

THE FUTURE OF SCIENCE

The role of young researchers in shaping research climates

Noémie Aubert Bonn, PhD student in Hasselt University (Belgium)

Open Access Ambassadors Conference - 10-11 December 2019 - Berlin, Germany



I want to be a researcher.

Cognitive Neuroscience

Strategic Networking

Sexy topics

Writing, writing, writing...

High impact factors

?

Doing research

Doing papers

CV

Tenure

Visibility

Is that what it means to be a researcher?

PhD on Research integrity (Ethics)



1. What I learnt from my research
2. What is happening out there
3. What can young researchers do?

1. What I learnt from my research

re-sinC

1. Interviews and Focus Groups in biomedical research in Flanders, Belgium



2. Survey on research assessments

1. What leads researchers to
success?

2. What threatens
integrity?

3. Who is
responsible?

Step 1. Interviews and Focus Groups in Flanders



PhD Students



Post Doc



Researchers



Past-Researchers

1. What leads researchers to
success?

2. What threatens
integrity?

3. Who is
responsible?

Institution Leaders



Policy Makers



Research Funders



Editors/Publishers



Research Integrity
Offices



Lab Technicians



Publishing in high impact journals is...

	...In advancing my career	...In advancing science	...to my personal satisfaction
essential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
irrelevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
unfavorable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
detrimental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to leave a comment (optional)

Publishing papers is...

Publishing in high impact journals is...

Publishing commentaries or editorials is...

Publishing more papers than others is...

Publishing open access is...

Peer reviewing is...

Replicating past research is...

Publishing findings that did not work (i.e., negative findings) is...

Sharing your full data and detailed methods is...

Reviewing raw data from students and collaborators is...

Conducting research with a high risk of failure is...

Connecting with renowned researchers is...

Collaborating across borders, disciplines, and sectors is...

Getting cited in scientific literature is...

Having your papers read and downloaded is...

Having public outreach (e.g., social media, news, etc.) is...

Having your results used or implemented in practice is...

Having luck is...

1. What I learnt from my research

- a. There is a clear issue in the way we assess scientists

a. There is a clear issue in the way we assess scientists

1. What leads to **SUCCESS?**

WHO

researcher



WHAT

output



HOW

process



a. There is a clear issue in the way we assess scientists

Current assessments...

WHO

researcher



WHAT

output



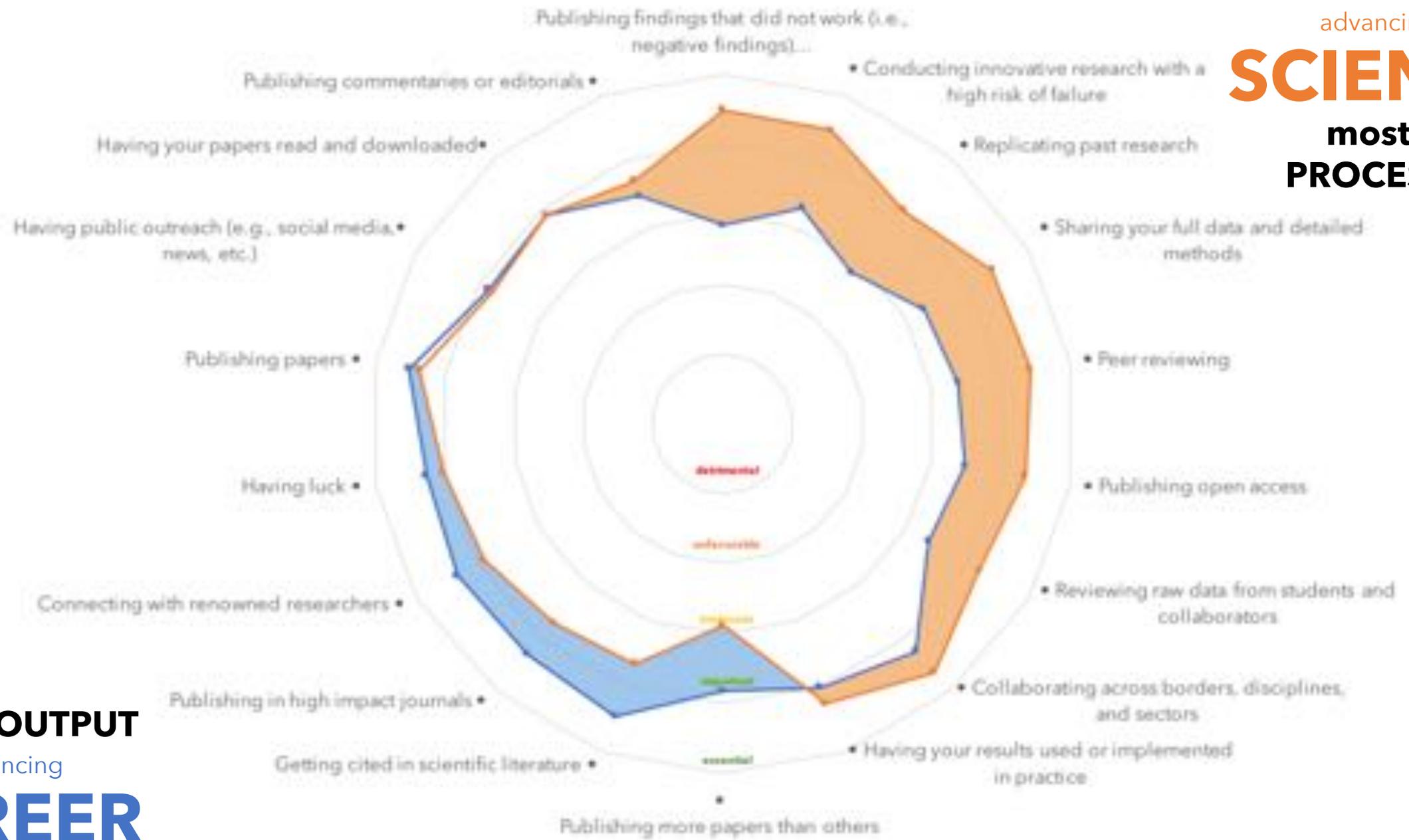
HOW

process



a. There is a clear issue in the way we assess scientists

advancing
SCIENCE
mostly
PROCESSES



mostly **OUTPUT**
advancing
CAREER

a. There is a clear issue in the way we assess scientists

Current assessments...



2. What threatens
INTEGRITY?

WHO

researcher



WHAT

output



HOW

process



a. There is a clear issue in the way we assess scientists

Current assessments...

...overvalue **outputs**

...**ignore** important **processes**

And they do that while...

...expecting **exceptional** output

...looking at researchers **individually**

...being based on **competition**



2. What threatens
INTEGRITY?

→ Discourages realism

→ Discourage collaboration

→ Discourage openness

a. There is a clear issue in the way we assess scientists

Current assessments...

...overvalue **outputs**

...**ignore** important **processes**

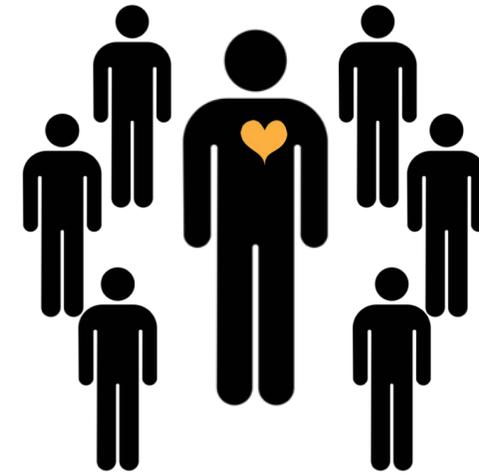
And they do that while...

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...being based on **competition**

IDEAL



Disinterested
Devoted, selfless
Part of a community
Rigorous
Realistic

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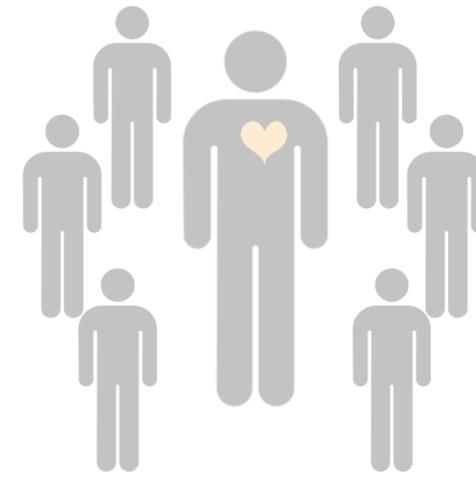
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CONFLICT!

SUCCESSFUL



Career minded
Strategic
Competitive
Quantity > Quality
Extraordinary claims

1. What I learnt from my research

a. There is a clear issue in the way we assess scientists

b. Research assessments shape our perspective of success

b. Research assessments shape our perspective of success

“ ...I think that the definition of success is highly dependent of the institute and the environment you're in [...] And if you're constantly told 'This is how we measure success' then...

”

Post Doc

b. Research assessments shape our perspective of success

Personal successes changes over time...



PhD Students

Help patients
Make clinical impact

Make a difference!



Post Doc

Help PhD students grow
Build connections
Fulfill requirements

Survive



Researchers

Create new knowledge
Publish and fulfill criteria
Be a recognized expert

Strive

WARNING! OVERGENERALISATION!

b. Research assessments shape our perspective of success

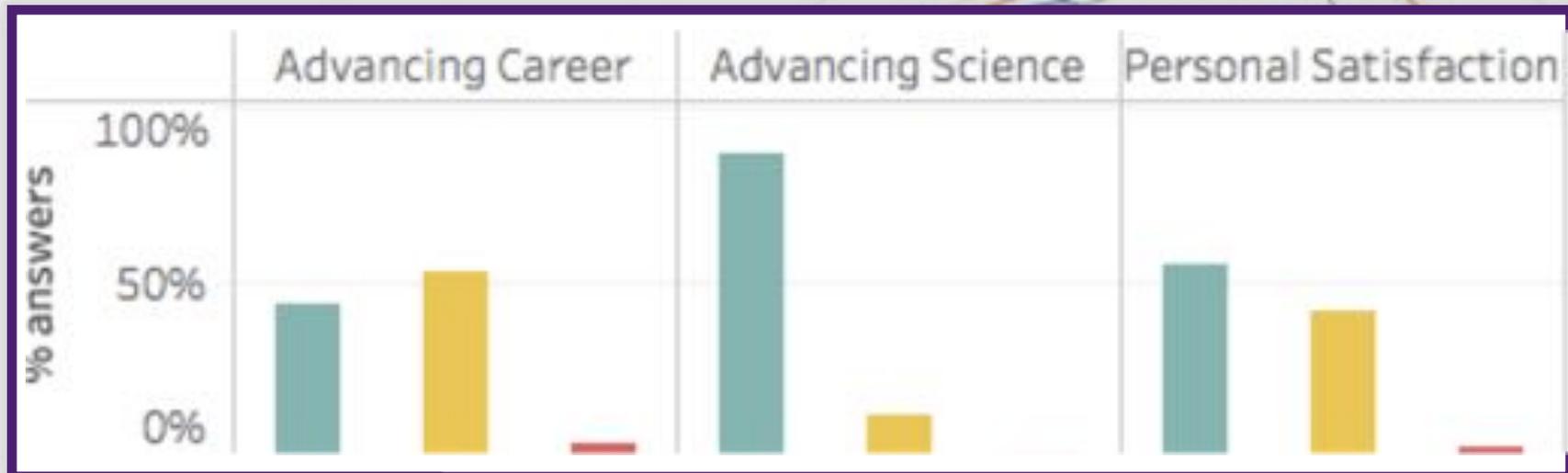
advancing
SCIENCE
mostly
PROCESSES



mostly **OUTPUT**
advancing
CAREER

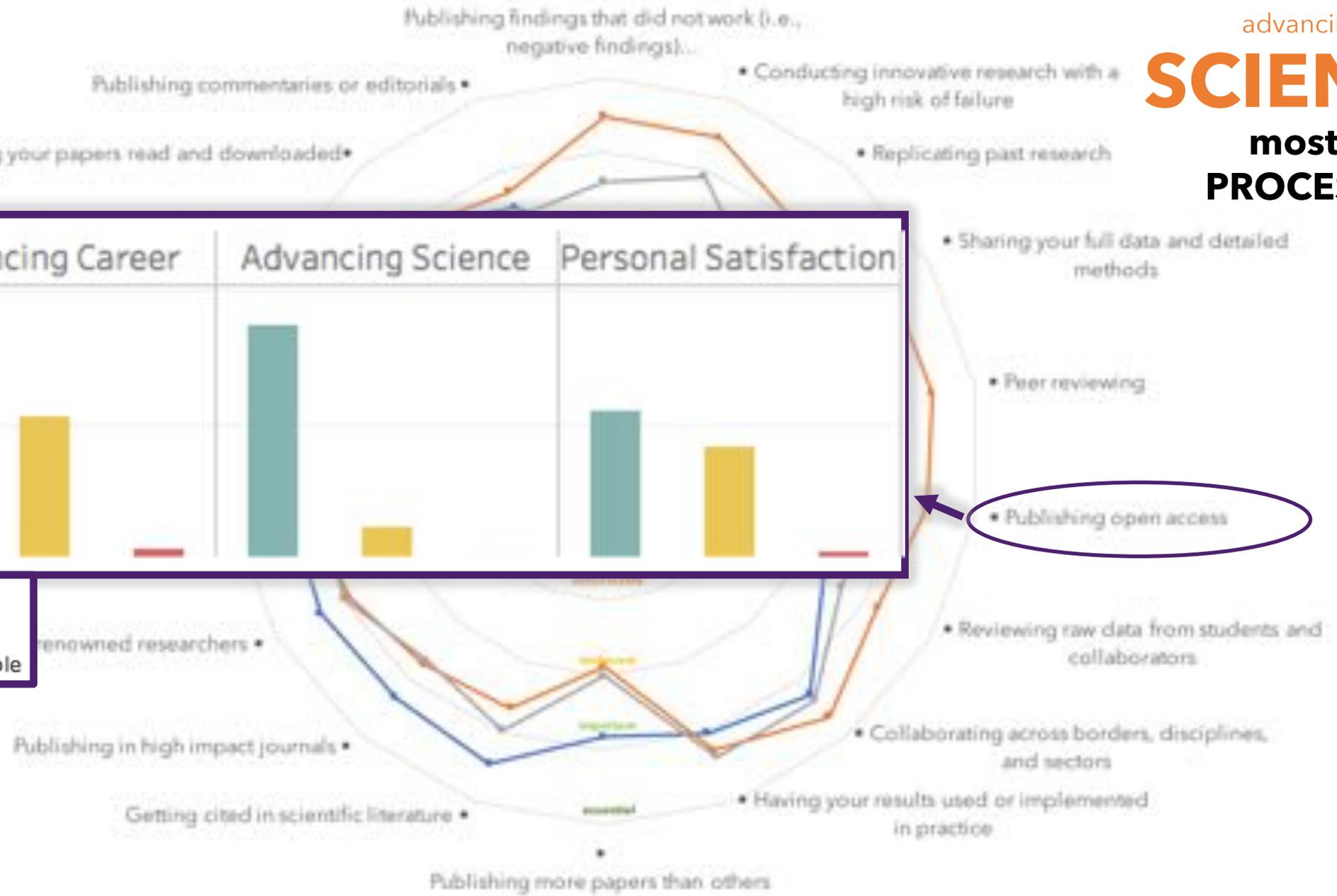
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advancing
SCIENCE
mostly
PROCESSES



essential or important
irrelevant
detrimental or unfavorable

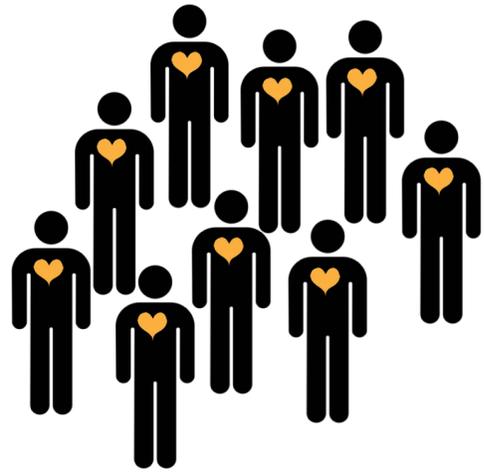
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advancing
CAREER



