Perspectives on "Intelligences" from Project Zero's First 50 Years

PROJECT ZERO
FIFTY YEARS

HARVARD GRADUATE SCHOOL OF EDUCATION

At the beginning, PZ's research focused on investigating cognitive processing in the arts. This seminal work led researchers to expand to broader aspects of human potential including learning, critical thinking, creativity, and intelligence. In the recent decades, PZ research built on these rich traditions by exploring further fundamental questions of human potential as they relate to contemporary issues facing an array of educational settings—schools, families, museums, and businesses. To celebrate 50 years, PZers looked across the vast body of research and developed an organizing framework that includes nine research areas representative of many facets of the five decades of work. These nine areas include: The Arts, Assessment, Character and Ethics, Civic Agency, Creativity, Developing Understanding, Global Competencies, Intelligences, and Thinking. PZ created a brief overview of each of the 9 areas as stand-alone "booklets." Each of the four-page booklets describes PZ's research in the area along with a set of "PZ perspectives," notes some big questions that are launching PZ into the future, lists key PZ projects, highlights important PZ quotes, offers a sample of notable PZ publications, vand visualizes the main frameworks and ideas.

The artwork and graphic elements featured on these pages was created by our collaborators, dpict, a local graphic facilitation and design firm, along with Matt Riecken, PZ's digital learning specialist.

INTELLIGENCES

Perhaps best known is Project Zero's pioneering research that broke with decades of psychological tradition built on innate and unitary concepts of human intelligence. It challenged the popular view that intelligence is fixed, general, and can be measured by standardized linguistic and logical tests. Led by Gardner & Perkins, PZ put forward to the field of educational psychology a radical view that intelligence is a learned ability to find/solve problems and create products of value in a culture. They revealed a robust set learnable dispositions that are foundations of intelligent behavior and a set of multiple intelligences that are developed and expressed within and across cultural contexts.

BIG QUESTIONS

What is the nature of intelligent behavior

How is intelligence expressed within and across cultures?

How does intelligence and intelligent behavior develop?

What if, instead of asking "how smart am I," we asked "how am I smart?"

PZ PERSPECTIVES

Human intelligence, rather than innate and unitary, is a learned ability to find/solve problems and create products of value in a culture.

There are several distinct intelligences that operate in problem solving and finding, and product creation (e.g. verbal, logical/mathematical, bodily-kinesthetic, etc.). These intelligences are not mutually exclusive and every human has a unique profile of them.

Intelligences are not fixed at birth; they are the result of a constant interaction of biological and environmental factors.

Intelligence is expressed in our performances, products, and ideas, not

through a test score. How the intelligences are expressed is culturally defined.

Dispositions play a critical role in human problem finding and solving; the

attitudes learners exhibit when performing – whether they are open or closed minded, adventurous or narrow in their thinking, careful or care-less – strongly predict the extent to which they engage in and develop intelligent behaviors.

Intelligence represents potential that will or will not be brought to bear, depending on the values, available opportunities, and personal decisions made by individuals of a particular culture.

A goal of education must be to increase intelligence by creating opportunities for problem finding and solving experiences that emphasize the cultivation of appropriate dispositions and the teaching of relevant skills.
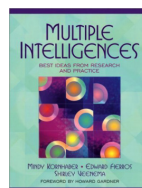
FRAMEWORKS

Seven key critical thinking dispositions that provide the best leverage on the kinds of thinking and learning challenges young people in our society face (Tishman, 1994):

