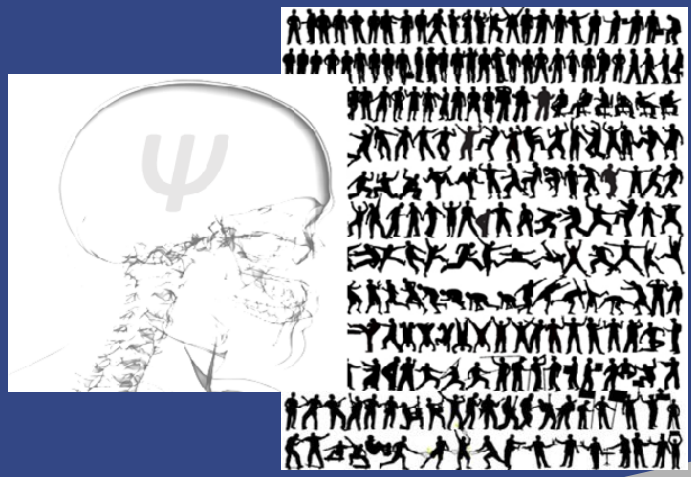
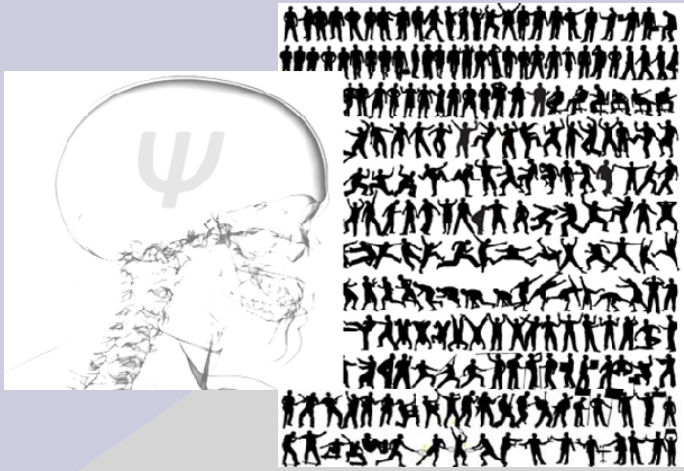
The Interplay of Sport Science and Sport Psychology