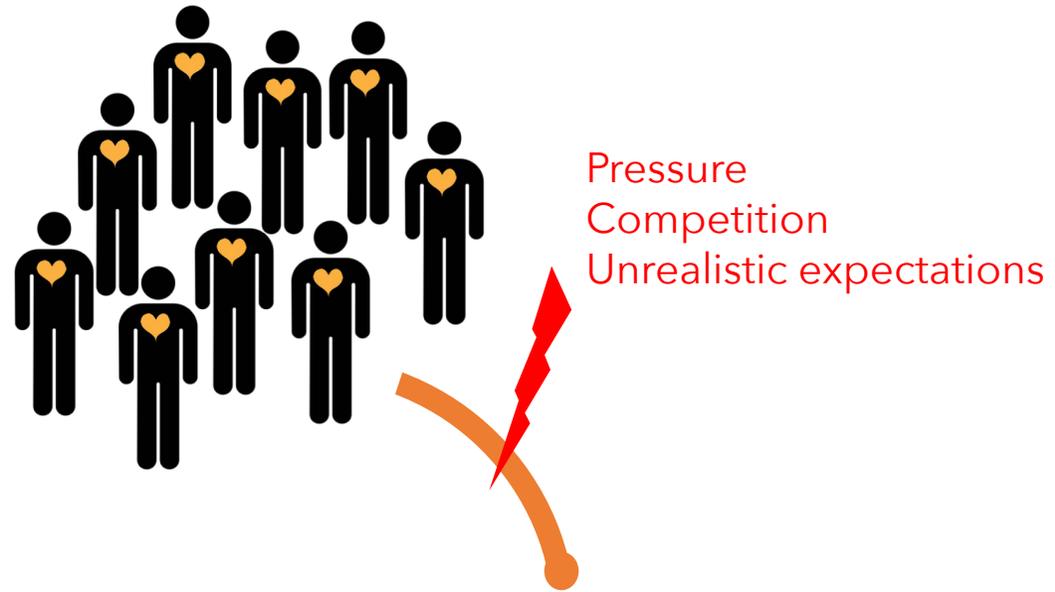
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- a. There is a clear issue in the way we assess scientists
- b. Research assessments shape our perspective of success
- c. The scientific cycle accentuates the problem

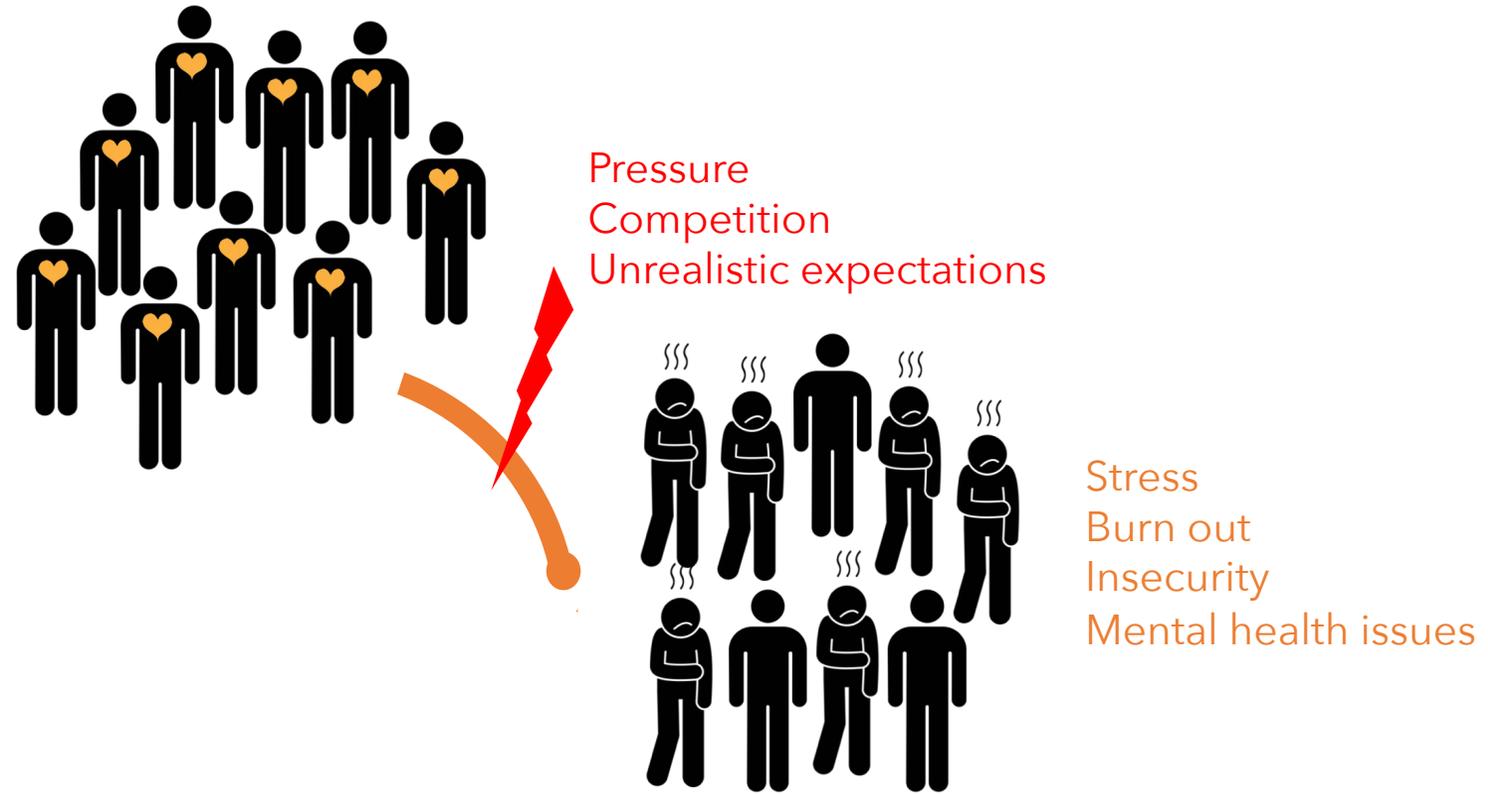
d. The scientific cycle accentuates the problem



