

# Success? Which success?

How historians of science might evaluate the success of „running systems“



25 Years of Particle Image Velocimetry  
in Aerodynamics

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# The TXM – a case study

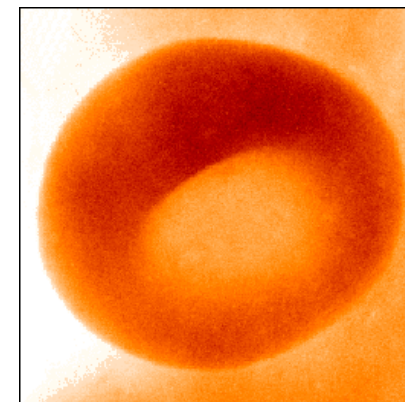
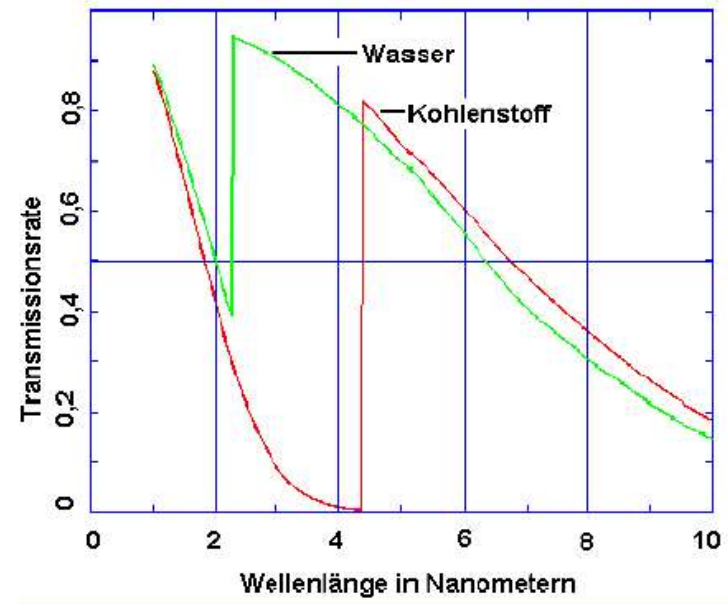
microscope developed at the  
University Observatory of  
Göttingen

various invisible hands at university,  
in the lab or at funding agencies

theoretically applicable to users in  
medicine and biology

adaption of techniques from other  
disciplines

results could not be produced fast –  
turning point for personnel



# Which were the drawbacks in the last 25 years?

„It is a shame that not more particle seeding devices were developed!“

„We still have not extended the dynamic velocity range much beyond 200:1.“

„The fierce pricing war between the companies has hindered future commercialization.“ // „As a user, the cost of a system and the fast obsolescence of equipment is still the main limitation to a wider use of PIV.“

„Still lacking hardware on the imaging side that approaches high resolution film.“

# I – Personal Success

Questions:

*Did P.I.V. help to launch or boost careers of individual scientists and promote their names across the borders of their very own scientific community?*

*Which networks have been formed in the course of events? ( → Social History of P.I.V.)*

## II – Economic Success/ Financial Success

Questions:

*Is P.I.V. a technique which can be bought and sold to a wide spectrum of potential users?*

*How difficult is it to receive funding for research projects?*

# III – Instrumental success?

Questions:

Does the PIV system work? What did you do to bring it from „childhood to adolescence“?

Does it work as intended in 1984?  
(Did PIV scientists fulfill their own visions?)

Are there any users? Did you listen to their wishes concerning future applications?

# Categories

- I) **personal success**
- II) **economical/financial success**
- III) **instrumental success**

# A historian's set of tools

- interaction between experimental, theoretical and applicational side
- analysis of the persons involved and their personal background
- „invisible hands“
- success – usefulness
- interdisciplinary development – style of thinking