

“It's either too simple or way too complex:”
Applying Bronfenbrenner's bioecological
theory in family research

Jonathan Tudge

Department of Human Development and Family Studies

The University of North Carolina at Greensboro

Presented at NCFR, Orlando, October 15, 2017

Introduction

- Simple, complex, or what?
- What type of theory is it?
- Metatheory, paradigm, or world view, and the types of cause associated with each
- Urie Bronfenbrenner: mechanist or contextualist?
- The development of the theory
 - Until 1979
 - 1979 to 1993
 - 1993 to 2005
- How to instantiate the theory in research

World views, metatheories, paradigms (Pepper, 1942)

- Mechanism
- Organicism
- Contextualism
- [Formism]

“-ologies”

- Ontology
 - The nature of reality
- Epistemology
 - The relation between the knower and that reality (or those realities)
- Methodology
 - Methods of discovering that reality (or those realities)

Types of cause

- **Efficient**
 - External to the environment
- **Material**
 - Within the organism
- **Formal**
 - Dialectical interplay of organism and environment
- **Final**
 - Unidirectionality of development

Mechanism

- Metaphor: the machine
- Ontology
 - Critical realism
- Epistemology
 - Dualist and [~objective]
- Methodology
 - Experimental, testing of hypotheses, “quantitative,” focus on **efficient** or **material** causes, reductionistic

Organicism

- Metaphor: living organism
- Ontology
 - Critical realism
- Epistemology
 - Transactional
- Methodology
 - Dialogical/dialectical, focusing on **formal** and **final** causes, “qualitative”

Contextualism

- Metaphor: historic event
- Ontology
 - Cultural-historical realism
- Epistemology
 - Transactional and subjective
- Methodology
 - Dialogical/dialectical, focusing on **formal** causes, holistic, “qualitative”

Pepper's description of the "historic event"

By historic event, however, the contextualist means...**the event alive in its present**. The real historic event, the event in its actuality, is when it is going on *now*, **the dynamic dramatic active event**. ... To give instances of this root metaphor...**we should use only verbs**. It is **doing, and enduring, and enjoying**: making a boat, running a race, laughing at a joke, communicating with a friend...**These acts or events are all intrinsically complex, composed of interconnected activities with continuously changing patterns**. They are like incidents in the plot of a novel or drama. **They are literally the incidents of life**" (Pepper, 1942, pp. 232-233).

So...where does Urie Bronfenbrenner fit?

- He's a mechanist (Overton, 2013, 2015)

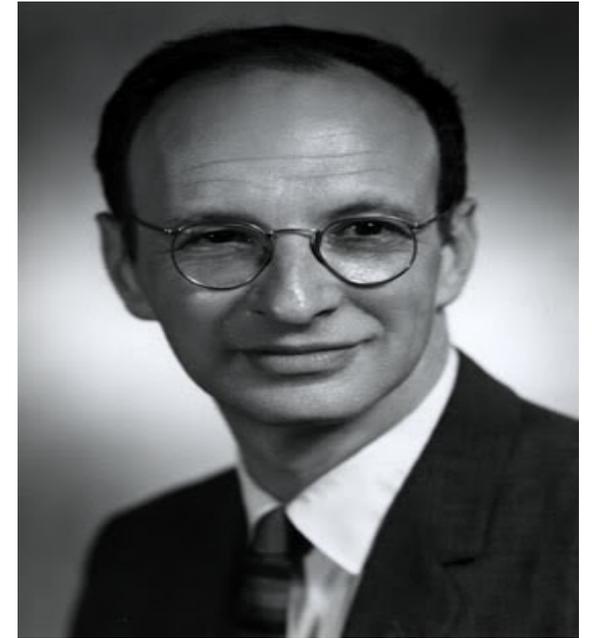
Overton (2015) cited Mistry and Dutta (2015, p. 370) as follows:

*Culture is represented as the outermost layer of context or macro-system. ... The specific layers [of context] have been treated as split-off independent variables that influence behavior and development as **efficient causes**.*

- He's a contextualist (Tudge, 2008; Tudge et al., 2009; 2016)
- Implications for methods?