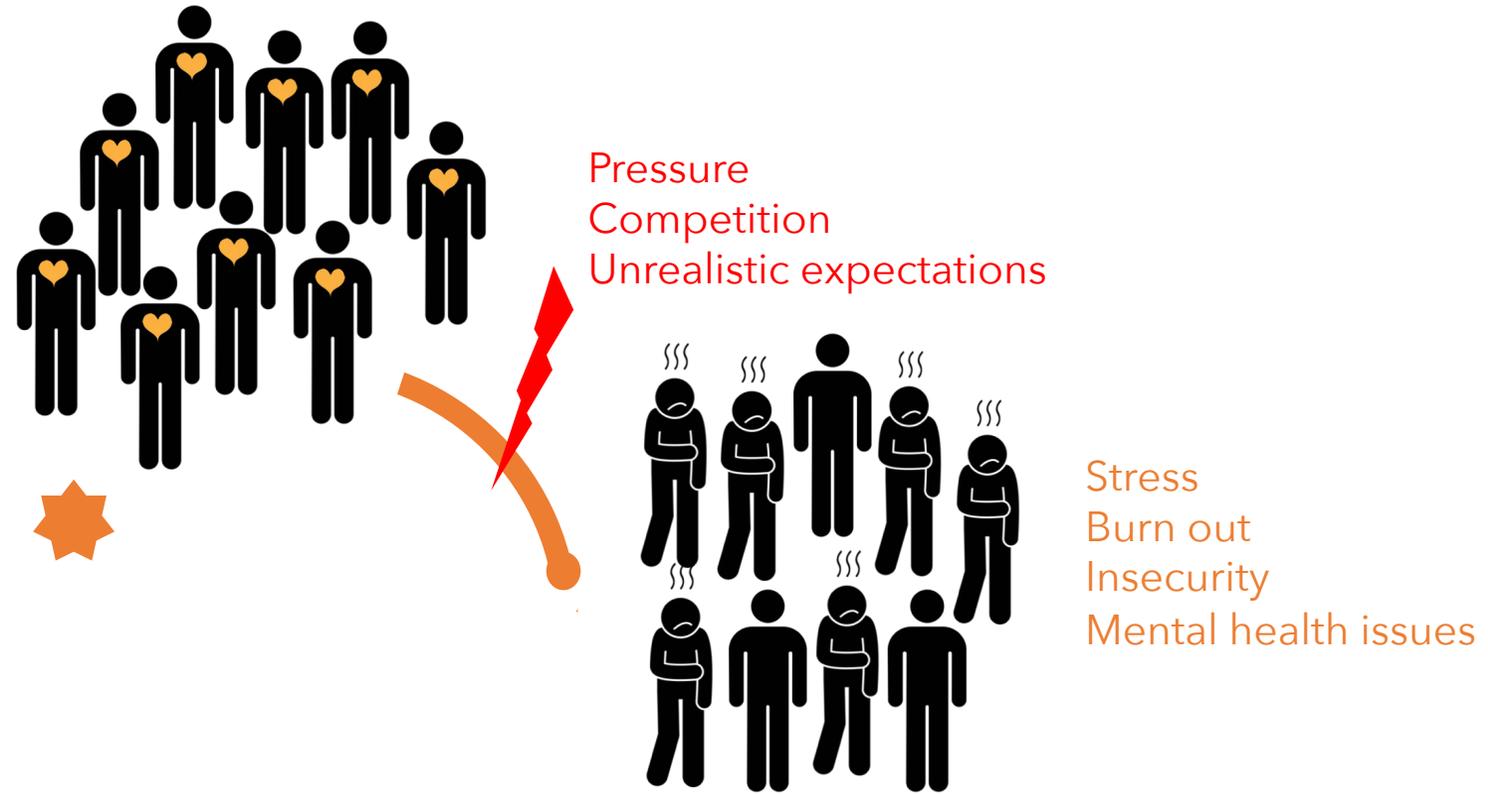
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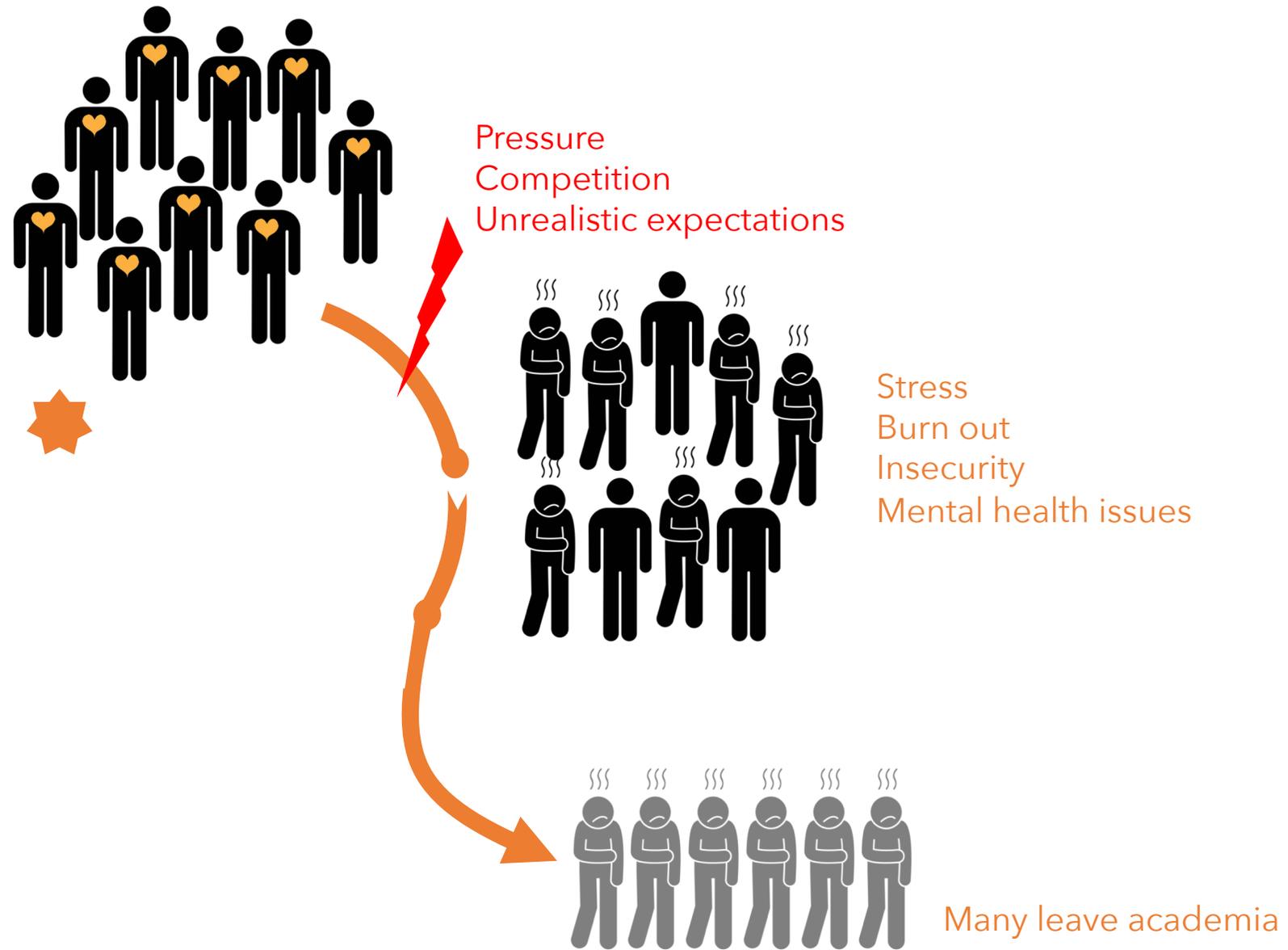
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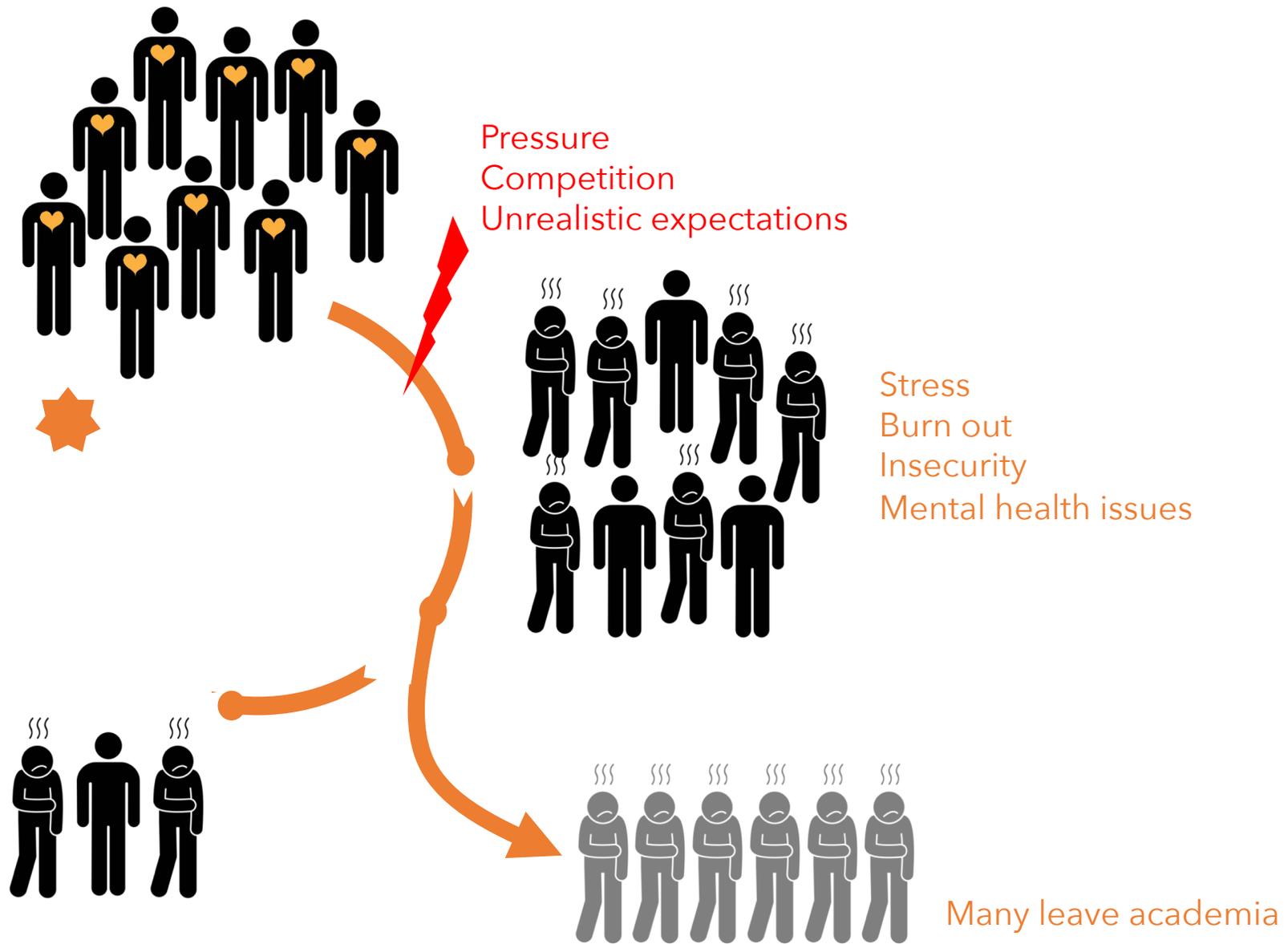
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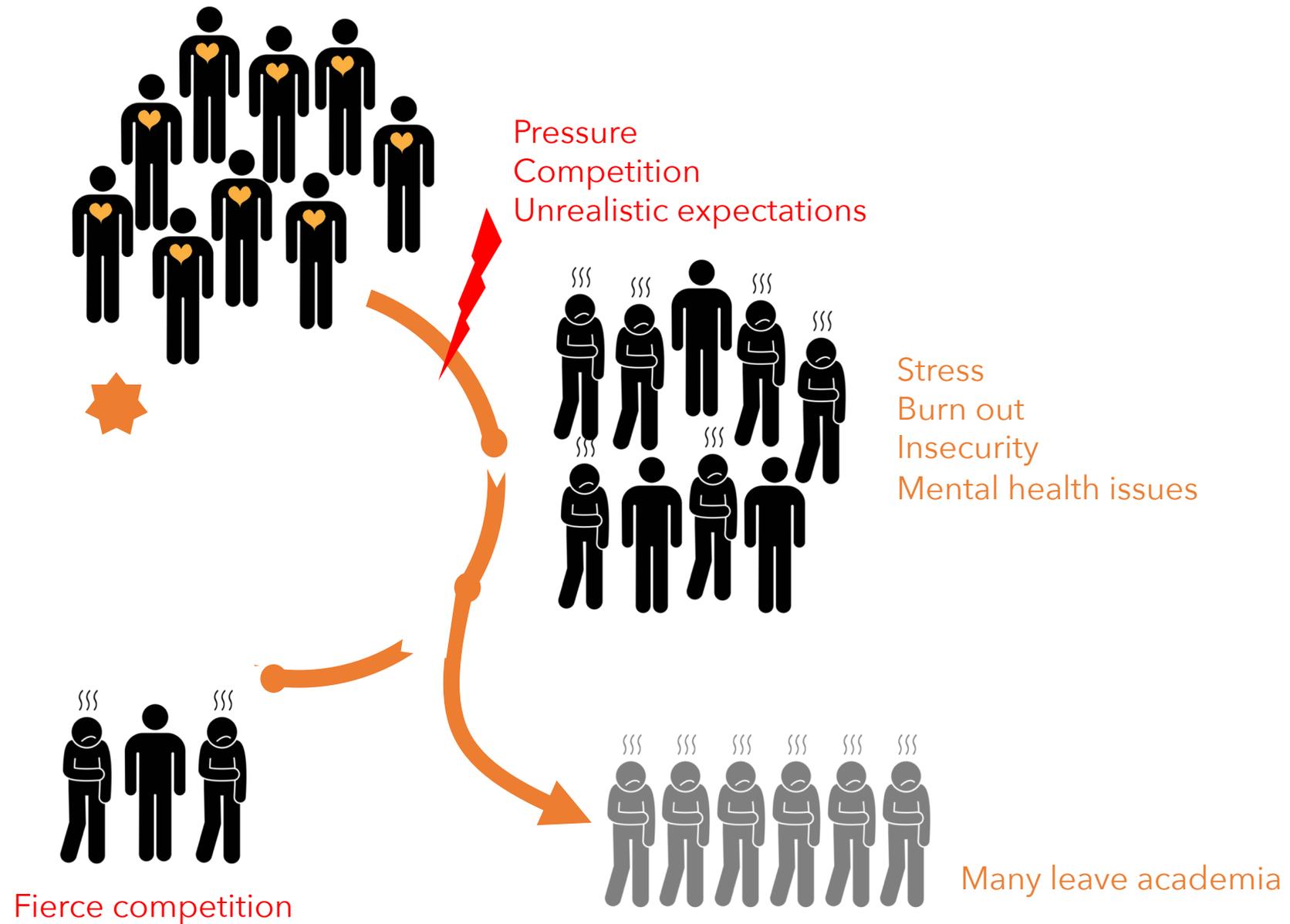
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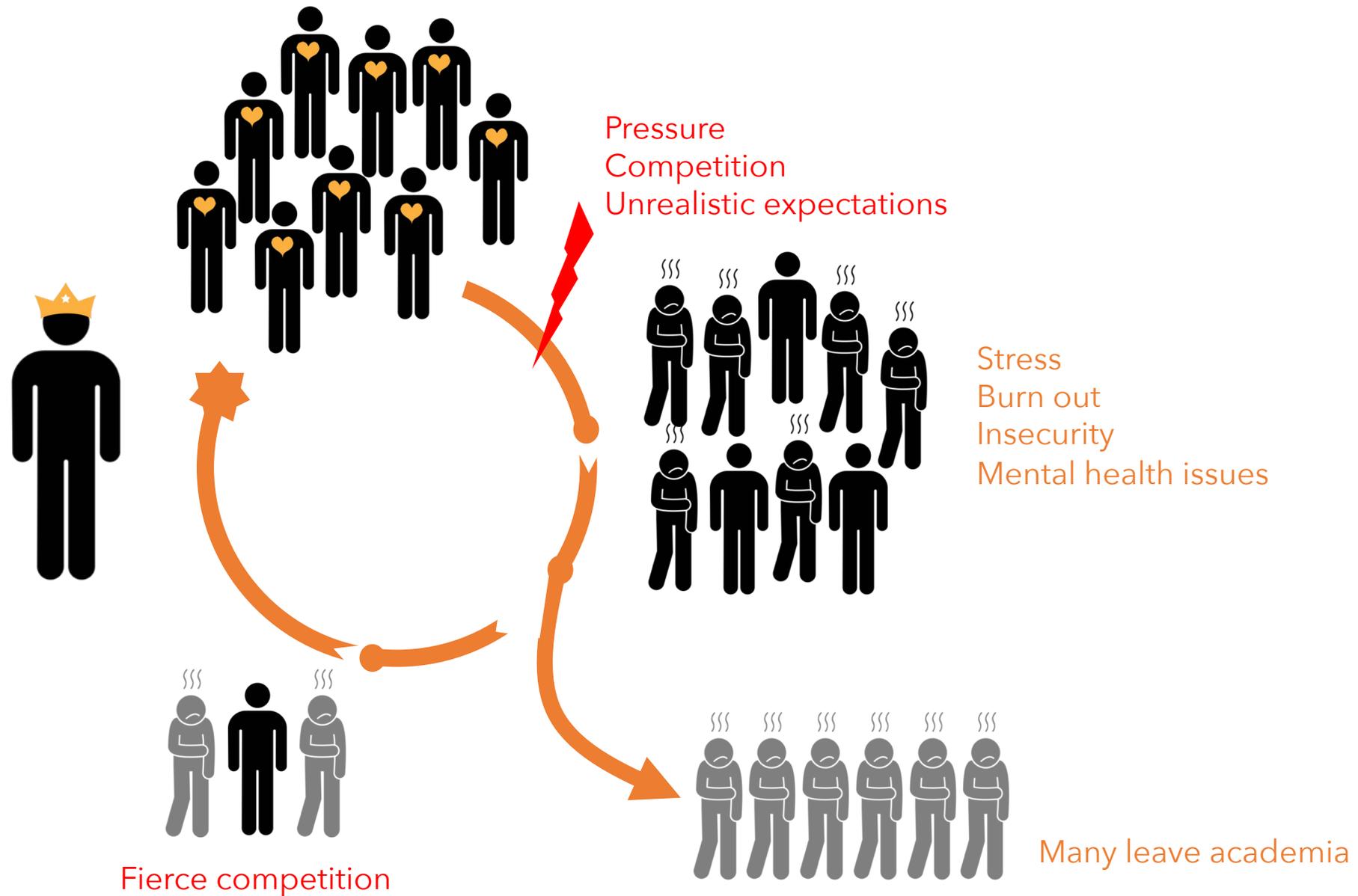
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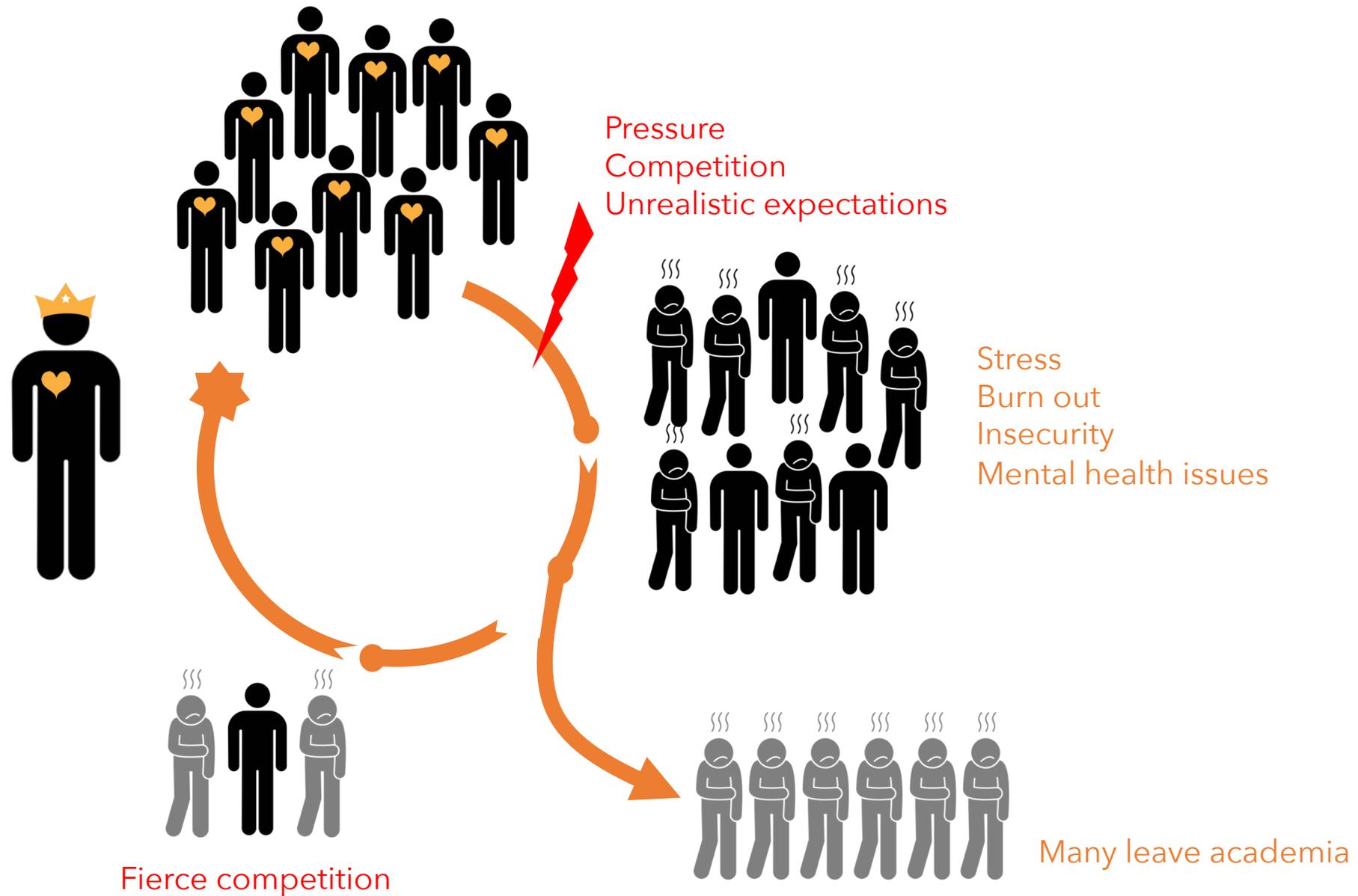
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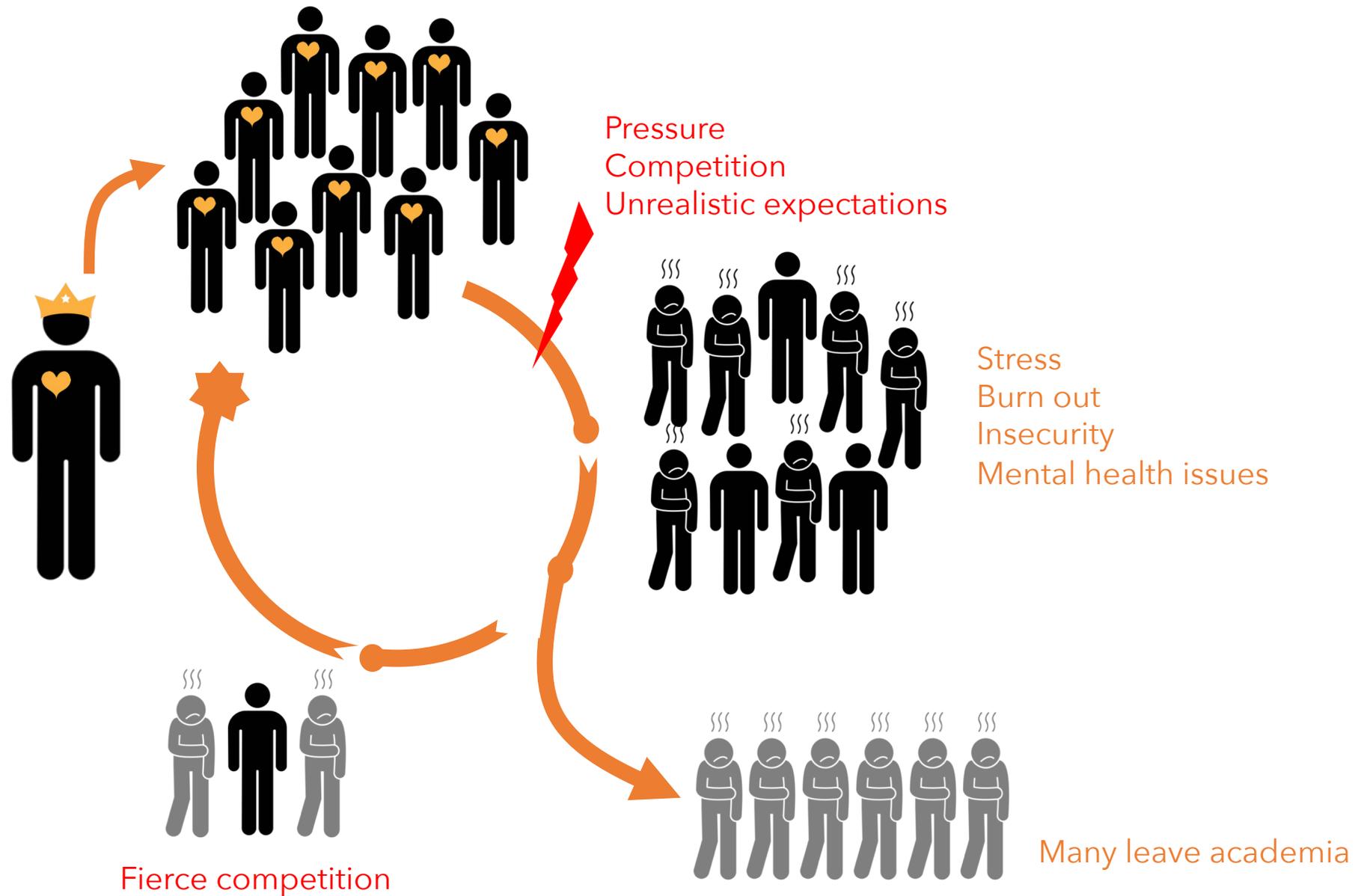
