Manuela Aparicio, PhD

Carlos J. Costa, PhD

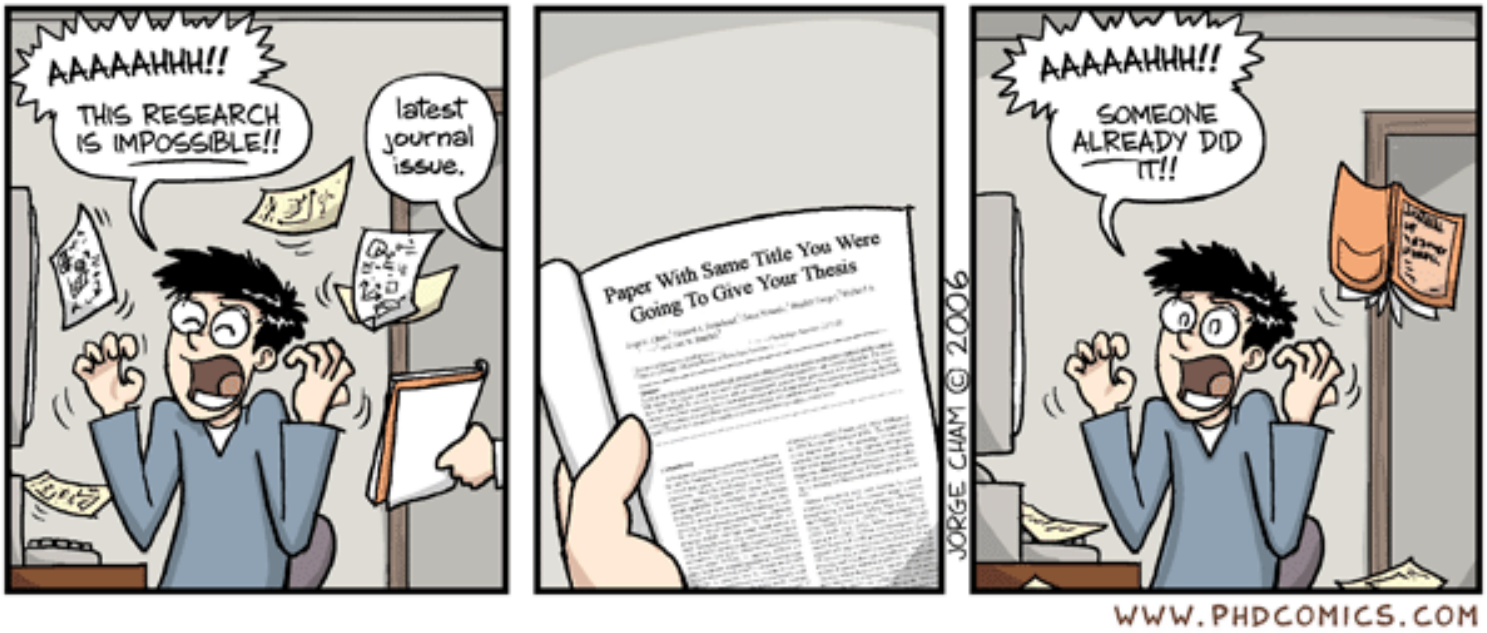
SCIENTIFIC PUBLICATIONS

Agenda

