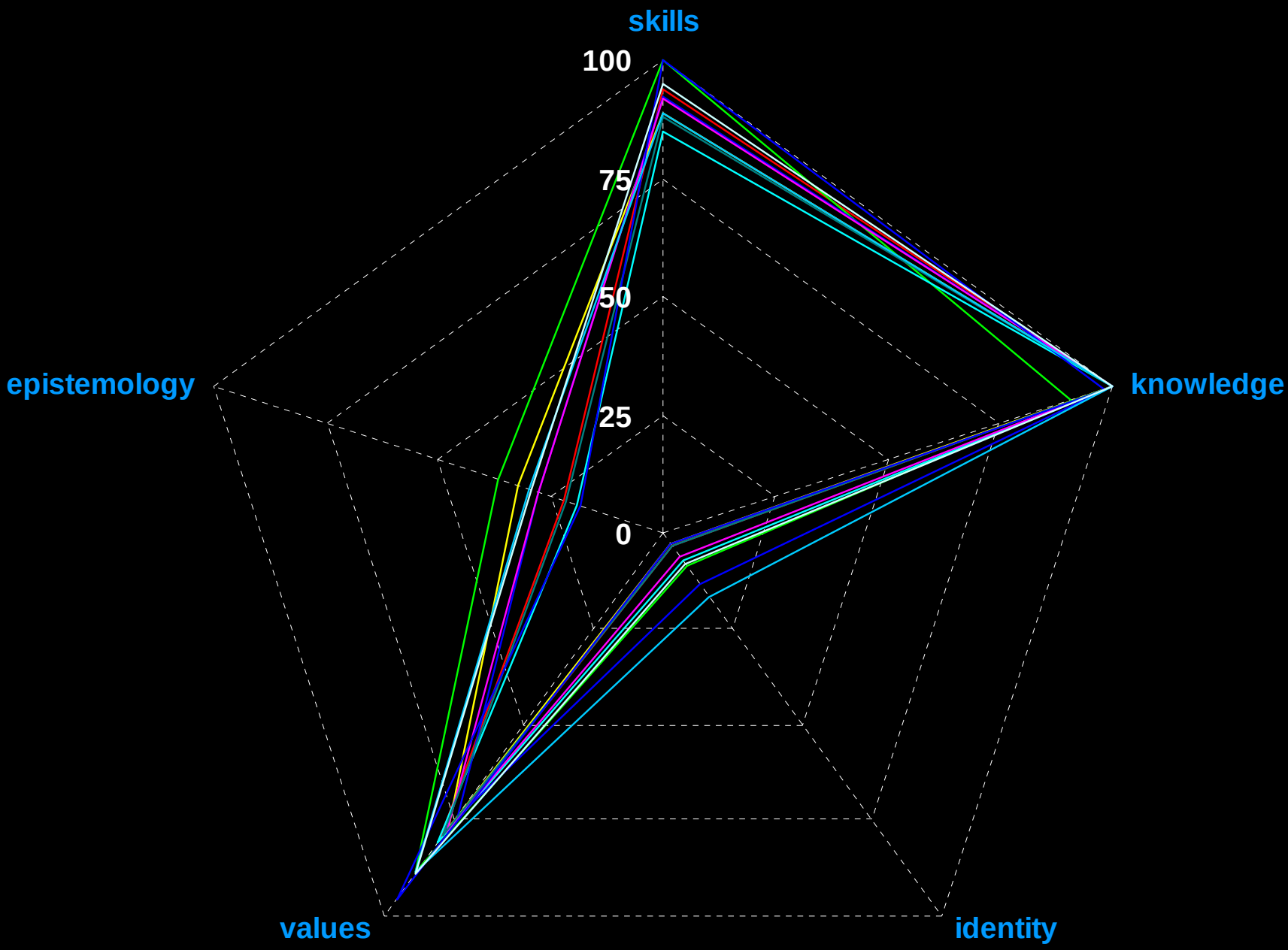


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