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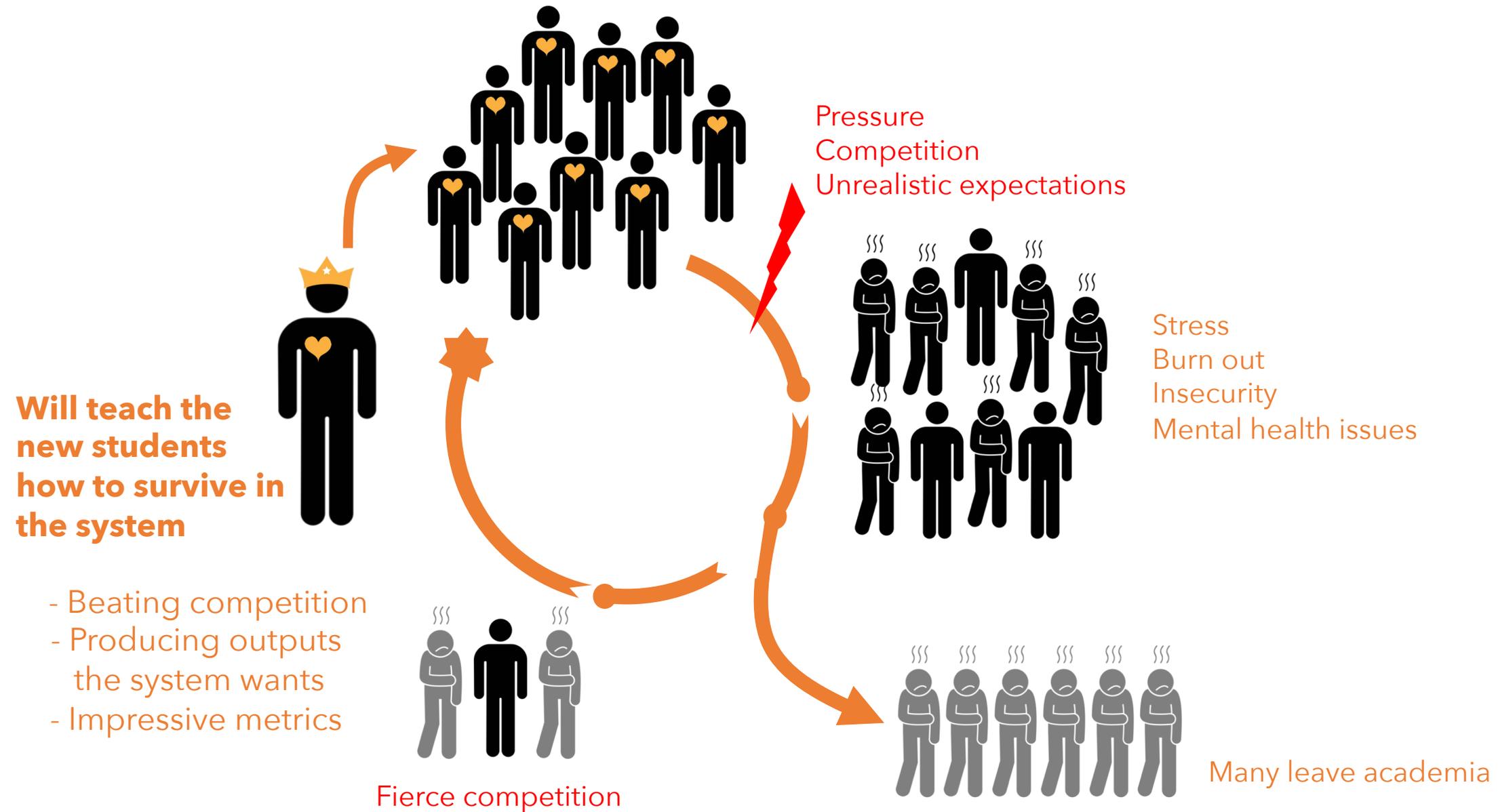
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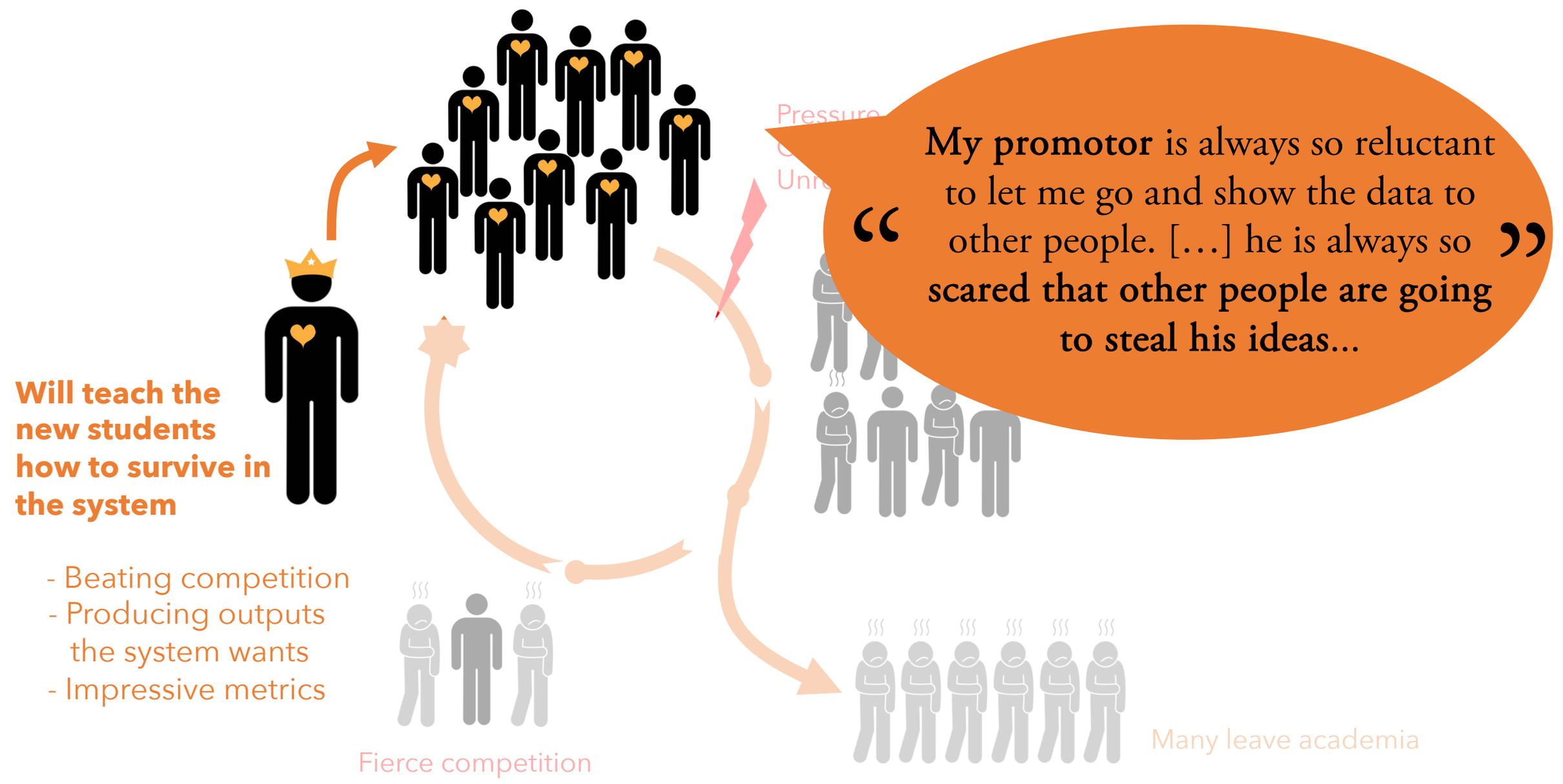
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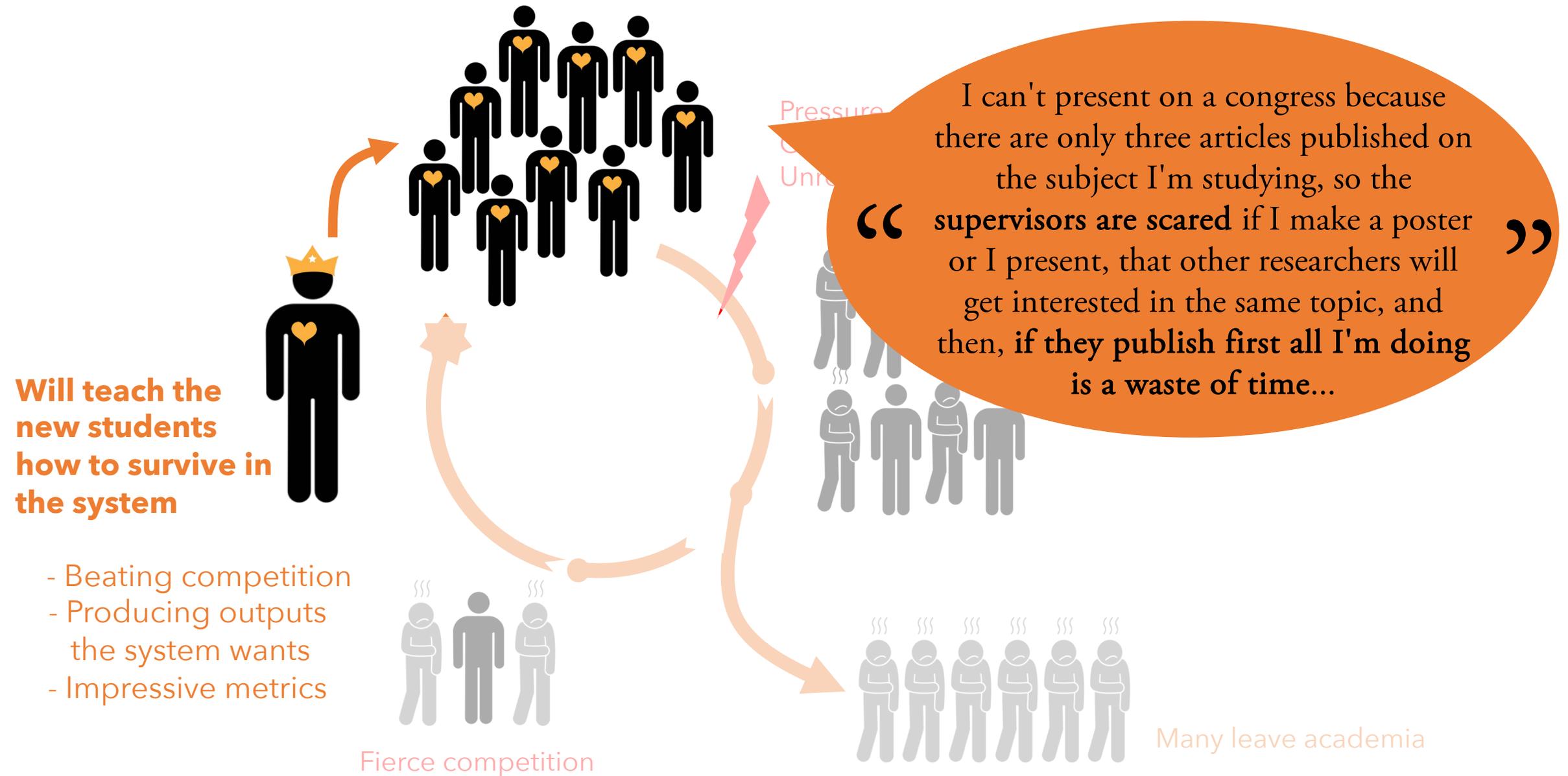
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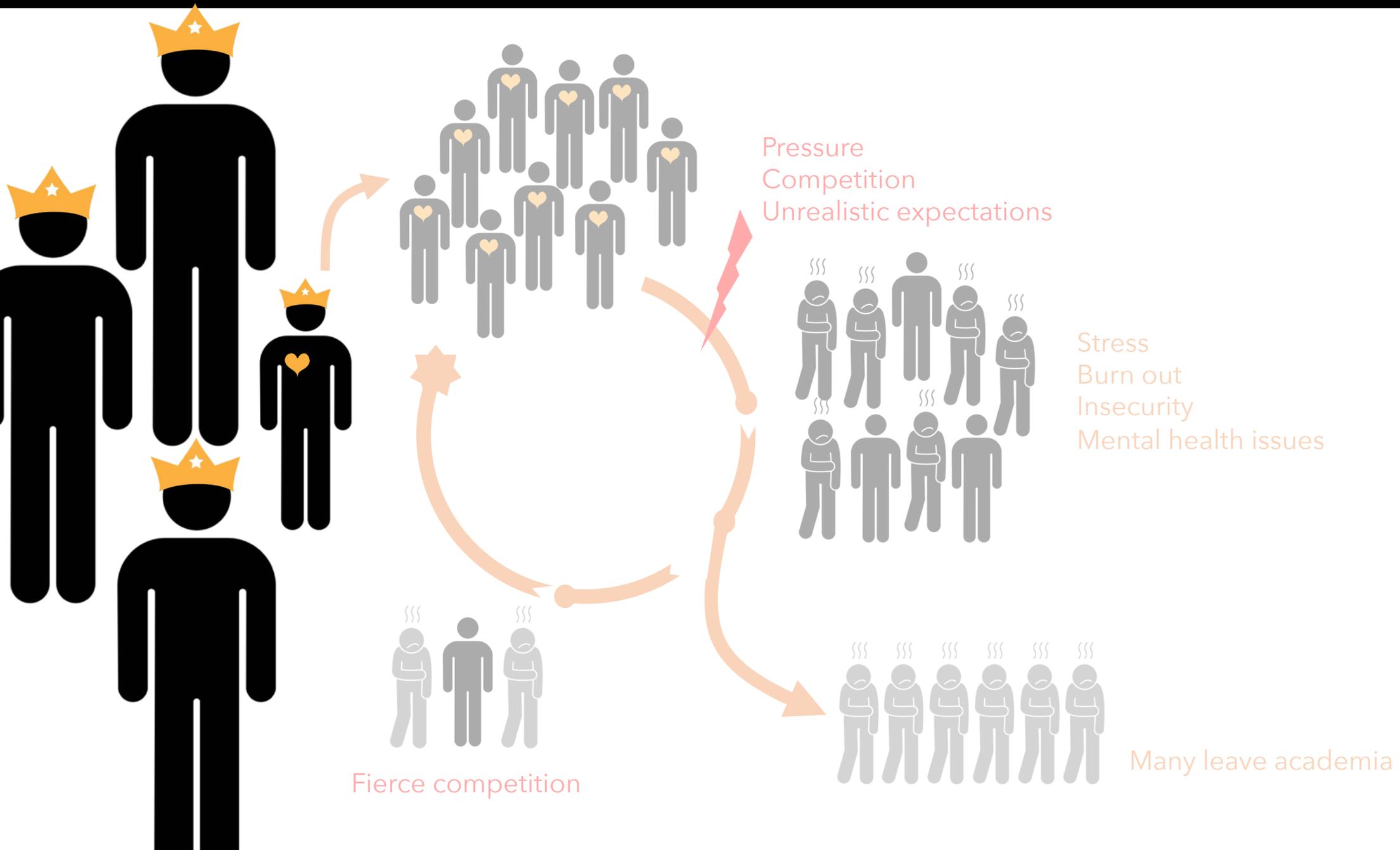
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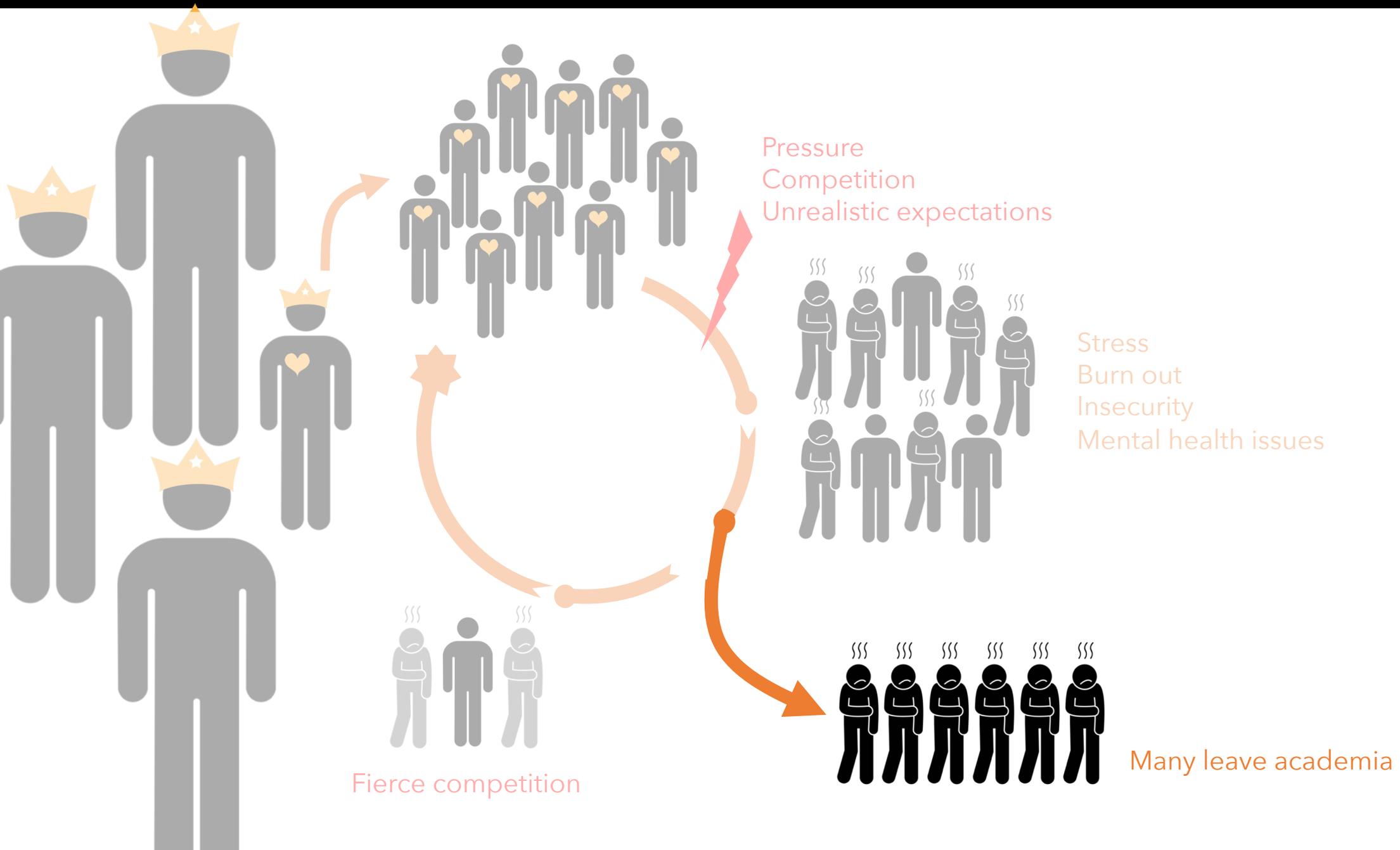
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1. What I learnt from my research