Ecological Theory (1973 to 1979)

- Context (concentric rings, or *matrioshka*)
- Individual
- Process = interactions between the individuals (including the researcher) within the context of interest
- Ecological validity (perceptions of the environment)
- Ecological transitions



But wait...it's an
“ecological” theory

The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and the larger contexts within which the settings are embedded.

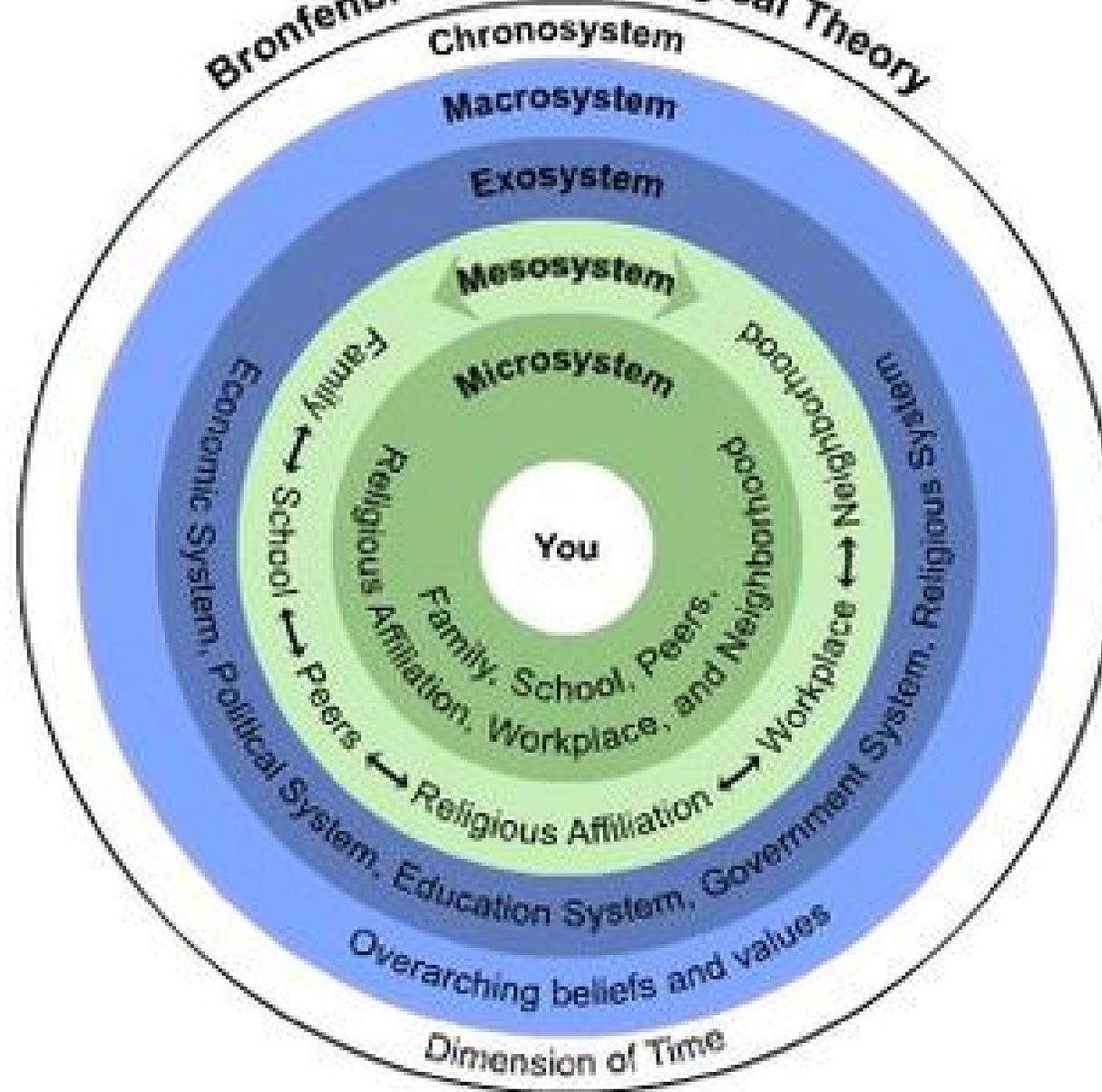
(Bronfenbrenner, 1979, p. 21)