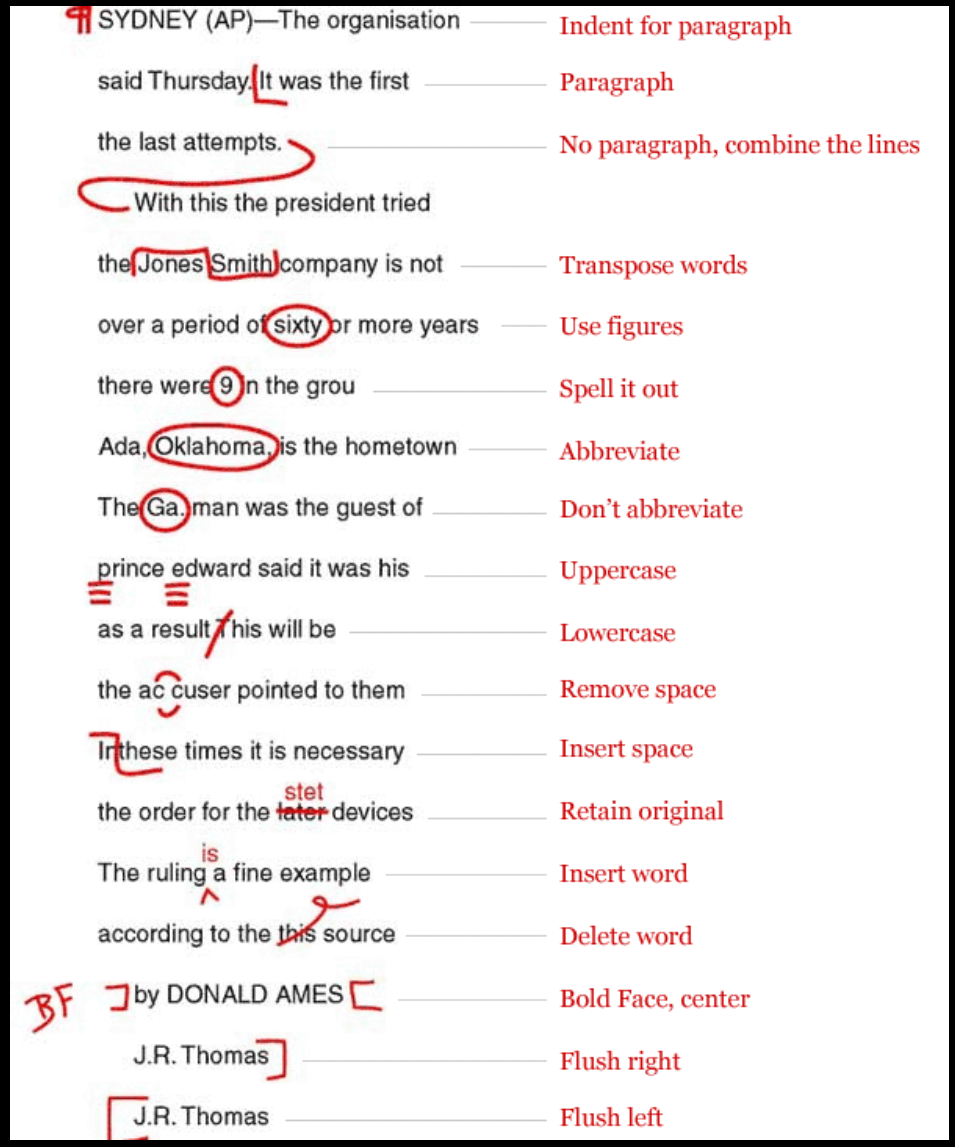


