



Johanna Havemann



eLearning  
Africa

October 24, 2019 - Abidjan, Côte d'Ivoire



@africarxiv

# What **role** can **Open Science** play in enabling **South-North dialogues?**



[info.africarxiv.org](http://info.africarxiv.org)



# Hello! 🙌

I am Justin Sègbédji Ahinon  
Software Engineer and AfricArxiv co-founder



@justinahinon1

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## African scientists launch their own preprint server

The free, online outlet is one of a growing number where academics on the continent can share their work

25 June 2018

Smriti Mallapaty




Physicists at the University of Namibia, Windhoek, Namibia

NiaPhoto/Contributor/Getty

Latest supplement

**Nature Index 2018 China**  
China's rise is the story of the century in science. Its scientific output has already overtaken that of the United States, but on measures of quality, such as articles published in the high-quality journals tracked by the Nature Index, it still has a big gap to close...



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Nature Index (June 25, 2018)

QUARTZ AFRICA

OPEN SCIENCE

## A research platform for African scientists will take papers in local languages

By Kwesi Gyameri-Akoko & Commentary · June 27, 2018



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African languages will have a formal role in the scientific research community with the launch of a repository that encourages and accepts research in indigenous languages including Swahili, Akan, Zulu, Igbo and more.

QUARTZ Africa (June 27, 2018)



# Reasons for Closed Science



financial paywalls by publisher

usage restrictions by publisher

poor formatting of data

use of proprietary hardware & software

reluctance to publish due to fear of competition



## The Academic Incentive System: **Publish or Perish**

*‘Publish as **many articles** as possible.’*

*‘Publish in journals with as high an **impact factor** as possible.’*

*‘Publish work with **statistically significant** results.’*

*‘Publish work with **surprising & catchy** results.’*

# The Academic Incentive System: **Publish or Perish**



## >> **Gaming the system - 'flexible' research practices**

p-hacking

results cherry picking

Replication Crisis

Hidden data & materials

**HARKing**

(Hypothesizing After the Results are Known)

competitive practices

Academic publishing monopolies

# What is Open Science?



**OPEN SCIENCE:  
JUST  
SCIENCE  
DONE RIGHT**

Sticker by Jon Tennant @protohedgehog and Melanie Imming @melimming

# What is Open Science?



Open Principles

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A complete manuscript shared with a public audience without peer review.

The version of a research article to be submitted for peer review and publication in a traditional scholarly journal.

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>> <http://help.osf.io/m/preprints//726873-preprint-faqs>

>> <https://cos.io/blog/preprints-what-why-how/>





Open Access

preprint repositories

arXiv.org



AgriXiv

SOCARXIV

bioRxiv  
THE PREPRINT SERVER FOR BIOLOGY

<https://osf.io/preprints/>

Practiced **Open Science** allows for **more diversity** in research output and the **convergence** of the **global scientific community**.