Invited Lecture
Wingate 2018-06

Prof. Dr. Dieter Hackfort



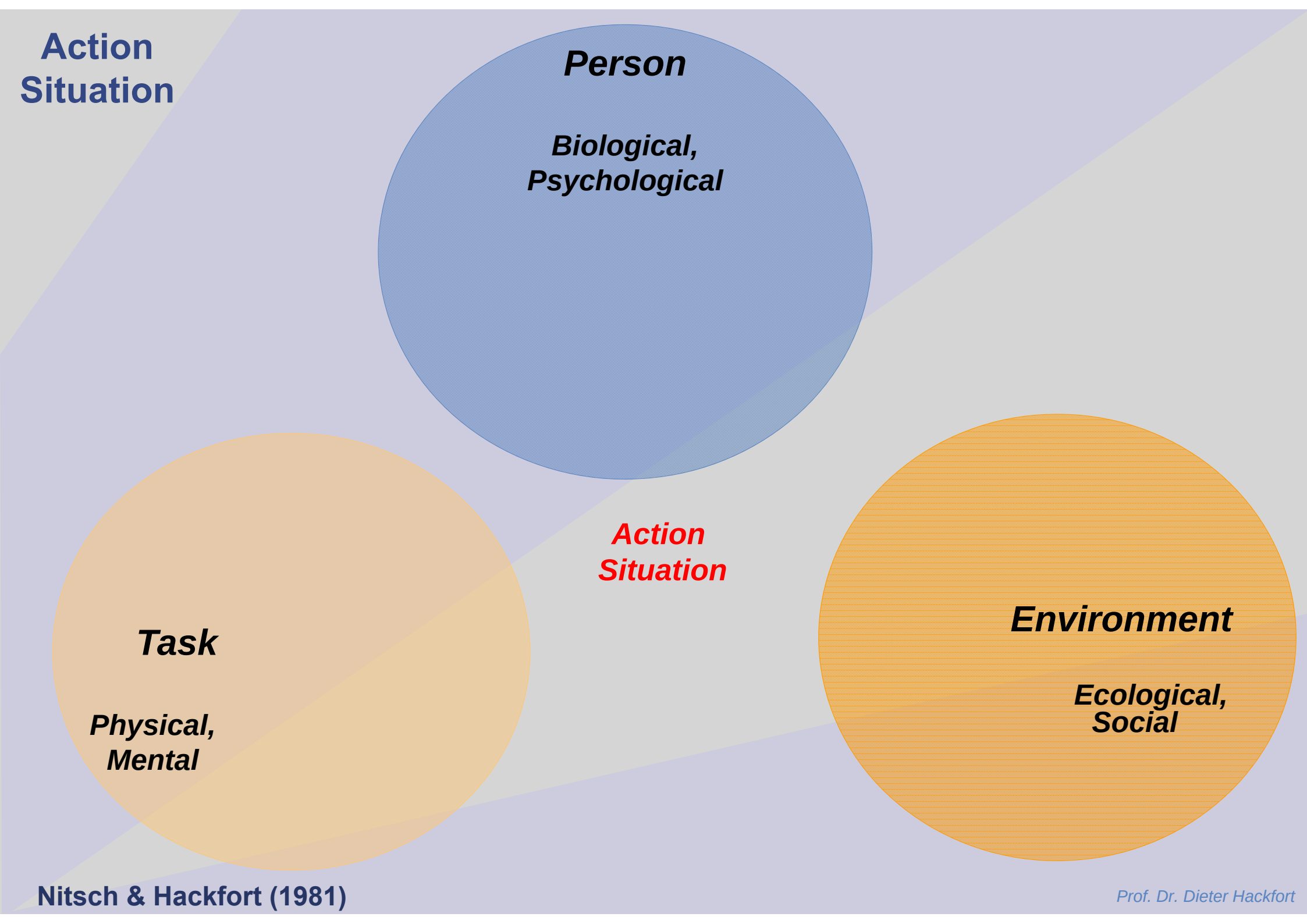
Fitness

Mental Fitness

Mental Robustness

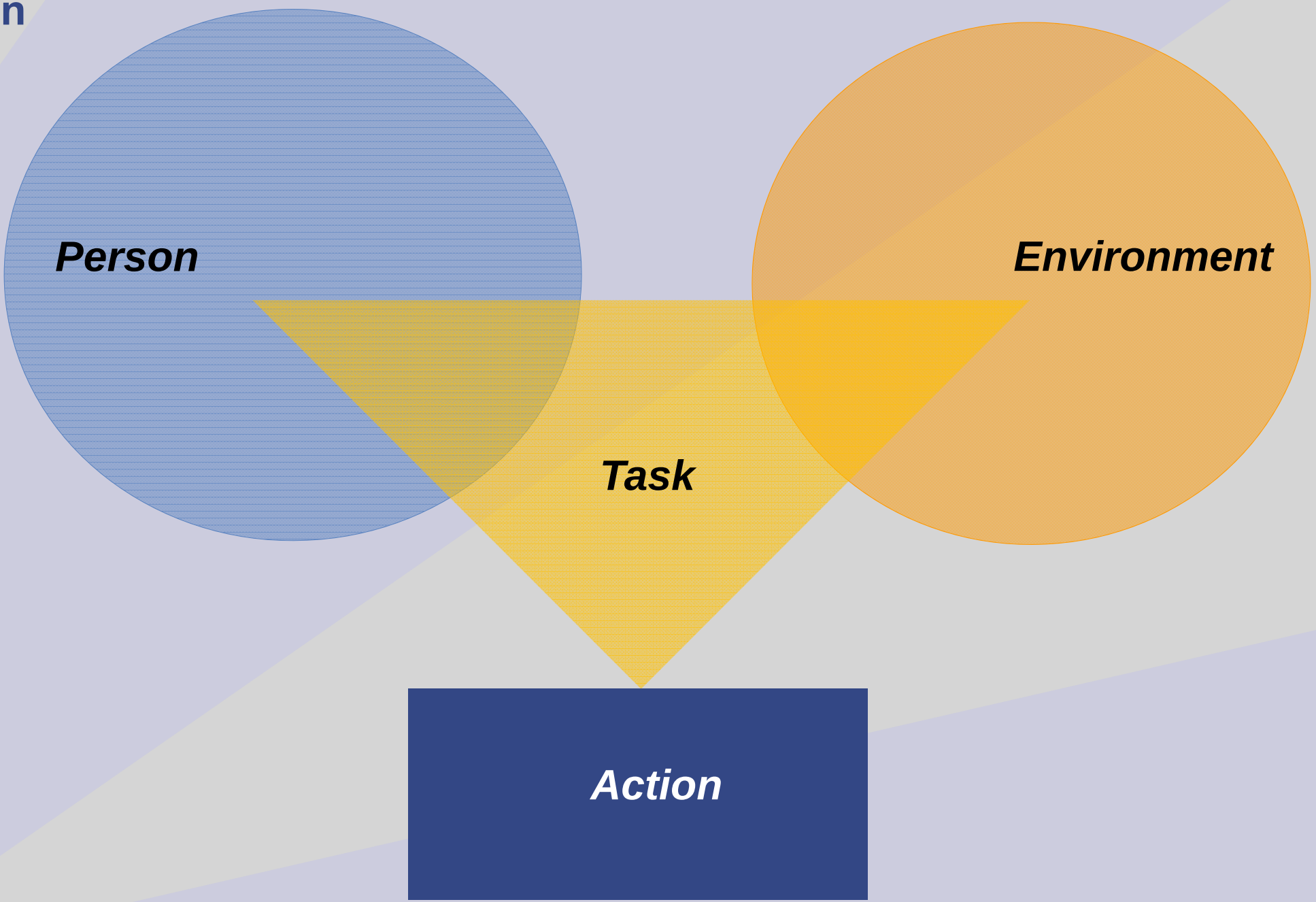
Measurement Issues
MR2B

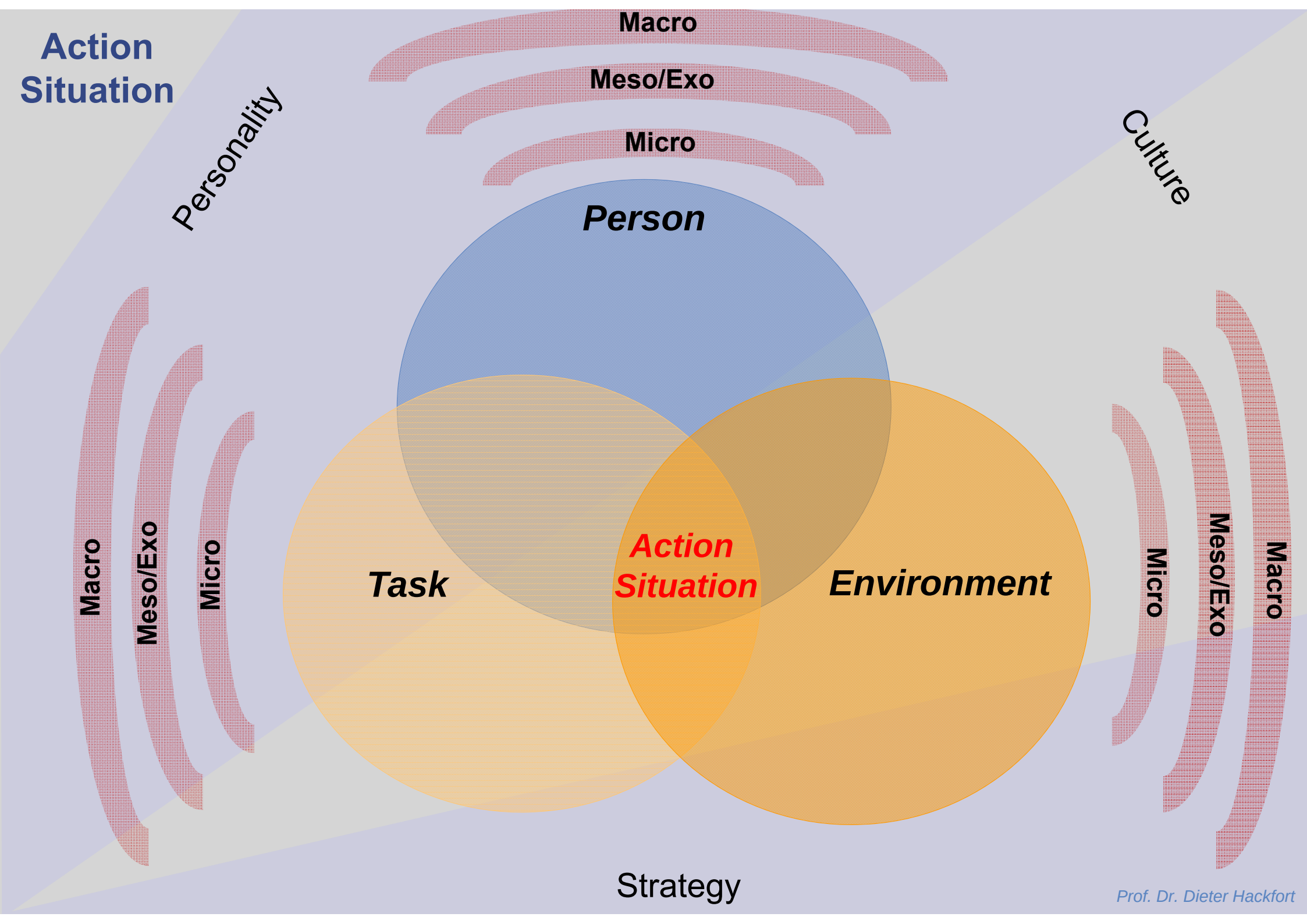
Action Situation



Nitsch & Hackfort (1981)

Action Situation




Action Situation
Personality
Macro
Meso/Exo
Micro
Culture
Person
Macro
Meso/Exo
Micro
Task
Action Situation
Environment
Micro
Meso/Exo
Macro
Strategy