- a. There is a clear issue in the way we assess scientists
- b. Research assessments shape our perspective of success
- c. The scientific cycle accentuates the problem
- d. We all play a role in the problem

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3. Who is **responsible**?

d. We all play a role in the problem



PhD Students



Post Doc



Researchers



Lab Technicians



Ex-Researchers

Institution Leaders



Policy Makers



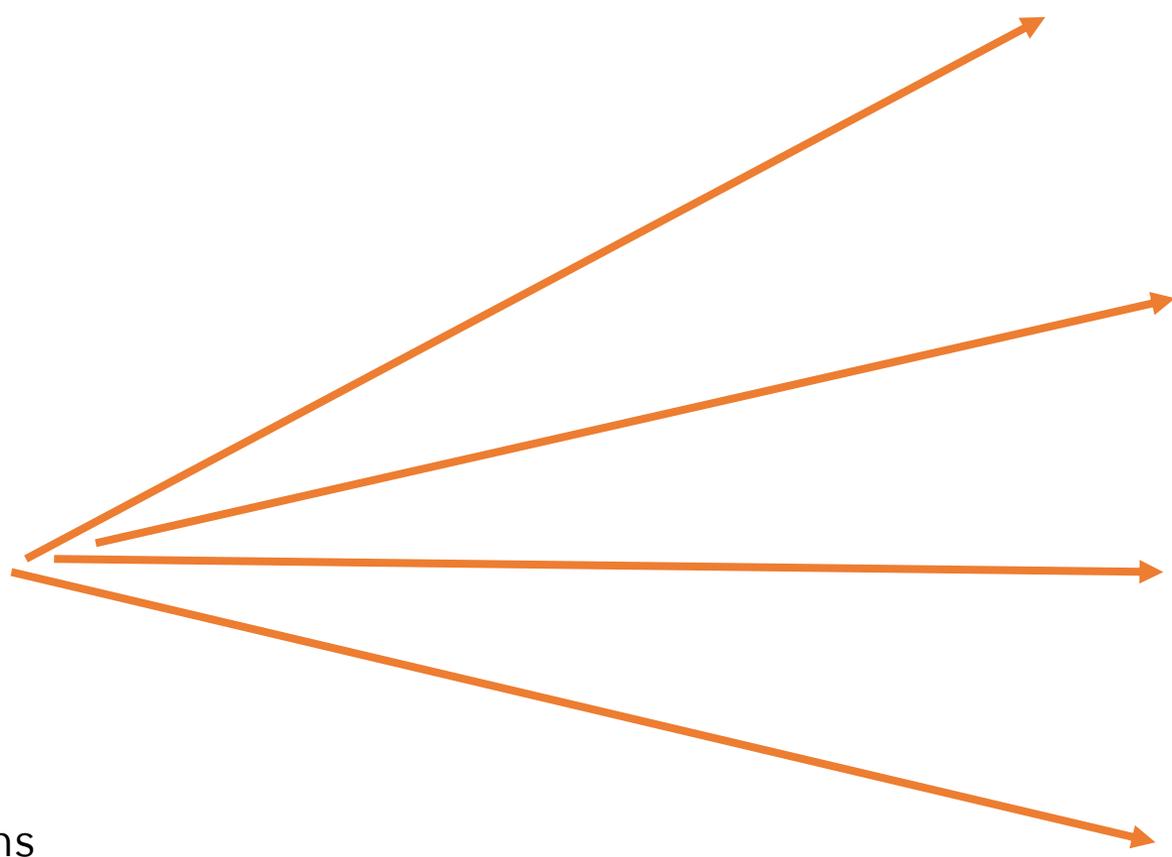
Research Funders



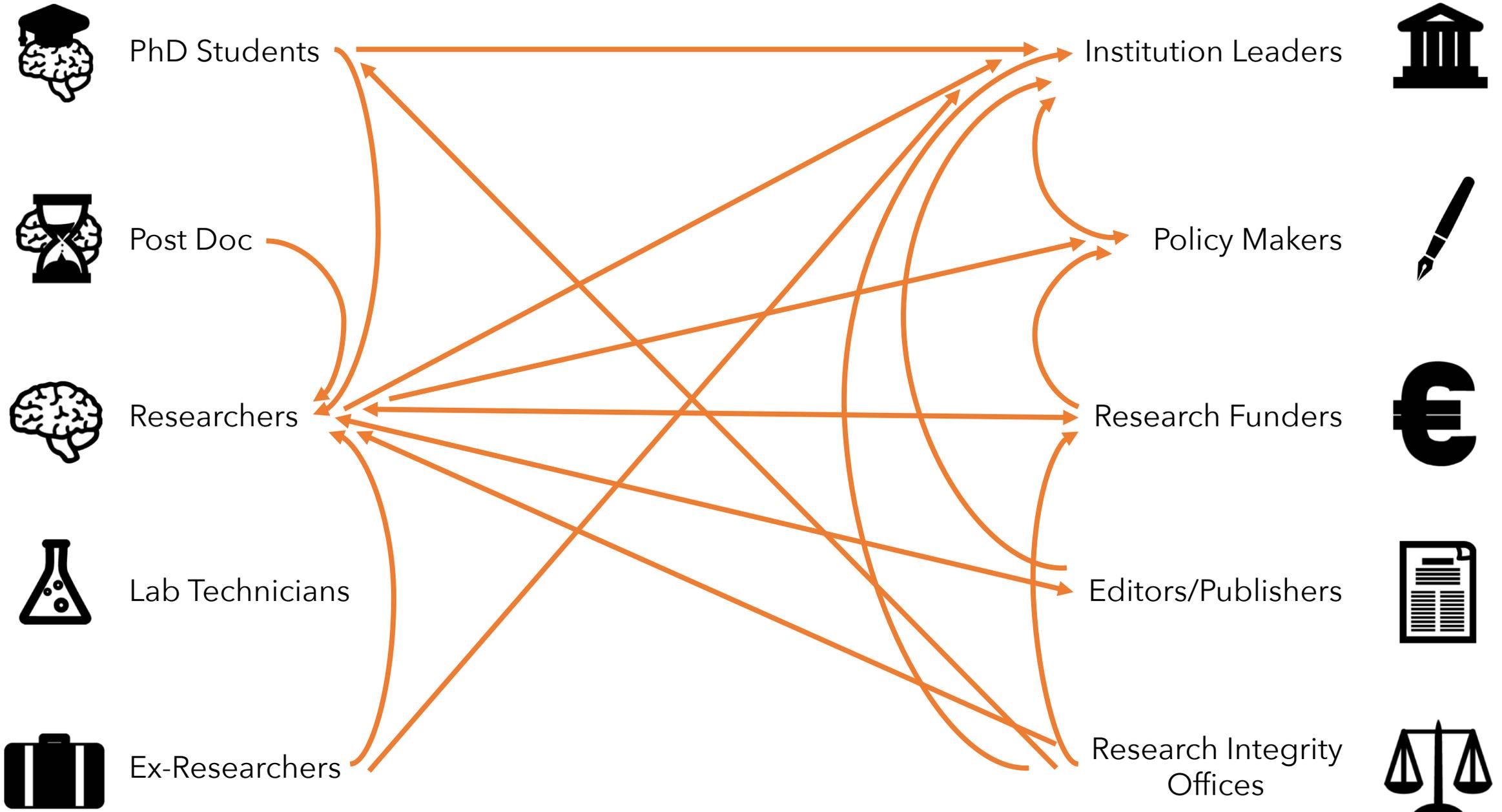
Editors/Publishers



Research Integrity
Offices



d. We all play a role in the problem



Key findings: Summary

Current research assessments **overvalue outputs and quantity** but ignore important research **processes and quality**.