# Open Science enables Global Knowledge Exchange





# With **Open Science**, researchers in Africa, Latin America and Asia can easily

access papers

Collaborate across  
continents

increase global  
visibility to their  
research outputs

# The African Open Science Landscape



Science Communication Hub Nigeria

*Engaging The Public Through Science*



AFRICA  
OPEN SCIENCE  
HARDWARE

African Digital Research  
Repositories

International African Institute



African Open  
Science  
Platform

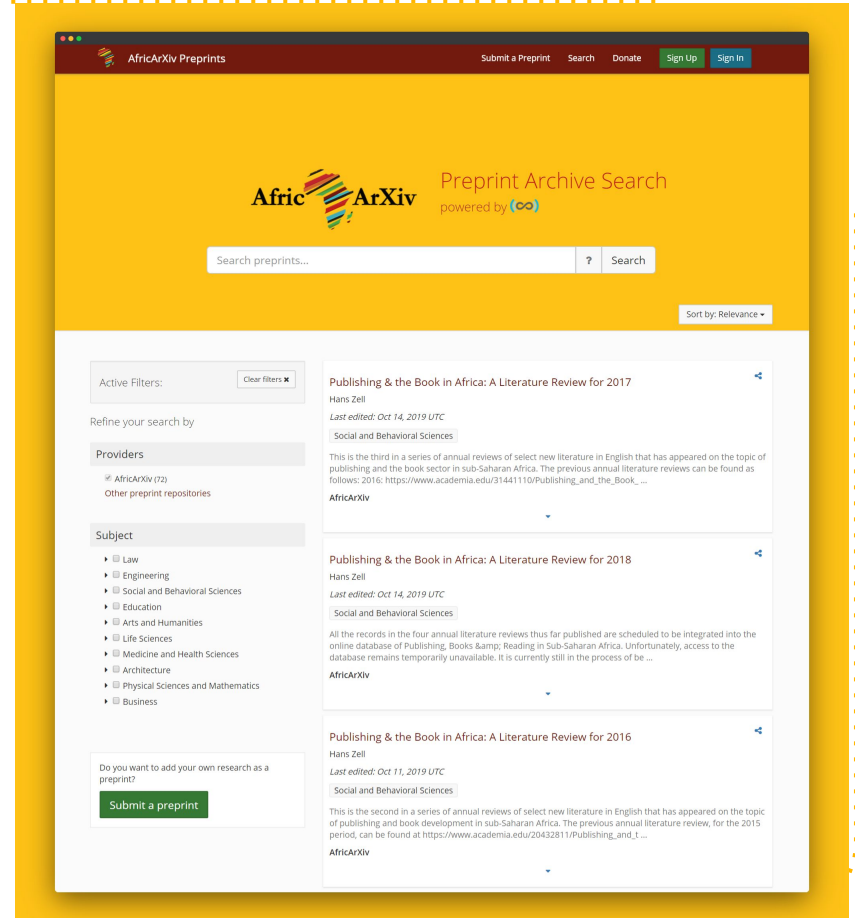


AAS Open Research



The free preprint service for african scientists

Making research outcomes produced in Africa more visible





# With **AfricArxiv**, we want to

**promote the use of  
local African  
languages in  
science**

**bridge the gap  
between  
anglophone and  
francophone  
research output**

**highlight the  
relevance of  
indigenous and  
traditional  
knowledge in a  
research context**

# Submit the following types and formats



Research articles

negative' results and 'null' results

Review papers

Data and methods papers

Project proposals

Technical notes

Case studies

Dataset description papers

> **Translations of the above**

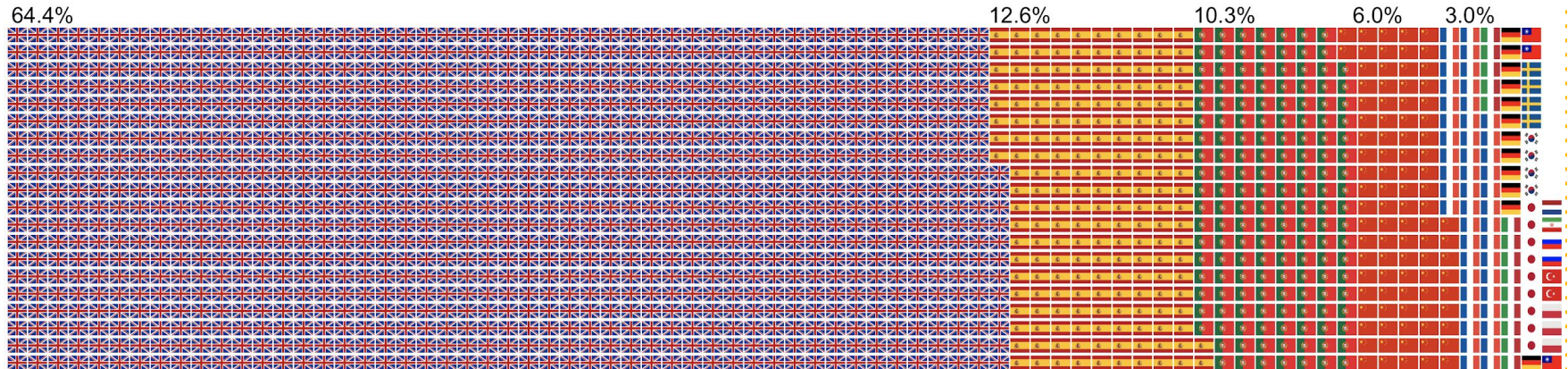


# Breaking the **language barrier** for **Global Science in Africa**

- we need language diversity in science.
- we need a common language to connect.
- we suggest a balanced use of both using machine translations combined with manual corrections.

