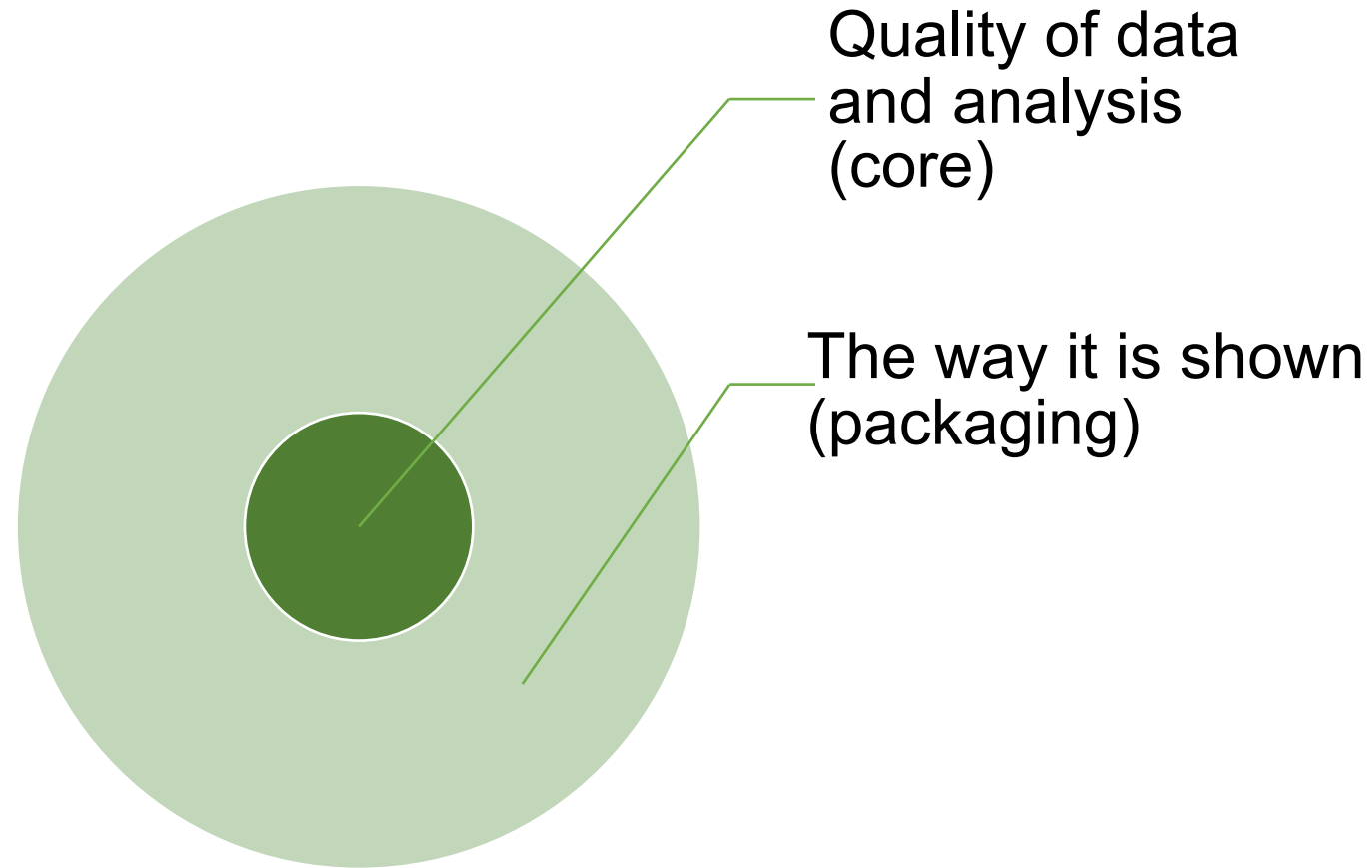


學術發表： 做個有故事的人

獸醫學系 陳慧文

Success of a research article



黑白電視 vs. 彩色電視



觀眾會想看哪一個？

以 *science storytelling* 為關鍵字搜索



science storytelling

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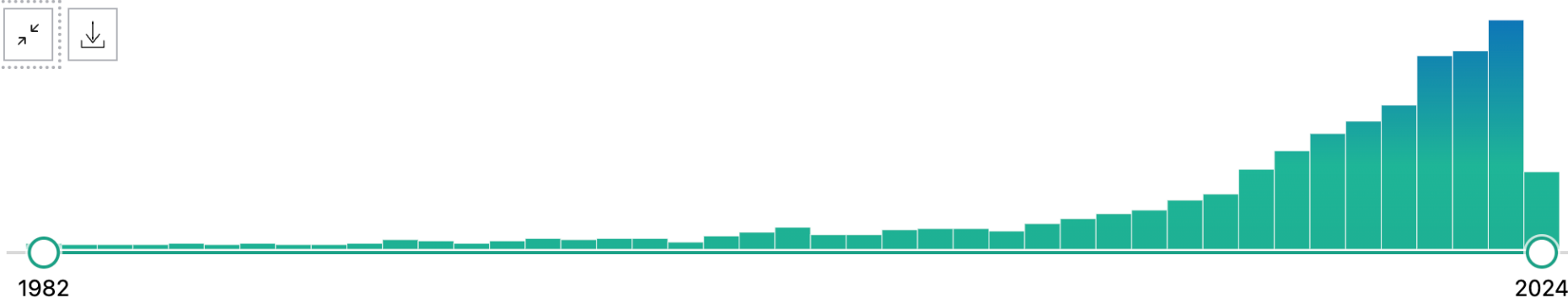
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RESULTS BY YEAR

1,099 results

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有故事的人？



圖／台灣佛克斯 Taiwan Focus 臉書



The heart of the story: Peripheral physiology during narrative exposure predicts charitable giving

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ABSTRACT

Emotionally laden narratives are often used as persuasive appeals by charitable organizations. Physiological responses to a narrative may explain why some people respond to an appeal while others do not. In this study we tested whether autonomic and hormonal activity during a narrative predict subsequent narrative influence via charitable giving. Participants viewed a brief story of a father's experience with his 2-year-old son who has terminal cancer. After the story, participants were presented with an opportunity to donate some of their study earnings to a related charity. Measures derived from cardiac and electrodermal activity, including HF-HRV, significantly predicted donor status. Time-series GARCH models of physiology during the narrative further differentiated donors from non-donors. Moreover, cardiac activity and experienced concern were found to covary from moment-to-moment across the narrative. Our findings indicate that the physiological response to a stimulus, herein a narrative, can predict influence as indexed by stimulus-related behavior.

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1. Introduction

Can bodily states predict costly behavior? The brain exerts control on the body via neural (autonomic) and hormonal (neuroendocrine) systems (Janig, 2003). Likewise, these systems relay information about bodily states (the “internal environment”) back to the brain. Neural states as people are processing information can be observed without intruding on the experience of process itself (Falk et al., 2010), and have been associated with objective influence outcomes (Falk, Berkman, & Lieberman, 2012). In this research we examine how reactivity in these peripheral systems can predict whether someone will behaviorally respond to a related stimulus.

Recent work has associated the neuroactive hormones adrenocorticotropin hormone (ACTH) and oxytocin (OT) with cognitive (attention) and affective engagement (empathic concern) while viewing public service announcements (Lin, Grewal, Morin, Johnson, & Zak, 2013).¹ ACTH has long been affiliated with

attention toward environmental stimuli (e.g., Born, Fehm, & Voigt, 1986). Other steroidal hormones are linked to social behaviors. For instance, cortisol is hypothesized to motivate action in response to the factors in the environment (see Dickerson & Kemeny, 2004), including social stimuli (Rahe, Rubin, & Gunderson, 1972). Testosterone has been shown respond to social challenges (Bos, Panksepp, Bluthe, & van Honk, 2012) and in the absence of social threats increases prosocial behavior (Boksem et al., 2013).

