

# The Synergy of Interpersonal Neurobiology and the Virtuous Life



**Sr. John Dominic Rasmussen, O.P.** is a founder of the Dominican Sisters of Mary, Mother of the Eucharist. She was an elementary principal for 20 years and the developer of *Disciple of Christ, Education in Virtue®*. At present, she is C.E.O. and director of *Lumen Ecclesiae Press and Digital*.

## Presenters

**Dr. Karen Villa, Ph.D.** is a trained clinical neuropsychologist with a focus on interpersonal neurobiology. She completed postdoctoral training with the University of Michigan and practices in the Ann Arbor area.



### Some terms to start out:

**Decade of the Brain:** (1990-1999) declared by President Bush to direct funding to brain research and enhance public awareness of the benefits/findings derived from that research

**Interpersonal Neurobiology:** interdisciplinary field that focuses on continuous brain growth and how personal relationships affect the mind

## The State of Catholic Education

### CATHOLIC EDUCATION

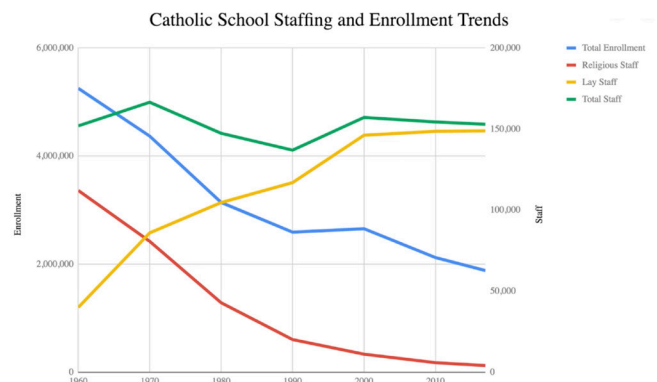
1965

- 14,000 SCHOOLS
- 6.5 MILLION STUDENTS
- 96% RELIGIOUS MEN AND WOMEN
- 4% LAITY



**Charism:** a special gift of grace of the Holy Spirit which directly or indirectly benefits the Church; often associated with religious orders, the charism defines the work members do and the spirit with which they do it.

**Virtue:** an interior disposition to goodness or the habit of doing good



Source: National Catholic Education Association. (2018, August 15). CEP in EdNext: Why Can't the Middle Class Afford Catholic School Anymore? <https://catholicpartners.org/news/2018/8/15/cep-at-ednext-why-cant-the-middle-class-afford-catholic-school-anymore>

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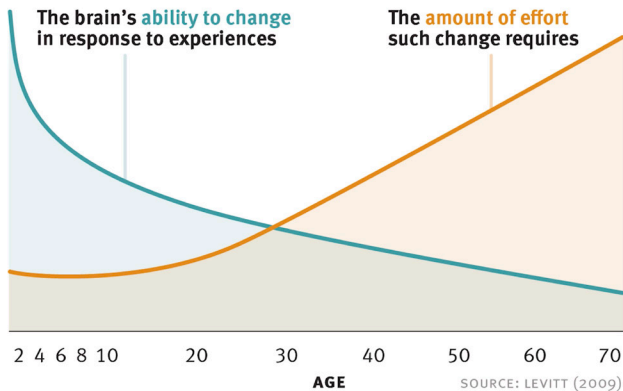
### CATHOLIC EDUCATION

2018

- 6,000 SCHOOLS
- 1.7 MILLION STUDENTS
- 97% LAITY
- > 3% RELIGIOUS MEN AND WOMEN



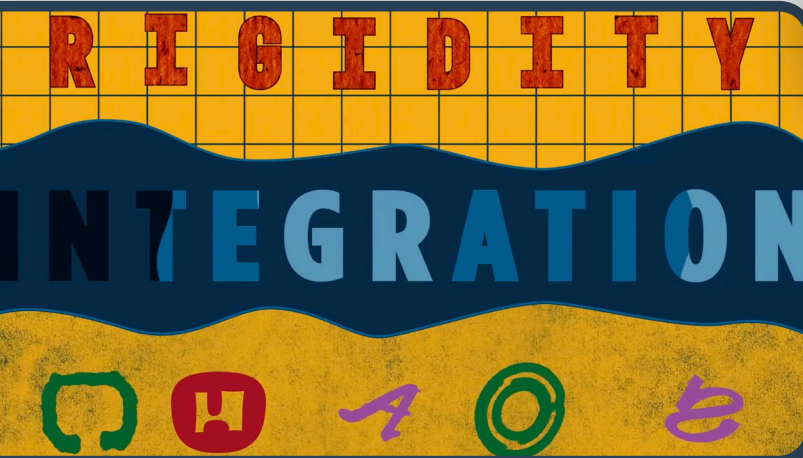
# Brain Development



Center on the Developing Child HARVARD UNIVERSITY

www.developingchild.harvard.edu

**Integration:** As a child grows and develops, he or she operates from a more integrated perspective where they are open to receive information from their environment and they have the ability to interact with their environment in a more calm and reasoned way.