# Languages Are Still a Major Barrier to Global Science

Google Scholar search on #biodiversity #conservation in 16 languages



1 square = 50 documents

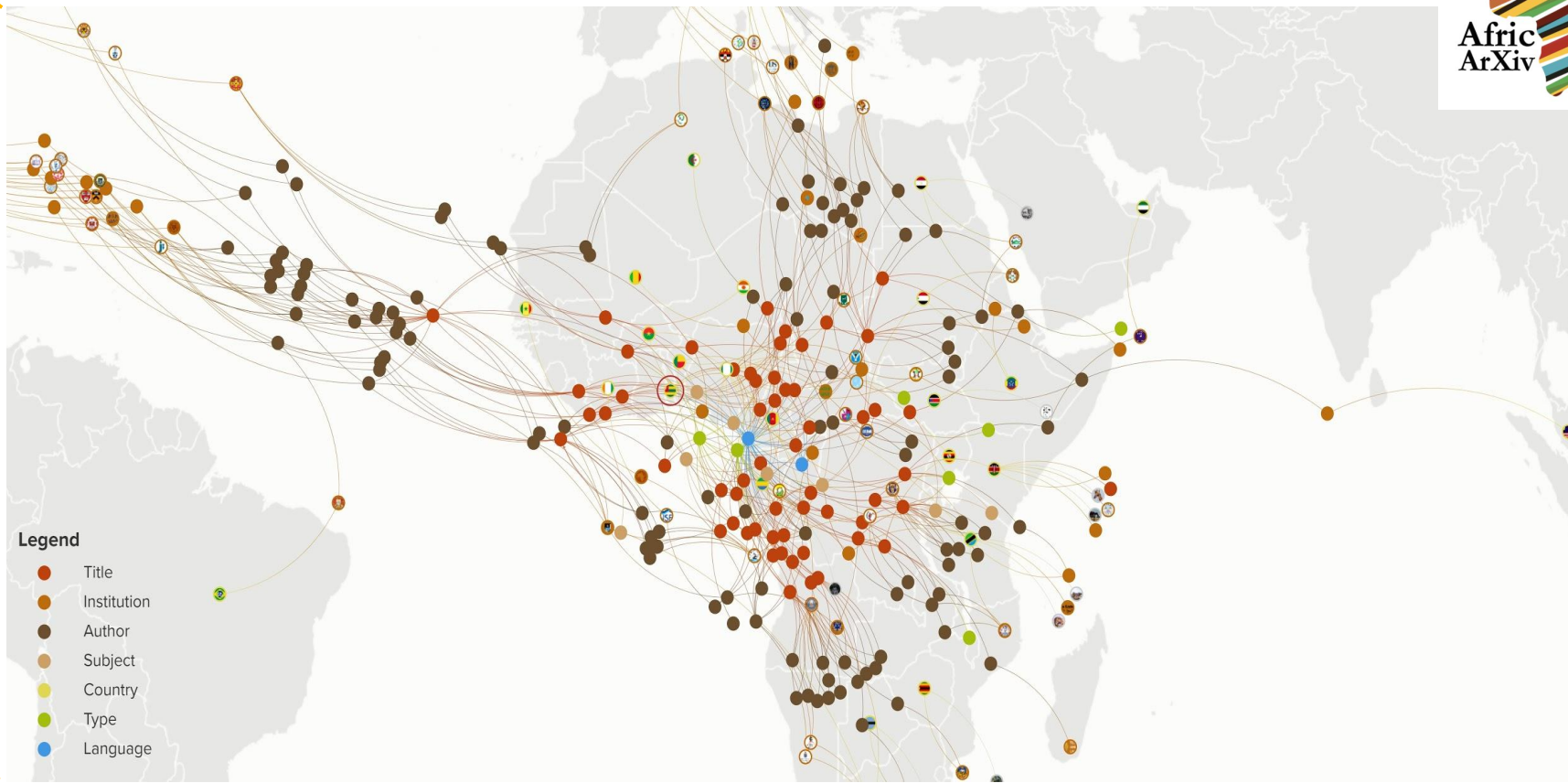
Amano T, González-Varo JP, Sutherland WJ (2016).  
PLoS Biol 14(12): e2000933. [doi.org/10.1371/journal.pbio.2000933](https://doi.org/10.1371/journal.pbio.2000933)



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**~37,000** page views





## Tweet



**The Nicholas Outa**

@nichouta



My paper is under review for publication but I decided to publish it as a Preprint in [@AfricArxiv](#) and it already has three citations and my [#GoogleScholar](#) metrics are increasing. What a good idea [@tccafrica](#) opened my eyes in this regard.

