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Research Interests

My main research interests and activities can be assigned to the "ecological perspective" in psychology, a tradition represented by scholars like E. Brunswik, R. G. Barker, U. Bronfenbrenner, J. J. Gibson, A. Wicker. I prefer the term "psychological ecology" since, in its analogy to "biological ecology", it seems to meet best the fundamental characteristics of this particular modality of pursuing psychology. Barker (1968) introduced the distinction between a psychology that works with an "operator data-generating system" (theory building and research based on data that are generated within specifically arranged, "operator"-guided situations like experiments, tests, interviews etc.) and "psychological ecology" working with a "transducer data-generating system". There, the researcher – in principle analogously to the biological ecologist – leaves human people function according to their "natural" everyday life amidst their natural surroundings ("environments"), gathering data through observing sections of everyday life as unobtrusively as possible. Barker held that methodological standards of psychological research have to be adapted to the specificity of the research domain and to the peculiar tasks of ecological research. Each of these two fundamental research strategies has its specific strengths and also weaknesses. Rather than competing against or excluding each other they complement one another. "Ecological representativeness" and "ecological validity" are (as basic preconditions of "generalizability") important evaluative criteria for experimental research too, whose sufficiently precise determination requires assistance of a psychological ecology.

Evidently, describing, taxonomizing, conceptualizing, and analyzing human "everyday life" theoretically and empirically is much more intricate than dealing with organism-environment-interrelations within biological ecology since humans extended and enriched their surrounding conditions in many respects through diverse kinds of culture and thereby complicated and differentiated human-environment-interrelations correspondingly. Thus, "psychological ecology" implies an overwhelming potential of diverse theoretical, methodological, and empirical research tasks. No wonder therefore that "ecological" approaches that emerged in psychology may appear as remarkably heterogeneous and unconnected. My own pertinent research interests are - within the immensely broad spectrum of possible and meaningful ecological research problems and tasks - also focused on quite a number of rather different topics.

(1) *Systematization, conceptualization, theory building, epistemological foundation of psychological ecology.* In order to determine systematic interrelations between different ecological approaches we need a comprehensive categorical articulation of the research field in its entirety. One particularly momentous fundamental principle of categorical articulation – among others - is the differentiation with respect to levels of "granularity", in particular with respect to "time scales", i. e., levels of "temporal extension" of the phenomena (especially its "basic units") to be considered, conceptualized, and analyzed. Different levels require different methodological principles and tools. So, besides making theoretical use of this categorical principle I tried to develop and to apply ecological methods of data gathering suited for different "time scales". Furthermore, I tried to proceed from gathering and systematically analyzing level-specific data to developing level-specific ("transactional") descriptive-theoretical frameworks.

(2) *From "stream of behavior" to "stream of consciousness".* Within Barkerian psychological ecology the first basic phenomenal and conceptual unit in the description and analysis of

human everyday life was the "episode", something like a macro-unit of individual goal-directed behavior within the continuous "stream of behavior". It is constituted through relatively coarse-grained observation "from outside" verbalized in everyday language, implying also description of concurrent contextual conditions (therefore better "stream of transactions"). I tried – and still try – contributing to further differentiation and expansion of this ecological key concept:

- Human everyday "behavior" has to be regarded and analyzed as "acting" (or "transacting") since observable activities are cognitively prepared, concurrently regulated, and evaluated by the agent. Hence, capturing the "stream of transactions" within everyday life requires taking account also of the "stream of cognitive and emotional phenomena" accessed by introspective methods.

- Regarding the "stream of behavior" as a linear, chain-like succession of more or less separate transactional units amounts to a quite unrealistic simplification, as has become evident already in early Barkerian accounts. In fact, more or less numerous, more or less independent episode-like processes are operated in parallel or are overlapping almost ubiquitously. This evidence needed and still needs further theoretical and empirical elaboration ("multiple acting").

- The multiple individual stream of everyday transactions can be segmented, described, conceptualized, and analyzed on quite different levels of coarseness. This fact raises problems of interrelating all these levels theoretically and empirically; in particular, interrelating and possibly integrating research traditions that are primarily rooted in different levels (e. g., R. G. Barker, J. J. Gibson, U. Bronfenbrenner). - I approached part of these problems in some pilot projects in which I myself generated (and meticulously analyzed) "think-aloud"-protocols of the explorative "appropriation" of different sites (the Holocaust Memorial Berlin, an exhibition on nanotechnology).

