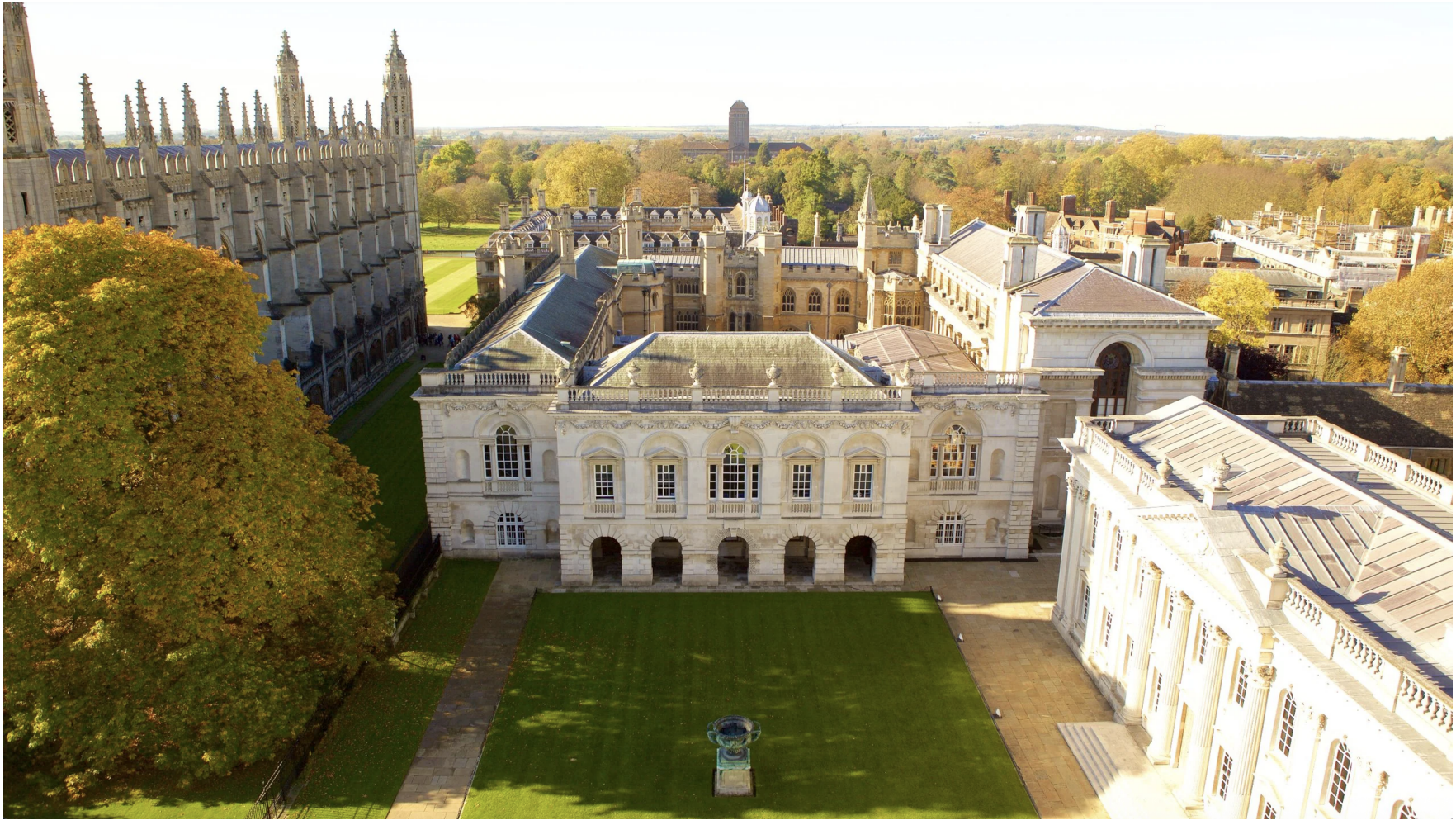
Les deux cultures

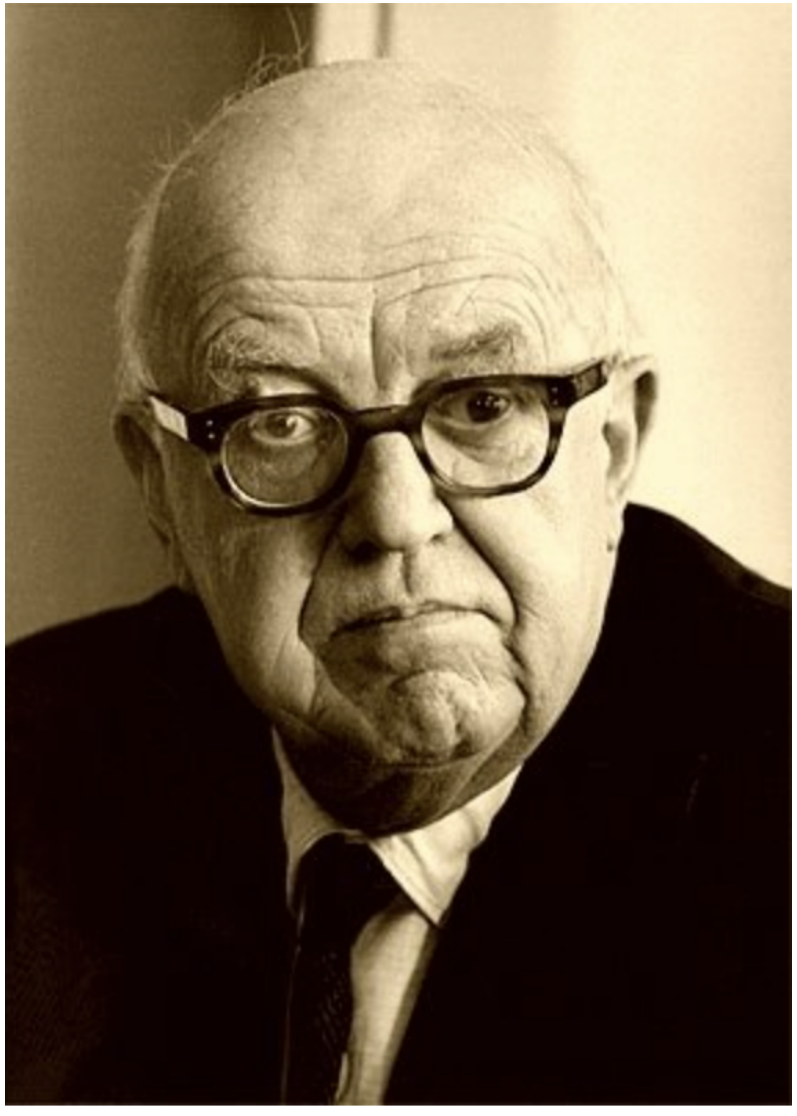
Frédéric Morneau-Guérin

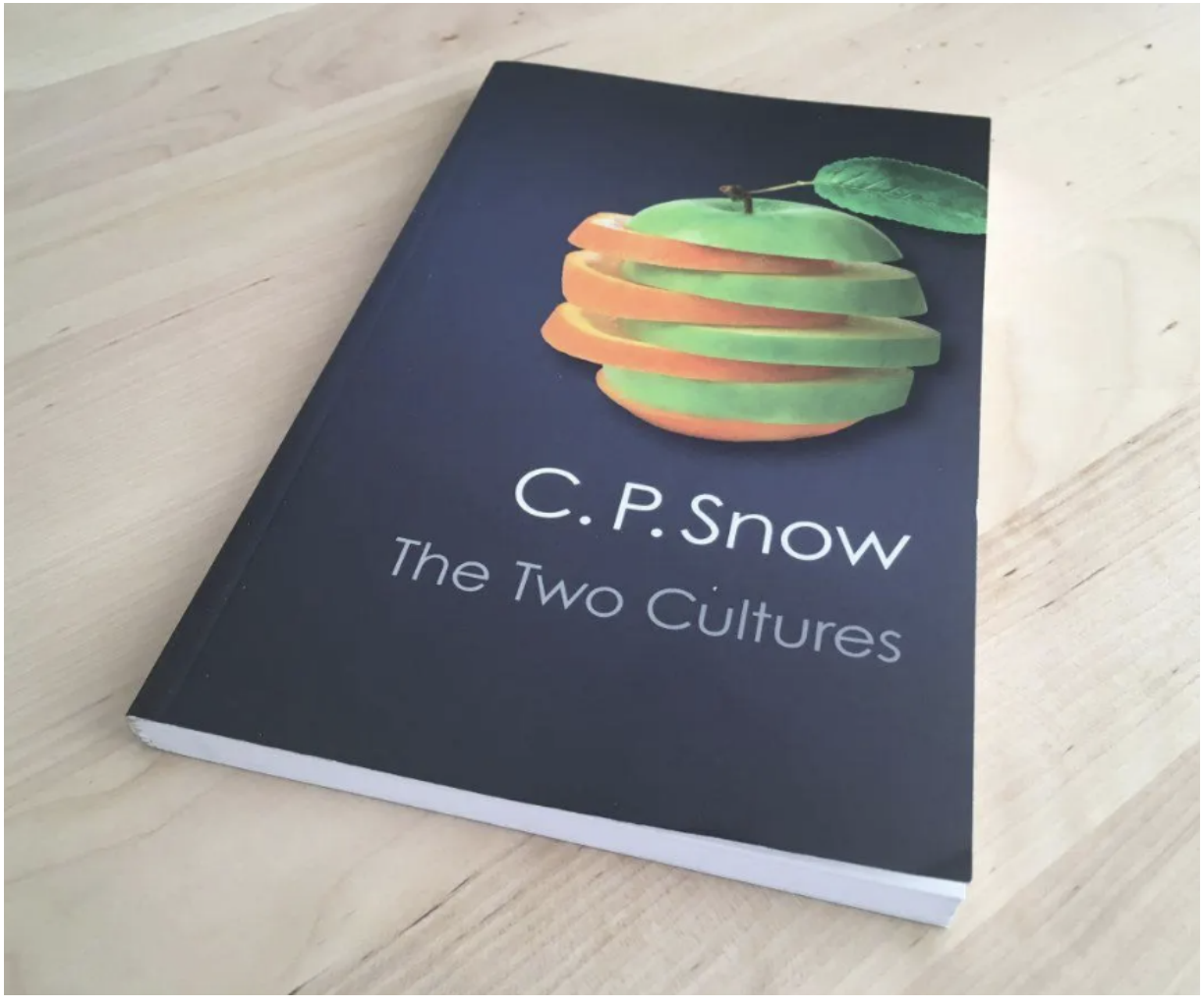