7:35 AM · Oct 11, 2019 · [Twitter for Android](#)

**1** Retweet **10** Likes

<https://twitter.com/nichouta/status/1182545250524512256>

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**The impacts of introduced species on lake ecosystems: A case of Lakes Victoria and Naivasha, Kenya.**

Outa N. Otieno<sup>1</sup>, Mungai D. Ndegwa<sup>2</sup> Ogello E. Ochieng<sup>1</sup>, Lokorio M. Lonye<sup>2</sup>

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 Email: [nichouta@gmail.com](mailto:nichouta@gmail.com)

Impacts of Species Introductions on Lakes Victoria and Naivasha.doc

Version: 1

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## Abstract

Fish and other aquatic organisms have been introduced into new environments for various reasons. Provision of sports fishery, supplemental to stocks, to fill empty niches, control weeds, and disease vectors and even create a commercial fishery are some of the reasons why fish species are introduced into new ecosystems. Lake Victoria and Lake ...

[See more](#)

## Preprint DOI

10.31730/osf.io/b5nyt

## License

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## Disciplines

Life Sciences | Biology | Integrative Biology

## Tags

None

## Citations

### APA

Outa, N., Mungai, D., & Keyombe, J. L. A. (2019, October 9). The impacts of introduced species on lake ecosystems: A case of Lakes Victoria and Naivasha, Kenya. <https://doi.org/10.31730/osf.io/b5nyt>



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1 Hybridization in human evolution: insights from other organisms

2

3

4 Rebecca R. Ackermann<sup>1,2</sup>, Michael L. Arnold<sup>3</sup>, Marcella D. Baiz<sup>4</sup>, James A. Cahill<sup>5</sup>, Liliana Cortés-Ortiz<sup>6</sup>, Ben J. Evans<sup>6</sup>, B. Rosemary Grant<sup>7</sup>, Peter R. Grant<sup>7</sup>, Benedikt Hallgrímsson<sup>8</sup>, Robyn A. Humphreys<sup>1,2</sup>, Clifford J. Jolly<sup>9</sup>, Joanna Malukiewicz<sup>10,11</sup>, Christopher J. Percival<sup>1,12</sup>, Terrence B. Ritzman<sup>1,2,13,14</sup>, Christian Roos<sup>15</sup>, Charles C. Roseman<sup>16</sup>, Lauren Schroeder<sup>2,17</sup>, Fred H. Smith<sup>18</sup>, Kerryn A. Warren<sup>1,2</sup>, Robert K. Wayne<sup>19</sup>, Dietmar Zinner<sup>20</sup>

5 [Article In press in *Evolutionary Anthropology*]

6

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9

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13 6 Biology Department, Life Sciences Building, McMaster University, Hamilton, Canada

14 7 Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ, USA

15 8 Dept. of Cell Biology & Anatomy and the Alberta Children's Hospital Research Institute, University of Calgary, Canada

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## Abstract

During the late Pleistocene, isolated lineages of hominins exchanged genes thus influencing genomic variation in humans in both the past and present. However, the dynamics of this genetic exchange and associated phenotypic consequences through time remain poorly understood. Gene exchange across divergent lineages can result in myriad outcomes ...

[See more](#)

## Preprint DOI

[10.31730/osf.io/y3bp7](https://doi.org/10.31730/osf.io/y3bp7)



## African Principles for Open Access in Scholarly Communication

We, the undersigned, declare to adhere to the following Principles for Open Access in Scholarly Communication in and about Africa:

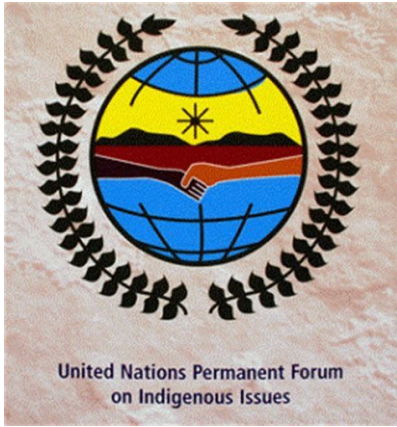
- 1) Academic Research and knowledge from and about Africa should be **freely available** to all who wish to access, use or reuse it while at the same time being **protected from misuse and misappropriation**.
- 2) African scientists and scientists working on African topics and/or territory will make their research achievements including underlying datasets available in a **digital Open Access repository or journal** and an explicit **Open Access license** is applied.
- 3) African research output should be made available in the principle common language of the global science community as well as in one or more **local African languages** – at least in summary.



“**Academic Research and knowledge** from and about **Africa** should be **freely available** to all who wish **to access, use or reuse** it while at the same time being **protected from misuse and misappropriation.**”



“**African research output**  
should be **made available**  
in the principle common language  
of the global science community  
as well as in one or more  
**local African languages**  
– at least in summary.”



**“It is important  
to take into consideration** in the discussions  
**indigenous and traditional knowledge**  
in its various forms.”