An extensive research suggests that both sympathetic and parasympathetic systems are indicative of attention and affective engagement. People are more likely to attend to stimuli eliciting sympathetic arousal (see Boucsein, 2012; Kensinger, 2004; MacLeod & Mathews, 2004). Activity in both sympathetic and parasympathetic systems, via electrodermal and cardiac activity, has been shown to occur in response to emotional stories (Eisenberg, Fabes et al., 1988; Eisenberg, Schaller et al., 1988; Eisenberg et al., 1991). A key component of the parasympathetic nervous system, the vagus nerve, is proposed to be central to the mammalian “social-engagement system” (Porges, 2007). Whereas resting vagal activity is associated with affective experiences,

The remaining data had such large between- and within-subject variation that they were not included in the analyses.

Stories not only facilitate information processing and recollection; they also elicit a hormonal response

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¹ Unlike with Lin et al. (2013), we were unable to include oxytocin in our analysis as we encountered a substantial proportion of missing data due to the assay process.

SYMPOSIUM

Making Science Meaningful for Broad Audiences through Stories

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From the symposium “Science Through Narrative: Engaging Broad Audiences” presented at the annual meeting of the Society for Integrative and Comparative Biology, January 3–7, 2018 at San Francisco, California.

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Synopsis Science is a search for evidence, but science communication must be a search for meaning. General audiences will only care about science if it is presented in a meaningful context. One of the most effective ways to do this is through storytelling. Stories are integral to all cultures. Studies indicate that stories even help audiences to process and recall new information. Scientists sometimes worry that storytelling will conflate empirical evidence with fabrication. But when telling non-fiction stories, it is a process of recognizing the story elements already present in the subject material and distilling the most concise and compelling account for a target audience. In this paper, I review literature, offer examples, and draw from my experience as a scientist and a communication trainer to explore how storytelling makes science comprehensible and meaningful for general audiences.

Allow me to begin this paper with a story ...

When I began studying paleontology as an undergraduate, I felt like a black sheep in the family. My relatives all had occupations that dealt with everyday problems, like feeding and healing people. Every time a relative asked me, “So what is your research about?” I got the same feeling of dread. I would try to explain my work (“I study fossil lizards that were abundant in the US Western Interior during the Paleogene!”), and they would nod politely and change the subject. Despite my passion for the field, I was inadvertently making it impossible for others to share my enthusiasm. It bothered me that I did not know how to convey the importance of my work to my own family.

I was now a year into my PhD program. As I began preparing for my qualifying examination, I decided that I needed to address my communication problem before I started my dissertation. But where to start? At family gatherings, my relatives swapped stories. I realized that I had learned a lot about their work through those stories. I needed to learn how to tell stories about my work that would appeal to them as well. If I could do that with my relatives, I could probably do that with anyone.

It just so happened that some masters of storytelling were located close to my university campus.

I contacted Pixar Animation Studios to see if anyone there would be interested in coming to chat with a group of graduate students in my department. To my complete shock, I actually got a response. We started planning a seminar. I had loved Pixar movies since I was a kid, and now we were going to learn about storytelling from my childhood heroes! The timing was also perfect because I had just been invited to give a talk at a public paleontology festival called PaleoFest (Burpee Museum of Natural History 2016). I already had a talk prepared from my Master’s thesis defense, but I was hoping to pick up a few tips to help tailor it for a public audience.

In our campus seminar, an artist from Pixar gave an entertaining and perceptive overview of basic storytelling tools that they use at the studio. I realized that I was already familiar with many of these terms and concepts. But I was surprised to realize that I had never thought about them in the context of communicating science. It had not occurred to me that telling a story with a protagonist and a plot could be just as useful in science as in fiction. I was also reminded by this artist that the most important rule in storytelling is to make your audience care. Even in stories about toys or monsters or superheroes, the story has to be emotionally

Science is a search for evidence, but science communication must be a search for meaning.

One of the most effective way to do this is through storytelling.

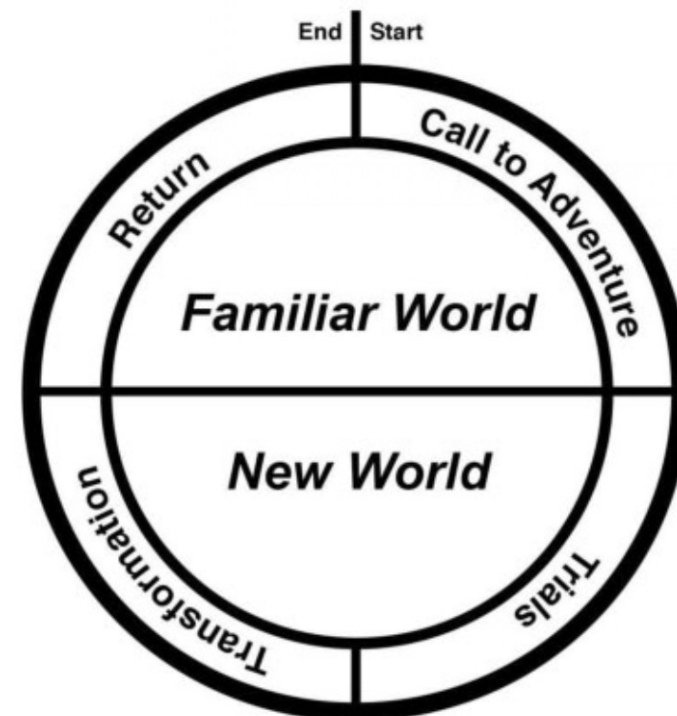
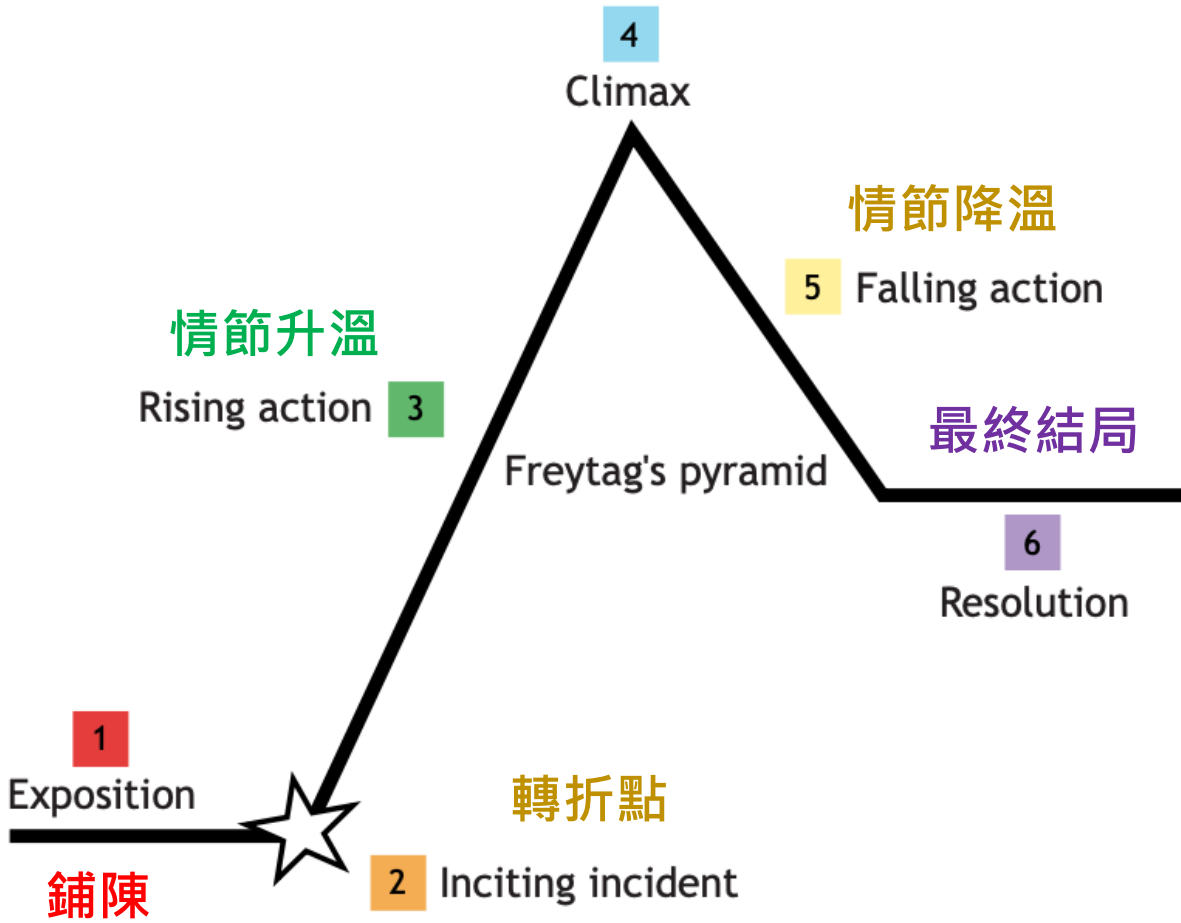


Fig. 2 “The Hero’s Journey” story model. The protagonist, or

故事高潮



- 1 Introduction
- 2 Research question
- 3 Experiments
- 4 Major findings
- 5 Discussion
- 6 Conclusion

TITLE
ABSTRACT

Informative, Accurate, Attractive,
Concise, Clear, Specific

INTRODUCTION

What is known?
What is not known?
Research question?

