

**UCREL Research Seminar
Lancaster University
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**Climate Change, Ocean Acidification and the Nitrogen Cycle.
A Corpus-based Discourse Analysis of the concept of
Anthropocene in the press**

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THE BEGINNING



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**S01 Environmental issues and the Anthropocene:
Problems and Opportunities**

BACKGROUND

The period of time during which human activities have had an environmental impact on the Earth regarded as constituting a distinct geological age.

Merriam-Webster Dictionary

BACKGROUND

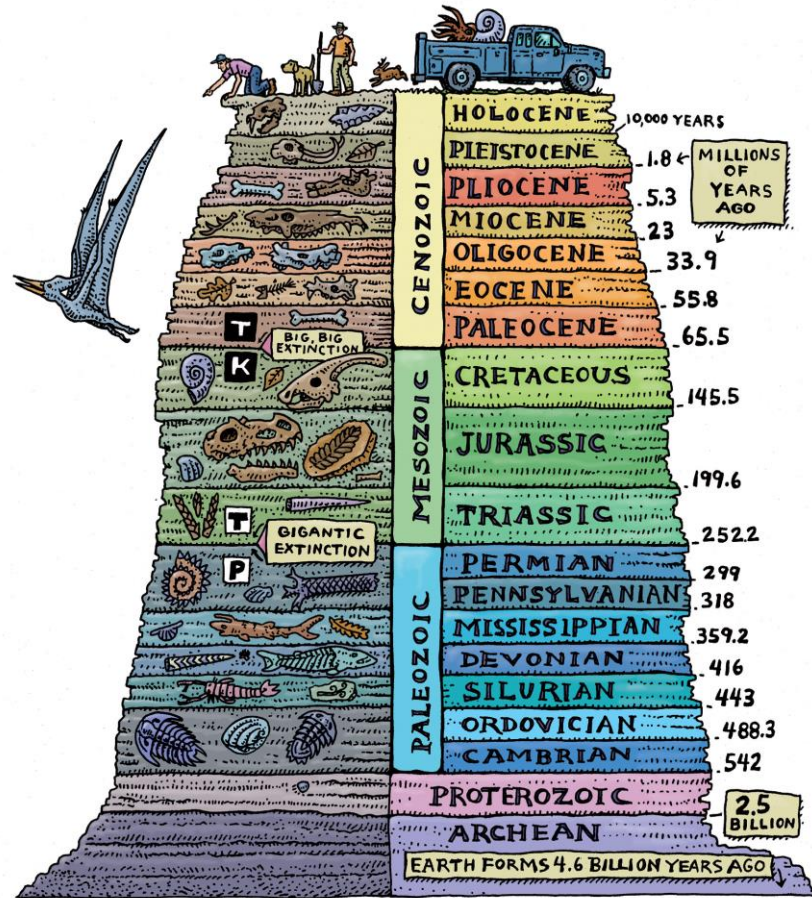
It seems to us more than appropriate to emphasize the central role of mankind in geology and ecology by proposing to use the term 'anthropocene' for the current geological epoch.

(Crutzen & Stoermer 2000)

- What exactly has been happening on Earth in the last quarter of a millennium?
- The Anthropocene.
- Anthro-what?
- We already live in the Anthropocene, so let us get used to this ugly word and the reality that it names. It is our epoch and our condition. This geological epoch is the product of the last few hundred years of our history. The Anthropocene is the sign of our power, but also of our impotence.

(Bonneuil & Frescoz 2017)

BACKGROUND



International Socialist Review

Fandom

BACKGROUND

[Humankind can be defined as a] new telluric force which in power and universality may be compared to the greater forces of earth

(Stoppani 1873 in Crutzen & Stoermer 2000)

Stoppani already spoke of the *anthropozoic* era in 1873

BACKGROUND

Perhaps earth scientists of the future will name this new post-Holocene period for its causative element—for us.

We are entering an age that might someday be referred to as, say, the **Anthrocene** [sic]. After all, it is a geological age of our own making.

(Revkin 1992)

RESEARCH QUESTION

- RQ:** Is the concept of *Anthropocene* being popularized by the press?
- To what extent is this process based on scientific knowledge?

THEORY & METHODOLOGY

◆ Ecological Sciences

(Zalasiewicz et al. 2017, 2008; Lewis & Maslin 2015; Ellis 2010; Crutzen 2002; Crutzen & Stoermer 2000; Vitousek et al. 1997)

◆ Environmental humanities

(Bonneuil, C. & Fressoz J. B. 2017; McNeill, J. R. & Engelke, P. 2016; Trischler 2016, 2013; Moore, J. 2015; Chakrabarty, D. 2012, 2009; Steffen et al. 2007)

◆ Corpus-based Discourse Analysis

(Baker et al. 2008; Baker, Gabrielatos, McEnery 2013)

◆ News Discourse

(Bevitori 2010; Carvalho 2007)

THE ANTHROPOCENE CORPUS

◆ **TIMESPAN:** 1/01/2000 – 30/06/2018
(Crutzen and Stoermer 2000)

◆ **AREA:** Australia, India, UK, USA

◆ **SOURCE:** Newspapers – “anthropocene”
(Australia: Major Australian Newspapers – 44)
(India: All sources available in EN - 44)
(UK: UK Nationals – 20)
(USA: Major US Newspapers -17)

THE ANTHROPOCENE CORPUS

	Articles	Tokens
Australia	114	96,788
India	88	65,987
UK	356	344,520
USA	172	187,493
tot.	717	694,788

I. ANALYSIS: word-sketch

◆ Nouns modified by “anthropocene”:

Era, epoch, group, concept, age, idea, period

◆ “Anthropocene” is: name, epoch

◆ Verb with “anthropocene” as object

define, enter, name recognize, coin, declare, formulate, characterize, design, consider, see

◆ Verb with “anthropocene” as subject:

begin, become, manage, pose, mark, represent, be, refer, start, include

◆ Adjective predicates of “anthropocene”:

permanent, real

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I. ANALYSIS: word-sketch

- Nouns: ambiguity of definition.