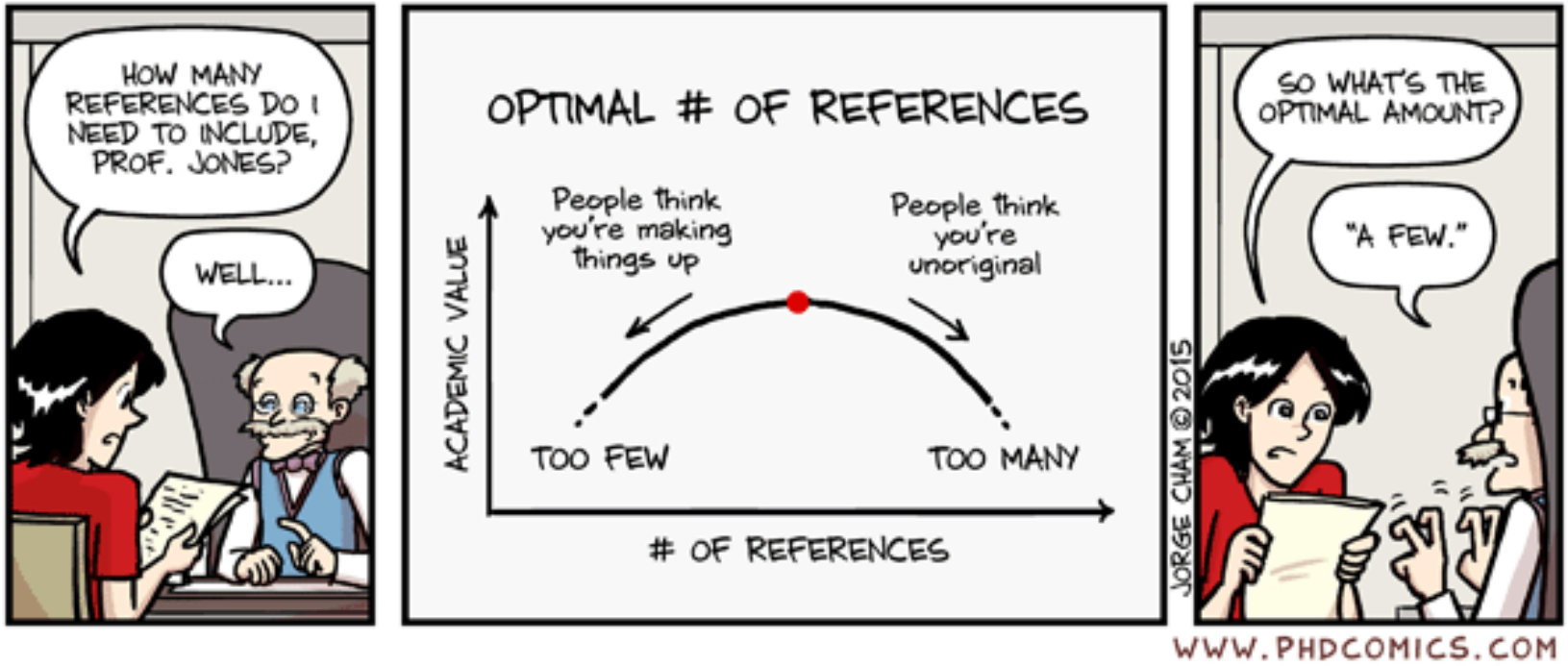
- Publishing
- Review Process
- Paper/Article Structure
- Writing Guidelines