In ecological research, the properties of the person and of the environment, the structure of environmental settings, and the processes taking place within and between them must be viewed as interdependent and analyzed in systems

terms. (Bronfenbrenner, 1979, p. 41)

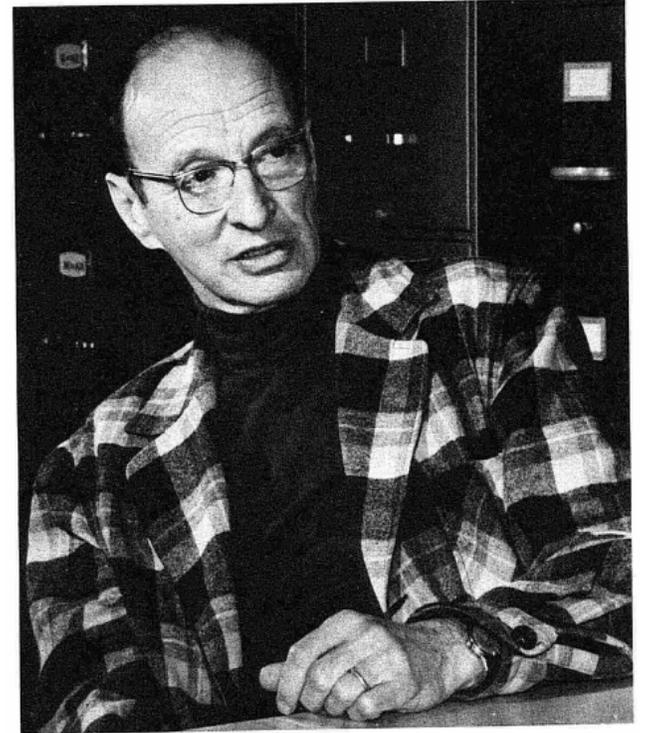


Bronfenbrenner's Ecological Theory



Ecological Systems Theory (1983 to 1993)

- Models of research
 - Class- and field-theoretical models (Lewin)
 - Focus on process
- Personal “instigative” characteristics
- Macrosystem (as culture and sub-culture)
- Chronosystem (time)



Process, and the influence of Kurt Lewin

$$B = f(PE) \rightarrow D = f(PE)$$

Class-theoretical models

Social address model

Personal attributes model

Sociological niche model

Person–context model

Field-theoretical models

Microsystem process model

Process–context model

Person–process–context model

Process–person–context model

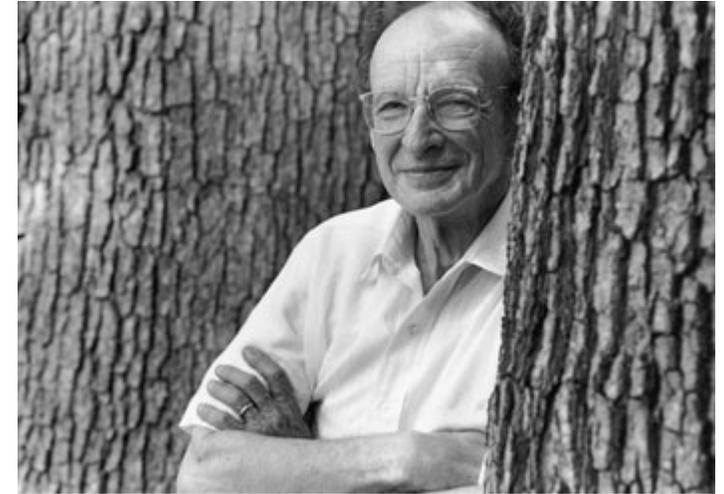
$$D = f(PE) \rightarrow D_t = f_{(t-p)}(PE)_{(t-p)}$$

(Bronfenbrenner, 1988, 1989/1992; Bronfenbrenner & Crouter, 1983)

Bioecological Theory (from 1993/1994)

The PPCT model

- Process
Proximal processes (the “engines of development”)
- Person
Force, resource, and demand characteristics
- Context
Micro, meso, exo (and macro?)
- Time
Micro, meso, and macro
Longitudinal study



Very complex?
Maybe not!

