Axiomatic Basis of Behavior Theory

Richard Jung [1]

Harvard University

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Department of Social Relations, Harvard University
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[1] Kouřimská 24, CZ - 284 01 Kutná Hora, Czech Republic; *Tel / Fax:* +420 327 512 197;
E-mail: Richard.Jung@post.Harvard.edu , *URL:* http://www.RichardJung.cz/

HYPOTHESIS 1

The concepts behavior, individual, transaction, interaction, situation and environment can be meaningfully interpreted as stated below:

- All elements, operations and transformations of behavior remain invariant under the behavioral group.
- All behavior can be analyzed fully by a spectral set of S-operators.
- Behavioral S-operators in a non-empty sub-set are E-operators.
- The set of behavioral E-operators includes a non-trivial sub-set of inverse E-operators.
- The behavioral group includes sub-sets without group property (open sub-sets).
- The behavioral group is a sub-set of a non-behavioral super-set.
- The non-behavioral super-set includes sub-sets without group property.
- Some sub-sets of the behavioral group and some sub-sets of the non-behavioral set that do not have group property are complements of some behavioral sub-sets without group property.
- A behavioral open sub-set and its complement form a sub-set that has group property, if connected by the operation of transaction.
- Some transactions result in behavioral and some in non-behavioral sub-groups (or sub-sets).
- Behavioral sub-groups form a larger behavioral sub-group through the operation of interaction.
- Behavioral open sub-sets can be analyzed by behavioral S- and E-operators only through the concomitant operation of transaction.
- Non-behavioral open sub-sets can be analyzed by behavioral S- and E-operators only through the concomitant operation of transaction.
- Subtraction of transaction from S- and E-operations on open sub-sets transforms S- and E-operators into F-operators.
- A behavioral open sub-set analyzed by a full set of behavioral F-operators is an element of behavior.
- A non-behavioral open sub-set analyzed by a full set of behavioral F-operators is an element of the behavioral environment.
- An element of behavior has the lattice property.
- Only behavioral elements and elements of the behavioral environment can be complements to behavioral elements.
  (Only behavioral elements can form behavioral sub-groups by transaction with their complementing behavioral elements and elements of behavioral environment.)
- Behavioral sub-groups can be formed by an improbable transaction between elements of the behavioral environment.

HYPOTHESIS 2

It is possible to find sufficient additional properties of the above concepts, which can be stated in algebraic terms, such that a deduction of non-trivial consequences of propositions in the system will be possible.