Scientists must write

Scientists must publish



Scientists must be cited

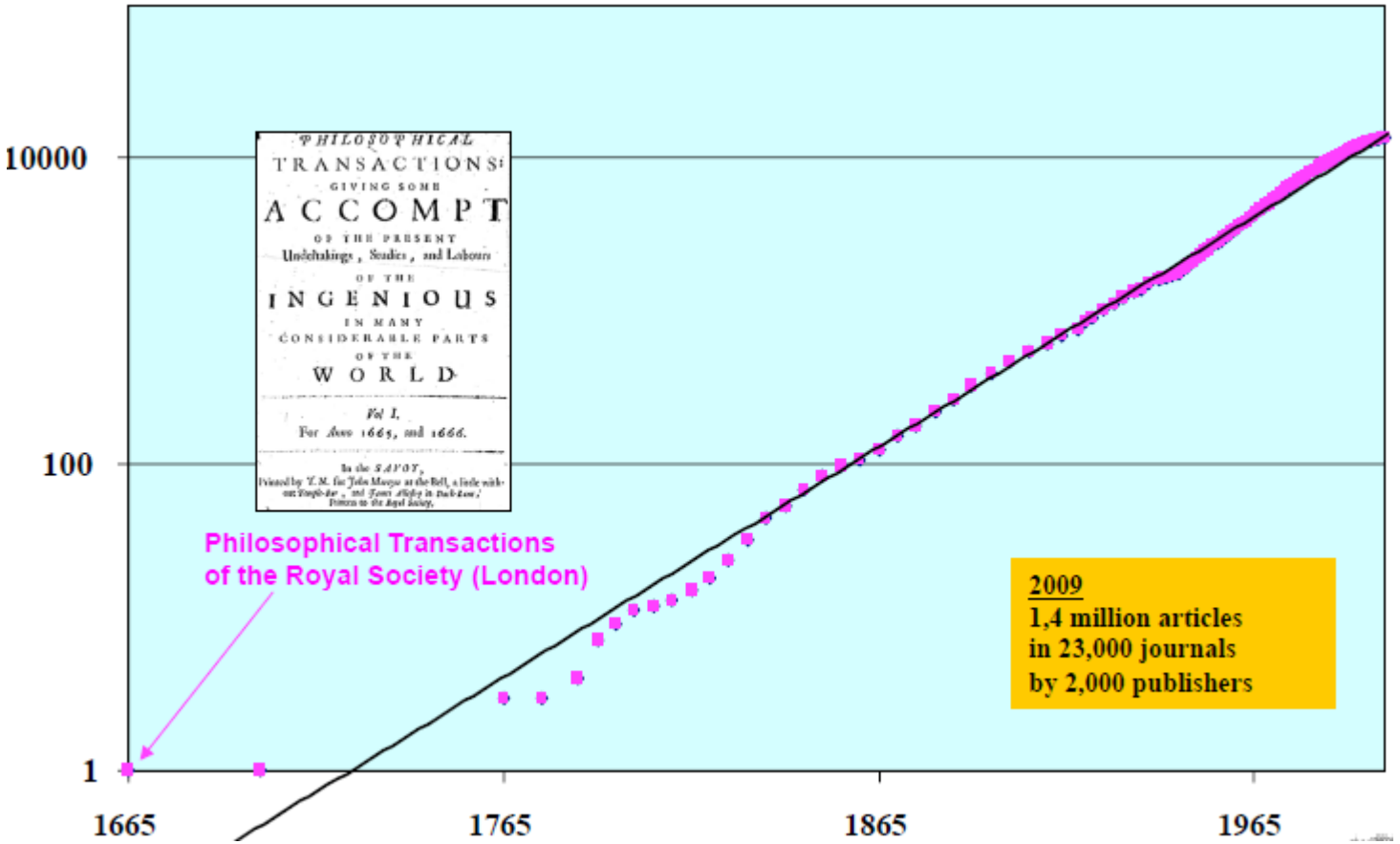


Scientists must be read

Heinrich Oldenburg

- Heinrich Oldenburg (or Henry Oldenburg) (c. 1619 - 1677)
  - German born
  - Theologian, diplomat, natural philosopher;
  - Early member of the Royal Society (founded in 1660),
  - Served as first secretary of the Royal Society
  - Known for creating the first scientific journal – Philosophical Transactions of the Royal Society of London - 1665

Heinrich Oldenburg



M A Mabe The number and growth of journals *Serials* 16(2).191-7, 2003

Trends in Publishing

- **Rapid conversion from "print" to "electronic"**
  - 1997: print only
  - 2009: 55% e-only (mostly e-collections)
  - 25% print only
  - 20% print-plus-electronic
  - 2013: 95+% electronic access
- **Changing role of "journals" due to e-access**
- **Increased usage of articles**
  - at lower cost per article
  - **Electronic submission**
  - Increased manuscript inflow
- **New publishing models**
  - E.g. "author pays" models (open access), "delayed open access" (open archiving), etc.

Why Publishing?

- Publishing is one of the necessary steps embedded in the scientific research process. It is also necessary for graduation and career progression