Proximal Processes

Proposition 1

Especially in its early phases, but also throughout the life course, human development takes place through processes of progressively more complex **reciprocal interaction** between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of *time*.

Proposition 2

The form, power, content, and direction of the proximal processes effecting development vary systematically as a **joint function** of the characteristics of the *developing person*; of the *environment*—both immediate and more remote—in which the processes are taking place; the nature of the *developmental outcomes* under consideration; and the social continuities and changes occurring over *time* through the life course and the historical period during which the person has lived.

(Bronfenbrenner & Morris, 1998, p. 996)

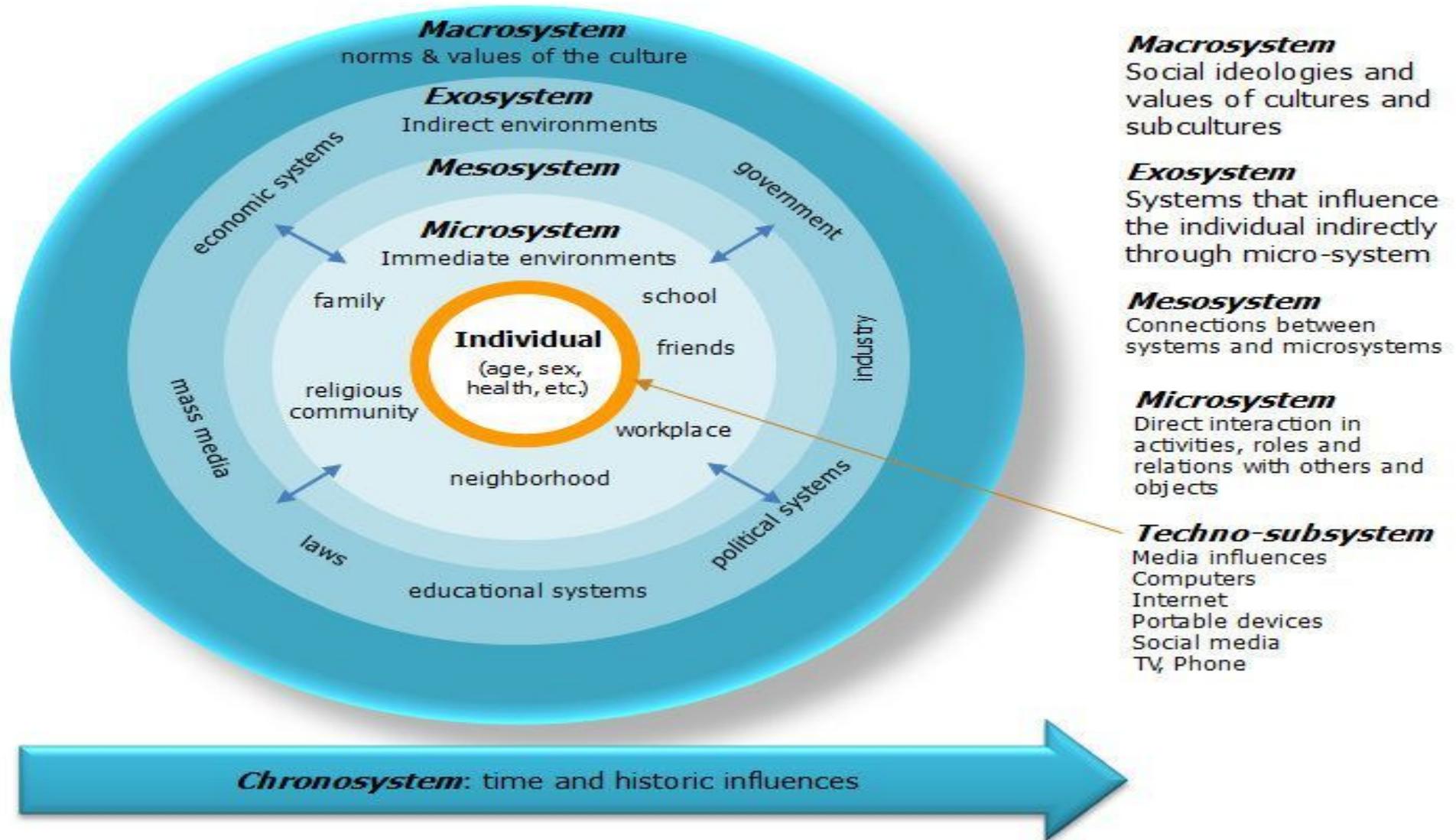
Compare with...

