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AUTHOR Ariel, Shlomo  
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ABSTRACT

This paper summarizes how Chomsky's methodological principles of linguistics may be applied to the clinical interpretation of children's play. Based on Chomsky's derivation of a "universal grammar" (the set of essential, formal, and substantive traits of any human language), a number of hypothesized formal universals of clinically-relevant symbolic play were developed. In applying these hypothesized universals to data representing the play activities of a five-year-old boy, a componential analysis (on which the dimensions underlying a set of individual meanings were extracted by pairwise comparisons of these meanings and their contextual attributes) was performed and then interpreted accordingly. It was noted that if different therapists performed a componential analysis on the raw data and organized the results of this analysis in the manner dictated by the hypothesized universals outlined in this paper, their interpretations would in all probability be both similar across interpreters and relatively valid. (BB)

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The expression "the Chomskyan revolution" has been applied to the great leap forward in the science of linguistics and related fields in the sixties, which was partly due to the influence of Noam Chomsky's methodological contributions. (Cf. Searle 1975). In the last ten years I have been obsessed with the problem of applying Chomsky's methodological principles to the clinical interpretation of children's play, and now I am being obsessed with the question how I am going to squeeze these ten years into the following ten minutes.

According to Chomsky, the ultimate goal of the study of language is to discover "universal grammar", that is, the set of essential formal and substantive traits of any human language. Accordingly, my goal has been to discover the essential, universal, formal and substantive traits of clinically relevant manifestations of children's play. Conceived in Chomskyan terms, this goal does not have the mystical connotations of Jung's archetypes.

Why is it so important to look for essential, universal traits? Suppose you are a therapist attempting to understand a child-patient's make-believe play in order to learn from it about his or her complexes, conflicts, defenses, etc. Imagine the child made a toy-baby "drown" in a "sea" of sand. This sequence may be construed and interpreted in a great number of different ways. I have no idea how you are going to

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interpret it, but most therapists would impose some structure and meaning on it, which are derived from some theory, or, if you prefer, ideology, the latter being based neither on a theoretical analysis nor on an empirical study of play per se. What I have in mind is theories like Klein's, Erikson's, Axline's, etc. Guided by such theories, different clinicians would come up with radically different interpretations, ranging from "wish to return to mother's womb" to "reaction-formation against one's own oedipal-aggressive wishes". However, if therapists had at their disposal a "universal grammar of play" which is based primarily on the empirical and theoretical study of play per se (although relevant aspects of extra-play theories can figure in it too), their range of alternative interpretations would be severely curtailed. Only those interpretations would be permissible which are compatible with this universal model. This would, a priori, considerably increase the validity of each interpretation.

Chomsky described an elaborate procedure for deriving the universal grammar. Transformed to the context of play research, this procedure may be specified as follows: (a) samples of play are videotaped in clinical settings and subsequently transcribed by phonetic and kinesic notations. (b) A tentative nomenclature for the analysis of play is constructed on the basis of the present state of the art. This nomenclature will be continuously elaborated and modified, following the progress of the research program. My own tentative nomenclature includes terms and concepts borrowed from a variety of play theories as well as from diverse semiotic and linguistic theories. (c) A tentative set of clinically relevant traits of play is specified, again, on the basis of the present state of the art. (d) A number of idiographic theories ("grammars") will be constructed for each sample of play. Each such theory is a set of rules, covering the above-mentioned relevant traits. The rules are formulated in the theoretical language embodied in the above-mentioned nomenclatures. (e) These idiographic

theories are compared, and the best one is chosen. The criteria for preferring an idiographic theory are, among other, consistency, completeness, parsimony and predictive power. (f) As more and more samples are studied in this manner, the original tentative nomenclature is, as mentioned above, modified and elaborated and formal and substantive universals begin to emerge. These are the traits shared by all the idiographic theories chosen.

This continuous dialogue between data and theory is a process that has no end.

In these ten years I applied this procedure to many samples of play and has come up with a number of hypothesized formal universals of clinically-relevant symbolic play. Here is a partial list of these findings: HUI (HU= HYPothesized Universal): The contents of any child's symbolic play are organized (and presumably also mentally represented) in a specific manner, that may be illustrated by the following table (which is based on authentic data, representing the play of a five year old boy named Joseph):

Central theme: Dangerous attack on body-self.