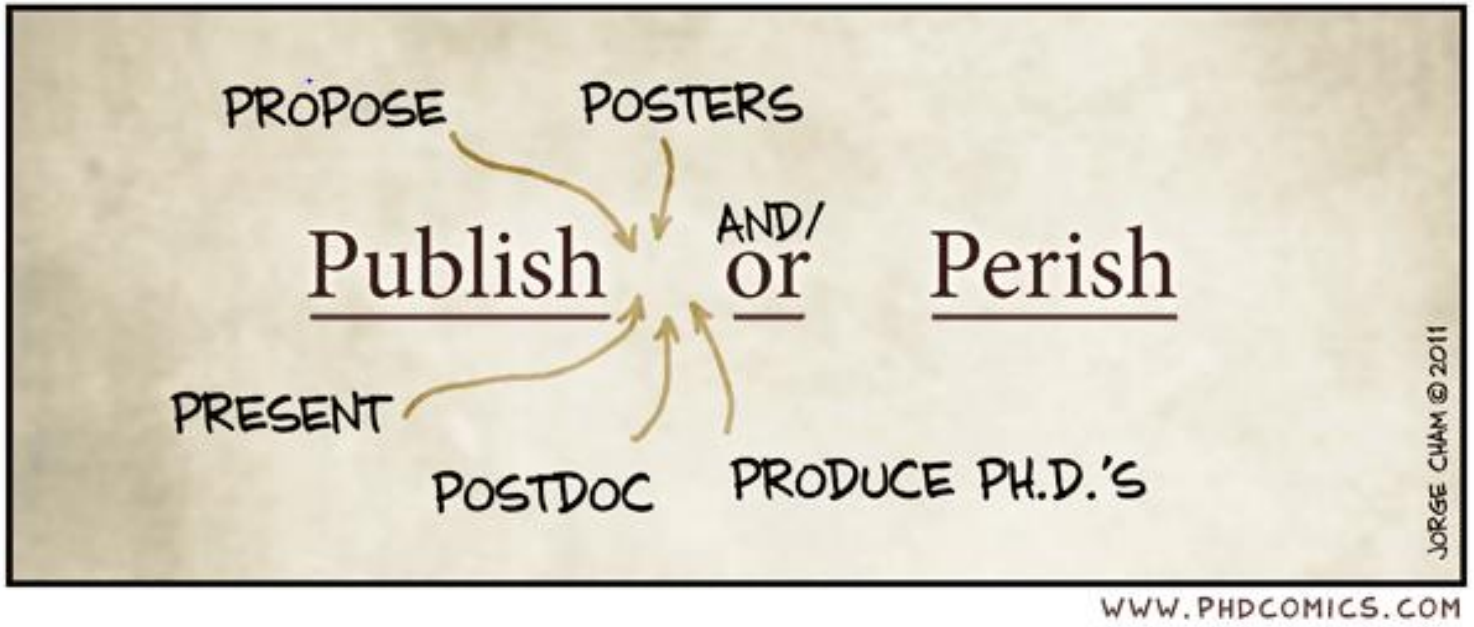
Think about **WHY you want to publish your work.**

- Is it **new and interesting**?
- Is it a current **hot topic**?
- Have you **provided solutions** to some difficult problems?
- Are you **ready** to publish at this point?