Réunion d'été 2025 de la SMC

7 juin 2025



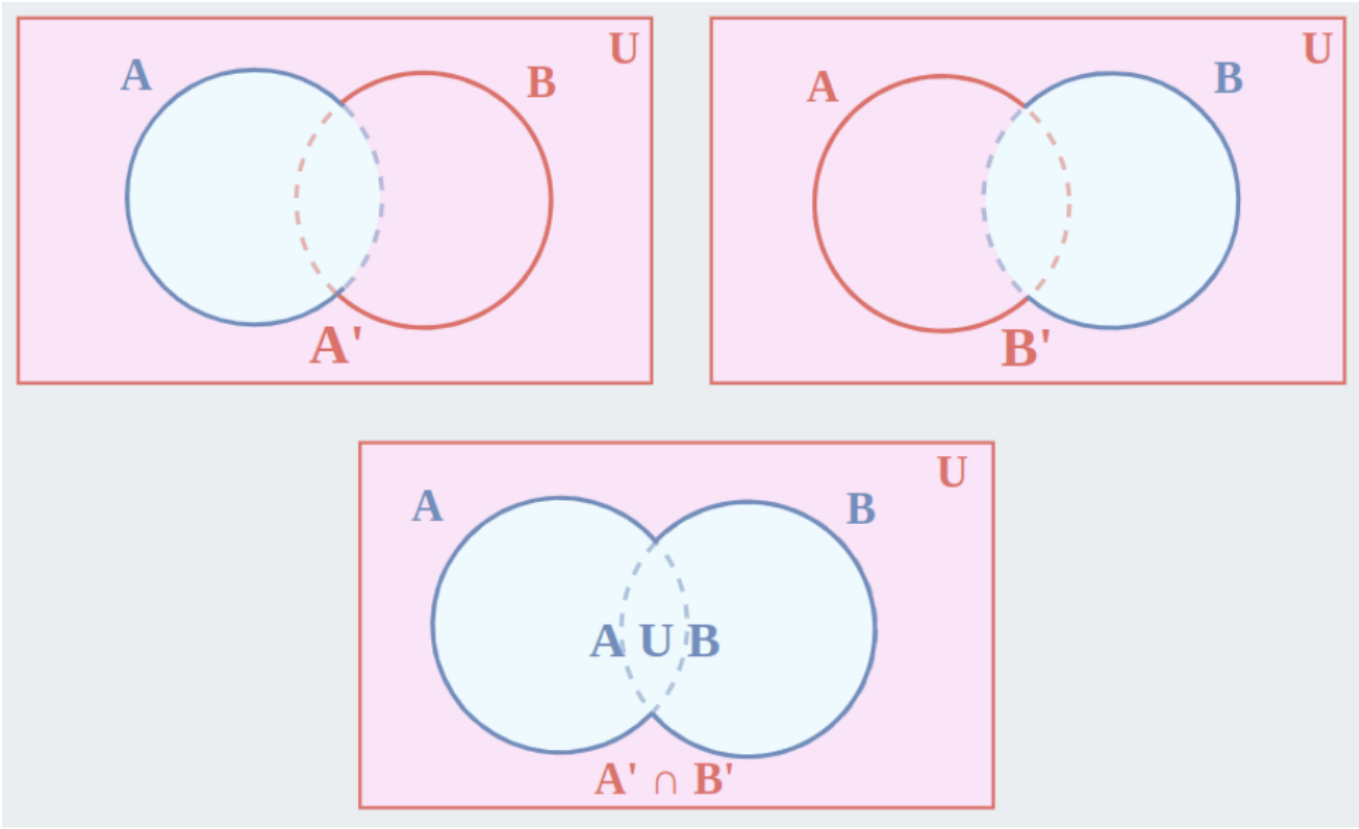





C. P. Snow
The Two Cultures





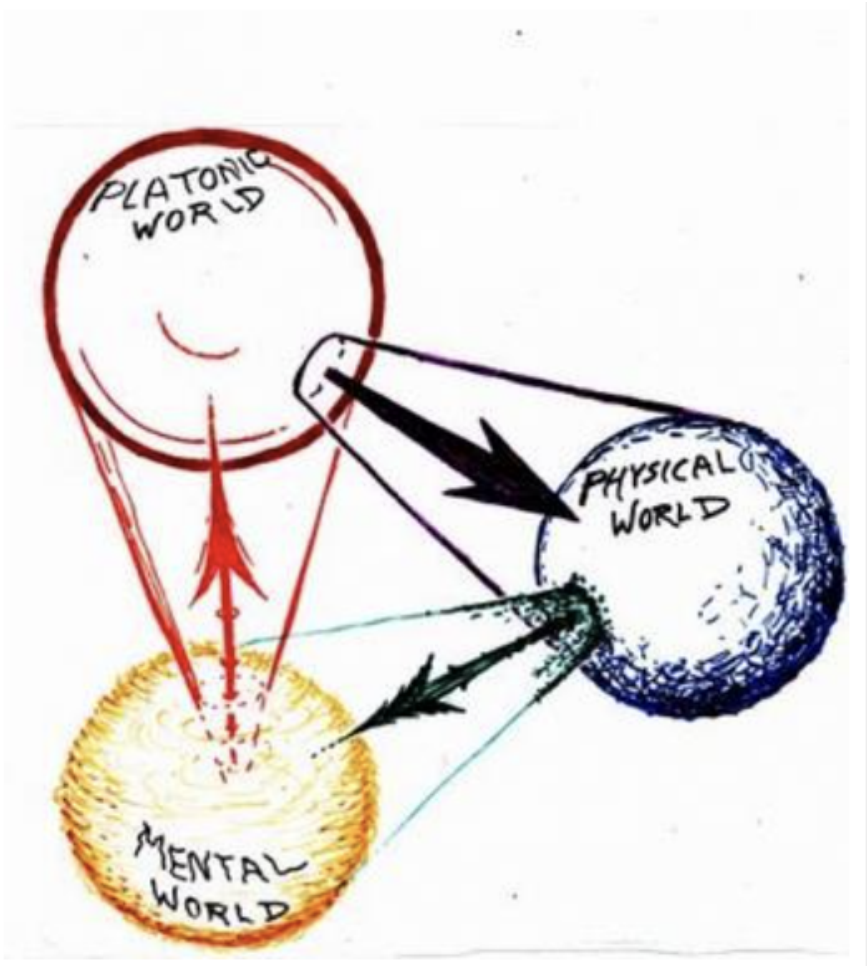

U
A
B
A'
U
A
B
B'
U
A
B