Thematic sub-dimensions of central theme =====	marine vessels	zone	activity	aggression	help
degrees of danger/fear =====					
very dangerous and frightening	submarine	under water	energetic	lethal	none
mildly dangerous and frightening	ship, boat	on surface of water	mild	non-lethal	protected
safe		on shore	inertia	none	saved

The content and ,partly,the structure,of such tables are not imposed on the data but systematically derived from the latter by a semantic technique called componential analysis(cf. Bendix1966 ),in which the dimensions underlying a set of individual meanings are extracted by pairwise comparisons of these meanings and their contextual attributes.For example,the dimension "danger" is extracted from the comparison of "submarine",which has, in Joseph's play,contextual attributes such as "drowned","hit by bullets",etc., with "boat",which has in his play contextual attributes such as"greeted", "protected",etc.

The private,latent symbolic meaning of each individual theme is automatically defined by the content and structure of the table. For example, if Joseph makes a toy soldier "rest on the shore" this is interpreted directly as "safe activity in a safe zone" and indirectly as "absence of fear of attack on body-self".

HU2: The child introduces into his play themes which belong to the highest row,associated with the most intensive emotions(e.g."lethal aggression", "no help",etc.) This raises his level of arousal up to a certain peak,and then he "cools himself off" by stepping down,that is,going over to themes which belong to a lower row(e.g. "boat","saving",etc.). Calmed,he "steps up" again, and the cycle repeats itself.

Play may be viewed,then,as a feedback mechanism, a kind of thermostat which balances the level of emotional arousal around emotionally laden themes.

These<sup>e</sup>hypothesized universals explain the following relevant traits of play(see step(c)in the procedure for deriving universals above):

Repetitions: The child produces, over and over again, the same or similar themes in his play.

Distortions: Bizarre or "cute" thematic combinations result from the mechanisms described in HU2 above. For example, Joseph produced the combination "boatsy submarine", which represents the "stepping down". The highly dangerous and frightening "submarine" is mellowed by adding to it the harmless "boatsy" aspect.

Accompanying behaviors: Each row is associated with different behavioral manifestations. The highest row is accompanied by signs of arousal (anxiety, fear, anger, etc.) and the lower rows by calmer behavioral features.

Constraints on cocurrence : Themes which belong to different rows either do not cocur or cocur just in distorted combinations such as "boatsy submarine".

Constraints on sequencing: The contents characterizing the different rows follow one another in a cyclical fashion, as predicted by HU2.

If different therapists perform a componential analysis on the raw play data and organize the results of this analysis in the manners dictated by HU1 and HU2, their interpretations will in all probability be both similar across interpreters and relatively valid. Their validity will be further increased when further advances in this research program lead to the discovery not just of formal universals but also of substantive universals, that is, universal thematic features of symbolic play.

The implications of the findings described and illustrated above to clinical assessment are easy to point out. A table such as the one presented above includes information both about central emotionally laden themes in the child's psychical life and about his or her defenses. It can be inferred from the above table, for instance, that Joseph defends himself against his fear of attack on his own body self by becoming passive and expecting to be protected or saved by external forces. HU1 and HU2, in combination with

the list of relevant traits, enable the clinician to predict some of his responses, e.g. his moments or periods of aroused anxiety. And so forth.

The hypothesized universals presented above can be inferred from, or explained by, broader psychological laws. The information included in HU1 is one manifestation of psychological structures which were designated by terms such as Freud's "complexes" (cf. Freud 1975 ), Piaget's "affective schemas" (cf. Piaget 1962), Izard's "cognitive-affective structures" (cf. Izard 1978 ), Klinger's "current concerns" (cf. Klinger 1971 ) and my own "emotives" (cf. Ariel 1984). See also Singer 1972 . Feedback mechanisms such as described in HU2 were discussed by Tomkins (1982 ). See, again, Singer 1972.

The ideas summarized in this paper are discussed in full detail in Ariel 1984.

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