Overton (2015) cited Mistry and Dutta (2015, p. 370) as follows:

*Culture is represented as the outermost layer of context or macro-system. ... The specific layers [of context] have been treated as split-off independent variables that influence behavior and development as **efficient causes**.*

The bioecological theory is STILL treated as a theory of concentric circles of context that exert causal effect on individual development.

Bronfenbrenner's Bioecological Model of Human Development



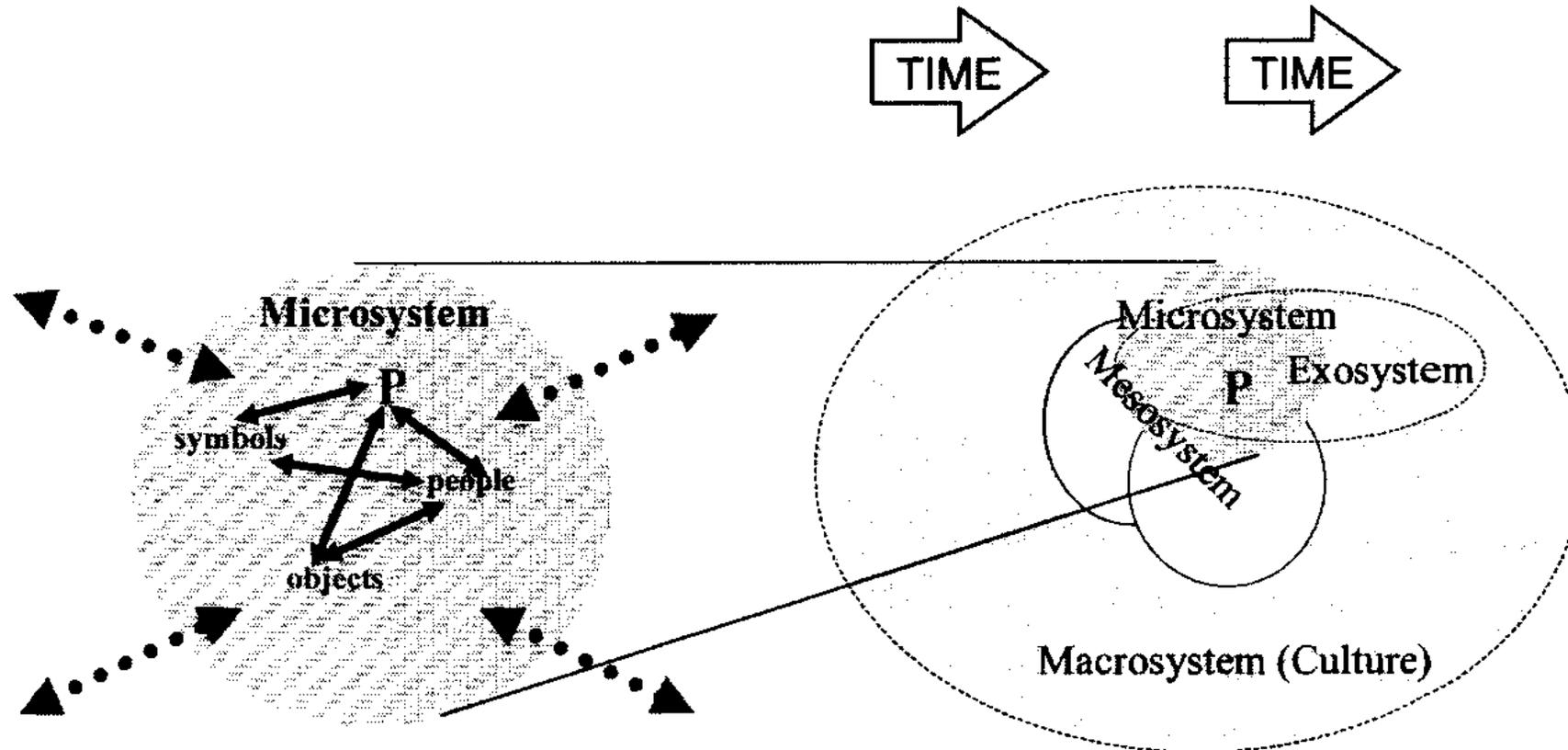


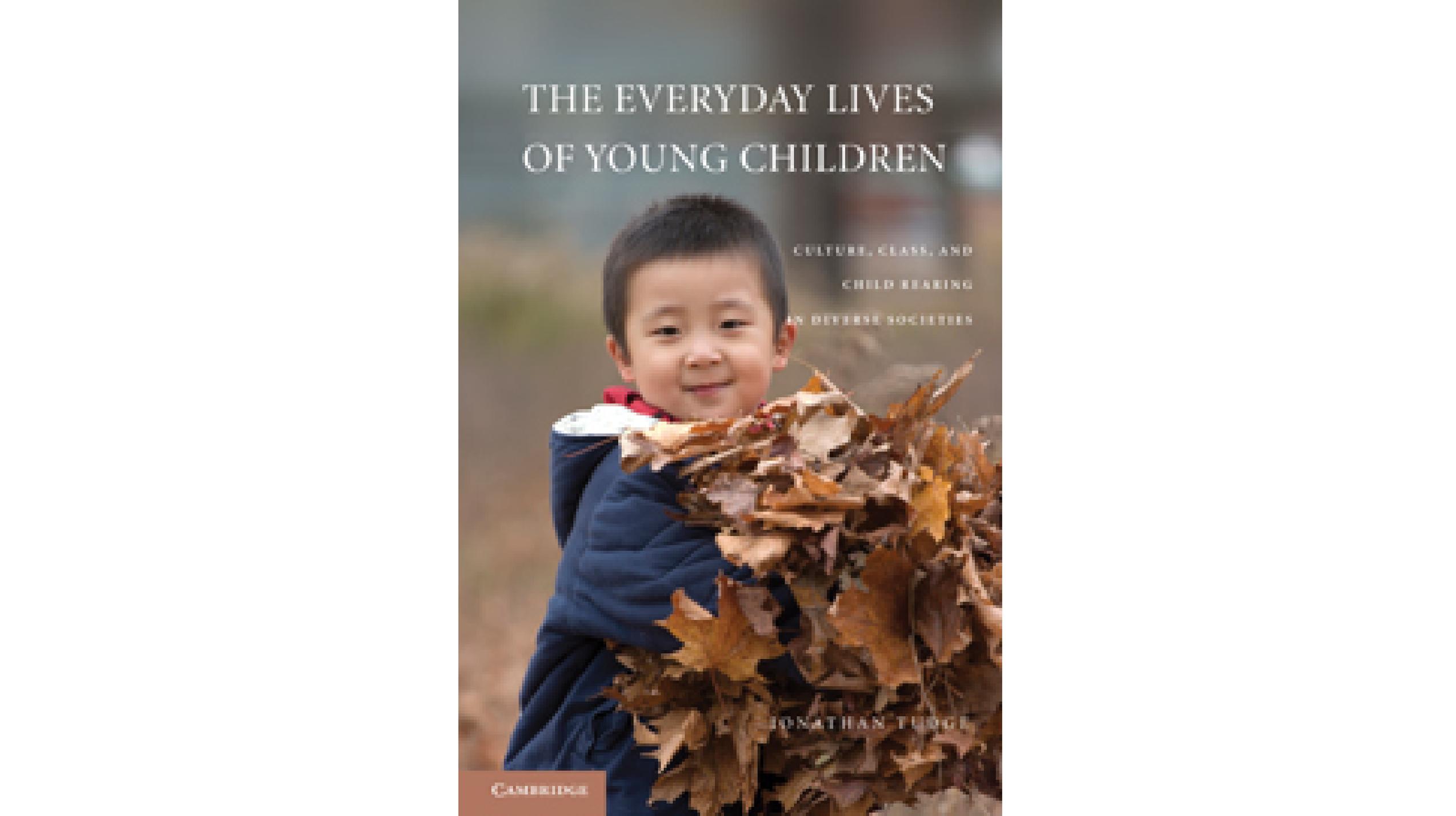
Figure 3.1. Urie Bronfenbrenner's PPCT (Process, the Person, Context, and Time) model. The active *Person* (P) engaging in *Proximal Processes* with people, symbols, and objects within a microsystem, in interaction with other *Contexts*, involving both continuity and change over *Time*.