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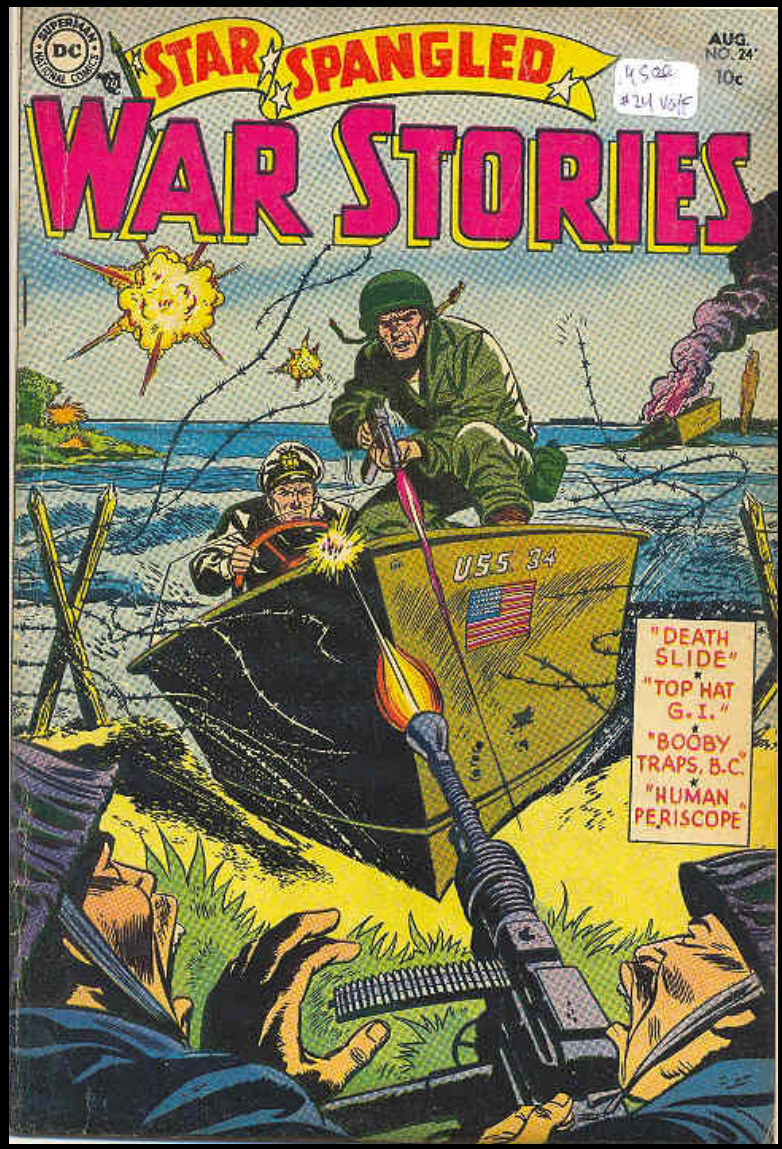


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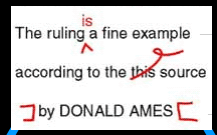