METHODS

Study Design, Setting,
Subjects, Data Collection,
and Data analysis

RESULTS

TABLES AND FIGURES

Recruitment/response,
Characteristics of sample,
Findings from primary analyses,
Secondary analyses and additional findings
Self explanatory,
Representation of key findings

DISCUSSION
CONCLUSION

Important results,
Integrating the findings with
what is known in the literature,
Strengths and limitations,
Future studies

ACKNOWLEDGEMENTS
REFERENCES

Writing introduction —

It is all about identifying a knowledge GAP!



- Engage the audience
- Get them excited

By stating

- *something is missing*
- *something is not clear*
- *something is wrong*
- *something more*

Gap





You can't connect the dots looking forwards, you can only connect them looking backwards.

The only way to do great work is to love what you do (Jobs: I had been rejected, but I am still in love)

Following your heart and intuition, they somehow already know what you truly want to become (everything else is secondary!)

Drama in research papers

Denys Wheatley

Editor in Chief, *Cell Biology International*; *Cell Biology International Reports*; *Cancer Cell International*; *Oncology News*; Chairman and Director, *BioMedES*; Leggat, Keithhall, Inverurie, Aberdeen AB51 0LX, UK; 3232dnwd@gmail.com

Is science a theatrical business? Many would say that experimentation is down to earth, most investigations being routine and rather mundane. Drama in science does surface in the excitement that surrounds momentous occasions, such as the discovery of the double helical structure of DNA or proof that the Higg's boson exists. By contrast, some heightened emotion might arise when an unexpected result is found that questions a well-established hypothesis, or light dawns on a new hypothesis never previously considered. While scientific life might be seen as quite unemotional, there is nevertheless excitement in the creative action of research, as workers test their cherished hypotheses. This is only human, and it frequently spills over into their papers. However, this practice has been discouraged for many decades. The question is whether we should discourage it today or let authors have greater liberty to express themselves in a more emotive way. Otherwise we will find:

"there is nothing more tedious to read as a scientific paper"- Francis Crick

It is clear that some air of excitement (drama) is present in current communications. Perhaps even some humour might be tolerated, but as yet there is little evidence of it, except perhaps by subtle innuendo. In previous essays, I have ranted on about conventional primary research articles being frankly boring. An increasing use of more theatrical words and expressions can lighten the tedium somewhat. Some are here to stay, having become standard vocabulary.

Let me reveal a few of my favourite examples – well, I have just done so! I am going to *reveal* to you, not just *give* or *show* you a few examples. To *reveal* is more than just to show; it is to uncover something "before your very eyes" in a dramatic way, eg Poirot might say "I am now going to reveal who is the true murderer!" Everything in science today, however, is being "*revealed*". In previous articles I have dwelt a lot on choosing exactly the right word for the context, and English is rich indeed in these choices. Depending on the context, the word *revealed* can be correct, but another word is needed in other contexts. The less emotive words that can be used are much simpler in most research papers - to *show*, *tell*, *indicate* or *find* - each of which has its rightful place as the context demands.

But this is the tip of the iceberg. In yesteryear the parlance would be that *we experimented* on a rat, but today it has become "*we performed an experiment* on a rat", as though the researcher mounted a stage in front of an audience to carry out this "act". The same goes for "*sacrificed*", as discussed in a previous essay, and this certainly has a very emotive ring to it (where's the altar?). I have yet to read that animals were *executed*, but it could come into use! This theatricality goes much further. "Factor 8 *plays a significant role* in..." is pure theatre. This expression means "*functions, is involved in, or acts*" in some process.

Take a look at emotive words now commonplace in today's literature: *Unexpectedly*, we revealed that... Surprisingly, this did not happen...*Interestingly*, the evidence was... *Astonishingly*, we did not observe...The effect was *remarkably* elevated... *Importantly*, we noted... This procedure was shown to *dramatically* increase the level of... The images were captured with an Olympus S2 camera...At confluence, the cells were *harvested* with...The mice were *subjected* to an intravenous injection of...It will be *enormously important* to examine...*Excitedly*, simultaneous inhibition with... This treatment caused a *drastic* decrease in... Our results *display new and exciting* evidence of... ..*To further testify the specificity of the remarkable* effect of... Therefore we were *very keen to ameliorate our knowledge*... SNP insults induced H9c2 cell death as a dose-dependent manner... Caspase-3 is one of the *key executioners* of apoptosis... and so on (these are actual examples).

A frequent and annoying phrase in a primary research article is "We have revealed *for the first time*..." While this may be true, it conjures up a moment of real drama, the authors hailing themselves as true pioneers by making prior claim, when the whole purpose of a primary research paper is to communicate *new* findings.

Let me return to phrases mentioned earlier that abound in the literature, eg the word *perform*. I have no quibble with it when it is used in the appropriate context, but surely it is not suitable when used in almost all scientific papers. To *perform* connotes a quite strong element of *exhibitionism*, and is a function carried out by a person. To say that estrogen performs better than progesterone in eliciting a response from the ovary transfers the action from the investigator to the hormone when the word *is* would be shorter and perfectly adequate. You will also have seen this with the word *exhibited*, used far too liberally in almost every paper, as in eg "this cell type *exhibited* an unusual phenotype...". The simpler word "had" is preferable.

In conclusion, two issues arise. First, the examples I have given are words that are far too limited in their connotations to be used so frequently and almost exclusively, often inappropriately, and are lacking in precision - so necessary in science, no less in its communication than in its execution. And second, most of them have become so hackneyed and commonplace (ie jargon) that they have lost their force. The question is, do we editors leave these elements of drama in papers or should we weed them out and use simpler English words (back to good old Anglo-Saxon)? Whatever transpires, we ought to stop the repeated use of some of these words within the same article while also considering sensible and more appropriate alternatives.

**“There is nothing more tedious to read as a scientific paper”
-Francis Crick, 1962 Nobel Prize**

I am going to *reveal* to you, not just *give*
or *show* you

To *reveal* is more than just to
show; it is to uncover something “before your very eyes” in a
dramatic way

Examples

- *Unexpectedly*, we revealed that...
- Surprisingly, this did not happen...
- *Interestingly*, the evidence was...
- *Astonishingly*, we did not observe...
- The effect was *remarkably* elevated...
- *Importantly*, we noted...
- This procedure was shown to *dramatically* increase the level of...
- It will be *enormously important* to examine...
- *Excitedly*, simultaneous inhibition with...
- This treatment caused a *drastic* decrease in...
- Our results *display new and exciting* evidence of...
- Therefore we were *very keen to ameliorate our knowledge*...
- Caspase-3 is one of the *key executioners* of apoptosis...

RESEARCH



CHRISTMAS 2015: THE PUBLICATION GAME

Use of positive and negative words in scientific PubMed abstracts between 1974 and 2014: retrospective analysis

OPEN ACCESS

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Abstract

Objective To investigate whether language used in science abstracts can skew towards the use of strikingly positive and negative words over time.

Design Retrospective analysis of all scientific abstracts in PubMed between 1974 and 2014.

