

Triple Symmetry: Intelligence, Education, and Human Effectiveness

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OUTLINE

*Intelligence and Effectiveness*

Historical treatments of human intelligence

Alfred Binet and Francis Galton

IQs prediction of academic success

IQs prediction of occupational success

IQ and job status

IQ and job performance

Intelligence operationalized as IQ can predict certain expressions of personal effectiveness

Limitations: imperfect prediction and limited scope of success outcomes

Respectable prediction nonetheless

Emergent theories: Gardner's

Emergent theories: Sternberg's

Emergent theories: Emotional intelligence

Reconstruals beyond analytical intelligence

Reconstruals beyond academic and job success

Greater breadth on the predictor and criterion and attempts to cultivate intelligence

Expanding conceptualizations of the nature and constituents of intelligence

Constituents of analytical intelligence

*Symmetry*: entities constituent to intelligence are constituent also to effectiveness and to education

*The Construct of Education*

Theories of intelligence and effectiveness can co-evolve

A third major social construct and phenomenon, *education*

What is *education*?

Definable relationships connect effectiveness to its two precursors: *intelligence* and *education*

*Mutual Reference and Definition*

Education, intelligence, and effectiveness form a conceptual triangle

*Intelligence –(facilitates)-> Effectiveness*

Recognized from the earliest days of intelligence testing and theory-building.

Intelligence contributes to diverse valued outcomes

*Effectiveness -(guides theories of)-> Intelligence*

Expanded conceptions of effectiveness have suggested varieties of intelligence that were previously unrecognized

In Gardner's theory and in Sternberg's, diverse manifestations of effectiveness suggest and justify, along with other evidence (e.g., neurological), intelligences that are distinguishable from analytic ability

*Education -(prepares for)-> Effectiveness*

One purpose of school is the preparation of young people to be successful in the world, especially as adults

The model of triple symmetry recognizes that a major function of education is to prepare learners to be effective as they engage complex problems in future contexts

*Effectiveness -(is the measure of)-> Education*

A broadened theory of effectiveness would permit a comparably broad span of effectiveness criteria to apply to judgments about the quality of education

*Education -(cultivates)-> Intelligence*

Education promotes effectiveness partly through its capacity to enhance intelligence

The Flynn effect is likely attributable (in part) to worldwide increase in universal education and the rise in average duration of formal education in the U.S. and elsewhere

*Intelligence -(is the curriculum of)-> Education*

Educate for capabilities most likely to contribute to the economic viability, emotional fulfillment, and creative expression of individuals, families, communities, and nations

Perhaps only through its articulation with intelligence and effectiveness constructs will education solve its most pressing problems,

If intelligence theories are to guide the appraisal and revision of educational practice, then the quality of intelligence theories will be a limiting factor to the success of the project

Intelligence-enhancing experiences are presented through many informational and social channels of society and culture, including families, peers, and the mass media

*Conclusions*

A model of triple symmetry has heuristic value in correcting design misalignments among the three superconstructs

With theories of intelligence and effectiveness as reference points, we can appraise how students allocate time, attention, and effort in schools and in other potentially educative contexts

Educative experiences designed within the logic of a three-construct triangle could be differently conceived and carried out than are typical manifestations of formal education