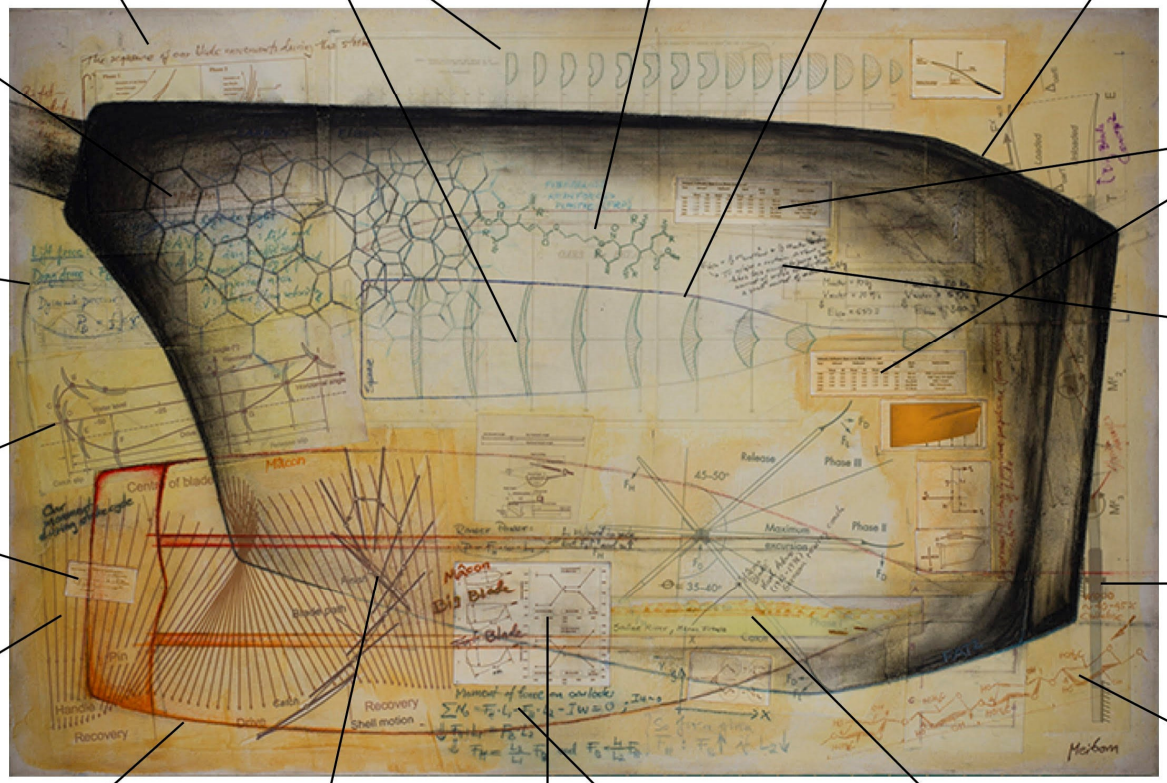

Diagram showing detailed view of the oar blade's movement during the stroke

Chemical structure formula for Fiberglass Reinforced Plastic (FRP) used in the construction of modern oars, oar blade, and rowing shells

Outline (black) of the Fat Blade used by elite competitive rowers today

Illustration of the regular hexagonal molecular structure of the carbon fiber used in modern rowing oar blade, oar, and shell construction

Cross-sectional view of the old classic wooden oars and oar blades

Outline of the old(est) "square" oar blade

Data tables demonstrating the evolution in "inbound" and "outbound" oar span with the change in oar blade design (shape) and surface area

Expression for the lift force, drag force, and dynamic pressure on the oar blade in the water

Expression for the kinetic energy of the rower-shell system, demonstrating that it requires less energy to move a large amount of water slowly, than a small amount of water quickly - thus making the case for the modern "Fat Blades"

Diagrams showing sideview of oar blade's ideal path during stroke cycle

Experimental setup to measure forces on modern oar and blade system

Oar and blade movement through water during stroke cycle

Chemical formula for cellulose which is the primary component of wood used for the old Square and Mâcon oar blades

Picture of the Saône river in Mâcon, France

Outline of the Mâcon blade, named after the french city Mâcon in which the blade won popularity when used by winning german crews when racing on the Saône river

Closer look at the blade movement during the stroke, clearly illustrating the "slip" and "back-watering" near the finish

Equations for the moment of force at the oarlock, and expression for the relations between handle force and force on the oar blade

Diagram showing the evolution in oar blade shape and the corresponding change in "outbound" oar length to optimize propulsion