From Tudge (2008), p. 69

How to instantiate bioecological theory in research (perhaps not so complex)

- Focus on **proximal processes**
- at least **one relevant person characteristic** (so need at least two categories); and
- at least **one relevant aspect of context** (at least two categories); and the study should
- take place **over time** (longitudinal) and be situated **in time** (the historical context)

- Examples



THE EVERYDAY LIVES
OF YOUNG CHILDREN

CULTURE, CLASS, AND
CHILD REARING
IN DIVERSE SOCIETIES

JONATHAN TUDGE

CAMBRIDGE

The Cultural Ecology of Young Children Project

- Focus on **proximal processes**
 - Everyday activities and interactions of young children
- At least **one relevant person characteristic**
 - Gender (demand); initiation of activities and interactions (force)
- At least **one relevant aspect of context**
 - Home and child care (microsystem); social class and society (macrosystem)
- **Over time** (longitudinal) and situated **in time** (the historical context)
 - 20 hours over one week; from 3 years to the transition to school; prevailing political and economic factors

A second example: How to design a study based on YOUR interests

Domain of interest?

Outcome to be examined?

Proximal Processes

Typically occurring everyday activities and interactions, becoming increasingly complex over time

Person characteristic

Variation in at least one is needed, one hypothesized to be relevant to the outcome of interest

Could be: Demand; Resource; Force

Context

Variation in at least one is needed, one hypothesized to be relevant to the outcome of interest

Variation in one of the “systems” (micro, meso, exo, or macro)

Time

Should be longitudinal, if studying something that develops

Set the study into its historical time

References

- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge: Harvard University Press.
- Bronfenbrenner, U. (1988). Interacting systems in human development. Research paradigms: Present and future. In N. Bolger, A. Caspi, G. Downey, & M. Moorehouse (Eds.), *Persons in context: Developmental processes* (pp. 25-49). Cambridge: Cambridge University Press.
- Bronfenbrenner, U. (1989/1992). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development, Vol. 6* (pp. 187-249). Greenwich, CT: JAI Press.
- Bronfenbrenner, U., & Crouter, A. C. (1983). The evolution of environmental models in developmental research. In P. H. Mussen (Series Ed.) & W. Kessen (Vol. Ed.), *Handbook of child psychology, Vol. 1: History, theory, methods* (4th ed., pp. 357-414). New York: Wiley.
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Series Ed.) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 993-1028). New York: John Wiley.
- Overton, W. F. (2013). Relationism and relational developmental systems: A paradigm for developmental science in the post-Cartesian era. *Advances in Child Development and Behavior, 44*, 21-64.
- Overton, W. F. (2015). Process and relational developmental systems. In W. F. Overton & P. C. Molenaar (Eds.), *Handbook of child psychology and developmental science: Theory and method*. (7th Ed., Vol. 1, pp. 9–62). Hoboken, NJ: John Wiley & Sons.
- Pepper, S. C. (1942). *World hypotheses: A study in evidence*. Berkeley: University of California Press.
- Tudge, J. R. H. (2008). *The everyday lives of young children: Culture, class, and child rearing in diverse societies*. New York: Cambridge University Press.
- Tudge, J. R. H., Mokrova, I., Hatfield, B. E., & Karnik, R. (2009). The uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory and Review, 1*(4), 198-210. doi: 10.1111/j.1756-2589.2009.00026.x
- Tudge, J. R. H., Payir, A., Merçon-Vargas, E. A., Cao, H., Liang, Y., Li, J., & O'Brien, L. T. (2016). Still misused after all these years? A re-evaluation of the uses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory and Review, 8*, 427–445. doi: 10.1111/jftr.12165.