Since permanent positions and resources are scarce, we are **constantly competing against one another**. Unfortunately, the **skills that make us successful and that allow us to survive in academia** are not necessarily the ones that ensure the **best science**.

We know we have a problem, but we tend to **point the finger at other actors and to lose trust in one another** instead of taking concrete action to change.

2. What is happening out there?

Expression of concern: 'We have a problem'

UNDER PRESSURE

YOUNG RESEARCHERS ARE HAVING TO FIGHT HARDER THAN PAST GENERATIONS FOR A SMALLER SHARE OF THE ACADEMIC PIE.

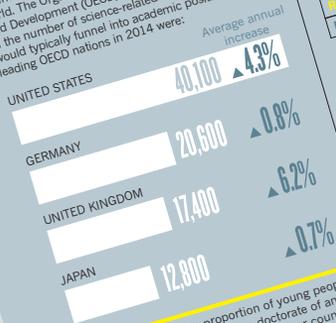
BY BRENDAN MAHER AND MIQUEL SUREDA ANFRES
DESIGN BY JASIEK KRZYSZTOFIK

Scientists and policymakers around the world increasingly worry about the plight of young researchers in academia, and for good reason. Competition for tenure-track

positions has surged, and some early-career researchers face tough odds in the quest for funding. As a result, many see lower pay-offs for their efforts in preparing and writing grant applications. Although everyone is under pressure, those just starting out seem to feel the impacts more acutely.

PHDS RISING, JOBS FLAT

The number of graduates with advanced science and engineering degrees has been rising around the world. The Organisation for Economic Co-operation and Development (OECD) has recorded an increase in the number of science-related doctorates that would typically funnel into academic positions. The leading OECD nations in 2014 were:



1.6%

3,000

The proportion of young people completing a doctorate of any kind in OECD member countries has doubled from **0.8%** less than two decades ago.

In most countries, however, the growth in academic jobs has not kept pace. US universities, for example, create only about **3,000** new full-time positions annually.

YOUNG SCIENTISTS
A Nature special issue
nature.com/youngscientists

FUNDING FALTERS

Government funding for research has plateaued or declined in many countries, and success rates for grants is now below 20% for some of the most important funders.

GRANT SUCCESS RATE (%)

GERMAN RESEARCH FOUNDATION
RESEARCH COUNCILS UK
EUROPEAN RESEARCH COUNCIL

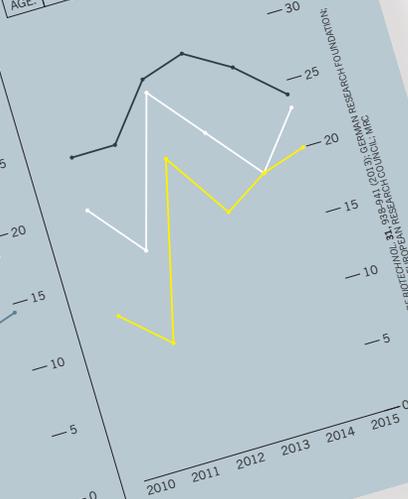


TOUGH COMPETITION

Early-career scientists struggle to compete for grants against researchers who have a better knowledge of the system, more academic and administrative resources and richer publication lists. The Medical Research Council (MRC) — part of Research Councils UK — for example, shows lower success rates for younger scientists.

SUCCESS RATE FOR MRC GRANTS (%)

AGE: 20-29 40-49 >50



SOURCES: OECD; NATURE; MRC; EUROPEAN RESEARCH COUNCIL; MRC; RESEARCH COUNCILS UK; NIH; GERMAN RESEARCH FOUNDATION

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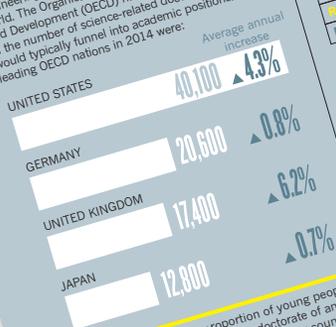
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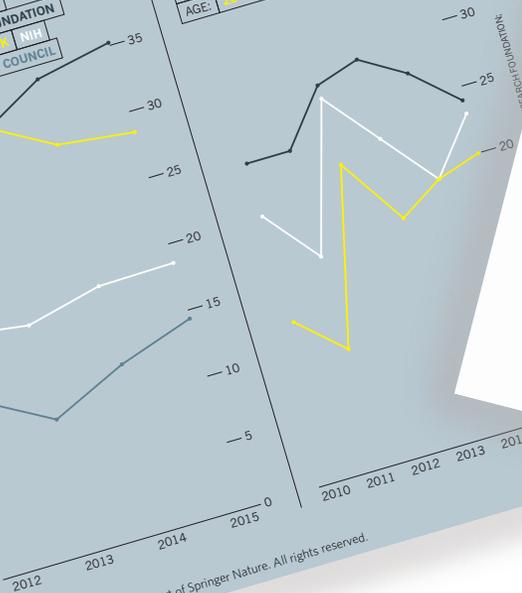
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Fewer numbers, better science

Scientific quality is hard to define, and numbers are easy to look at. But bibliometrics are warping science — encouraging quantity over quality. Leaders at two research institutions describe how they do things differently.

REDEFINE EXCELLENCE

Fix incentives to fix science

Rince Benedictus and Frank Miedema

An obsession with metrics pervades science. Our institution, the University Medical Center Utrecht in the Netherlands, is not exempt. On our website, we proudly declare that we

publish about 2,500 peer-reviewed scientific publications per year, with higher than average citation rates. A few years ago, an evaluation committee spent hours discussing which of several faculty members to promote, only to settle on the two who had already been awarded particularly prestigious grants. Meanwhile, faculty members who spent time crafting policy advice had a hard time explaining how this affected clinical output, even when it Publications that directly influenced patient care were weighed no higher in evaluations than any other paper, and

FIRST TO SUCCEED

Two simple changes could make a big difference.

Create a 'pivot narrative'. Funding applications should give researchers who are in the midst of a shift in opportunity to describe their rationale. The significance and potential of the proposed work should be assessed alongside the researcher's proven abilities for research in other fields. Alicia, for example, could explain how her work with young people sensitized her to a growing need for evidence-based interventions to treat trauma in children fleeing conflict.

"Innovation will be stifled by failing to invest in the best emerging scientists."

A pivot narrative would also explain dry spells and the lack of a track record in the proposed area. The simple step of adding a test box to an application form could expand scientists' willingness to explore, and help assessors to support such exploration.

Revise peer review. There is little to no emphasis on peer-review training. Equipping scientists with skills for more nuanced appraisal will help them to consider varied attributes, particularly how to address complex societal challenges and to evaluate broader interdisciplinary questions. This could eventually change institutional cultures.

The greatest risk is that innovation will be stifled by failing to invest in the best emerging scientists, who are approaching the peak of their creativity.

Tobias Oeri is a public-health physician scientist at the University of Cape Town, Cape Town, South Africa. Fabio Sciarrino is associate professor of physics at the Sapienza University of Rome, and junior fellow at the International School for Advanced Studies Sapienza, Rome, Italy. Gerardo Adesso is professor of mathematical physics at the University of Nottingham, Nottingham, UK. Rob Knight is professor of parasitology and of computer science and engineering at the University of California San Diego, La Jolla, California, USA. e-mail: tobias.oeri@uct.ac.za

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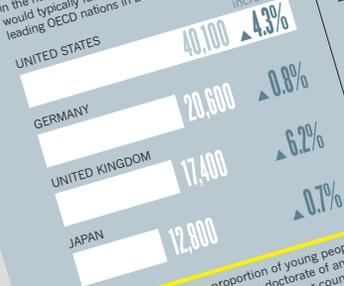
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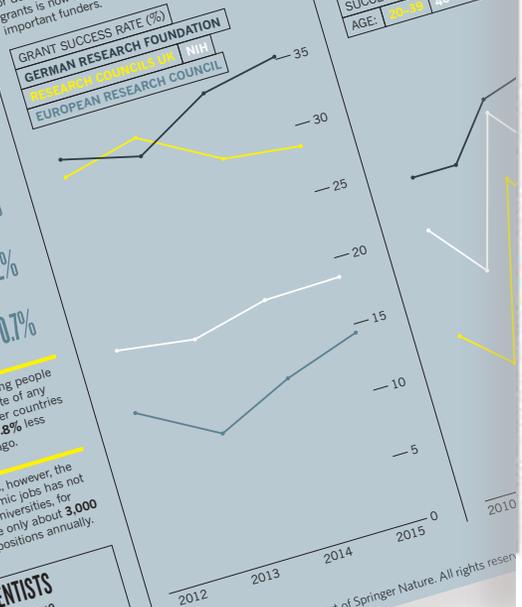
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AGE	20-29	30-39	40-49	>50
SUCCESS RATE FOR MRC GRANTS	~10%	~15%	~20%	~25%

Transparency, openness, and reproducibility are readily recognized as vital features of science (1, 2). When asked, most scientists embrace these features as disciplinary norms and values (3). Therefore, one might expect that these valued features would be routine in daily practice. Yet, a growing body of evidence suggests that this is not the case (4-6).

A likely culprit for this disconnect is an academic reward system that does not sufficiently incentivize open practices (7). In the present reward system, emphasis on innovation may undermine practices that support verifications. Too often, publication requirements (whether actual or perceived) fail to encourage transparent, open, and reproducible science (2, 4, 8, 9). For example, in a transparent science, both null results and statistically significant results are made available and help others more accurately assess the evidence base for a phenomenon. In the present culture, however, null results are published less frequently than statistically significant results (10) and are, therefore, more likely inaccessible and lost in the 'file drawer' (11). The situation is a classic collective action problem. Many individual researchers lack

SCIENTIFIC STANDARDS

Promoting an open research culture

Author guidelines for journals could help to promote transparency, openness, and reproducibility

- By B. A. Nosek, G. Alber, G. C. Banks, D. Borsook, S. D. Bowman, S. J. Breckler, S. Berk, C. D. Chambers, G. Chin, G. Christensen, M. Contostabille, A. Daloz, E. Eick, J. Freese, R. Glazer, D. Goroff, D. P. Green, B. Heise, M. Humphreys, J. Ishiyama, D. Karlun, A. Krant, A. Lapla, P. Mabry, T. Madison, N. Malhotra, E. Mayo-Wilson, M. McNitt, E. Mignot, K. Levy Paluck, U. Simonsohn, C. Soderberg, B. A. Spellman, J. Tarrino, G. Vandenberg, S. Yastik, E. J. Wagenmakers, R. Wilson, T. Yarkoni



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Health physician of Cape Africa, Fabio professor of physics of Rome, and national School, Rome, professor of University of Utrecht, Rince and working at in Diego.

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UNDER RECOGNITION

A personal take on science and society

LSE Impact Blog

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Better, fairer, more meaningful research evaluation – in seven hashtags

Considering the future of research assessment, Elizabeth Gadd outlines how she believes research evaluation could be made better, fairer, and more meaningful. The resulting seven guiding principles, neatly framed as hashtags, range from understanding our responsibilities to researchers as people, through to ensuring our evaluations are a more formative process, offering valuable, constructive feedback.

Imperial College recently held an event called "Mapping the Future of Research Assessment". It was a chance for Imperial College staff to consider how becoming a **DCRA** (Declaration on Research Assessment) signatory would affect their approach to research evaluation and I was kindly invited to speak more broadly about the concept of responsible metrics. In putting together my talk, I found myself trying to articulate what guided me when I sought to do metrics responsibly, as well as how I'd like to see the world of research evaluation improve. What resulted was seven high-level concepts – principles, if you like – that, I believe, would make research evaluation better, fairer, and more meaningful. And as I spend much time on Twitter it seemed only natural to frame them in hashtags. A **recording** of the event that follows is a transcript (almost) of that.

They have to start by remembering who we are responsible for and to do their best work, to save and enhance the world for the opposite is happening. People are being destroyed, due to crazy workloads and stress. The world is being destroyed. The world is being destroyed. The world is being destroyed.

SHARE 12K

Email Address

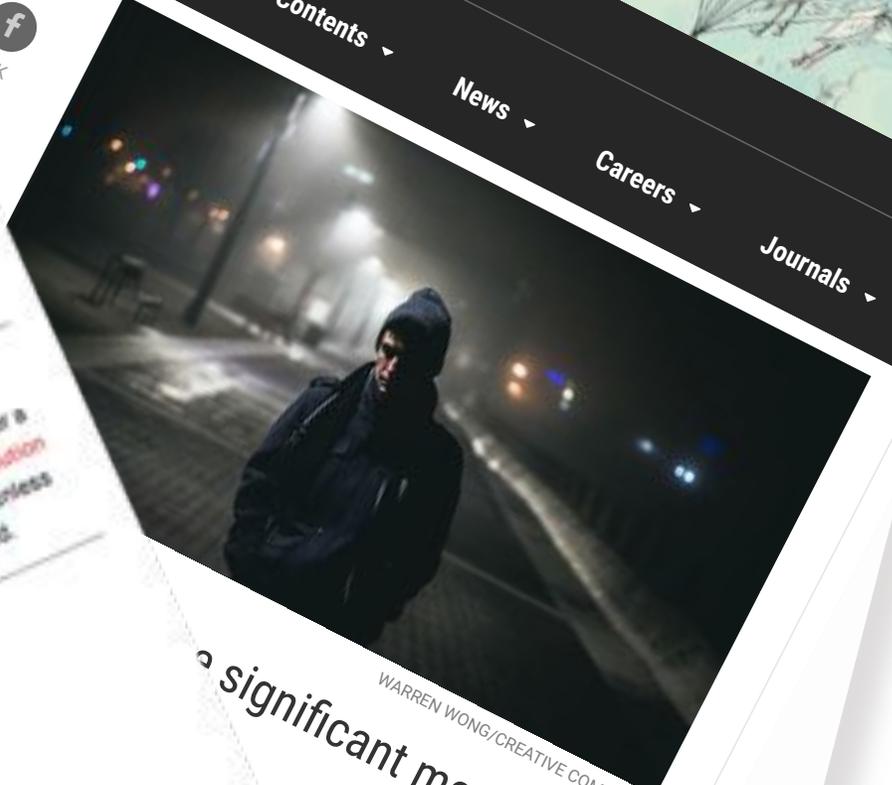
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WARREN WONG/CREATIVE COMMONS

A significant mental health issue

... or recent study of 3659 students studying the mental health issues that are...

