

HRA

HIBAR Research: Research Excellence in Service to Society

Lorne Whitehead
a brief discussion @ UBC MMRI

Feb 14, 2019

The HIBAR Research Alliance(HRA)

A group of universities encouraging widespread improvement of the university research ecosystem

Arizona State University *University of California Los Angeles*
Brandeis University *University of California San Diego*
University of British Columbia *University of Maryland*
University of Idaho *University of South Florida*
UC Davis *Washington State University*

Integrating basic and applied research is very valuable.
A considerable body of research has established this.

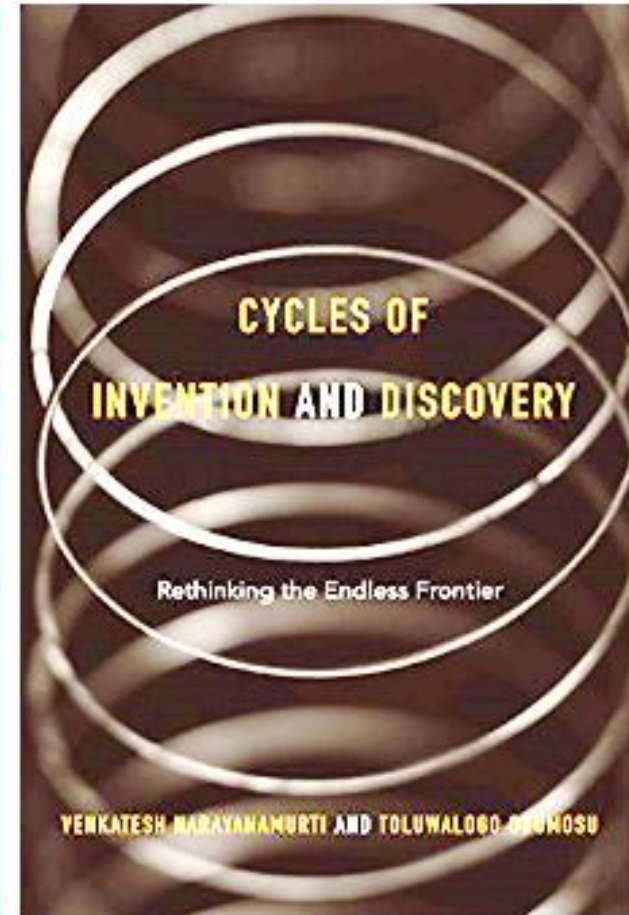
PASTEUR'S QUADRANT

*Basic Science
and Technological
Innovation*

Donald E. Stokes



Ben Shneiderman



Venakatesh Narayanamurti

Donald Stokes

Research results can be excellent in various ways:

Aspects of Research Excellence	Definition
Generative	Broadly applicable, generates new ideas
Brilliant	Thoughtful, creative and visionary
Explanatory	Provides valuable understanding
Use-inspired	Motivated and informed by societal issues
Engaged	Carried out in partnership with society
Practical	Quickly solves a specific practical problem

Examples:

Pythagorean theorem

Special Relativity

Universal Gravitation

Micro-finance

Accurate Weather Forecasting

countless examples

Aspects of Research Excellence	Definition	Basic Research Projects	HIBAR Research Projects	Applied Research Projects
Generative	Broadly applicable, generates new ideas	Light Green	Light Green	Light Green
Brilliant	Thoughtful, creative and visionary	Light Green	Light Green	Light Green
Explanatory	Provides valuable understanding	Light Green	Light Green	Light Green
Use-inspired	Motivated and informed by societal issues	Light Green	Light Green	Light Green
Engaged	Carried out in partnership with society	Light Green	Light Green	Light Green
Practical	Quickly solves a specific practical problem	Light Green	Light Green	Light Green

Basic Research, HIBAR Research and Applied Research have different valuable patterns of excellence

HIBAR research has an important role to play

Examples of HIBAR Research Projects

Pasteur's creation of immunization and microbiology

The transistor

The global positioning system

The internet....

But, what **exactly** is HIBAR research?

Highly
Integrative
Basic
And
Responsive
Research:

- Balancing** academic *with* practical motivations
- Combining** analytic *with* creative methods
- Partnering** academics *with* societal experts
- Seeking** long-term goals *with* urgency

Questions for Identifying HIBAR Research Projects

On Motivations:

- ✓ Is there an intent to discover new knowledge?
- ✓ Is there a desire to solve societal problems?

On Methods:

- ✓ Is there a scholarly rationale for the project?
- ✓ Is it guided by use-inspired creative processes?

On Partners:

- ✓ Is strong basic research talent leading this project?
- ✓ Are societal experts true partners from the start?

On Time Frames:

- ✓ Are participants committed to a long term effort?
- ✓ Is there a plan for maintaining urgency throughout?

Why HIBAR Research Projects are so impactful

- Problem-orientation → highly motivated teams
- Visionary partners → better insights about the future
- Diversity → broader skill sets and better decisions
- Societal partners → special resources
- Academic freedom → fewer conflicts of interest
- Long term focus → fewer concerns about IP

10 important clarifications about HIBAR research:

1. HIBAR is not new; the fairly new term HIBAR just helps describe it
2. Most basic research is too disconnected from society to be HIBAR
3. Most applied research is too short term focused to be HIBAR
4. In HIBAR projects, curiosity, creativity and passion **flourish**
5. HIBAR embodies academic freedom and standard academic values
6. HIBAR projects need not be interdisciplinary, though they often are
7. The societal expert partners in HIBAR work can be very diverse
8. HIBAR research is found in all fields, not just science and technology
9. HIBAR benefits society in many ways, not just commercial ones
10. Boosting HIBAR requires culture change: challenging, but warranted

The Mission of the HIBAR Research Alliance is:

To achieve, within 10 years, a 4-fold increase in the fraction of research projects that are HIBAR, from roughly 1 project in 20 today, to about 1 in 5, while strengthening all other important forms of research.

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