A U B
A' ∩ B'










PLATONIC WORLD
PHYSICAL WORLD
MENTAL WORLD









NICATIONS ON PURE AND APPLIED MATHEMATICS

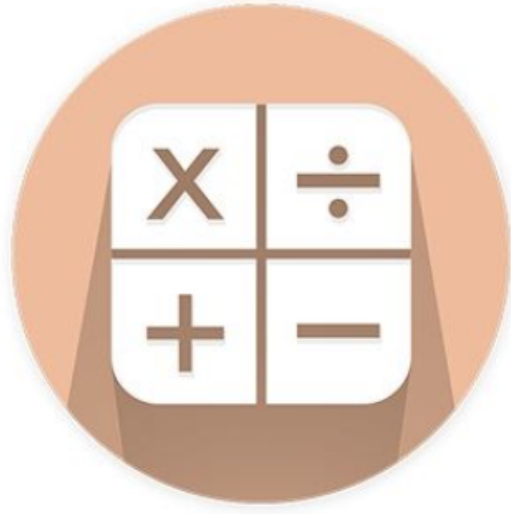
e Unreasonable Effectiveness of Mathematics in the Natural Sciences

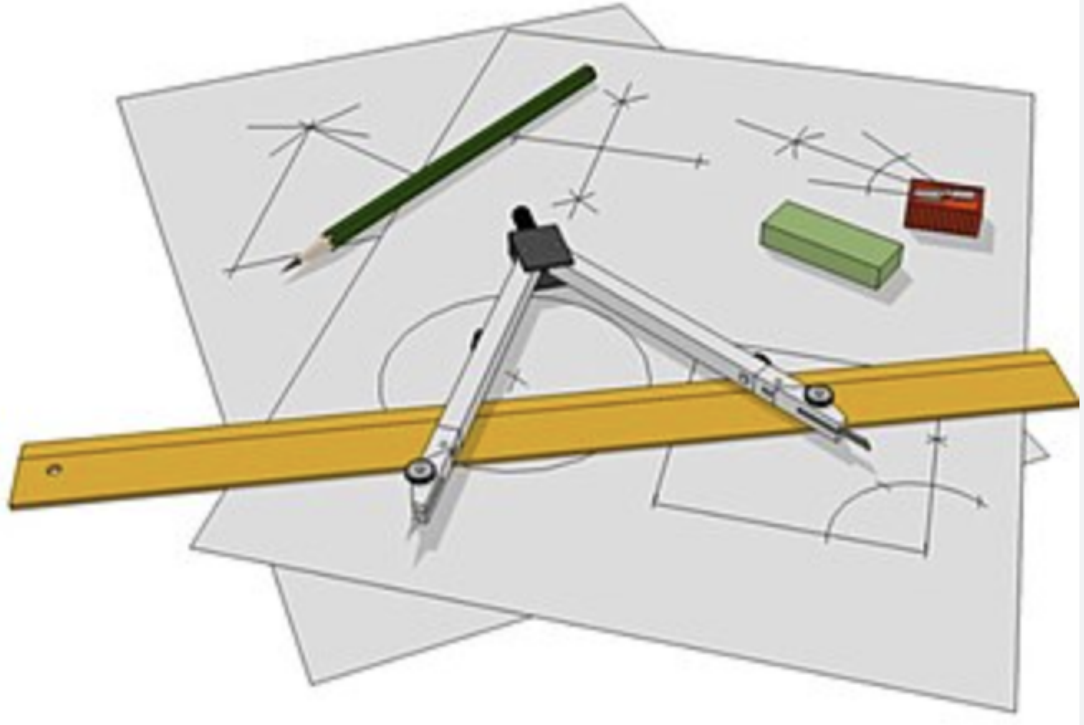
hard Courant Lecture in Mathematical Sciences delivered at New York University
May 11, 1959