Methods The yearly frequencies of positive, negative, and neutral words (25 preselected words in each category), plus 100 randomly selected words were normalised for the total number of abstracts. Subanalyses included pattern quantification of individual words, specificity for selected high impact journals, and comparison between author affiliations within or outside countries with English as the official majority language. Frequency patterns were compared with 4% of all books ever printed and digitised by use of Google Books Ngram Viewer.

Main outcome measures Frequencies of positive and negative words in abstracts compared with frequencies of words with a neutral and random connotation, expressed as relative change since 1980.

Results The absolute frequency of positive words increased from 2.0% (1974-80) to 17.5% (2014), a relative increase of 880% over four decades. All 25 individual positive words contributed to the increase, particularly the words "robust," "novel," "innovative," and "unprecedented," which increased in relative frequency up to 15 000%. Comparable but less pronounced results were obtained when restricting the analysis to selected journals with high impact factors. Authors affiliated to an institute in a non-English speaking country used significantly more positive words. Negative word frequencies increased from 1.3% (1974-80) to 3.2% (2014), a relative increase of 257%. Over the same time period, no

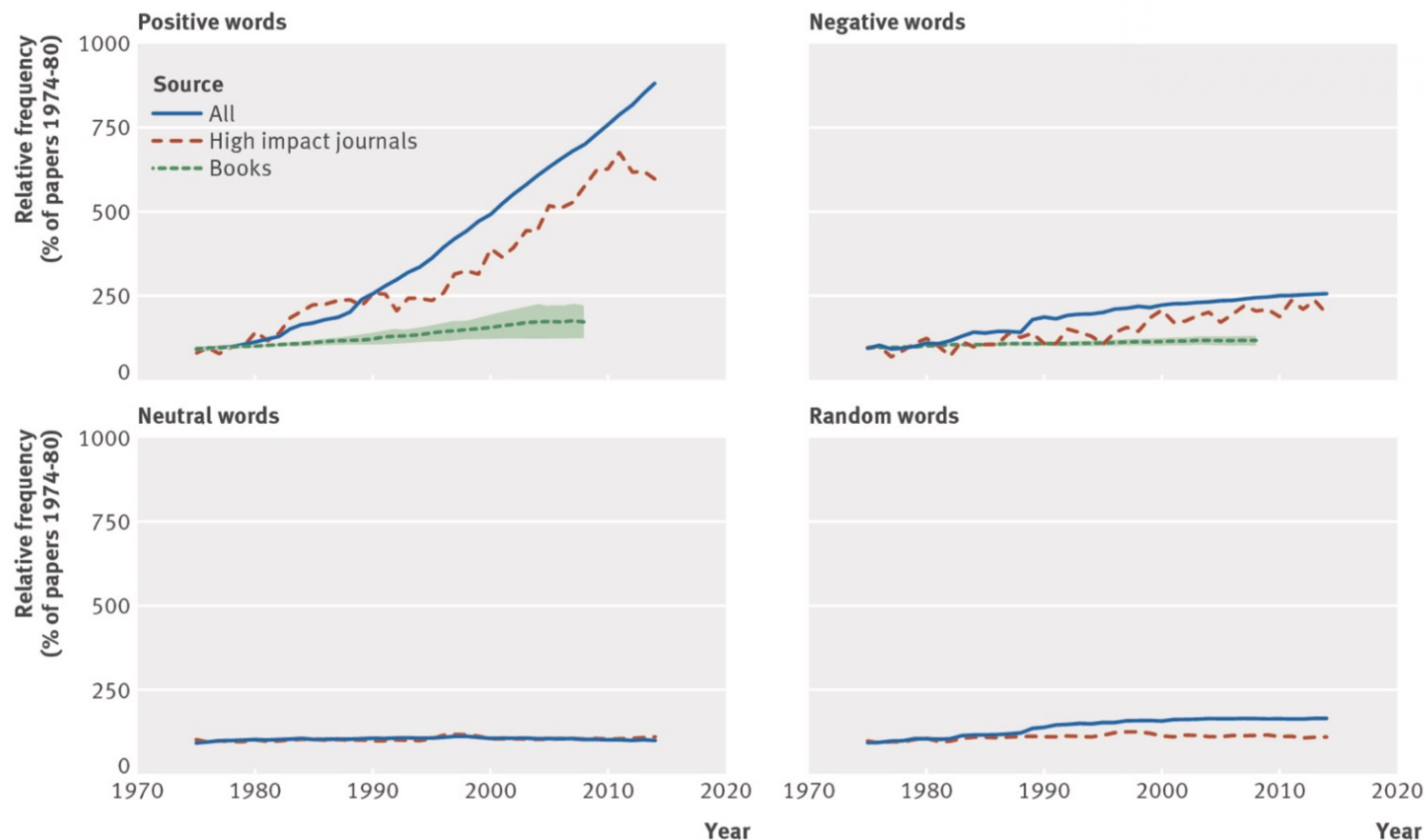
apparent increase was found in neutral or random word use, or in the frequency of positive word use in published books.

Conclusions Our lexicographic analysis indicates that scientific abstracts are currently written with more positive and negative words, and provides an insight into the evolution of scientific writing. Apparently scientists look on the bright side of research results. But whether this perception fits reality should be questioned.

Introduction

Science has shown an impressive growth over past decades and more scientific papers are published now than ever before.¹ Between 1996 and 2011, over 15 million individuals authored around 25 million papers.² Owing to expanding research fields, it is increasingly difficult to get studies published in high impact journals.³ This is important since publication quantity and associated impact factors have a considerable effect on a scientist's career perspective.⁴ Consequently, in order to get published, scientific discoveries can sometimes be exaggerated or the potential implications overstated.⁵⁻⁹ Indeed, overinterpretation, overstatement, and misreporting of scientific results have been frequently reported.⁷⁻¹² However, the prevalence of this problem in the scientific literature is unclear. There is a well known universal tendency in people to use positive words,¹³ and exaggeration of research related news has previously been linked to overstatements in academic press releases.¹⁴ In the current study, we used a data driven approach to investigate trends in the use of positively and negatively valenced words in PubMed abstracts and titles over the past

The absolute frequency of positive words increased from 2.0% (1974-80) to 17.5% (2014), a relative increase of 880% over four decades.





Original Investigation | Ethics

Trends in the Use of Promotional Language (Hype) in Abstracts of Successful National Institutes of Health Grant Applications, 1985-2020

Neil Millar, PhD; Bojan Batalo, MSc; Brian Budgell, PhD

Abstract

IMPORTANCE The integrity of the grant application process is important to the success of the entire research enterprise. However, little information is available concerning the prevalence and evolution of subjective or promotional language (“hype”) that has the potential to undermine objectivity in the writing and evaluation of grant applications.

OBJECTIVE To assess changes over time in the use of hype in abstracts of National Institutes of Health (NIH) grant applications.

DESIGN, SETTING, AND PARTICIPANTS This cross-sectional study assessed the prevalence of promotional adjectives in abstracts in the NIH archive from 1985 to 2020.

MAIN OUTCOMES AND MEASURES From all abstracts in the NIH RePORTER (Research Portfolio Online Reporting Tools: Expenditures and Results) archive, adjectives were automatically extracted, and their frequencies in the most recent year (2020) were assessed relative to the start year (1985). Adjectives that shifted significantly in frequency and that carried a promotional sense (ie, hype) were retained, and patterns of change were assessed by plotting yearly frequencies (1985-2020). By grouping the adjectives based on shared semantic properties, broad meanings commonly expressed by hype were identified. Absolute change was measured as the difference in normalized frequency between 1985 and 2020. Relative change was measured as the percentage change in normalized frequency in 2020 relative to 1985, or the first year of occurrence.