- The disposition to be broad and adventurous.
- The disposition toward wondering, problem finding, and investigating.
- The disposition to build explanations and understandings.
- The disposition to make plans and be strategic.
- The disposition to be intellectually careful.
- The disposition to seek and evaluate reasons.
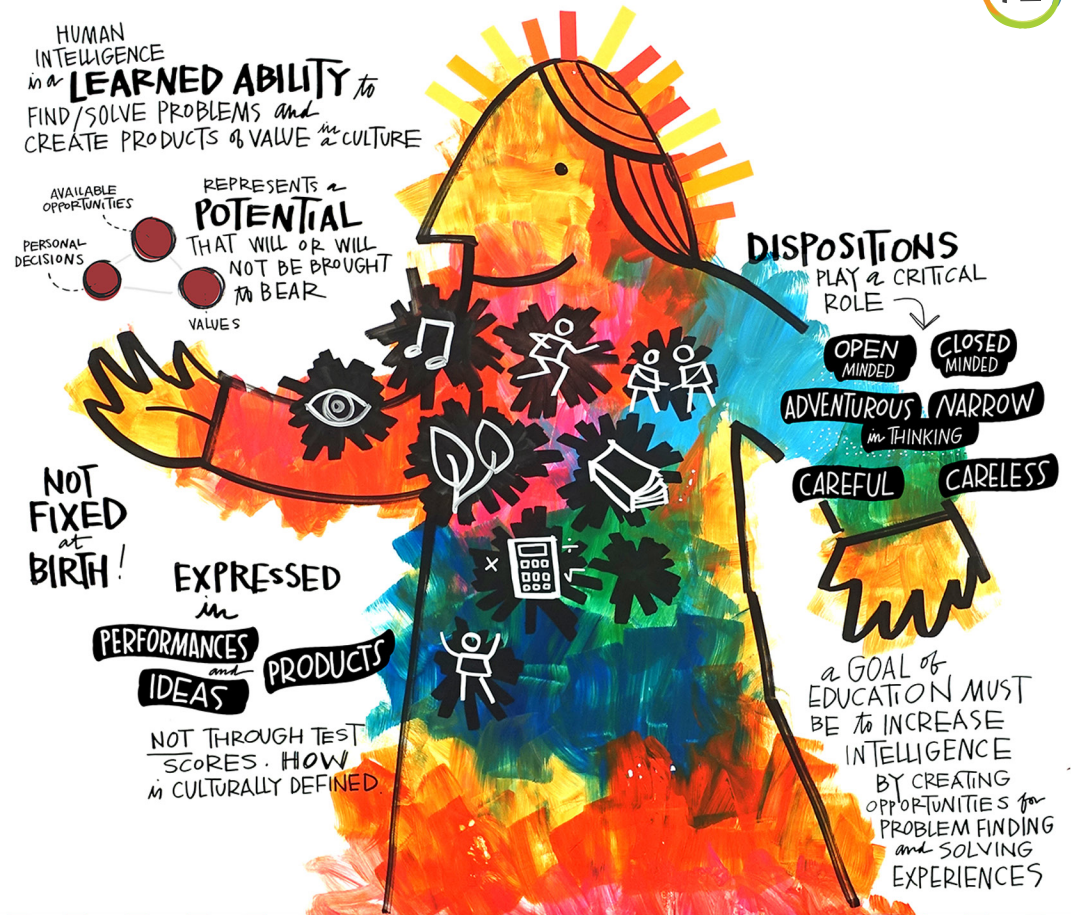- The disposition to be metacognitive.
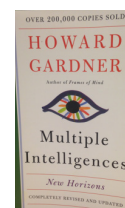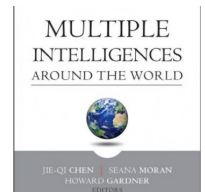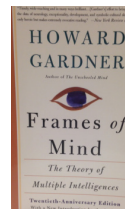
Once we realize that people have very different kinds of minds, different kinds of strengths—some people are good at thinking spatially, some in thinking with language, others are very logical, other people need to be hands-on and explore actively and try things out—then education, which treats everybody the same way, is actually the most unfair education. - Howard Gardner

Passions, motivations, sensitivities, and values all seem likely to play a role in intelligence. To define intelligence as a matter of ability without also honoring the other elements that enliven it is to fail to capture its human spark." - Dave Perkins, Shari Tishman, Ron Ritchhart, Kiki Donis, and Al Andrade.

INTELLIGENCE

HOW DOES INTELLIGENCE and INTELLIGENT BEHAVIOR DEVELOP?

WHAT in the NATURE of INTELLIGENT BEHAVIOR?

WHAT IF, INSTEAD of ASKING "HOW SMART am I?" WE ASKED HOW AM I SMART?

HOW IS INTELLIGENCE EXPRESSED WITHIN and ACROSS CULTURES?

HUMAN INTELLIGENCE is a **LEARNED ABILITY** to FIND/SOLVE PROBLEMS and CREATE PRODUCTS of VALUE in a CULTURE

AVAILABLE OPPORTUNITIES
PERSONAL DECISIONS
VALUES

REPRESENTS a **POTENTIAL** THAT WILL OR WILL NOT BE BROUGHT to BEAR

DISPOSITIONS PLAY a CRITICAL ROLE

OPEN MINDED   CLOSED MINDED
ADVENTUROUS   NARROW in THINKING
CAREFUL   CARELESS

NOT FIXED at BIRTH!