Prof. Dr. Dieter Hackfort

Fit and Fitness

are Key Issues in Human Life

and in

Sport Science as well as in Sport Psychology

Prof. Dr. Dieter Hackfort

In Sport Science

Fitness was studied first
from a Sport Medicine perspective
and is discussed primarily at present

in Exercise Science
with a focus on Physical Fitness

The concept of **Fit** is discussed for a long time,

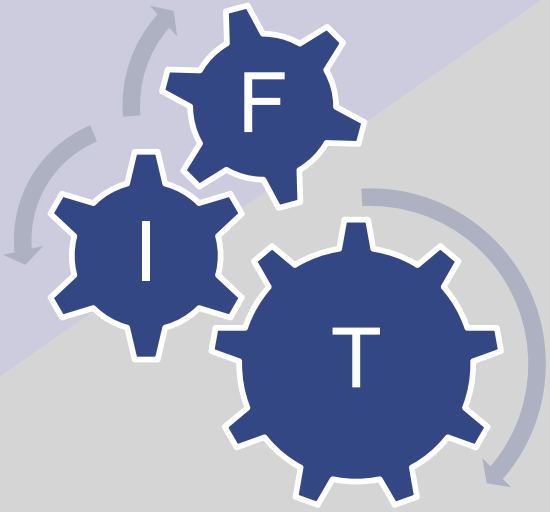
e.g., in Psychology, Social Psychology, Occupational Psychology:

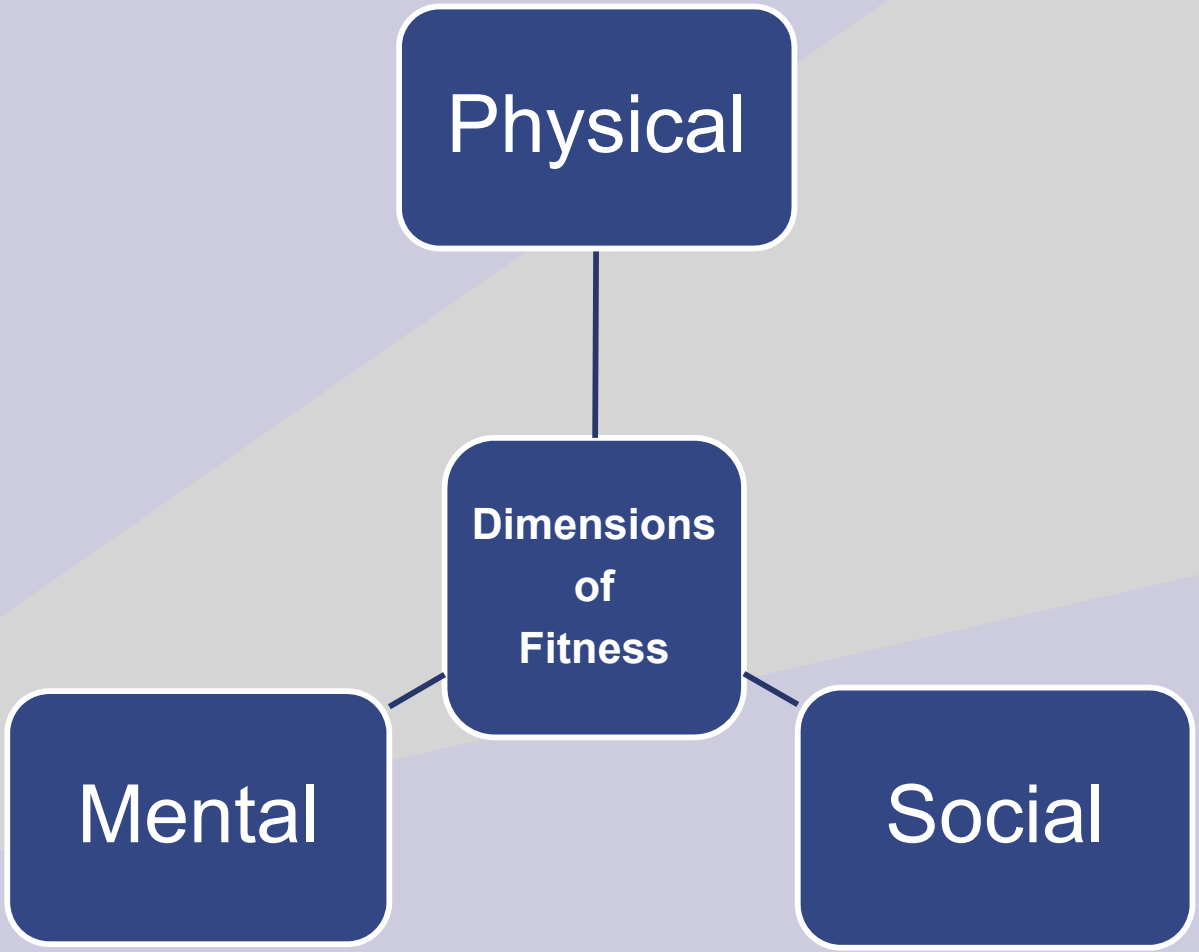
1973 - French: Person role fit
1974 - French, Rodgers and Cobb: Adjustment as person-environment fit.