RESULTS In total, 901 717 abstracts were analyzed and 139 adjective forms were identified as hype. Among these 139 adjective forms, 130 hype adjectives increased in frequency by 7690 words per million (wpm) (mean [SD] relative increase, 1378% [3132%]), while 9 hype adjectives decreased in frequency by 686 wpm (mean [SD] relative decrease, 44% [18%]). The largest absolute increases were for the terms *novel* (1054 wpm), *critical* (555 wpm), and *key* (461 wpm), while the largest relative increases were for the terms *sustainable* (25 157%), *actionable* (16 114%), and *scalable* (13 029%). Hype most often serves to promote the significance, novelty, scale, and rigor of a project; the utility of the expected outcomes; the qualities of the investigators and research environment; and the gravity of the problem; as well as conveying the personal attitudes of the applicants.

CONCLUSIONS AND RELEVANCE Levels of hype in successful NIH grant applications have increased over time from 1985 to 2020. The findings in this study should serve to sensitize applicants, reviewers, and funding agencies to the increasing prevalence of subjective, promotional language in funding applications.

Key Points

Question Has the use of “hype” (promotional language) in the abstracts of successful National Institutes of Health applications increased since 1985?

Findings This cross-sectional study of 901 717 National Institutes of Health abstracts from 1985 to 2020 shows that applicants described their work in increasingly subjective terms and relied on promotional language and appeals to emotion (ie, 130 adjective forms identified as hype increased in frequency).

Meaning This study suggests that applicants, reviewers, and funding agencies should be aware of the increasing prevalence of promotional language in funding applications.

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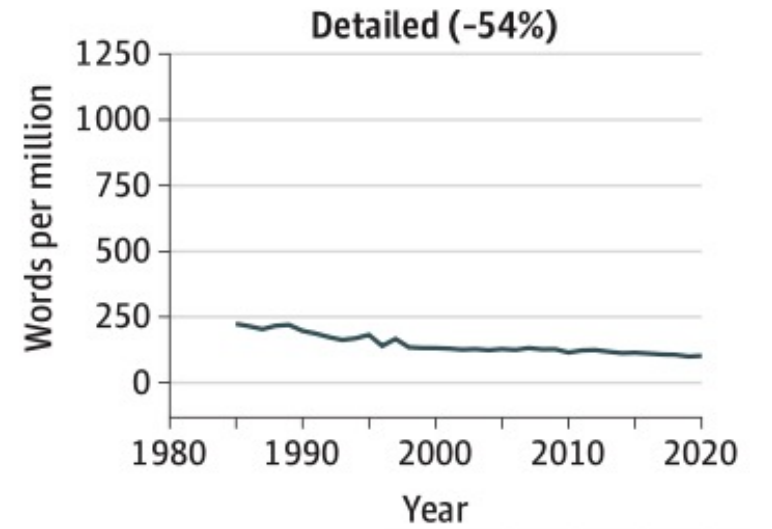
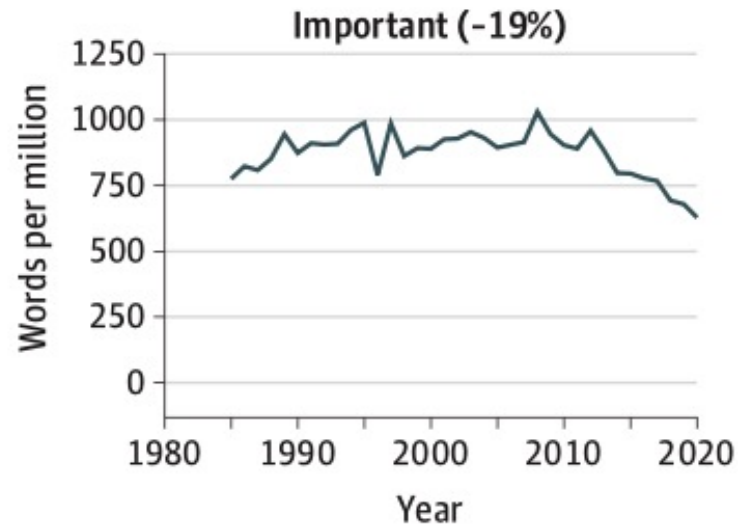
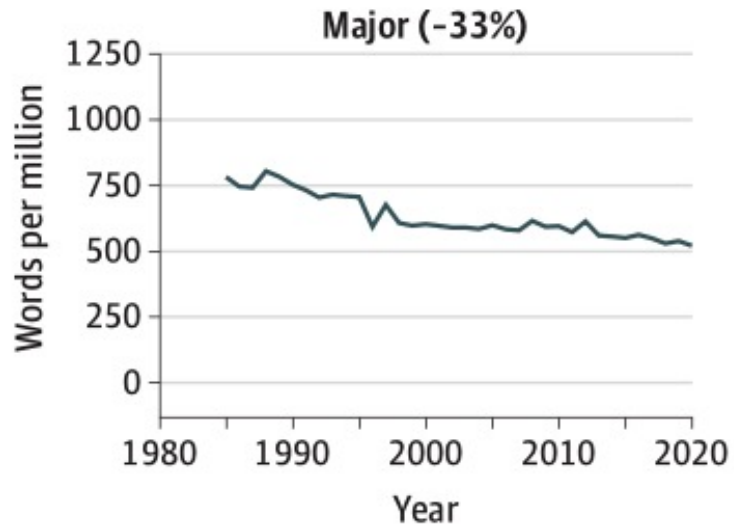
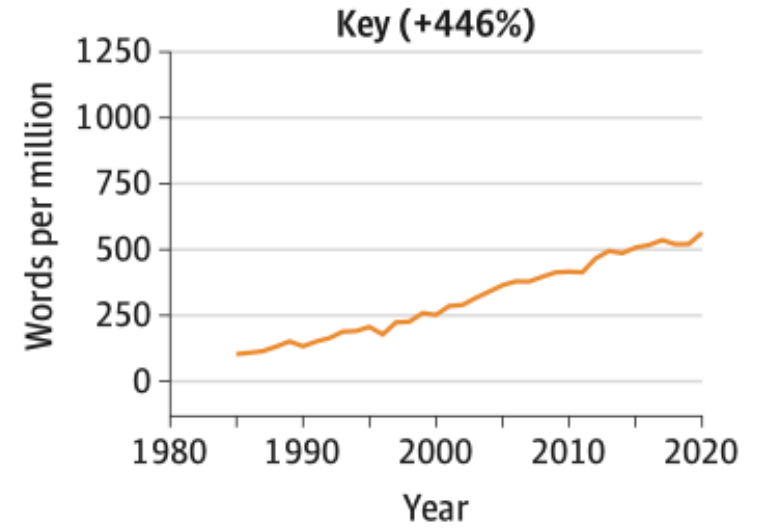
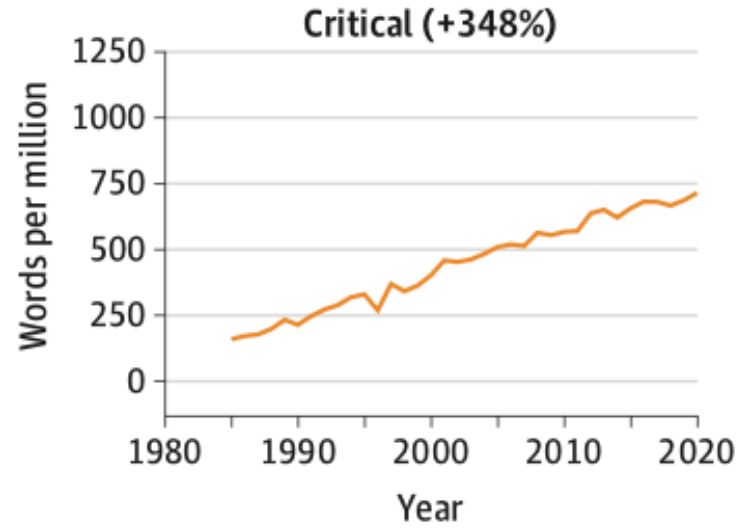
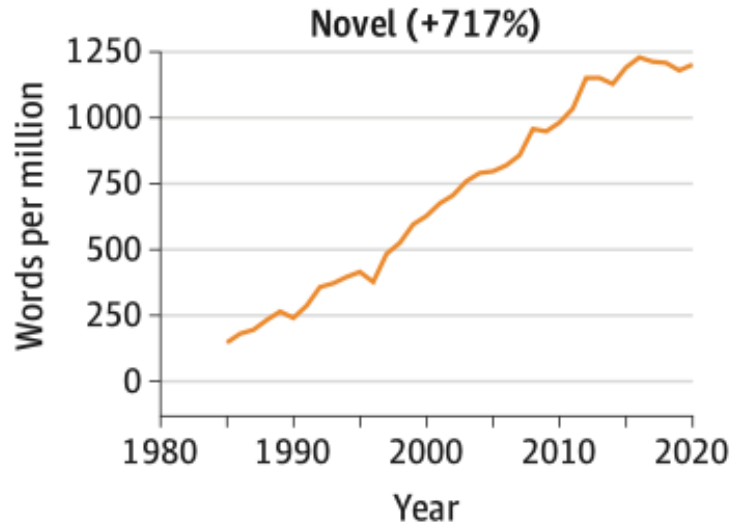
In total, 901,717 abstracts were analyzed and 139 adjective forms were identified as “hype”