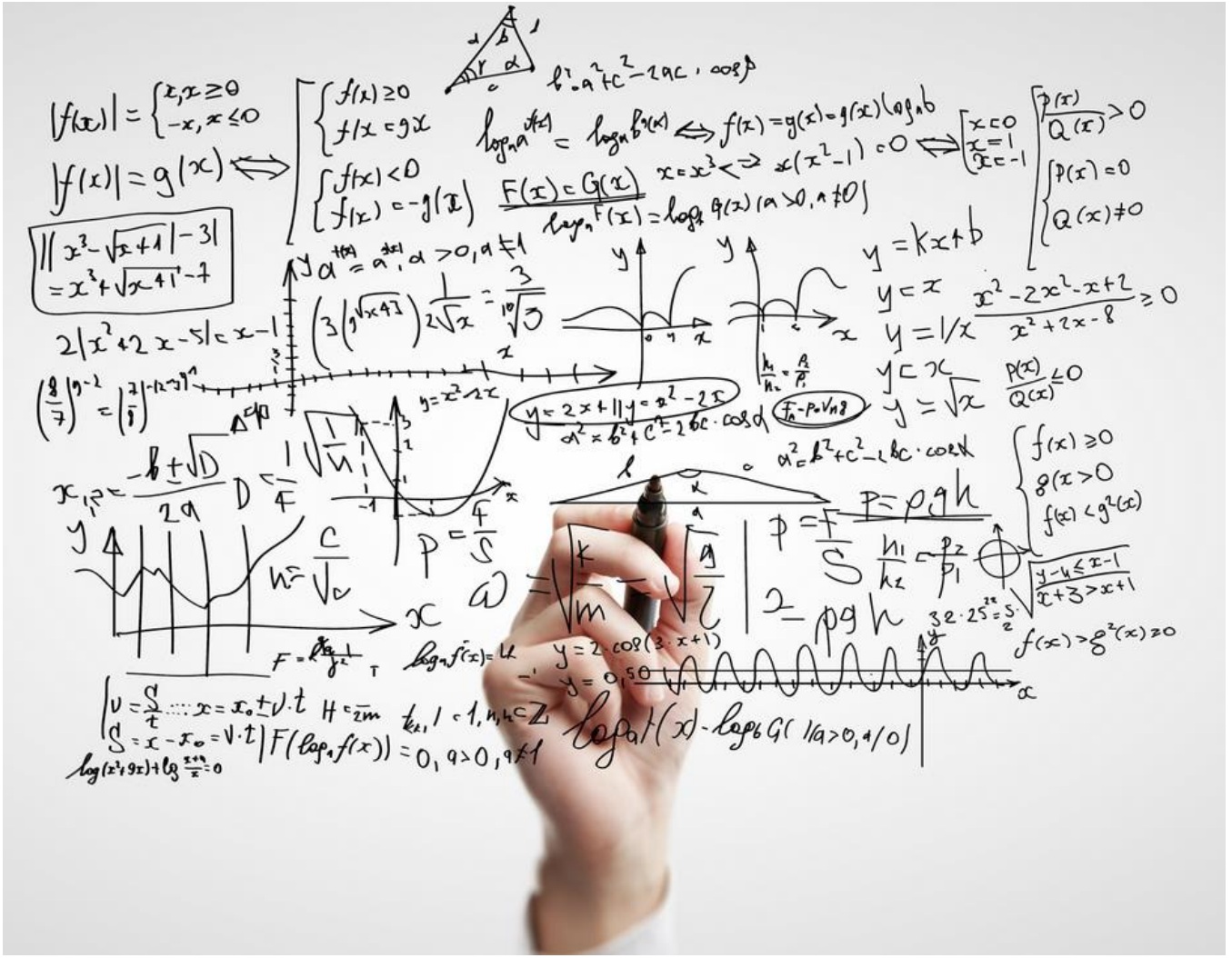
Why Publish?

- Improves the changes of getting a research grant
- May help you to secure employment
- Personal sense of achievement
- Get research into the public domain
- Contribute towards the evaluation of universities

Why Publishing?

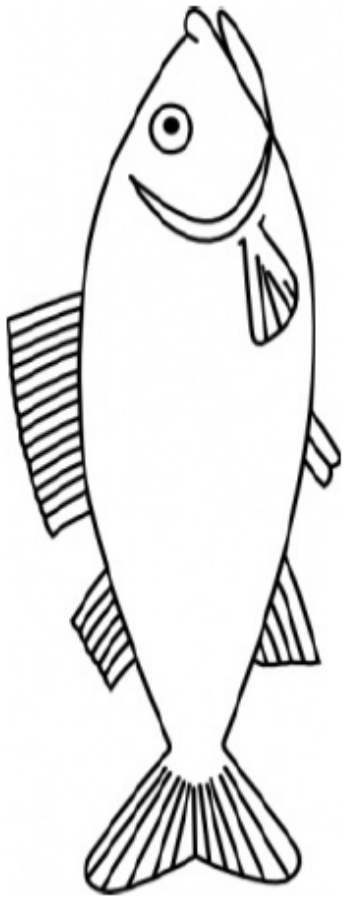


Writing is not an exact science, there are no formulas!