Era: a large division of geologic time usually shorter than an eon (1 billion years)

Period: a division of geologic time longer than an epoch and included in an era

Epoch: a division of geologic time less than a period and greater than an age

Age: a division of geologic time that is usually shorter than an epoch

Concept: an abstract or generic idea generalized from particular instances

Idea : an indefinite or unformed conception/a formulated thought or opinion

Group: The Anthropocene Group

I. ANALYSIS: word-sketch

- **Nouns:** ambiguity of definition.
 - a non-specified span of time
 - something that is being discussed, not defined
- **Adjective:** permanent, real
 - Contrary to the definition given by nouns

The **Anthropocene** is the **name** of a **proposed** geological epoch that **may** soon enter the official Geologic Time Scale. (*Daily Mail* 11/03/2015)

Planet Earth **has entered** a **new epoch** dubbed the **Anthropocene** because of the extent of humanity's impact on the planet, according to a group of experts. An international working group set up to consider the question voted by 34 to zero, with one abstention, that the **Anthropocene** was **real** in a geological sense. (*i* 30/08/2016)

II. ANALYSIS: Causes of anthropocene

	AU	IN	UK	USA
Climate Change	175	109	411	167
Ocean Acidification	1	7	21	16
Nitrogen Cycle	1	0	9	2
Overpopulation	0	0	9	1
CO2 Emissions	4	2	11	2
Methane Cycle	0	0	0	0
Phosphate Cycle	0	0	0	0
Plastic Production	0	0	6	0
City Growth	0	0	2	0
Ice Caps Melting	0	0	0	0

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II. ANALYSIS: Causes of anthropocene

Ironically, some States in India have also grappled with heatwaves and drought, and the coming of an above-average monsoon was meant to be succour. In the mysterious and startling ways of climate change, we have the added dimensions of the Anthropocene which affect more than the climate. Human activity - such as bad decisions linked to the opening or shutting of water sluice gates, or building over water canals (reminiscent of the 2015 Chennai floods), or encroaching on rivers like Mumbai's Mithi - has changed the way we receive water and rainfall. (*The Hindu* 3/08/2016)

II. ANALYSIS: Causes of anthropocene

Many Australians may still be unaware that climate change is a bipartisan national security issue. This was cemented only in the latest Defence white paper that, building on the 2009 and 2013 (Labor) iterations, identifies climate change as a "major challenge" to Australia's national security.[...] The US Department of Defence recently released its most comprehensive climate policy yet, the "Climate Change Adaptation and Resilience Directive", in preparation for the coming impacts of climate change. Understanding how climate change is unfolding in different countries and regions in terms of rate of change, exact locations and specific impacts lies at the heart of security planning in this new epoch of the Anthropocene. (*Canberra Times* 8/04/2016)

II. ANALYSIS: Causes of anthropocene

One of their central contentions is that we are no longer living in the Holocene, but in a new geological era they refer to as the Capitalocene - the currently fashionable term "Anthropocene", they argue, suggests that our current state of ecological emergency is merely the result of humans doing what humans do, whereas the reality is that it flows out of the specific historical phenomenon of capitalism. As a term, then, Capitalocene is designed to nudge us away from evolutionary determinism, and from a sense of collective culpability for climate change, towards an understanding of the way in which the destruction of nature has largely been the result of an economic system organised around a minority class and its pursuit of profit. (*The Guardian* 14/062018)

II. ANALYSIS: Causes of anthropocene

If you are a denier of **global climate change** and that man has anything to do with it, and you think that Glenn Beck and Rush Limbaugh are science gods, you won't like this column. Now, read on ... Eocene, Oligocene, Miocene, Holocene - **the names denote pieces of geologic time** in what's called the Cenozoic era. Now we're in what scientists call the **Anthropocene**, an epoch that began in the 18th century when man attained the ability to affect Earth's biosphere for good or ill. (*The Tampa Tribune* 19/02/2008)

II. ANALYSIS: Causes of anthropocene

- The causes represented in the press are those with which the lay audience is already familiar with
- The more specialized or uncommon concepts are not mentioned in the press
- India: more scientific > environmental issue
Australia: fear > political issue
UK: specialized language > economic issue
USA: informative

III. ANALYSIS: future perspectives

	Australia	India	UK	USA
Catastrophe	8	3	53	25
Collapse	17	10	47	23
Extinction	71	32	274	96
Crisis (Crises)	39	11	114	18
Resilience(positive)	2	3	12	8

PRELIMINARY CONCLUSION

- ◆ Popularization : explanation of effects – different theories
- ◆ Incoherence of scientific discourse
- ◆ Each country different discourse
- ◆ Predominance of emotional discourse

FURTHER STEPS

- ◆ Expand corpus to other countries such as Canada in order to widen the research's range.
- ◆ Monitor evolution of the discourse around the discourse of anthropocene following the recognition (or not) of the definition by the International Commission on Stratigraphy in 2019

Thank-you!

Questions or comments?

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