

# Intersections in Science, Technology, & Culture

### Alan Rauch

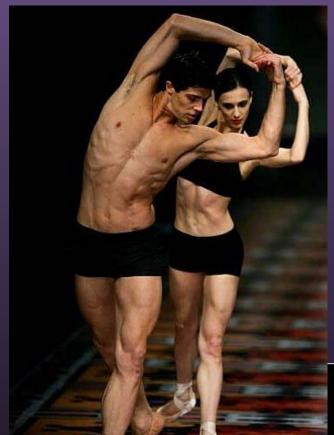
Department of English UNC Charlotte Seminar Leader

### Jennifer Thompson

7<sup>th</sup> Grade Science James Martin Middle School Seminar Coordinator The Central Question of Interdisciplinary Studies is...

> Where and when does Culture meet with Science or Science meet with Culture?

> > Everywhere & All of the Time!



#### Is the Dancer an Artist or a Machine for Dancing or Both?





Ear - Macquarie University, Sydney Implant in the inner ear stimulates nerve fibres. Signals are processed by the brain into sounds

Heart -

Arizona

SynCardia,

temporary

Battery-powered organ that costs £76,000. A

measure until a

donor is found

Eye - University of California A camera in the patient's glasses sends images to a microchip in the retina. This sends electrical pulses to the brain, which it turns into shapes and patterns

> Trachea - Royal Free Hospital, London An artificial windpipe, as first received by a cancer sufferer from Sweden in 2011

Spleen - Yale, Connecticut A chip filters out and traps infections in a patient's blood, preventing poisoning

> Pancreas - De Montfort University, Leicester Reacts to rising blood sugar levels to release insulin

Blood - Sheffield University Totally artificial and made from plastic. It has a much longer shelf life than donated blood, and is infection-free

Kidney - University of California Prototype shrinks a fridge-sized dialysis machine into a unit the size of a coffee cup



## Couldn't Frankenstein make this Creature "Beautiful"?

And what makes these figures monstrous?



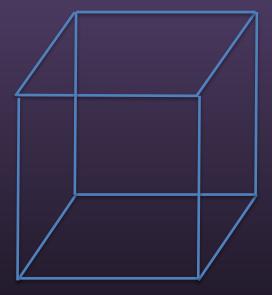
Touch Bionics, Glasgow, and Johns Hopkins, Maryland Respond to tiny electrical impulses when users twitch their muscles. The limb has 26 degrees of movement

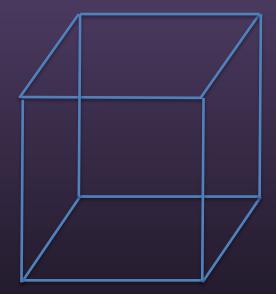
Hand and arm

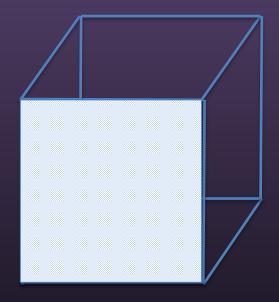
Foot and ankle - MIT, Massachusetts Sensors read body movements and deliver the right amount of power for walking, running or climbing

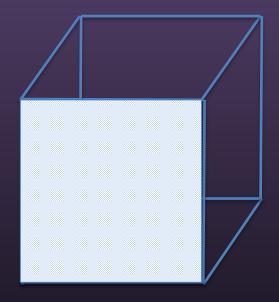
### Seeing is... not believing: The Necker Cube

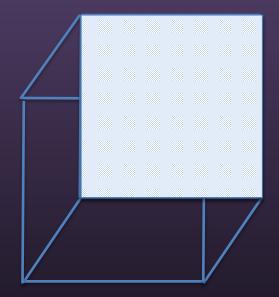
Named after: Louis Albert Necker (1786 –1861) Crystallographer