EUGENE P. WIGNER
Princeton University

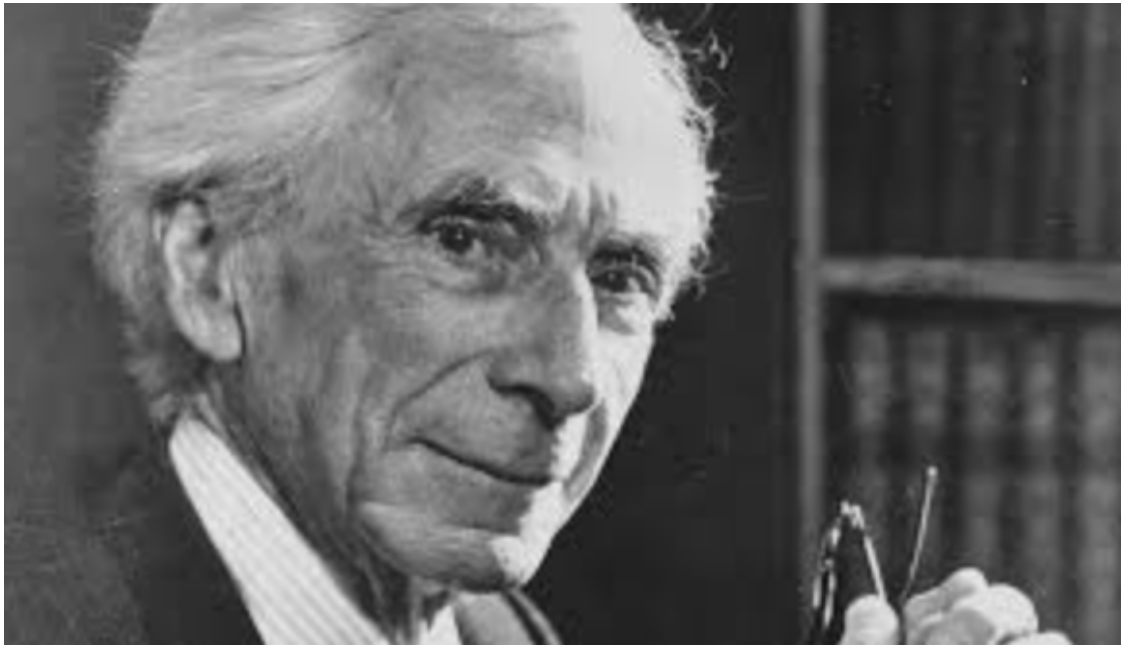
become secret


1 2 3
4 5 6
7 8 9
0


x
÷
+
−







$$\frac{}{\Delta, B \longrightarrow B}\ initial^{\dagger} \qquad \frac{B, C, \Delta \longrightarrow G}{B \wedge C, \Delta \longrightarrow G}\ \wedge \mathrm{L}^{\dagger}$$

$$\frac{\Delta \longrightarrow B \qquad \Delta \longrightarrow C}{\Delta \longrightarrow B \wedge C}\ \wedge \mathrm{R}^{\dagger} \qquad \frac{B, \Delta \longrightarrow G \qquad C, \Delta \longrightarrow G}{B \vee C, \Delta \longrightarrow G}\ \vee \mathrm{L}^{\dagger}$$

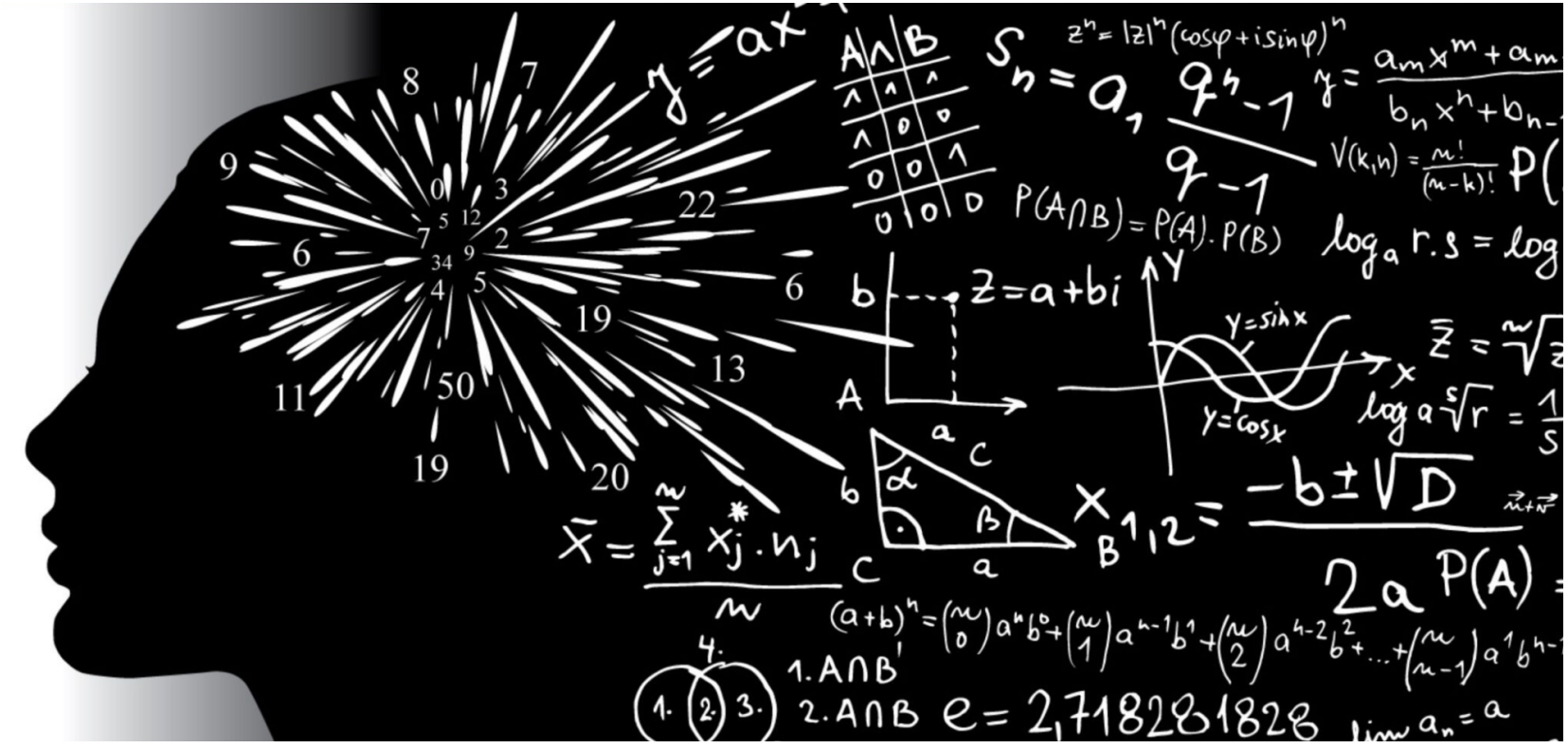
$$\frac{\Delta \longrightarrow B}{\Delta \longrightarrow B \vee C}\ \vee \mathrm{R} \qquad \frac{\Delta \longrightarrow C}{\Delta \longrightarrow B \vee C}\ \vee \mathrm{R}$$