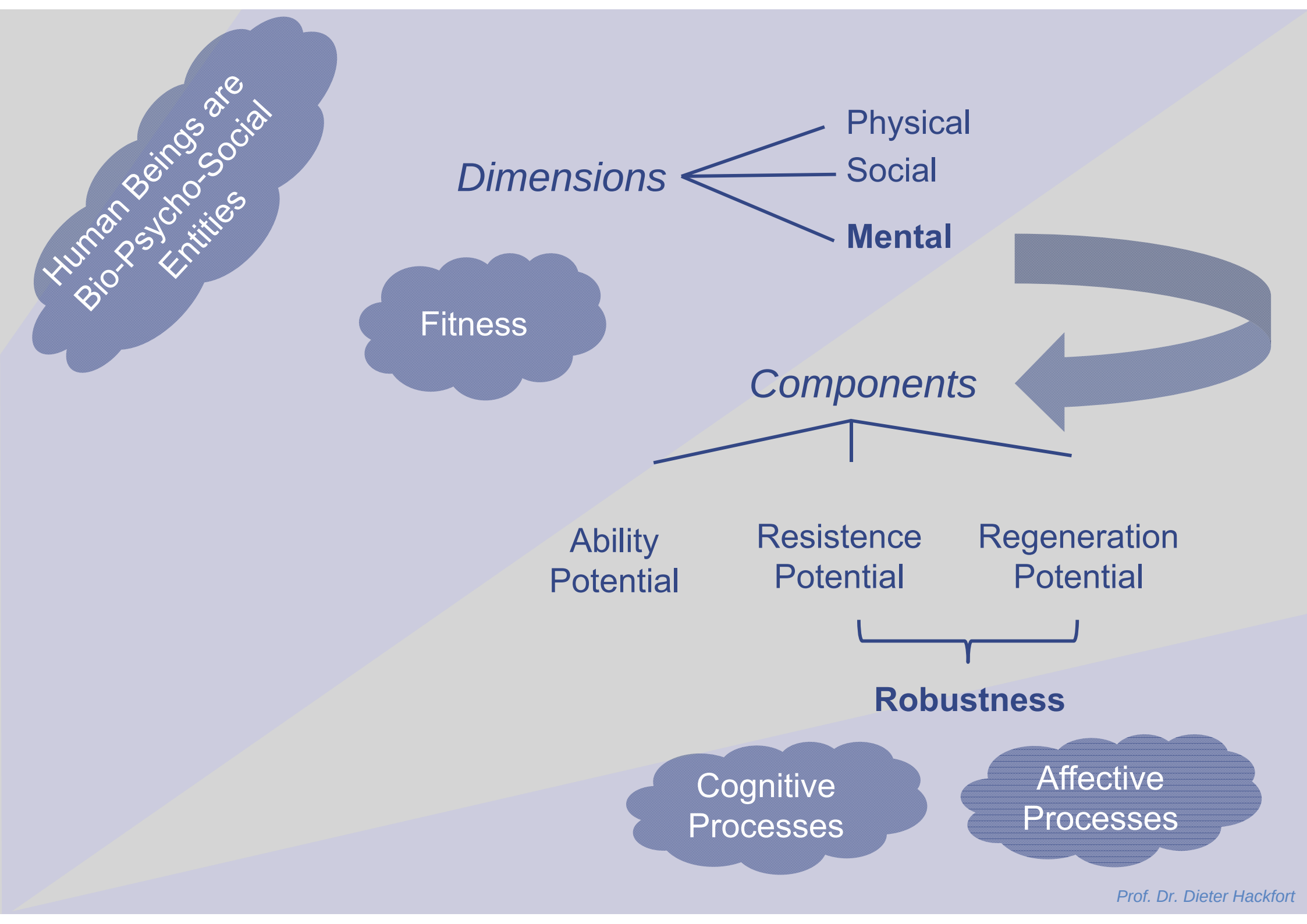
The concept indicates a relation … between ...

Fitness

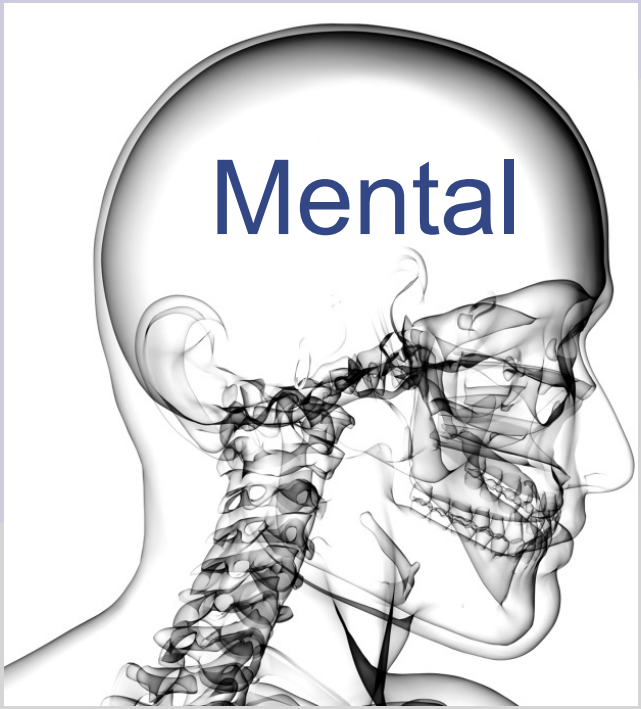
Fitness refers to the fit
of a constellation,
here it is the Action Situation
= **P**erson-**E**nvironment-**T**ask constellation