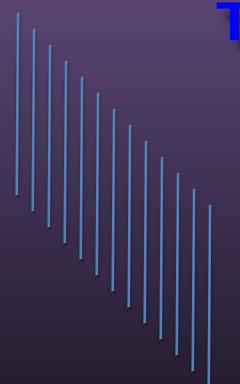




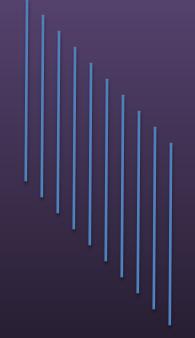




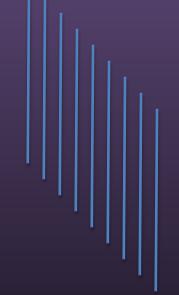










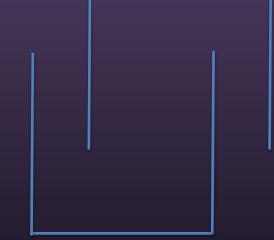


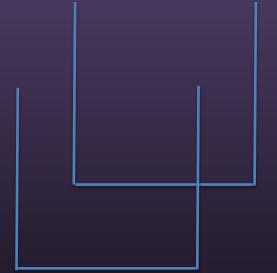




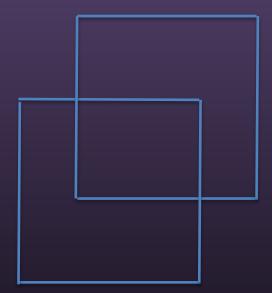


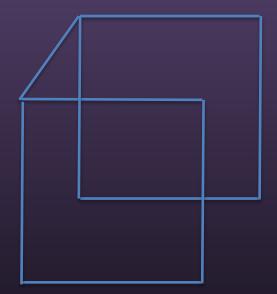




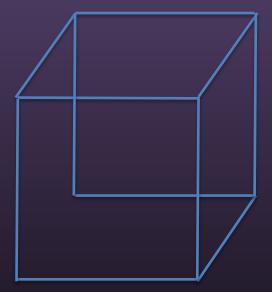


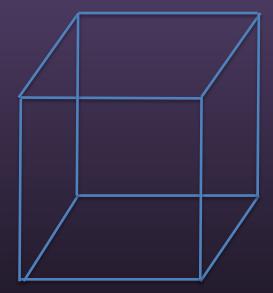




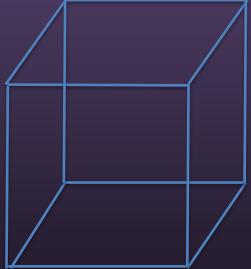


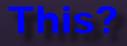






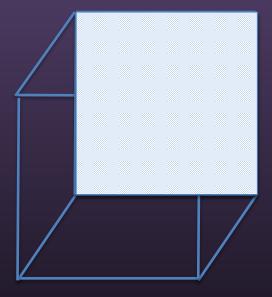
### So... which is The Necker Cube

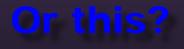




### Or this?

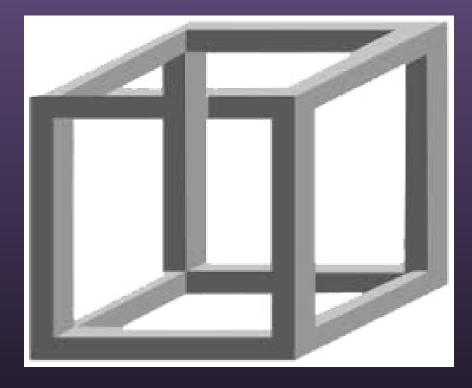
	$\square$





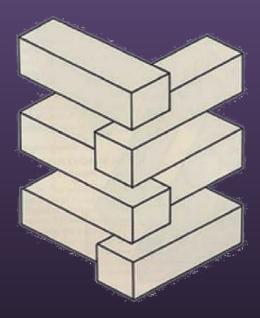






More Tyranny

Thanks,



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