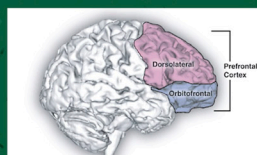


## (Upstairs/downstairs) Prefrontal Cortex and self/mental health:

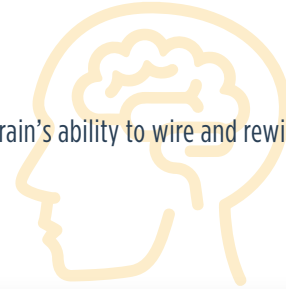
Because of neuroplasticity, the majority of cortical structures develop postnatally. Children are born with their downstairs brain essentially intact; however, their upstairs brain is under major construction throughout their childhood. The prefrontal cortex, in particular, grows entirely outside of the womb and in the context of experiences the child is having. The PFC while important in goal setting, attention/concentration, and planning has strong reciprocal connections with the emotional centers of the brain.

- ATTENTION AND CONCENTRATION
- DECISION MAKING AND OUTPUT
- MAKING GOALS AND PLANNING
- ANTICIPATING THE FUTURE

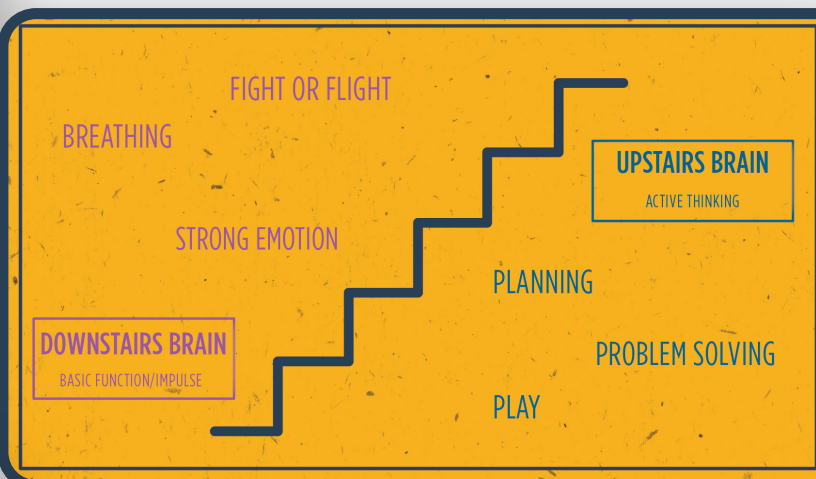
## THE PREFRONTAL CORTEX



**Neuroplasticity:** the brain's ability to wire and rewire itself across the lifespan



**River of Integration:** Integration is flowing down the middle of a stream with flexibility, adaptability, coherence/resilience, energy, and stability (FACES). Two banks on either side of this river occur when a child leaves integration and ends up in red zone chaos (angry outbursts, anxiety) or blue zone withdrawal or rigidity (shutting down, avoidance, depression, self-isolation).



The prefrontal cortex is the key to where there is a convergence of emotion and cognition to engage with the world, the very expression of the self and the seat of character and morality.

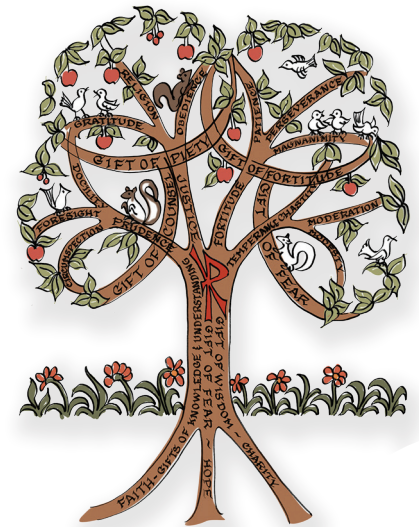
# Virtue

## What is virtue?

### Habits of mind in order with reason and nature

Teaching virtue is one of the greatest treasures of Catholic education and should be implemented as a means of developing a responsive and thoughtfully secure environment for learning and growing. The search for meaning is innate, God-given, in human nature and teaching virtue provides a rich and structured context for making meaning of the social and relational environment.

There are four cardinal virtues. These virtues create a theory of ethics/morality and are the basic virtues required for a virtuous life because so many other characteristics “hinge” on these.



### CONTENDING WITH FORTITUDE

enables one to endure difficulties and pain for the sake of what is good.



### MASTERING WITH TEMPERANCE

enables one to be moderate in the use of created goods



### ACTING WITH PRUDENCE

enables one to reason and to act rightly in any given situation – “right reason in action”



### LOVING WITH JUSTICE

enables one to give to each, beginning with God, what is due to him.



## From Scripture

### 4 Maccabees 1:18-19

“Now the kinds of wisdom are right judgment, justice, courage, and self-control. Right judgment is supreme over all of these since by means of it, reason rules over emotions.”