- Attempting to advance the stream of everyday transactions' segmentation and analysis towards utmost fine-grained time-scale necessarily results in focusing on the "natural" "stream of consciousness" since many of the introspectively accessible phenomena (first-person perspective) are much more volatile and speedy than "open behavior" could ever be. So, psychological ecology, while progressing in differentiating description, empirical and theoretical analysis of the individual's functioning in everyday life, is challenged attempting to contribute to elucidating the complicated and extremely quick interplay between what happens in consciousness and what happens in the sphere of the human body. In this thread I developed and practiced – and continue practicing it – a quite new introspective method which I could characterize as "introspective observation at opportunity within seconds' or fractions of seconds' time scale" which I use to term "psychological micro-ecology" (PME). It yields, primarily, minute comprehensive "qualitative" verbal descriptions of all kinds of more or less complex short-term "phenomenal happenings". These "vignettes" (nearly one thousand so far) are systematically categorized and analyzed, with intent to approximate an ultimately fine-grained comprehensive description and conceptualization of the "natural" ("ecological") phenomenal organization and functioning of the "stream of consciousness" in everyday life. – In my view, the PME-approach promises to be particularly relevant also to various strands of neuro-psychology. Research in neuro-sciences profits amply and substantially from diverse technological developments enabling the generation of many quite new types of technology-bound data. Obviously, however, also this type of research depends essentially and in many respects on accounts about introspective observations. Yet hitherto, as far as I could see, all these introspective data are generated under highly constrained conditions and utilized as highly particularized phenomena. A sufficiently precise, differentiated, comprehensive, methodologically well-founded description of the "natural" functioning of the "stream of consciousness" from the "first person perspective" seems to be lacking, seems not even to be considered a bothering deficit.

- One particular type of regulatory activity in the stream of consciousness is what we call "to be – and to remain for a while – attentive" or "concentrated". It can be practiced – and hence be observed introspectively – on different levels of temporal extension. I came across a fairly voluminous corpus of data containing short – though rather coarse-grained - introspective accounts of diverse variants of being more or less concentrated in everyday life. In a systematic "qualitative" analysis of these accounts I tried to extract from them general as well as differentiating features of "being concentrated" and thus arrived at a first draft of a hypothetical framework articulating the basic implications of "being concentrated" in different contextual conditions of everyday life.

(3) *Psychologizing, modernizing, expanding, and complementing the Barkerian "behavior setting" concept.* The second basic concept that emerged in Barkerian psychological ecology is the supra-individual systemic unit "behavior setting" (e. g., a concrete school lesson, family dinner, tennis match, court session, understood as specifically "site-embedded" systems of more or less organized social happenings). Its original conceptual substance has already undergone considerable change and expansion. Yet, it still needs further development in many regards. - I have been– and still are– involved in all these facets of further differentiation and expansion:

- Originally, behavior settings and what's happening in them has been described but in a rather coarse-grained manner. Hence, this ecological approach had widely been kept apart from traditional psychological conceptualizations. "Psychologizing" the behavior setting concept aims at refining the description, differentiating the conceptual components such that its empirical substance can consistently be connected to conceptualizations of pertinent neighboring research fields of the psychological mainstream.

- The "behavior setting" is conceptually constituted as a supra-individual unit, as it is otherwise characteristic of basic conceptual units in social sciences, e. g. sociology. Hence, psychologizing means also and in particular "individualizing" description, theoretical and empirical analysis, however, not as substituting the original conceptual unit through reducing it to a complex system of individual perspectives. Rather, the consistent individual perspective that is characteristic of numerous research domains in traditional psychology merely complements the original supra-individual constitution. This complementation is apt to suggest innovative research problems, e. g., how an individual becomes acquainted with diverse kinds of behavior settings; how (s)he acquires the highly complex more or less specific knowledge needed for participating capably in them; how this immensely differentiated bulk of knowledge is kept in readiness "in the background" while participating, or how parts of it are instantiated and utilized as rapidly as necessary. Additionally, an ecological theory of knowledge structures and knowledge processing could also contribute to disambiguating and differentiating the concept of (individual) "situatedness".