$$\frac{B, \Delta \longrightarrow C}{\Delta \longrightarrow B \supset C}\ \supset \mathrm{R}^{\dagger} \qquad \frac{C, B, \Delta \longrightarrow G}{B \supset C, B, \Delta \longrightarrow G}\ \supset \mathrm{L}_1$$

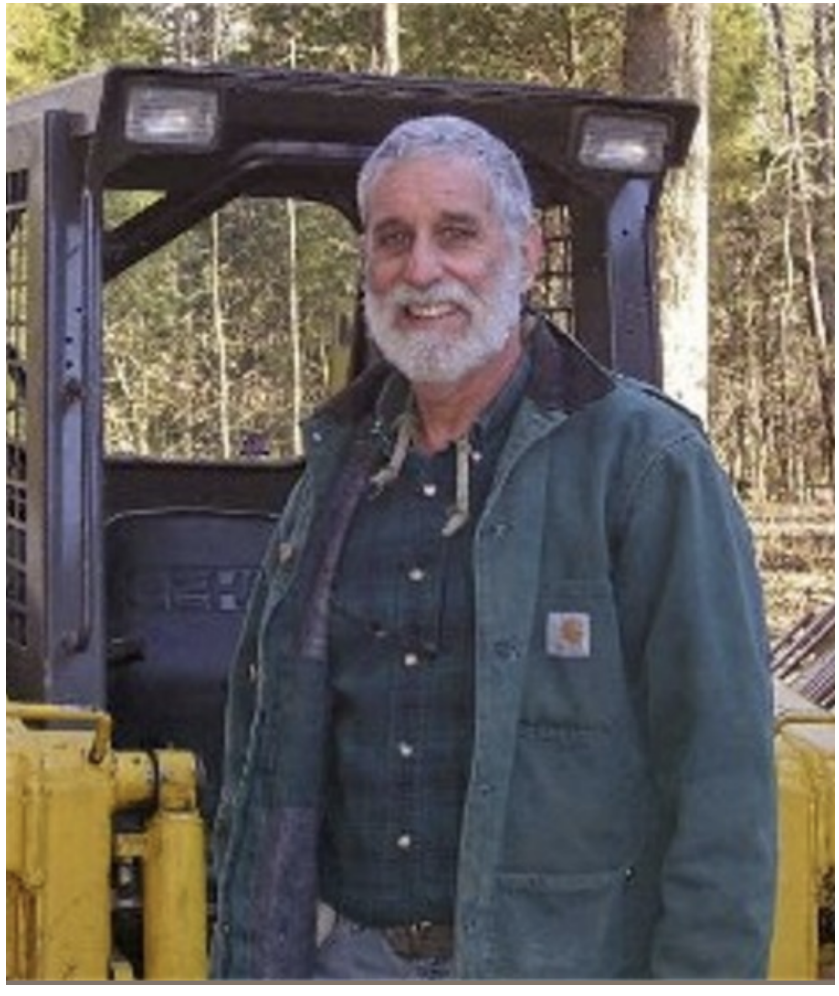
$$\frac{A \supset (B \supset C), \Delta \longrightarrow G}{(A \wedge B) \supset C, \Delta \longrightarrow G}\ \supset \mathrm{L}_2^{\dagger} \qquad \frac{A \supset C, B \supset C, \Delta \longrightarrow G}{(A \vee B) \supset C, \Delta \longrightarrow G}\ \supset \mathrm{L}_3^{\dagger}$$

$$\frac{B \supset C, \Delta \longrightarrow A \supset B \qquad C, \Delta \longrightarrow G}{(A \supset B) \supset C, \Delta \longrightarrow G}\ \supset \mathrm{L}_4$$