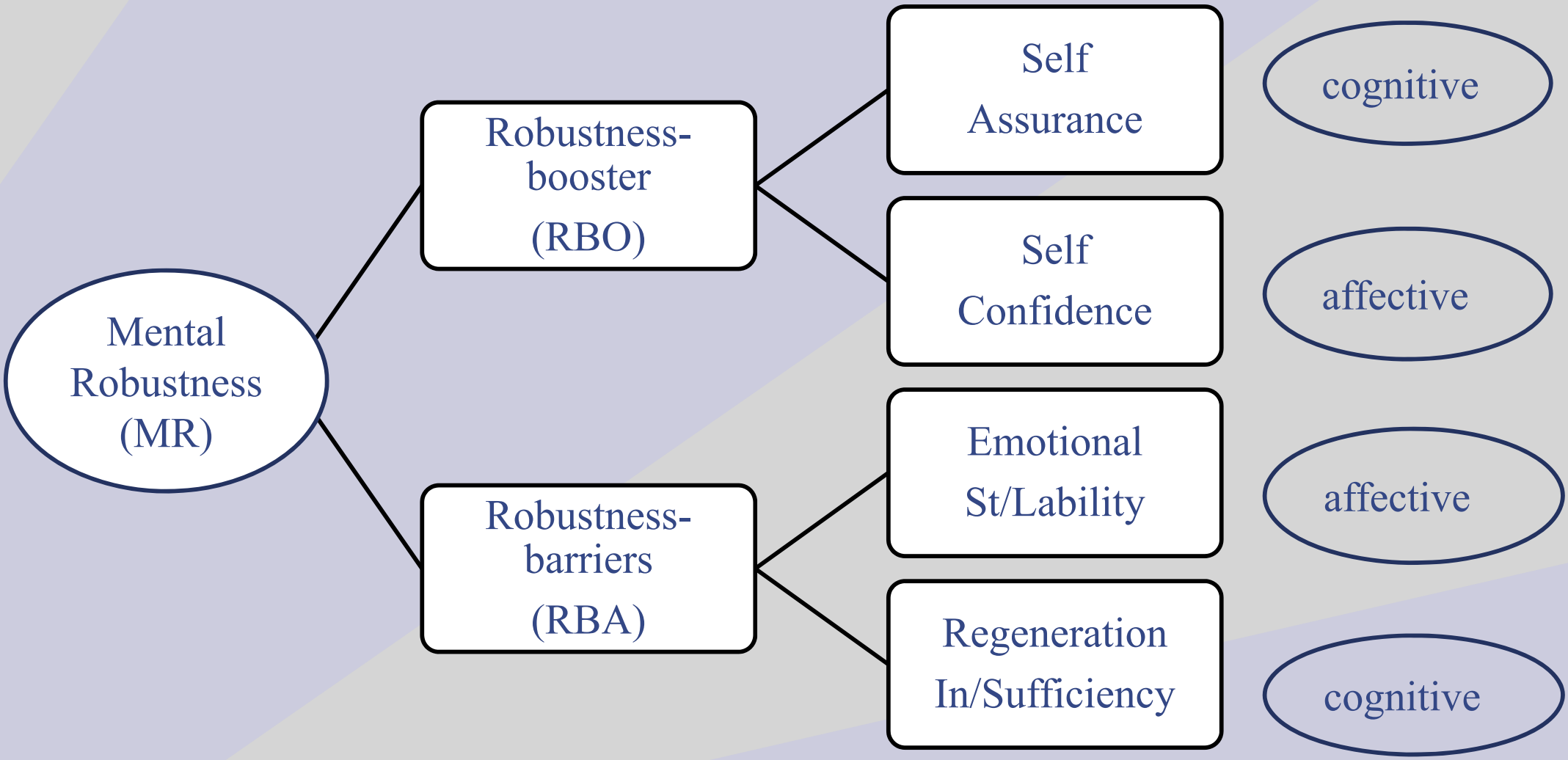

Human Beings are Bio-Psycho-Social Entities
Dimensions
Physical
Social
Mental
Fitness
Components
Ability Potential
Resistence Potential
Regeneration Potential
Robustness
Cognitive Processes
Affective Processes