skills

identity

values

knowledge

write to formula

invisible author

neutral voice

journalistic style

smart reporting

professional pest

individual face

reporting tools

pattern recognition

watchdog

public accountability

journalistic ethics

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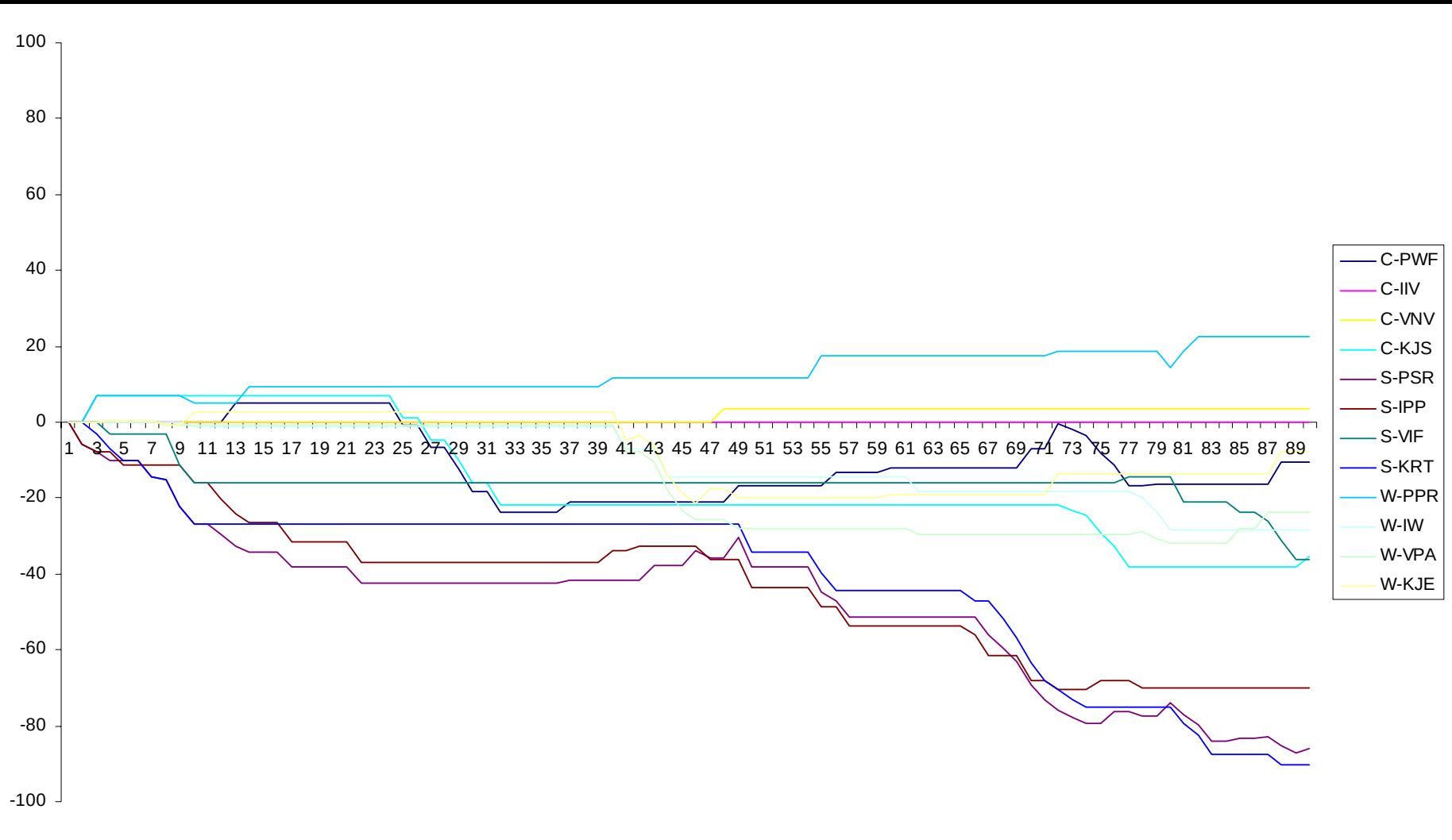