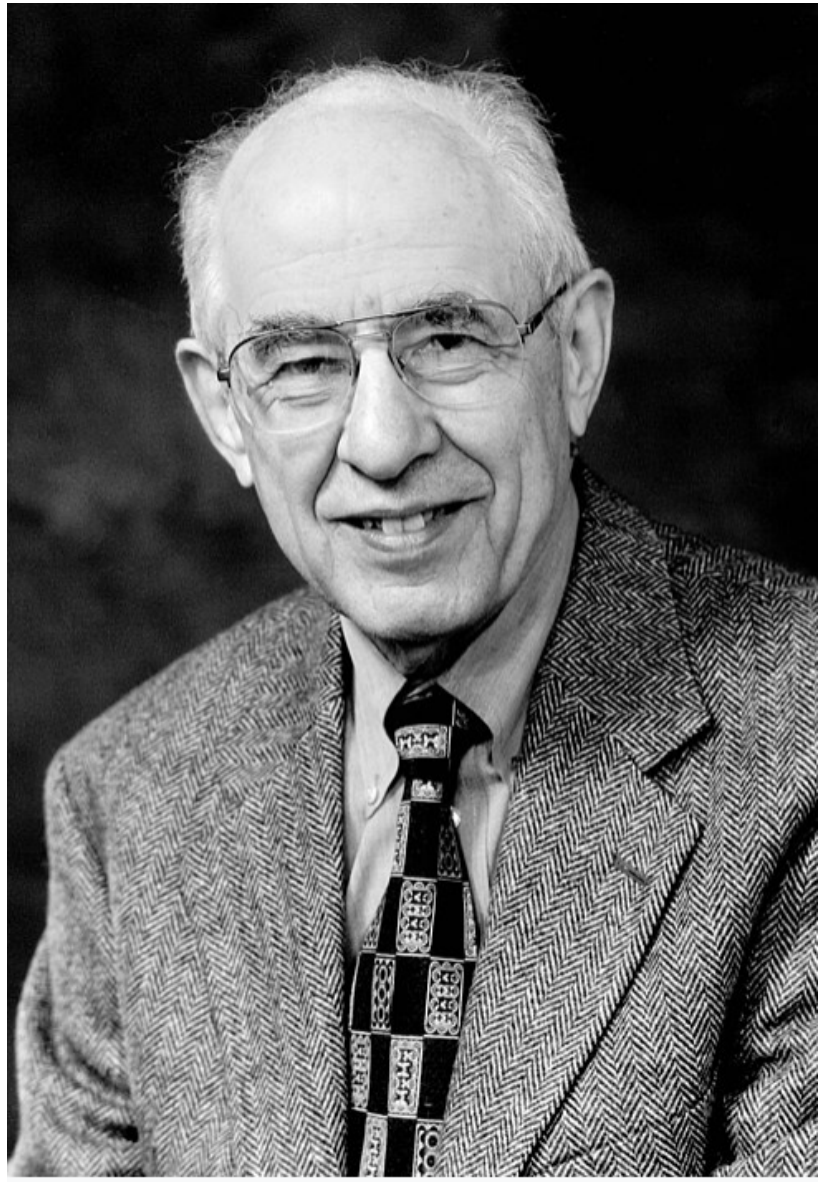


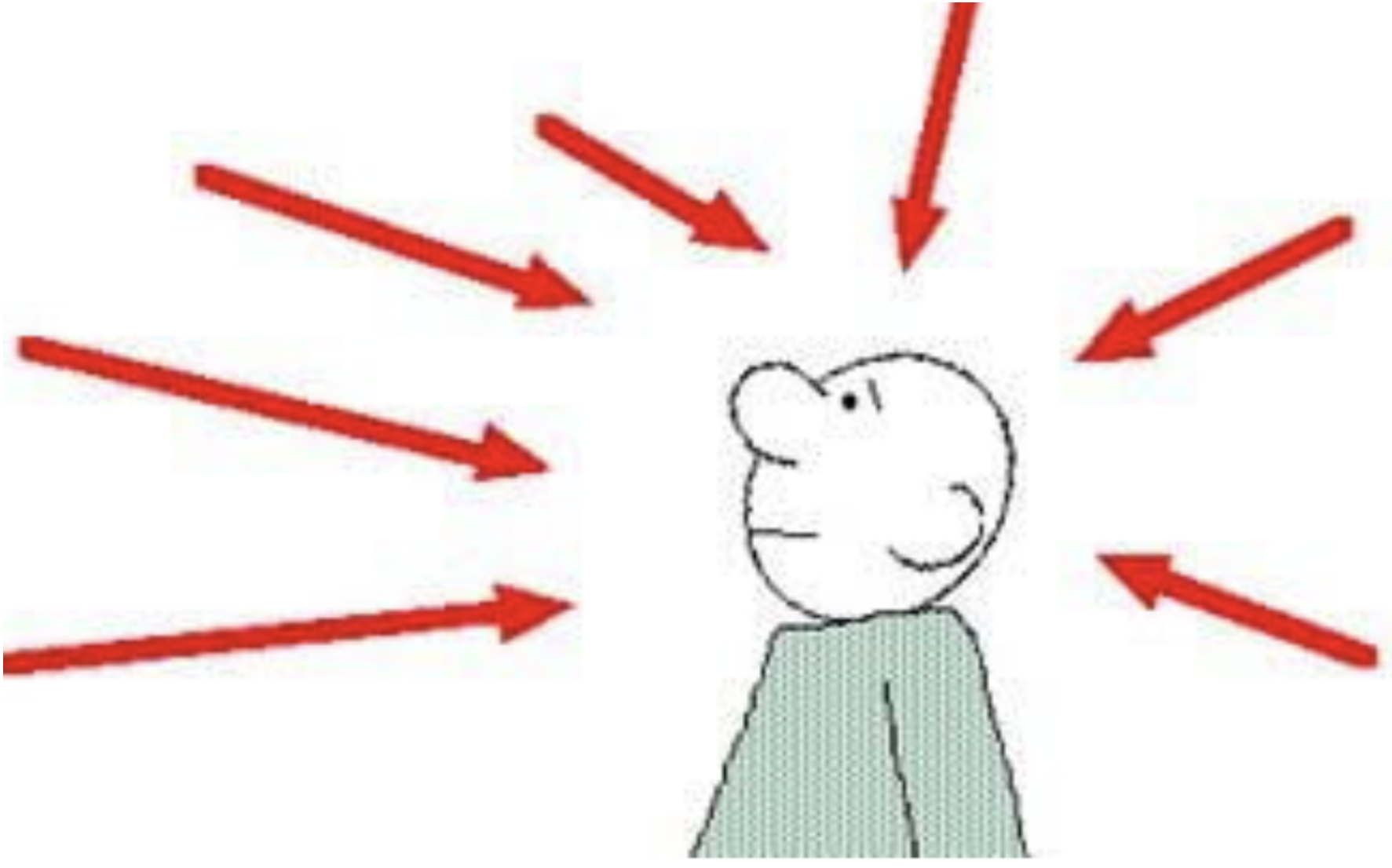


$z^n = |z|^n(\cos\varphi + i\sin\varphi)^n$
$S_n = a_1 \frac{q^n - 1}{q - 1}$
$P(A \cap B) = P(A) \cdot P(B)$
$z = a + bi$
$y = \sin x$
$y = \cos x$
$\bar{x} = \frac{\sum_{j=1}^{n} x_j^* \cdot n_j}{n}$
$x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$
$P(A)$