... than

... committee on the... while, facing policy... how this... the country... no higher in paper, and

NATURE | 422

UNDER

A personal t

LSE The London School of Economics and Political Science

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Better, fairer, more meaningful hashtags

Considering the future of research evaluation, guiding principles to researchers and offering value

Imperial College recently announced a new (Self-Assessment) signatory to speak more broadly to the world of research – that, I believe, is much

All news and views Media office



Opinion | 10 September 2019

Why we need to reimagine how we do research



Jeremy Farrar
Director
Wellcome

- [Diversity and inclusion](#)
- [Grant funding](#)
- [Open access](#)
- [Research culture](#)

The emphasis on excellence in the research system is stifling diverse thinking and positive behaviours. As a community we can rethink our approach to research culture to achieve excellence in all we do.



Credit: Wellcome

If we aren't working in a culture that's creative, inclusive and honest, then we're not getting the best research.

The UK's research sector is powering ahead, with our world-leading universities

News ▾ Careers ▾ Journals ▾

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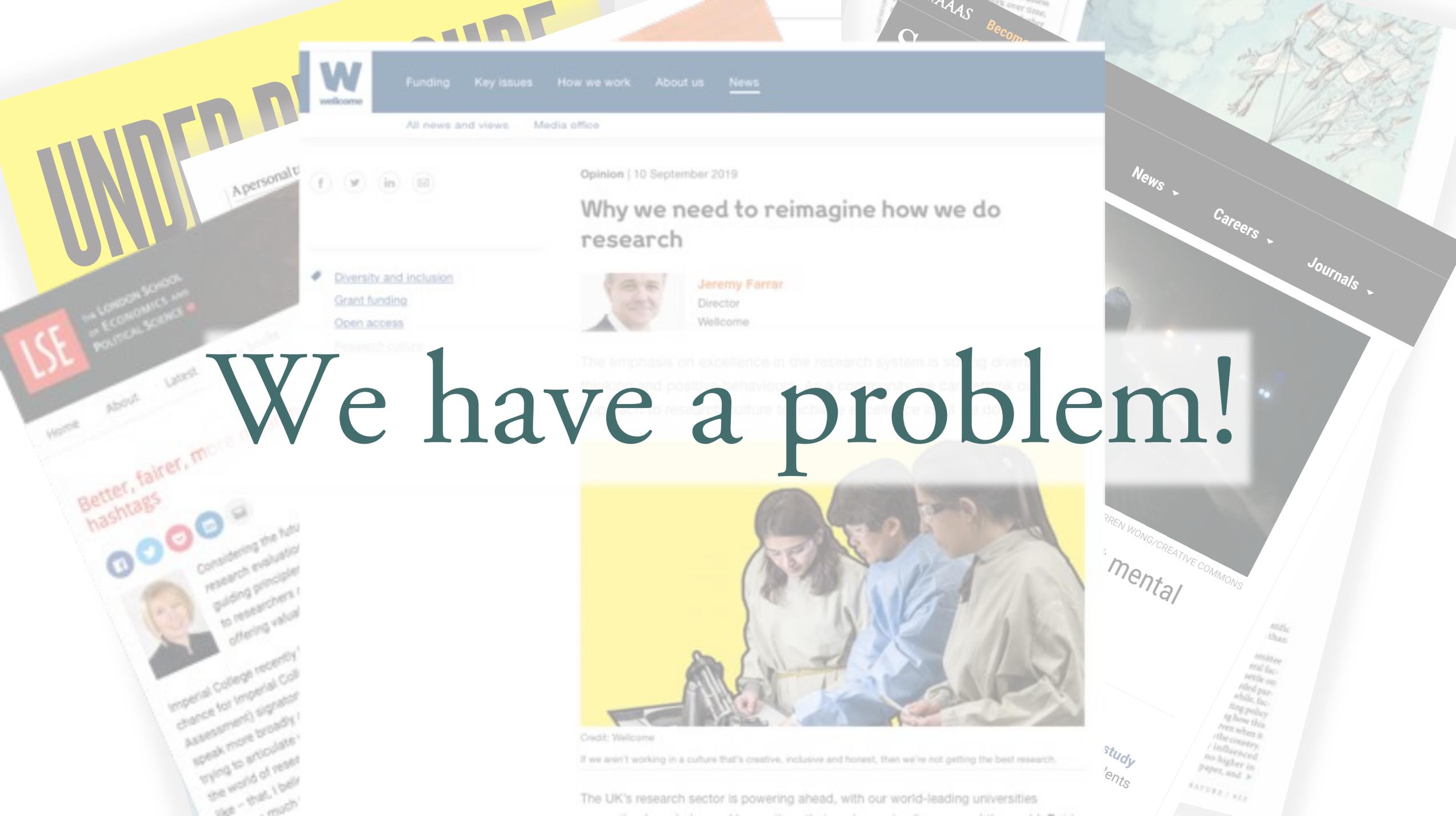
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NATURE | 422

We have a problem!



Mobilisation

SLOW - SCIENCE.org

THE SLOW SCIENCE MANIFESTO

We are scientists. We don't blog. We don't twitter. We take our time.

Don't get us wrong—we do say *yes* to the accelerated science of the early 21st century. We say yes to the constant flow of peer-review journal publications and their impact; we say yes to science blogs and media & PR necessities; we say yes to increasing specialization and diversification in all disciplines. We also say yes to research feeding back into health care and future prosperity. All of us are in this game, too.

However, we maintain that this cannot be all. Science needs time to think. Science needs time to read, and time to fail. Science does not always know what it might be at right now. Science develops unsteadily, with jerky moves and unpredictable leaps forward—at the same time, however, it creeps about on a very slow time scale, for which there must be room and to which justice must be done.

Slow science was pretty much the only science conceivable for hundreds of years; today, we argue, it deserves revival and needs protection. Society should give scientists the time they need, but more importantly, scientists must *take* their time.

We do need time to think. We do need time to digest. We do need time to misunderstand each other, especially when fostering lost dialogue between humanities and natural sciences. We cannot continuously tell you what our science means; what it will be good for; because we simply don't know yet. Science needs time.

—Bear with us, while we think.

THE SLOW SCIENCE ACADEMY

Support the Academy and express your sympathy on [Facebook](#). You can also [download the slow science manifesto](#) and information as a 2-page pdf here and post it round your institutions. Thank you.

SLOW - SCIENCE.org

THE SLOW SCIENCE MANIFESTO

We are scientists. We don't blog. We don't twitter. We take our time.

Don't get us wrong—we do say *yes* to the accelerated science century. We say *yes* to the constant flow of peer-review journals; we say *yes* to science blogs and media & PR because of their impact; we say *yes* to science blogs and media & PR because of increasing specialization and diversification in all disciplines; we say *yes* to research feeding back into health care and future prosperity game, too.

However, we maintain that this cannot be all. Science needs time to read, and time to fail. Science does not always move forward at right now. Science develops unsteadily, with jerky movements—forward—at the same time, however, it creeps about on which there must be room and to which justice must be done.

Slow science was pretty much the only science concept today, we argue, it deserves revival and needs protection. We give scientists the time they need, but more importantly, we give them the space to think.

We do need time to think. We do need time to do research in the physical and natural sciences. We cannot continuously rush to publish what it will be good for; because we simply don't know.

—Bear with us, while we think.

THE SLOW SCIENCE ACADEMY

Support the Academy and express your support by [downloading the slow science manifesto](#) and introducing it to your post it round your institutions. Thank you.

Charte de la désexcellence

Charte de la désexcellence – Version 1.1 – Janvier 2014

Pourquoi la « désexcellence » ?

« L'Excellence » est partout en ce début de 21^e siècle. Dans l'industrie, l'alimentation, le sport, à la télévision et jusque dans l'intimité de nos foyers. Elle exprime le dépassement de soi et des autres, l'accroissement continu des performances, la réussite dans un monde que l'on dit « en profonde mutation », où seuls les plus forts seraient appelés à survivre. Récupérée par la pensée néolibérale et managériale depuis les années 1980, « l'Excellence » a une dimension incantatoire qui peut prêter à sourire. Il y a loin, entre les slogans des nouveaux managers et la réalité que ces slogans sont censés décrire ou produire. Mais le sourire disparaît vite lorsqu'on mesure les effets concrets d'une gestion humaine fondée sur « l'Excellence » : hyper-compétition, dévalorisation des savoirs construits sur l'expérience, contenus, évaluations standardisées et répétées, avec, comme corollaires, le risque d'une perte d'estime de soi, d'une démotivation et d'une diminution effective de la qualité du travail fourni. Touché plus tardivement que d'autres secteurs, le monde universitaire a adopté l'idéologie de « l'Excellence » avec la ferveur des nouveaux convertis. Dans la foulée des accords de Bologne, qui consacraient principalement la mise en compétition des universités européennes, il semblait crucial de soigner son image de marque, de transformer son institution en machine de guerre capable d'absorber les meilleurs crédits, les meilleurs enseignants-chercheurs, le plus grand nombre d'étudiants, et de renforcer son positionnement sur les scènes nationales et internationales. Dans un contexte de pénurie et de crise, le souci d'un retour rapide sur investissements contribuait aussi à systématiser une gestion par indicateurs dans les domaines de la recherche et de l'enseignement. Mais après plus d'une décennie de réforme ininterrompue, nous sommes confrontés à une détérioration et non une amélioration de nos univers de travail. Bien sûr, nous avons accru nos capacités de communication. Bien sûr, nous sommes mis à produire ces « indicateurs d'Excellence » qui garantissent un bon positionnement dans les évaluations et les classements. Mais de telles aptitudes ne disent rien de la qualité de notre travail. Pire, elles masquent une baisse fréquente de cette qualité : formatage des champs et des objets de recherche, multiplication des résultats invalides et des fraudes, manque de recul et d'esprit critique, construction d'une relation marchande à l'apprentissage, substitution des savoirs instrumentaux aux connaissances et à la réflexion, ...etc. Derrière son décor de carton-pâte, cette politique de « l'Excellence » mène en fait à un résultat exactement inverse à celui qu'elle prétend promouvoir. C'est sur ce constat que s'est émergée la notion de « désexcellence ». Loin d'inciter à la paresse ou la médiocrité, elle invite à se préoccuper de la *qualité effective* du travail, qui porte à la fois sur la nature de ce qui est accompli et sur la satisfaction que l'on en retire. Selon cette perspective inspirée du travail artisanal, la qualité se cultive en conciliant l'acte et le sens, ce que remet en cause la gestion actuelle des universités. L'appel à la « désexcellence » ne revient pas à regretter un « âge d'or » —qui n'a d'ailleurs jamais existé— mais à s'opposer par nos pratiques au dévoiement actuel des universités.



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SCIENCE MANIFESTO

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Online Communities
PhD groups
Blogs
etc. etc. etc.

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More formal recommendations

San Francisco Declaration on Research Assessment



There is a pressing need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties. To address this issue, a group of editors and publishers of scholarly journals met during the Annual Meeting of The American Society for Cell Biology (ASCB) in San Francisco, CA, on December 16, 2012. The group developed a set of recommendations, referred to as the San Francisco Declaration on Research Assessment. We invite interested parties across all scientific disciplines to indicate their support by adding their names to this Declaration.

The outputs from scientific research are many and varied, including: research articles reporting new knowledge, data, reagents, and software; intellectual property; and highly trained young scientists. Funding agencies, institutions that employ scientists, and scientists themselves, all have a desire, and need, to assess the quality and impact of scientific outputs. It is thus imperative that scientific output is measured accurately and evaluated wisely.

The Journal Impact Factor is frequently used as the primary parameter with which to compare the scientific output of individuals and institutions. The Journal Impact Factor, as calculated by Thomson Reuters*, was originally created as a tool to help

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San Francisco Declaration on Research Assessment

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General Recommendation

1. Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

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COMMENT

Data reveal
development



Environment: Economics
and environmental
sustainability p.428

Science: Questions raised over
proposed Arctic pipeline
debate p.428

Art: How inspired
Britain to add more volume
to the national p.428



The Leiden Manifesto for research metrics

Use these ten principles to guide research evaluation, urge Diana Hicks,
Paul Wouters and colleagues

Data are increasingly used to generate science. Research evaluations that were once heuristic and reliant on memory are now based on data rather than by judgement. Metrics have proliferated, usually unvetted, and are being used to compare and rank research. We risk damaging the environment. We risk damaging the environment. We risk damaging the environment.

advice on good practice and interpretation. In 2008, there was the Science Citation Index (SCI) from the Institute for Scientific Information (ISI), used by experts for operational analysis. In 2001, Thomson Reuters launched an integrated web platform making the Web of Science database widely accessible. Competing citation metrics were created. Elsevier's Scopus (released in 2004) and Google Scholar (beta version released in 2004). Both based on the breadth and impact

were introduced, such as ISI's (using the Web of Science) and Scopus (using Scopus), as well as software to analyse individual citation profiles using Google Scholar (Publish or Perish, released in 2007). In 2005, Jorge Hirsch, a physicist at the University of California, San Diego, proposed the *h*-index, popularizing citation counting for individual researchers. Interest in the journal impact factor grew steadily after 1997 (see 'Impact factor: the evolution'), largely, metrics related to social impact.

COMMENT

new data revealed
development



CONSUMER Electronics
and environmental
sustainability p.122

RESEARCH Questions raised over
proposed AstraZeneca
deal p.128

ARTISTS Black, inspired
Newton to add more volume
to his law of gravitation p.132



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The Metric Tide

Report of the Independent Review of the Role of Metrics in Research Assessment and Management

July 2015



COMMENT



The Leiden Manifesto for research

Use these ten principles to guide research
Paul Wouters and c

Data are increasingly used to generate evidence. Research evaluations that assess impact and performance are now led by the data rather than by judgement. Metrics have proliferated, mostly unexamined, not only well intentioned, but also damaging to the scientific enterprise. We redesigned a comprehensive...