The largest increases were for the terms:

-novel (1054 wpm)

-critical (555 wpm)

-key (461 wpm)





Original Investigation | Ethics

Promotional Language (Hype) in Abstracts of Publications of National Institutes of Health–Funded Research, 1985-2020

Neil Millar, PhD; Bojan Batalo, PhD; Brian Budgell, PhD

Abstract

IMPORTANCE Investigators applying for National Institutes of Health (NIH) funding increasingly use promotional language (or hype) that has the potential to undermine objective evaluation. Whether or not the same investigators use hype in subsequent research reports has yet to be investigated.

OBJECTIVE To assess changes in the use of hype in journal abstracts reporting research funded by the NIH and to compare those trends with previously reported trends in the associated NIH funding applications.

DESIGN, SETTING, AND PARTICIPANTS This cross-sectional study assessed trends (from 1985 to 2020) in the use of promotional adjectives in abstracts of journal articles reporting NIH-funded research, and then compared those trends with previously reported trends for the associated NIH funding applications. Articles included in analyses had abstracts available in PubMed.

MAIN OUTCOMES AND MEASURES Absolute change for the 139 adjective forms that have previously been identified as representing hype in NIH funding applications was measured as the difference in frequency between 1985 and 2020. Relative change was measured as the percentage change in frequency in 2020 relative to 1985, or the first year of occurrence. Consistency of change was measured by the rank order correlation (Kendall τ). Concordance between longitudinal trends in the journal abstracts and NIH funding applications was measured by the rank-order cross-correlation.

RESULTS In a total of 2 394 480 journal abstracts, all 139 adjective forms were identified in 2 793 592 total occurrences. Among these adjectives, 133 increased in absolute frequency by 5335 words per million (wpm), with a mean (SD) relative increase of 1404% (2371%). The largest absolute increases were for *novel* (524 wpm), *important* (414 wpm), and *key* (378 wpm). The largest relative increases were for *scalable* (22 wpm [19 964%]), *unmet* (23 wpm [12 126%]), and *tailored* (40 wpm [8169%]). The mean (SD) correlation for all adjectives was 0.70 (0.30) with 95 adjectives showing a strong positive correlation ($\tau > 0.7$; $P < .001$), 24 a moderate positive correlation ($0.5 < \tau < 0.7$; $P < .001$), and 3 a moderate negative correlation ($-0.5 < \tau < -0.7$; $P < .001$). The mean (SD) cross-correlation was 0.64 (0.19) with 61 of the 139 adjectives showing a strong positive cross-correlations ($\tau > 0.7$; $P < .001$), 53 a moderate positive cross-correlations ($0.5 < \tau < 0.7$; $P < .001$), and 3 a moderate negative cross-correlation ($-0.7 < \tau < -0.5$; $P < .001$).

CONCLUSIONS AND RELEVANCE In this analysis of journal abstracts reporting NIH-funded research from 1985 to 2020, levels of promotional language were found to be increasing and trends were closely associated with previously reported trends in the related NIH funding applications. This suggests that increasing levels of salesmanship may in part be a downstream effect of salesmanship infused during earlier stages of the research cascade.

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Key Points

Question Is the increasing use of promotional language (often referred to as hype) in National Institutes of Health (NIH) funding applications associated with a similar shift in journal abstracts reporting the results of NIH-funded research?

Findings This cross-sectional study of 2 394 480 journal abstracts reporting the results of NIH-funded research from 1985 to 2020 found that the use of 133 out of 139 hype adjectives increased and that these trends were positively correlated with previously reported trends in related funding applications.

Meaning These results suggest that increasing salesmanship in the reporting of research is in part a downstream effect of language choices made during the stage of funding application.

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Table. Hype Adjectives With Moderate to Strong Positive Cross-Correlations

Cross-correlation coefficient	Hype adjectives	P value
$\tau > 0.9$	key, diverse, novel, critical, robust, promising, transformative	<.001
$0.8 < \tau < 0.9$	emerging, innovative, unprecedented, relevant, urgent, elusive, nuanced, exciting, scalable, scientific, actionable, successful, unparalleled, compelling, comprehensive, crucial, impactful, seamless	<.001
$0.7 < \tau < 0.8$	efficacious, safer, strong, unmet, quality, rigorous, strategic, top, devastating, essential, myriad, unanswered, vast, tailored, tremendous, advanced, meaningful, timely, unique, broad, durable, imperative, indispensable, sustainable, dismal, motivated, powerful, exceptional, alarming, dedicated, surprising, vital, foundational, groundbreaking, ideal, longstanding	<.001
$0.6 < \tau < 0.7$	efficient, huge, outstanding, daunting, paramount, remarkable, vibrant, transdisciplinary, immense, intuitive, dire, pivotal, confident, user-friendly, expansive, generalizable, substantial, enormous, sophisticated, ready, invaluable, multidisciplinary, notable, deeper, fundamental, overwhelming, premier, effective, skilled, accessible, easy, international, interdisciplinary	<.001
$0.5 < \tau < 0.6$	renowned, intriguing, latest, deployable, incredible, interprofessional, intellectual, revolutionary, senior, accurate, qualified, experienced, fastest, prestigious, ambitious, biggest, attractive, massive, immediate	<.001

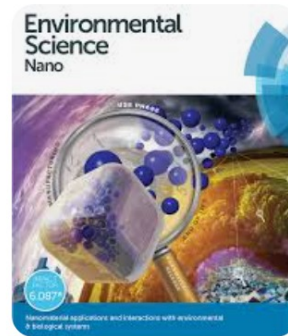
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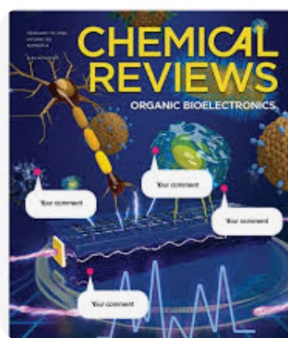
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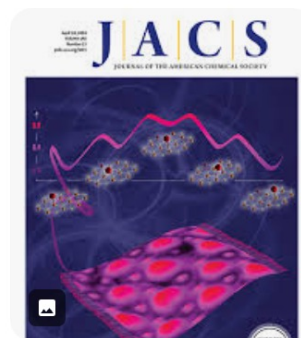
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Make science even more sexy— Images/Graphical abstract