$(a+b)^n = \binom{n}{0} a^n b^0 + \binom{n}{1} a^{n-1} b^1 + \binom{n}{2} a^{n-2} b^2 + \ldots + \binom{n}{n-1} a^1 b^{n-1}$
1. $A \cap B'$
2. $A \cap B$
$e = 2{,}718281828$



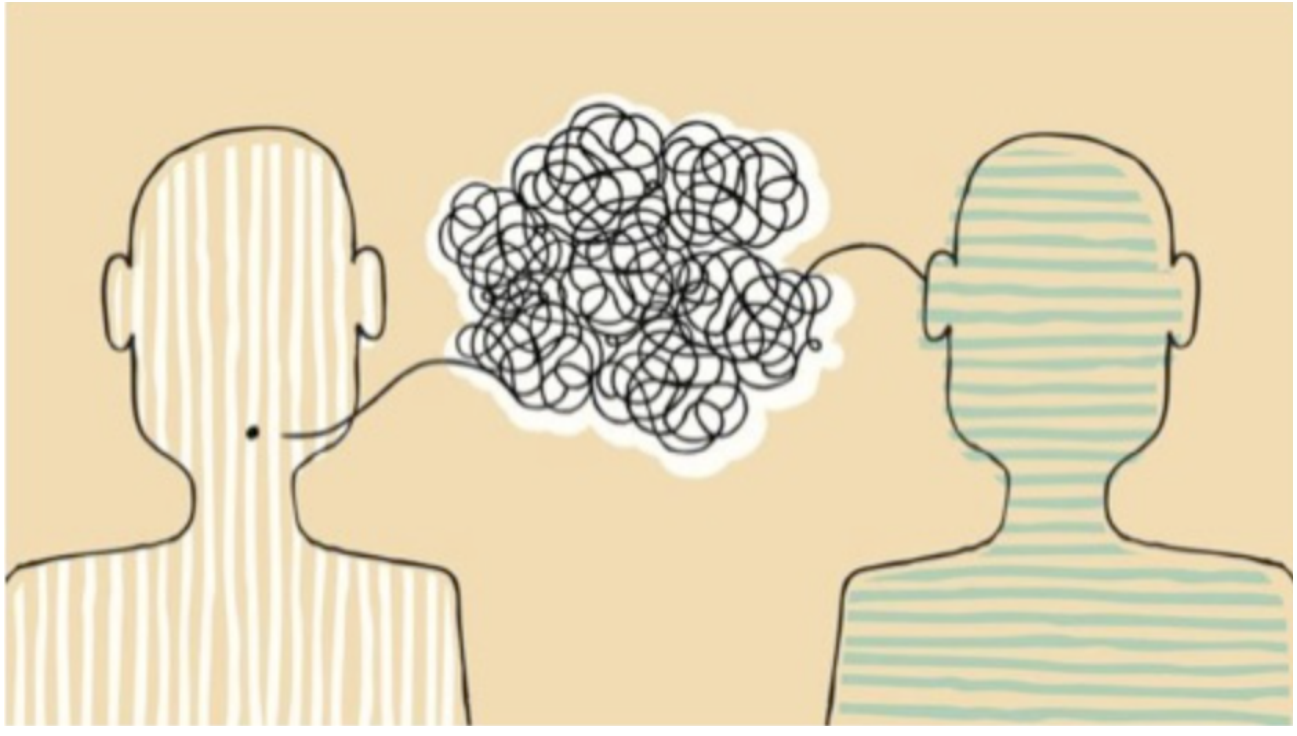













UNIVERSITÉ
LAVAL


UdS
Université de
Sherbrooke


UQAC


UQTR
Université du Québec
à Trois-Rivières


UQAR




UQÀM


Université
de Montréal


McGill

Merci!