### Wisdom of Solomon 8:7

“She (Wisdom) teaches temperance, and prudence, and justice, and fortitude, which are such things as men can have nothing more profitable in life.”



## The YES Brain is the virtuous brain



Dr. Daniel Siegel and Dr. Tina Bryson published *The YES Brain* outlining how skills associated with what we view as the Cardinal Virtues promote brain health in children by promoting their ability to be receptive to their environment and learning rather than reactive or avoidant.



# The Synergy of Neurobiology and Virtue

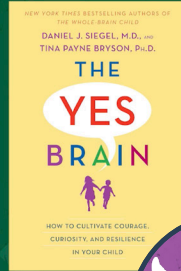
## THE BRIE ACRONYM FOUR FUNDAMENTAL SKILLS

 **BALANCE**

 **RESILIENCE**

 **INSIGHT**

 **EMPATHY**



Dr. Siegel and Dr. Bryson, authors of *The YES Brain*, based on the findings from interpersonal neurobiology, outline the fostering of these virtues in order to promote resilience, curiosity, and courage in everyday life...this is the YES brain (flexibility and adaptability, sound decision making and planning, regulation of emotions and body, personal insight, empathy and morality). These represent the essence of social and emotional intelligence and facilitate learning as well as lead to the kind of happiness that enables a life of meaning, connection, and equanimity.

### BALANCE TEMPERANCE

- Regulating emotions and body and making good decisions even when upset.
- Learning to flow down the river of integration by being flexible, adaptive, coherent, energized, and stable (FACES).
- If a child is out of control, they simply cannot learn.

### RESILIENCE FORTITUDE

- Being persistent in difficult circumstances.
- Building skills to ride the waves of emotion or difficulty/disappointment.
- Use the 4 S's (safe, seen, secure, and soothed) and teach mindfulness.

### INSIGHT PRUDENCE

- Right judgment, developing an internal compass to understand oneself and emotions more fully in order to find meaning regarding what they care about and who they want to be.
- Includes finding Christ within their internal compass. Learning relies on the ability to think about thinking. Provide for down time to reflect to create space for reflection.
- "The power lies in the pause" Pausing creates a space between impulse and action that allows for response flexibility.

### EMPATHY JUSTICE

- Using strengths and insights about oneself to understand oneself and others and act in ethical and moral ways.
- Teaching about virtue helps a child transcend self-centeredness to behave in ways that are considerate and caring.
- Taking action to address suffering in the world leads to increased joy.
- Virtue Education nurtures a child's brain to be wired to care about others and about right and wrong. A child who has a sense of self and other and of right and wrong leads to integration and thereby mental health. Integration is made visible in kindness and compassion.

## References

YES Brain Summary Sheet: <https://static1.squarespace.com/static/570a82c74d088e29f6f59598/t/5a60bcbde4966b287199d4a9/1516289214852/Refrigerator+Sheet--The+Yes+Brain.pdf>

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# Workshop Toolbox

- Value and pay attention to social and emotional needs
- Recognize when child has left the “River of Integration”
- Connect and redirect
- Name it to tame it
- Cultivate an interior world
- Breathe deeply to calm down
- Four S’S of a secure relationship: (safe, seen, secure, and soothed)
- Build a space between impulse and action

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## SEL Tools from Disciple of Christ, Education in Virtue



### Virtue Cards

Provides examples of what each virtue “looks like” and “sounds like” for students.  
*Neurons firing together and wiring together*



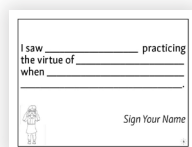
### Virtue To Be Cultivated Note

Redirect students to virtue  
*Connect and Redirect*



### Think Sheets

Create a space for students to think about and verbalize why they acted as they did.  
*Name it to tame it*



### Christian Witness Certificates

Give meaningful feedback to students about behavior  
*Feedback vs. Praise; secure relationships*



### Disciple Badges

Give meaningful feedback to students about behavior  
*Feedback vs. Praise; secure relationships*



### Saint Cards

Used to show students a virtue they have been practicing—meaningful feedback.  
*Feedback vs. Praise; secure relationships*



### Examination of Conscience

Examining conscience based on the virtues helps to recognize patterns of failure and ways to cultivate the virtues.  
*Self-awareness / Self-knowledge*



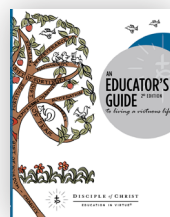
### Lectio Divina and Prayer Resources

Create space to think and listen to God and what He asks in our interior life.  
*Self-reflection / Mindfulness*



### Student Planners

Weekly planner places tools at students fingertips. Packed with a variety of academic, Catholic, and unique virtue resources.  
*Executive skills / Name it to tame it*



### Educator's Guide, pp. 144-148

Features St. John Bosco's approach to education, focusing on reason, religion, and kindness.  
*Building the 4 S's of relationships*