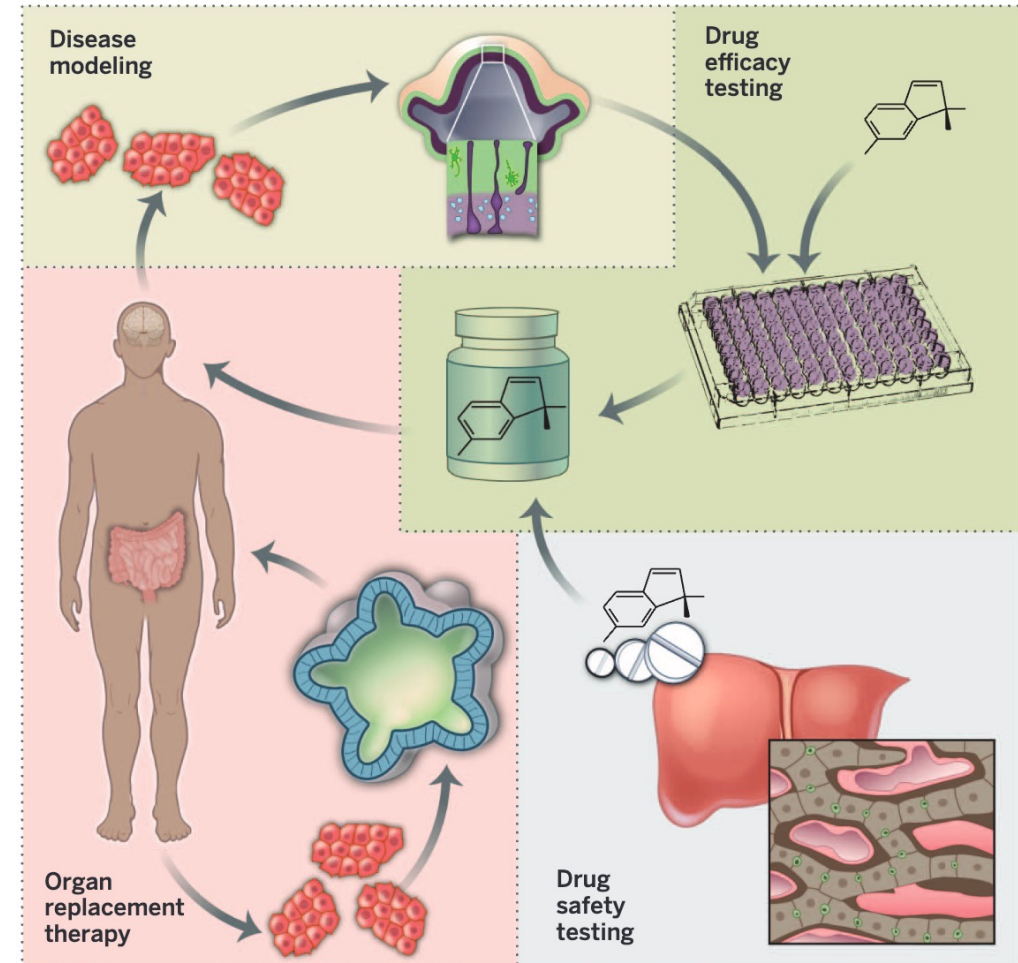
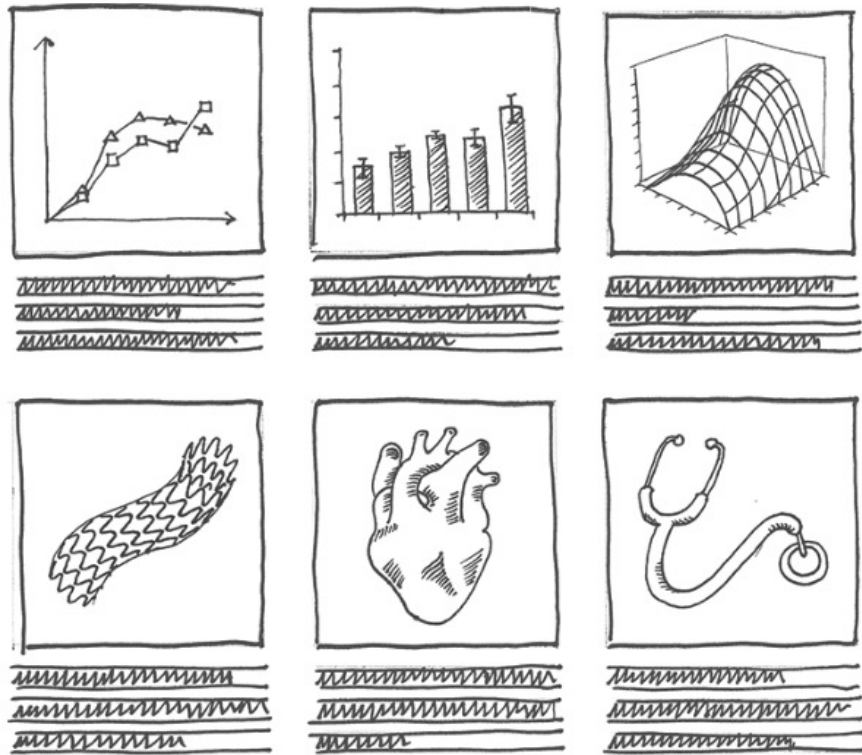
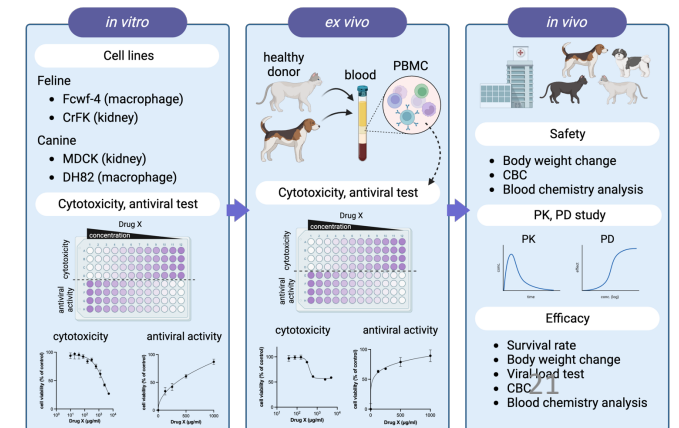
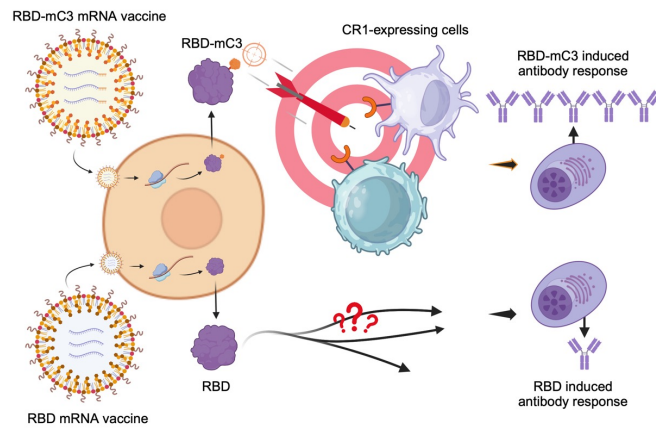
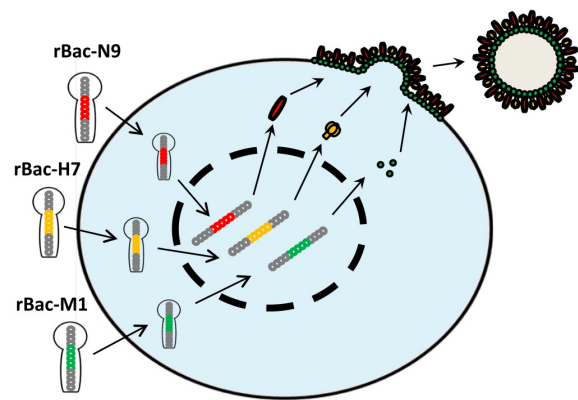
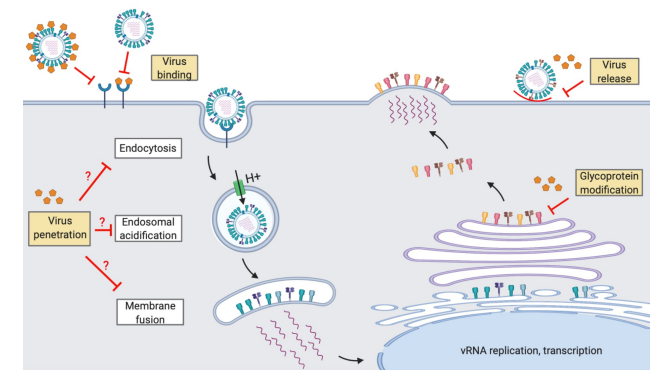
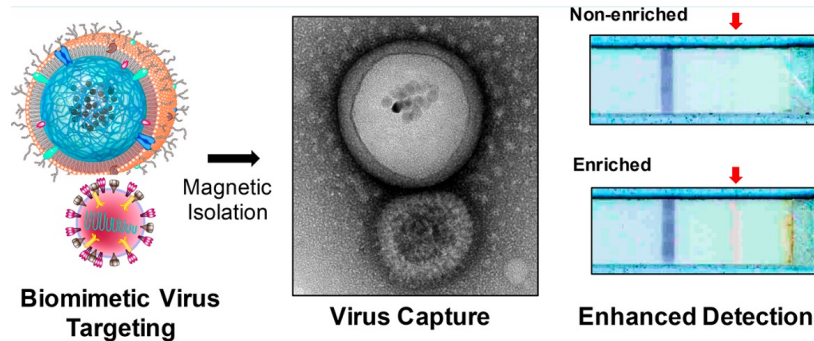
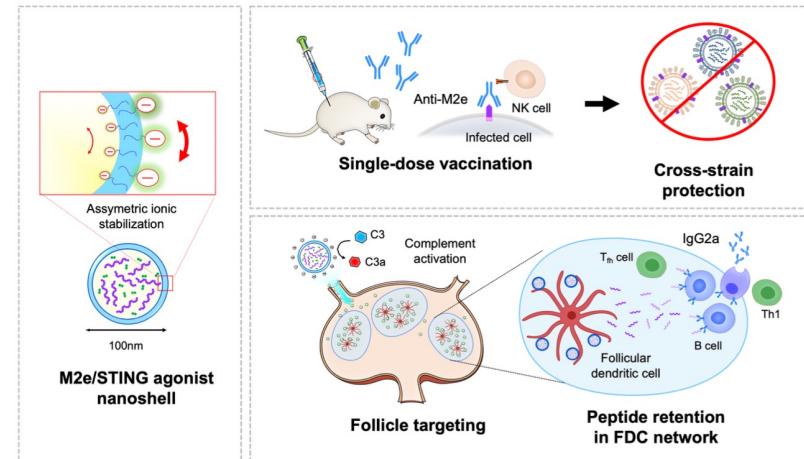
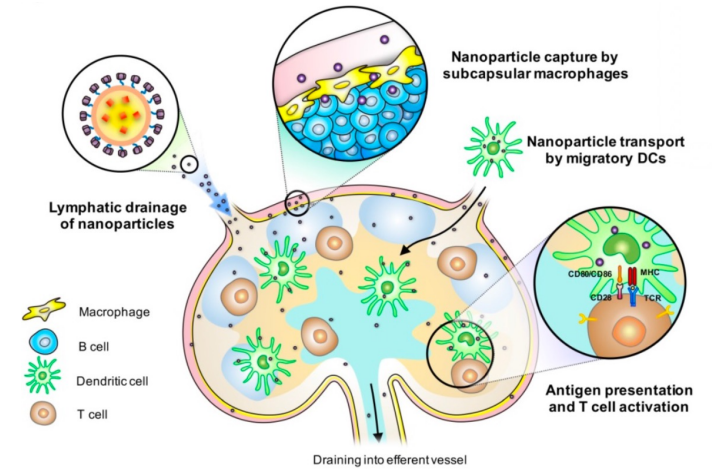
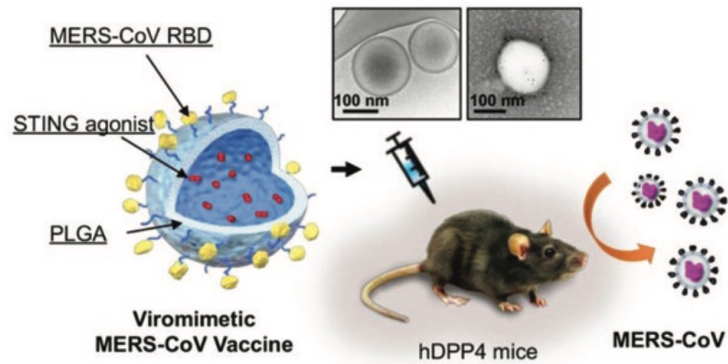
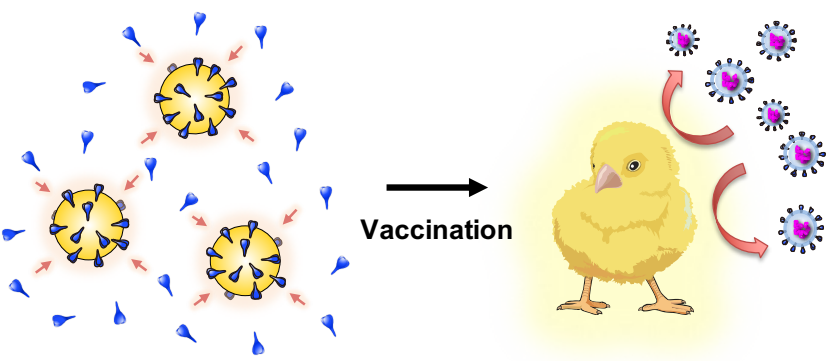