EXPRESSED in **PERFORMANCES** and **IDEAS** **PRODUCTS**
NOT THROUGH TEST SCORES. HOW is CULTURALLY DEFINED

a GOAL of EDUCATION MUST BE to INCREASE INTELLIGENCE BY CREATING OPPORTUNITIES for PROBLEM FINDING and SOLVING EXPERIENCES

IT MAY BE DIFFICULT to EXPLAIN INTELLIGENT BEHAVIOR in EVERY DAY CONTEXTS SOLELY in TERMS of ABILITIES. PASSIONS, MOTIVATIONS, SENSITIVITIES and VALUES ALL SEEM LIKELY to PLAY a ROLE in INTELLIGENCE. To DEFINE INTELLIGENCE as a MATTER of ABILITY without ALSO HONORING the OTHER ELEMENTS THAT ENLIVEN IT IS to FAIL to CAPTURE ITS HUMAN SPARK.
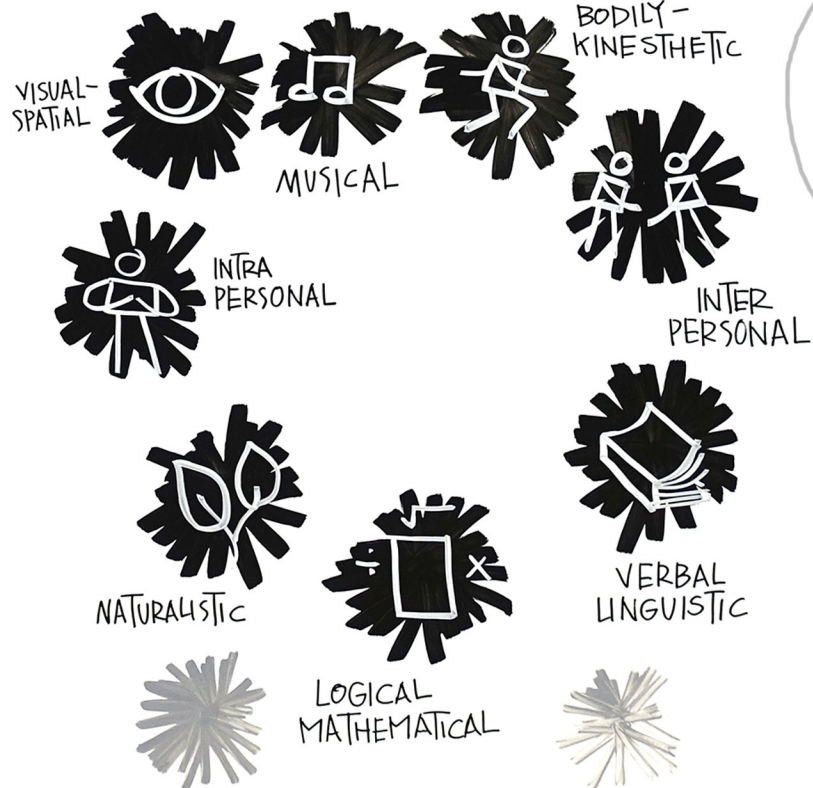
—David Perkins and Shari Tishman

NOTABLE PZ PROJECTS

MULTIPLE INTELLIGENCES
PROJECT SPECTRUM
INNOVATING WITH INTELLIGENCE

KEY FRAMEWORKS

PZ

THINKING DISPOSITIONS

MULTIPLE INTELLIGENCES

VISUAL-SPATIAL

MUSICAL

BODILY-KINESTHETIC

INTRA PERSONAL

INTER PERSONAL

NATURALISTIC

LOGICAL MATHEMATICAL

VERBAL LINGUISTIC

the TRIADIC NOTION

ABILITY

SENSITIVITY

INCLINATION

(7) CRITICAL THINKING DISPOSITIONS

that PROVIDE the BEST LEVERAGE on the KINDS of THINKING & LEARNING CHALLENGES THAT YOUNG PEOPLE in OUR SOCIETY FACE

- BE **BROAD** and **ADVENTUROUS**
- **WONDER, FIND PROBLEMS, INVESTIGATE**
- **MAKE PLANS** and **BE STRATEGIC**
- BE **INTELLECTUALLY CAREFUL**
- **BUILD EXPLANATIONS & UNDERSTANDINGS**
- **SEEK** and **EVALUATE REASONS**
- BE **METACOGNITIVE**