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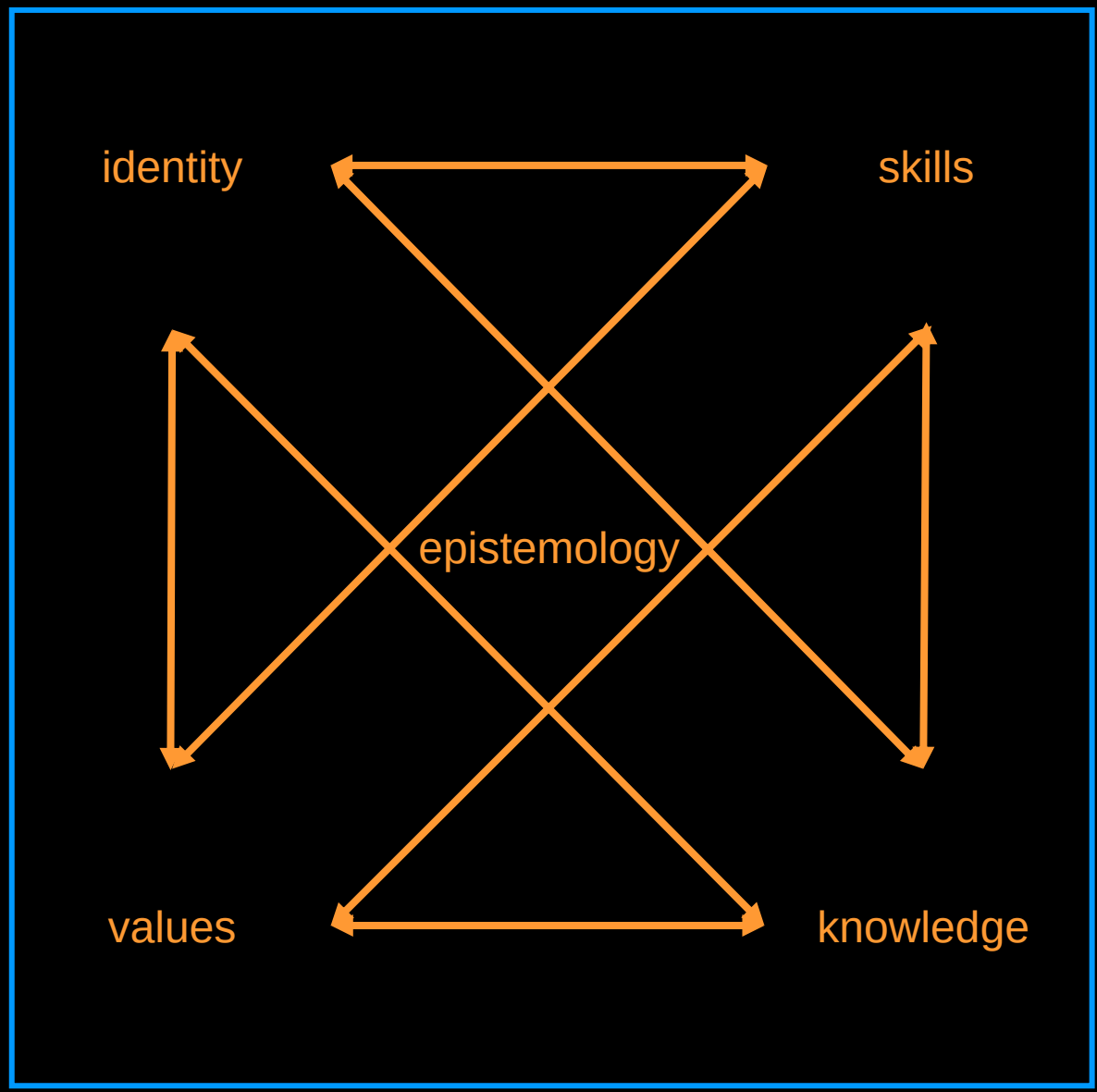


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# epistemic network analysis

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assessment of game-based learning

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Automated extraction of frame information

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# Model of complex thinking

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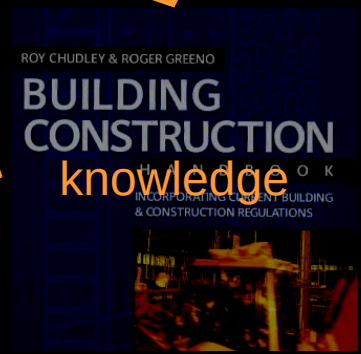