- At the outset, the "behavior setting" concept was constituted and amply exemplified almost exclusively within rural small-town communities. Some specificities of this origin limit this concept's applicability to different types of geographic and cultural contexts. Hence, it still needs further extension and liberalization in order to become suitable also for all kinds of modern urban living conditions, for participation, e. g., in all sorts of transportation and traffic systems and sub-systems, for using modern media and for participating in all variants of communication networks ("virtual behavior settings").

- The "behavior setting" concept was considered the core of the traditional Barkerian approach, Although it has, right from the beginning, also been expanded in different respects and directions these expansions need still further elaboration. (a) Behavior settings may be structurally and functionally embedded in different types of superordinate systems, "multi-setting synomorphs", organizations, "authority systems". (b) Behavior setting's "life cycles" have to be analyzed further, i. e., finding out how different sorts of behavior settings come

into being, how they grow and change, how they decline and end. (c) Although an "occurrence" of a specific behavior setting is defined as a singularly spatiotemporally concrete happening system it nevertheless has more or less similarity to other occurrences of the same behavior setting or to occurrences of other behavior settings. So, behavior settings can be pooled or categorized according to substantial similarities into behavior setting-"genotypes" of different levels of "genotypicality". This fundamental principle of ecological taxonomization needs further elaboration too.

- Barker himself tended to consider the behavior setting the only basic empirical and conceptual unit of psychological ecology needed for articulating human everyday life descriptively and theoretically. Yet, closer inspection of various empirical evidence suggests revising this doctrine by complementing the network of behavior setting-like basic units through several other types of basic systemic organization of everyday life, part of them superimposing the behavior setting-formatted organization. (a) More or less complicated, more or less transitory or stable systems of social interrelations may outlast and overlap behavior setting participations. (b) Particularly in the interspace between stably operating behavior settings (e. g., in traffic areas) we can observe several types of more or less short-lived happening systems that are significantly simpler and less strictly organized than typical behavior settings. (c) Basing myself on systematic observations of everyday life I introduced another basic ecological concept (a triple one) which I termed "resource system", "resource system management", "resource system dynamics". It refers to transactional processes of composing and decomposing all kinds of purposefully ordered arrays of objects, aggregating them from depots, re-depositing them, depleting and updating depots.

(4) *Ecological personology*. All in all, Barkerian psychological ecology views and describes human everyday life primarily as a stream of happenings, articulating it, in particular, on a time scale that corresponds to the duration of typical behavior setting occurrences or the duration of typical "episodes". Barker considers, however, that an individual participating in a behavior setting and thereby performing part of its supra-individual "program" nevertheless pursues own more or less individual-specific goals. Such goals are ingredients of the "individual system" whose existence outlasts – in his/her entire, life-long duration – myriads of behavior setting participations. An "individual system" in its entirety may also be viewed as a more or long lasting continuous process that can be segmented in basic conceptual units on very different time scales, as we know, e. g., from developmental psychology. Process-related data picked up from or explicitly generated by activities of the "individual system" may be the starting basis of inferring more or less enduring structural characteristics of the system. Personological perspectives such as these are widely neglected within Barkerian psychological ecology whereas they take center stage, e. g., in Bronfenbrenner's ecological approach. My own research interest in this context focuses on the conceptual unit "personal project" which can be understood as a more or less complex individual (goal-directed) macro-transaction or compound of macro-transactions that typically implies participation in quite a number of diverse behavior settings (e. g., traveling to a foreign country, buying a car, studying geography, writing an article). - As an analogous basic supra-individual conceptual unit I propose the "collective project" which is conceived, planned, and operated by a collective systemic agent like a family, a neighborhood, a firm, a community etc.

(5) *Practical applications of ecological perspectives*. Besides developing a general heuristic model of utilizing ecological conceptualizations and strategies in handling practical problems ("ecological praxeology") I myself applied the framework of psychological ecology predominantly in the domains of architecture and sport.