TIME

# 'We Know How to Keep the Balance of Nature'. Why Including Indigenous People Is Vital to Solving Climate Change



[ipacc.org.za/en](http://ipacc.org.za/en)

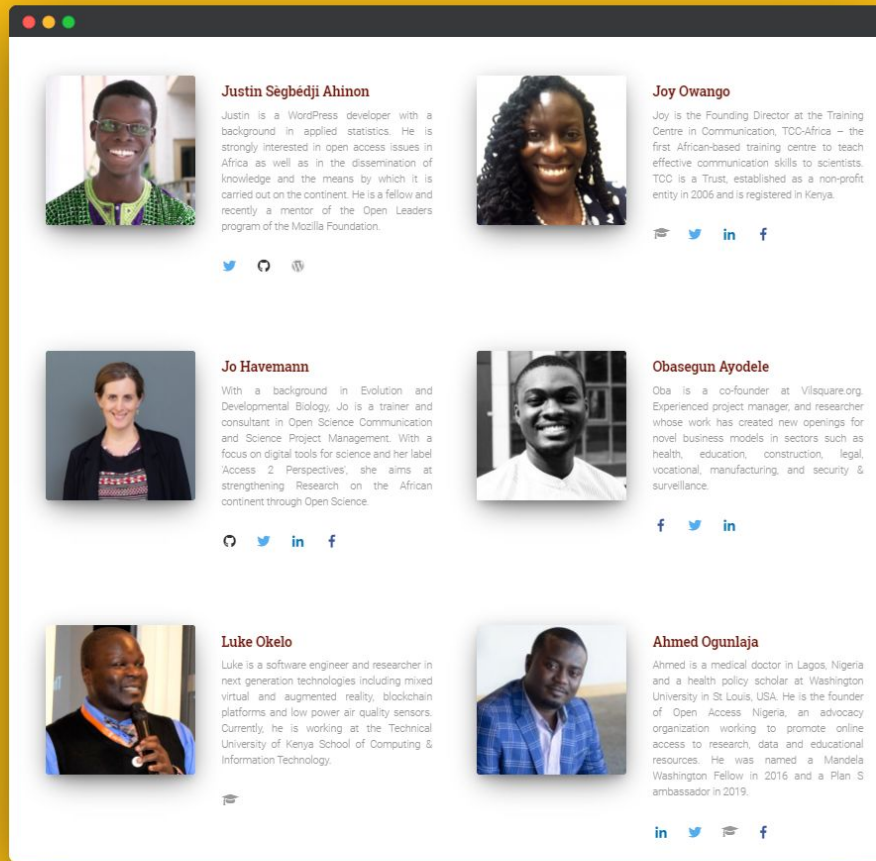


Hindou

@hindououmar

# The Team

of volunteer scientists and experts helping to improve the global visibility of African research.



The screenshot shows a grid of six team member profiles. Each profile includes a circular portrait, a name, a short biography, and social media icons for Twitter, GitHub, LinkedIn, and Facebook. The profiles are arranged in two columns and three rows.

- Justin Segbedji Ahinon:** Justin is a WordPress developer with a background in applied statistics. He is strongly interested in open access issues in Africa as well as in the dissemination of knowledge and the means by which it is carried out on the continent. He is a fellow and recently a mentor of the Open Leaders program of the Mozilla Foundation.
- Joy Owango:** Joy is the Founding Director at the Training Centre in Communication, TCC-Africa – the first African-based training centre to teach effective communication skills to scientists. TCC is a Trust, established as a non-profit entity in 2006 and is registered in Kenya.
- Jo Havemann:** With a background in Evolution and Developmental Biology, Jo is a trainer and consultant in Open Science Communication and Science Project Management. With a focus on digital tools for science and her label 'Access 2 Perspectives', she aims at strengthening Research on the African continent through Open Science.
- Obasegun Ayodele:** Oba is a co-founder at Vilsquare.org. Experienced project manager, and researcher whose work has created new openings for novel business models in sectors such as health, education, construction, legal, vocational, manufacturing, and security & surveillance.
- Luke Okelo:** Luke is a software engineer and researcher in next generation technologies including mixed virtual and augmented reality, blockchain platforms and low power air quality sensors. Currently, he is working at the Technical University of Kenya School of Computing & Information Technology.
- Ahmed Ogunlaja:** Ahmed is a medical doctor in Lagos, Nigeria and a health policy scholar at Washington University in St Louis, USA. He is the founder of Open Access Nigeria, an advocacy organization working to promote online access to research, data and educational resources. He was named a Mandela Washington Fellow in 2016 and a Plan S ambassador in 2019.

# Our partners



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on October 15, 2019

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