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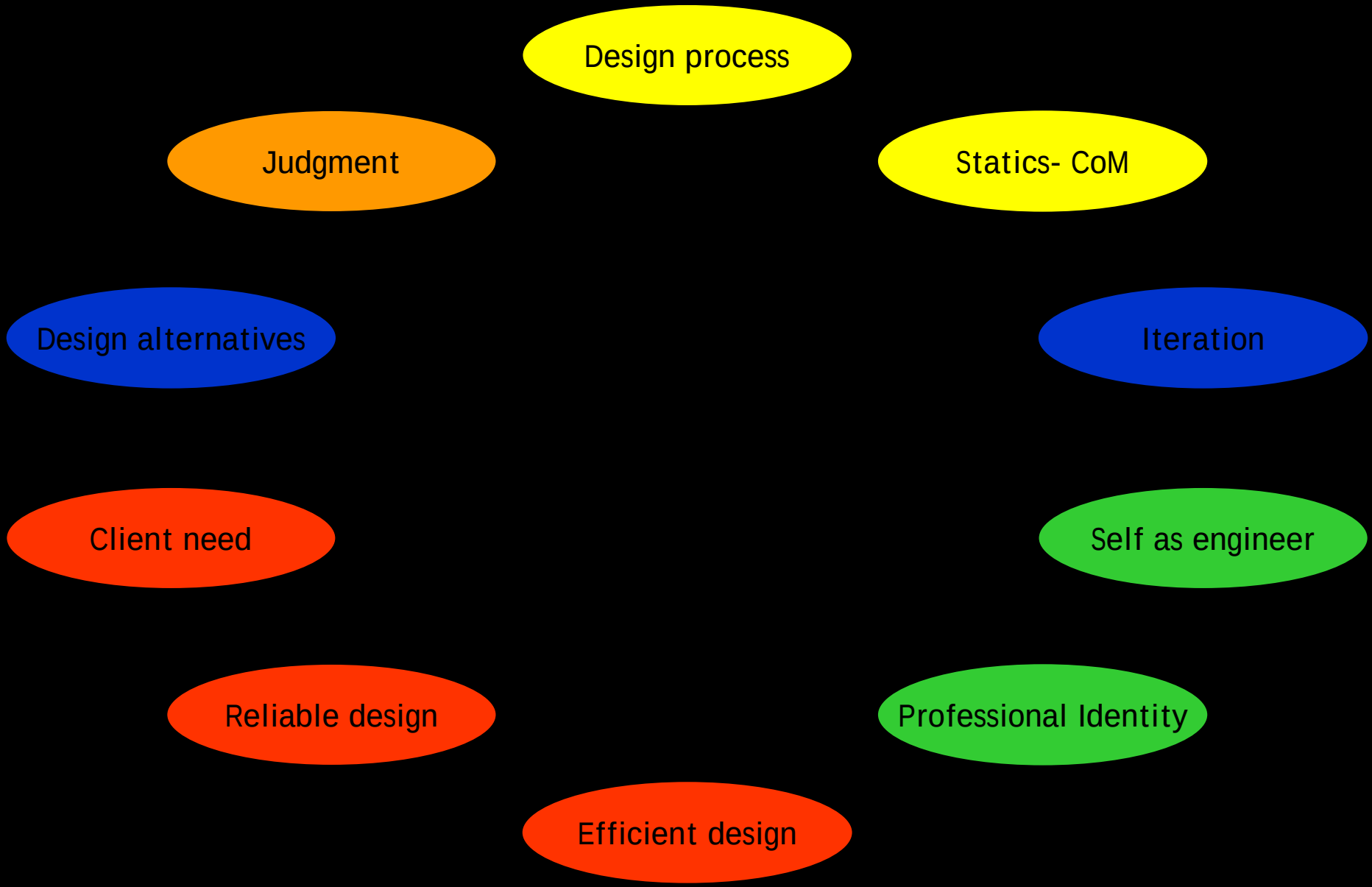


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