MR



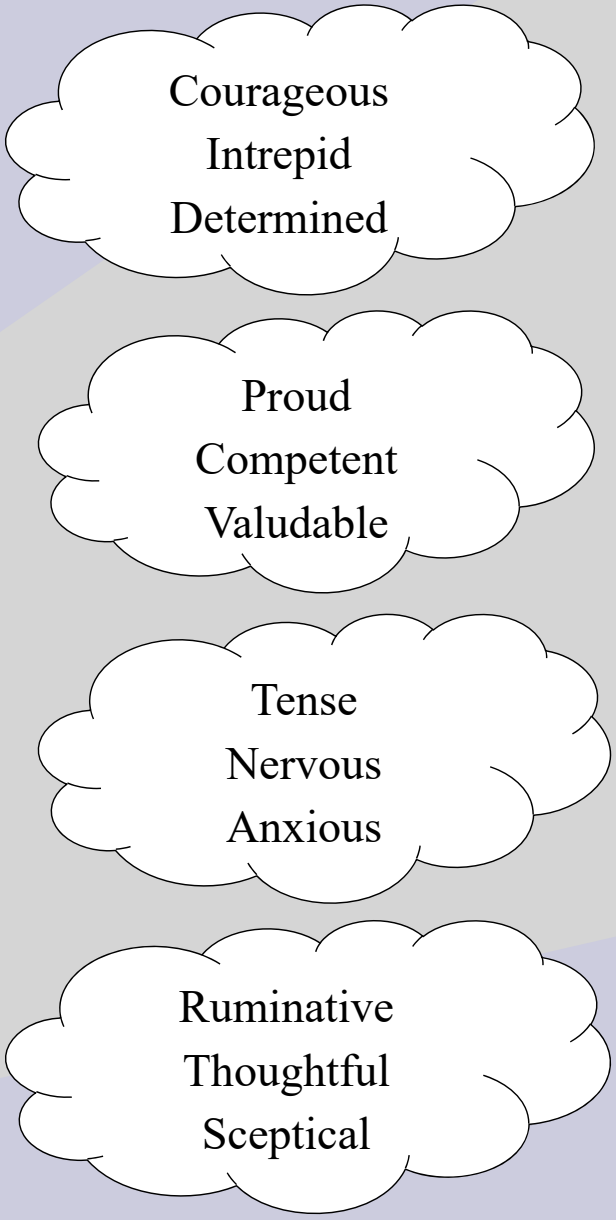
Robustness

MR

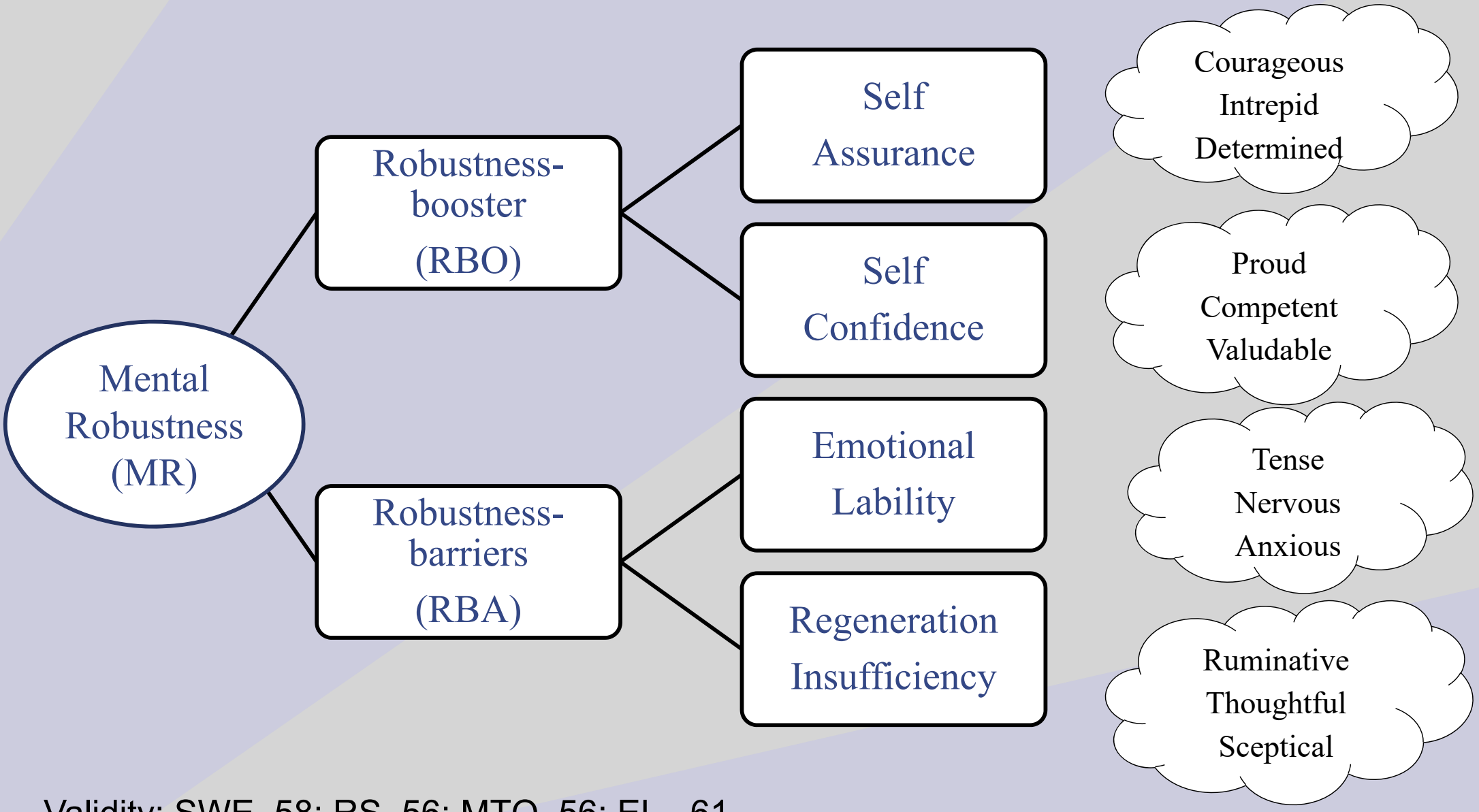

Mental Robustness (MR)
Robustness-booster (RBO)
Robustness-barriers (RBA)
Self Assurance
Self Confidence
Emotional St/Lability
Regeneration In/Sufficiency
cognitive
affective
affective
cognitive

MR2B

More than 120 Items from 7 measurements/scales
have been reduced to 12 adjectives
representing 4 facets.
These facets are building „clouds“ = items
for a **„summative“ (= „moleculare“)**
instead of the usual „additive“ (= „elementary“) **assessment.**



MR2B



Validity: SWE ,58; RS ,56; MTQ ,56; EL -,61
Stability: ,56 ≤ r_{tt} ≤ ,61; Consistency: r_{ik} = ,78
N = 503; Age: *M* = 34,1, *SD* = 14,3; w = 30%

Prof. Dr. Dieter Hackfort

Idea of the Measurement Philosophy & Strategy

Satisfycing (Herbert Simon,1990; see Henry Brighton, 2013)

- How to handle decisions under uncertainty

Insights (empirical proven)

- For predictions linear modelling is not working/
  (multiple) regressions are no appropriate functional model for predictions

- Increasing complexity is not contributing to improve predictive power/
  more parameters, more observations, more data will not highten the predictive power.