1 The Hong Kong Principles for Assessing Researchers: 2 Fostering Research Integrity

3
4 David Moher^{1,2}, Lex Bouter^{3,4}, Sabine Kleinert⁵, Paul Glasziou⁶, Mai Har Sham⁷
5 Virginia Barbour⁸, Anne-Marie Coriat⁹, Nicole Foeger¹⁰, Ulrich Dirnagl¹¹

6
7 ¹Centre for Journalology, Clinical Epidemiology Program, Ottawa Hospital Research Institute;
8 ²School of Epidemiology and Public Health, University of Ottawa, Ottawa, Canada;
9 ³Department of Epidemiology and Biostatistics, Amsterdam University Medical Centers,
10 location VUmc; ⁴Department of Philosophy, Faculty of Humanities, Vrije Universiteit,
11 Amsterdam, The Netherlands; ⁵The Lancet, London Wall Office, London, UK; ⁶Institute for
12 Evidence-Based healthcare, Bond University, Gold Coast, Qld, Australia; and ⁷School of
13 Biomedical Sciences, LKS Faculty of Medicine, The University of Hong Kong, Pokfulam, Hong
14 Kong SAR, China; ⁸Queensland University of Technology (QUT), Brisbane, Australia;
15 ⁹Wellcome Trust, London; ¹⁰Austrian Agency for Research Integrity, Vienna, Austria; ¹¹Berlin
16 Institute of Health, QUEST Center for Transforming Biomedical Research, Berlin, Germany

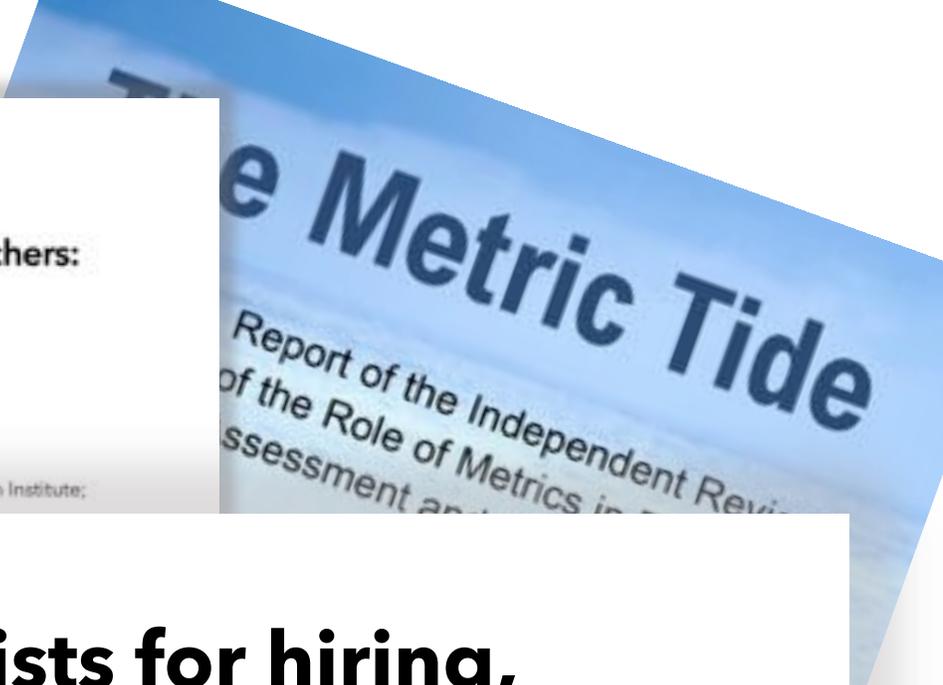
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18 David Moher: ORCID 0000-0003-2434-4206
19 Lex Bouter: ORCID 0000-0002-2659-5482
20 Sabine Kleinert: ORCID 0000-0001-7826-1188
21 Paul Glasziou: ORCID 0000-0001-7564-073X
22 Mai Har Sham: ORCID 0000-0003-1179-7839
23 Virginia Barbour: ORCID: 0000-0002-2358-2440
24 Anne-Marie Coriat: ORCID 0000-0003-2632-1745
25 Nicole Foeger: ORCID 0000-0001-7775-7325
26 Ulrich Dirnagl: ORCID 0000-0003-0755-6119

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7 ¹Centre for Journalology, Clinical Epidemiology Program, Ottawa Hospital Research Institute;

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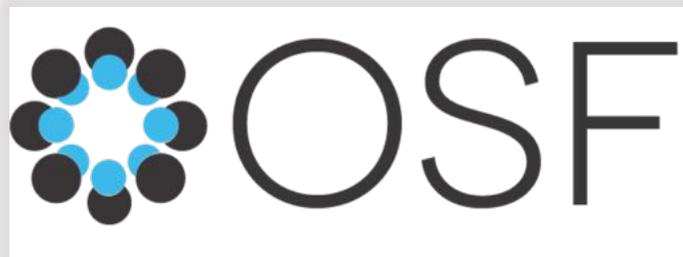
Moher et al. (2018). **Assessing scientists for hiring, promotion, and tenure.** *PLoS Biology*, 16(3), e2004089.
doi:10.1371/journal.pbio.2004089



23 Virginia Barbour: ORCID: 0000-0002-2358-2440
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26 Ulrich Dirnagl: ORCID 0000-0003-0755-6119
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29 23rd November 2019



...and some actions and concrete changes



CRediT – Contributor Roles Taxonomy



CRediT (Contributor Roles Taxonomy) is high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to scientific scholarly output. The roles describe each contributor's specific contribution to the scholarly output.



RCUK Policy on Open Access and Supporting Guidance

1. Introduction

(i) Free and open access to the outputs of publicly-funded research offers significant social and economic benefits as well as aiding the development of new research. The Government, in line with its overarching commitment to transparency and open data, is committed to ensuring that published research findings should be freely accessible. As bodies charged with investing public money in research, the Research



(iii) This document comprises both the policy statement (section 2) and the supporting guidance (section 3) aimed specifically at researchers, their host institutions and the publishers of peer-reviewed research papers.

Key Points to Note

- This policy applies only to the publication of peer-reviewed research articles (including review

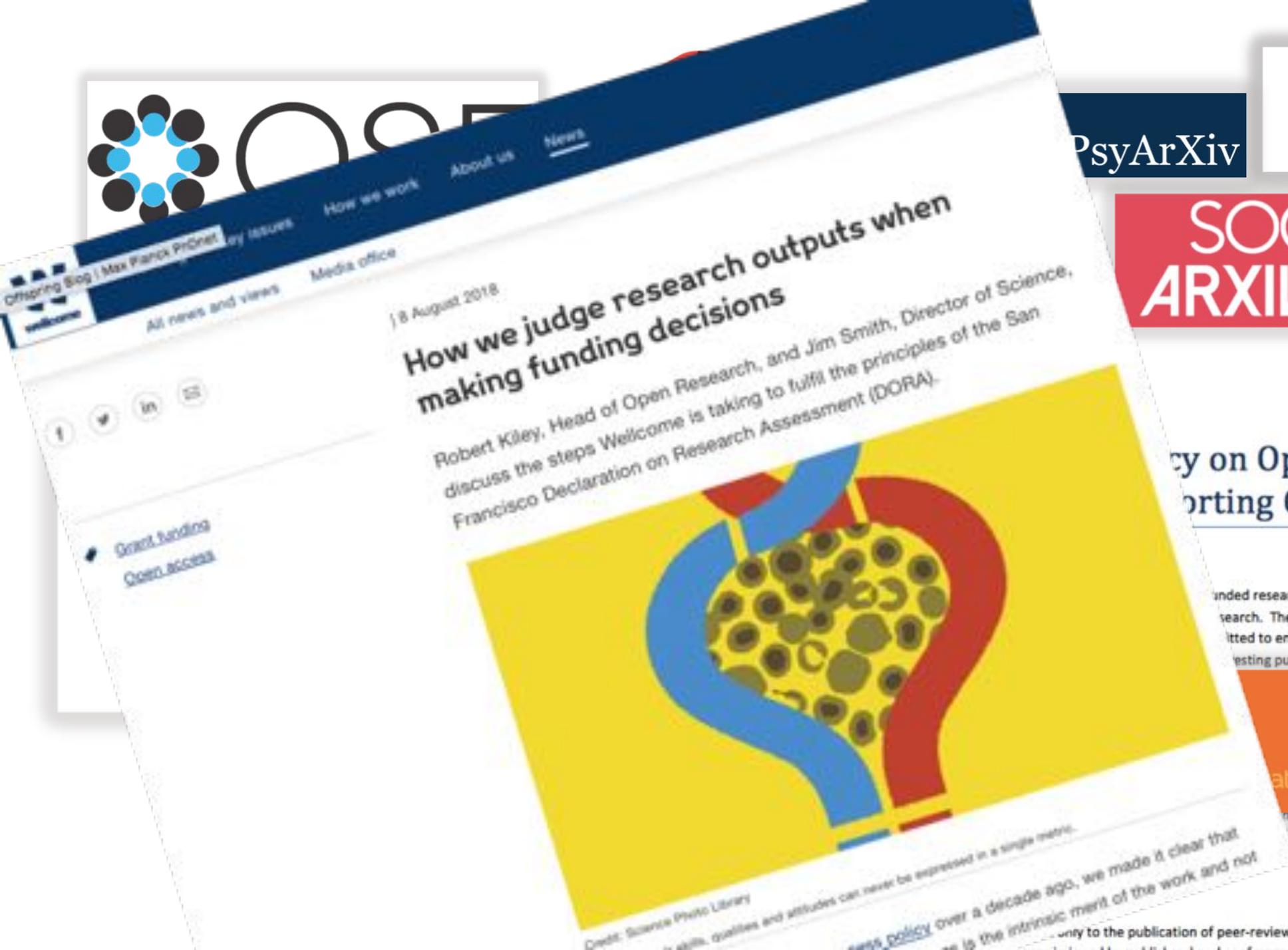


PsyArXiv

bioRxiv

SOC ARXIV

arXiv.org



How we judge research outputs when making funding decisions

8 August 2018

Robert Kiley, Head of Open Research, and Jim Smith, Director of Science, discuss the steps Wellcome is taking to fulfil the principles of the San Francisco Declaration on Research Assessment (DORA).



Credit: Science Photo Library

...skills, qualities and attitudes can never be expressed in a single metric. ...policy over a decade ago, we made it clear that ...is the intrinsic merit of the work and not ...only to the publication of peer-reviewed research articles (including review ...)

Policy on Open Access Supporting Guidance

...nded research offers significant social and economic ...search. The Government, in line with its overarching ...itted to ensuring that published research findings ...esting public money in research, the Research

...ate Open Access a reality

...n 2) and the supporting guidance (section 3) ...publishers of peer-reviewed research



Home > News > Ghent University is changing course with a new career model for professorial staff

Ghent University is changing course with a new career model for professorial staff



(07-12-2018) Ghent University dares to think. Ghent University also dares to push its own boundaries.

On December 7 the Board of Governors has approved a new career and evaluation model for professorial staff (ZAP) as well as the accompanying regulations.

Rik Van de Walle, Rector: "This is a very important decision for Ghent University and its staff. With the new career and evaluation model, our aim is to restore the confidence of our professorial staff instead of excessively measuring and controlling their activities. The starting point is that those who perform well will be promoted - with a minimum of formal procedures for accountability and administrative inconvenience."

"A predominantly quantitative and output-driven academic evaluation process makes way for talent development and growth, prioritizing vision development and strategy - at the personal as well as the group level. Quality prevails over quantity. Needless to say, we are confident that the intrinsic motivation of each ZAP member ensures that no one needs a priori objectives in order to perform well in the core tasks of our university: education, research and institutional or social engagement."

Credit: Science Photo Library

...policy over a decade ago, we made it clear that ... is the intrinsic merit of the work and not ...

PsyArXiv

bioRxiv

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arXiv.org

Policy on Open Access Supporting Guidance

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Ghent University is changing model for professorial



formal procedures for accountability and administrative
"A predominantly quantitative and output-driven academic development and strategy – at the personal as well as the group – intrinsic motivation of each ZAP member ensures that no one needs a education, research and institutional or social engagement."



Dutch end 'one-sided' research focus and hope world follows

Proposals include new job classifications, a rolling back of metrics, and shorter publication lists in a bid to end excessive 'emphasis on research performance'

December 3, 2019
By [David Matthews](#)
Twitter: [@DavidMJourn](#)

Higher education institutions across the world should follow a move by the Netherlands to reward academics for more than just research prowess, the head of the country's university association has said, following the release of new proposals to change scholars' career incentives.

Dutch universities and funding agencies want an end to what they say is a "one-sided emphasis on research performance" at the expense of teaching, social impact and management, plus open and collabor



Source: Getty
Measuring off prop
rolling back at

3. What can young researchers do?

1. Voice your concerns (and your praise)

Be vocal about what bothers you (and what you like). Raise these concerns with senior researchers, groups who are seeking ECR's views, or even on social media. Tell the editors you publish with what you would like their journal to offer. Introduce senior staff to new developments in open science...

→ Raise awareness (of problems and solutions)

2. Question your goals and help others question theirs

Do you do this for science or for advancing in your career?

Do you publish to share a message or to add a line to your CV?

Do you collaborate to be an author or because you are interested in the project?

→ Distinguish strategies from science

3. Question your own habits

Working 24/7?

Secrecy?

Open about mistakes, failures, and limitations?

→ Set the right standards

4. Look beyond academia

Instead of questioning yourself and your ability to fulfil what is expected of you, question what is expected of you. Your academic career does not define who you are and what you are worth.

→ Challenge expectations, not yourself

A close-up photograph of two hands held out, palms up, in a gesture of offering or presentation. The hands are positioned centrally, with the fingers slightly spread. The skin tone is a warm, light brown. The person is wearing a dark blue, long-sleeved sweater with ribbed cuffs. The background is dark and out of focus, with a hint of a light-colored surface below the hands. The text "The future of science" is overlaid in the center of the image in a white, serif font.

The future of science



Huge thanks to OAA
organisers for inviting me,
for supporting my trip,
and for making possible
such a great event!

Special thanks to all our
participants and to my
supervisor Wim Pinxten



Project funded by UHasselt Bijzonder
Onderzoeksfonds grant 15NI05

re-sinc 

re-sinc.wixsite.com/project

Thank you!



 [naubertbonn](#)

noemie.aubertbonn@uhasselt.be

orcid.org/0000-0003-0252-2331

Illustrations by James Graham, used with permission, photo from Jeremy from Unsplash, and some icons from thenounproject

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The CASPA logo, with 'CASPA' in a bold, sans-serif font. The 'C' is green and the rest of the letters are dark blue.

**Webinar: PhD students take on
openness and academic culture**

17 December 3:00 - 4:15 PM GMT

<http://oaspa.org/webinar-phd-st>

 naubertbonn

noemie.aubertbonn@uhasselt.be

orcid.org/0000-0003-0252-2331

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