Fig. 4. Therapeutic potential of organoids. Organoids can be used to model diseases (beige box),





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Writing a cover letter — Novelty, novelty, and novelty

- *No need to re-invent the wheel!* 不要重新發明輪子！



What is already known on this topic

Our perception of the world is reflected in how we use language

Science has shown a substantial growth over past decades, and in order to be published, scientific discoveries are sometimes exaggerated or potential implications overstated



What this study adds

Analysis of PubMed abstracts shows that positive words have been increasingly used between 1974 and 2014

Use of more overt positive language is probably related to the emergence of a positive outcome bias that currently dominates scientific literature

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For the submission of your article on Fowl adenovirus (FAdV) infections in poultry, here are several academic journals that might be suitable due to their focus on veterinary science, virology, and poultry diseases:

1. **Avian Diseases** - This journal is dedicated to publishing original research on diseases affecting poultry, making it highly relevant for your article on FAdV infections.
2. **Veterinary Research** - Known for its broad scope in veterinary science, this journal covers pathogen-host interactions and could be ideal for discussing the pathogenicity and transmission aspects of FAdVs.
3. **Journal of General Virology** - This journal focuses on all aspects of virology and would be suitable for the detailed viral analysis and genetic studies in your research.
4. **Poultry Science** - This is another excellent option that specifically addresses issues related to poultry, including health and disease management, and would directly cater to your target audience.
5. **Vaccine** - If your research emphasizes vaccine development against FAdV, this journal would be appropriate, especially given its focus on vaccine studies and immunology.
6. **Journal of Veterinary Diagnostic Investigation** - Ideal for papers that focus on diagnostic methods and disease surveillance in veterinary context, which appears to be a component of your research.



5 Tips on Getting Your Academic Article Published

Sarah Elaine Eaton, PhD, Editor-in-Chief, *International Journal for Educational Integrity*

→ Tip #1: Read the Aims and Scope

Ensure your manuscript fits with the aims and scope of the journal.

→ Tip #2: Focus on Quality

Poor-quality writing is one of the main reasons manuscripts get a desk rejection. Ensure the quality of your manuscript is your top priority.

→ Tip #3: Follow the Submission Guidelines

Ensure your submission fits with the submission guidelines of the journal. Do not wait for a desk rejection and then tell the editor you can reformat the manuscript. Submit according to the guidelines.



→ Tip #4: Do Your Homework

Read recently published articles in the journal to understand what kinds of submissions make the cut. It can also be helpful to understand who the editors and editorial board members are and how their expertise contributes to the journal.

→ Tip #5: Provide Value

Ensure that your manuscript adds something new to the existing knowledge base. The best academic articles provide value to the reader and the scientific or scholarly community. Always keep your reader in mind. The more value you can provide to the readers, the more likely it is your manuscript will be published in a high-quality journal.

Takeaway

- 喜歡自己的研究(先洗腦)、當自己研究的最佳業務員
- Storytelling說故事：
挖個大坑（引人入勝）→帶著data跳進去（承擔責任）→描述貢獻
、前瞻未來（展現高度與格局）