-> Acceptance that not all factors can be considered
-> **Optimal** selection and emphasis instead of looking for a **maximum** of factors, observations, data

Methodological Interconnection

Research

Practice

Multi-Method

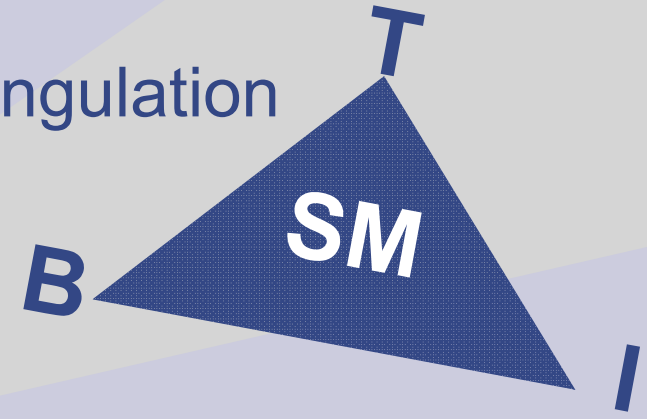
Performance-/Test-,
Observational-/Behavioral-,
Interview-/Subjective-Data

Data-
Analysis

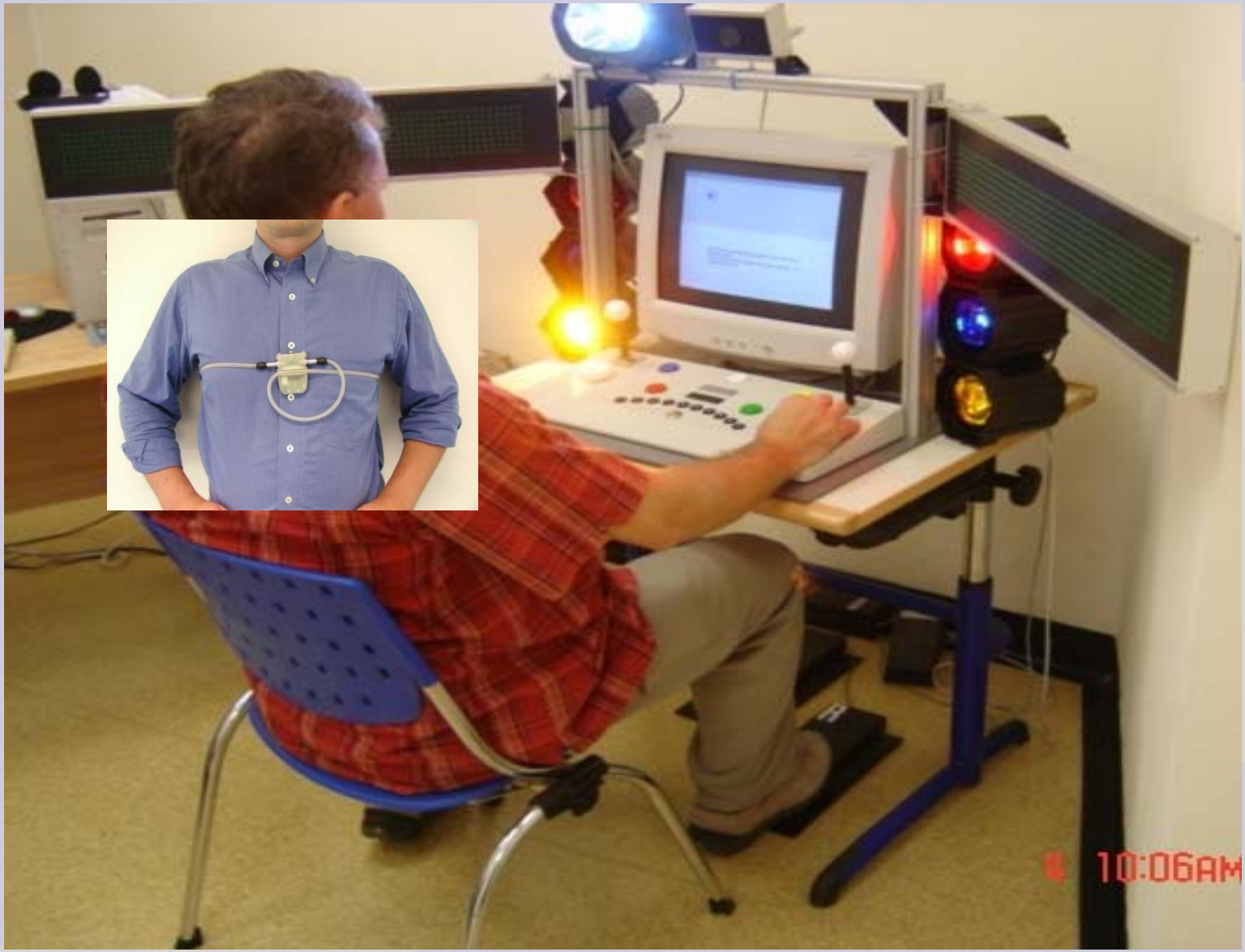
Multi-Perspective

External & internal

Triangulation



E.g., SWOT-**Analyses**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Thank you very much
for your attention