But some tips and guidelines

General Structure



- **Title**
- **Abstract**
- **Keywords**

- **Main text (IMRAD)**
  - Introduction
  - Methods
  - Results
  - And
  - Discussions

- **Conclusion**
- **Acknowledgement**
- **References**
- **Supplementary Data**

•Make them **easy for indexing** and **searching**! (informative, attractive, effective)

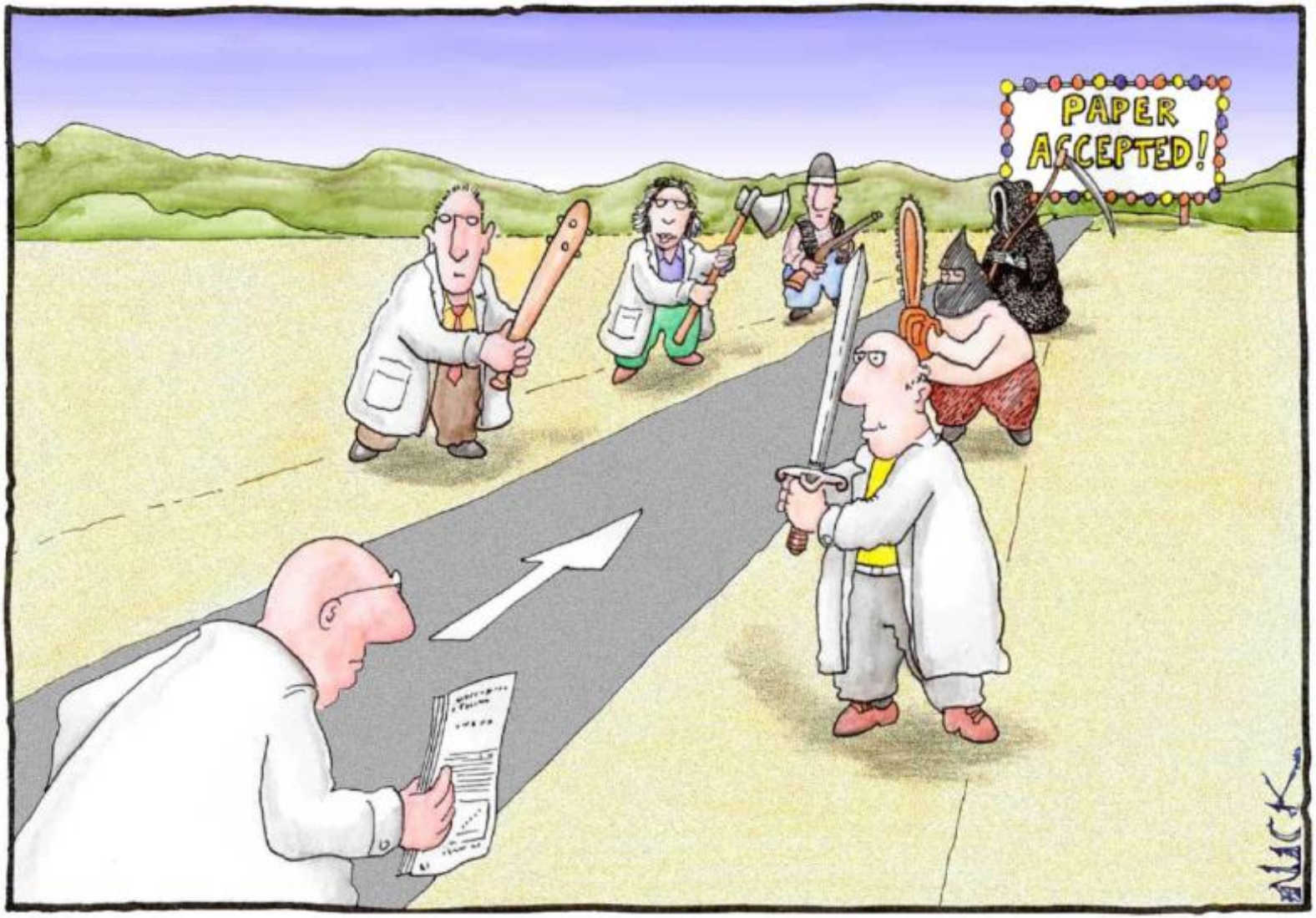
•Journal **space** is not unlimited.

•Your reader's **time** is scarce.

•Make your article as **concise** as possible - more difficult than you imagine

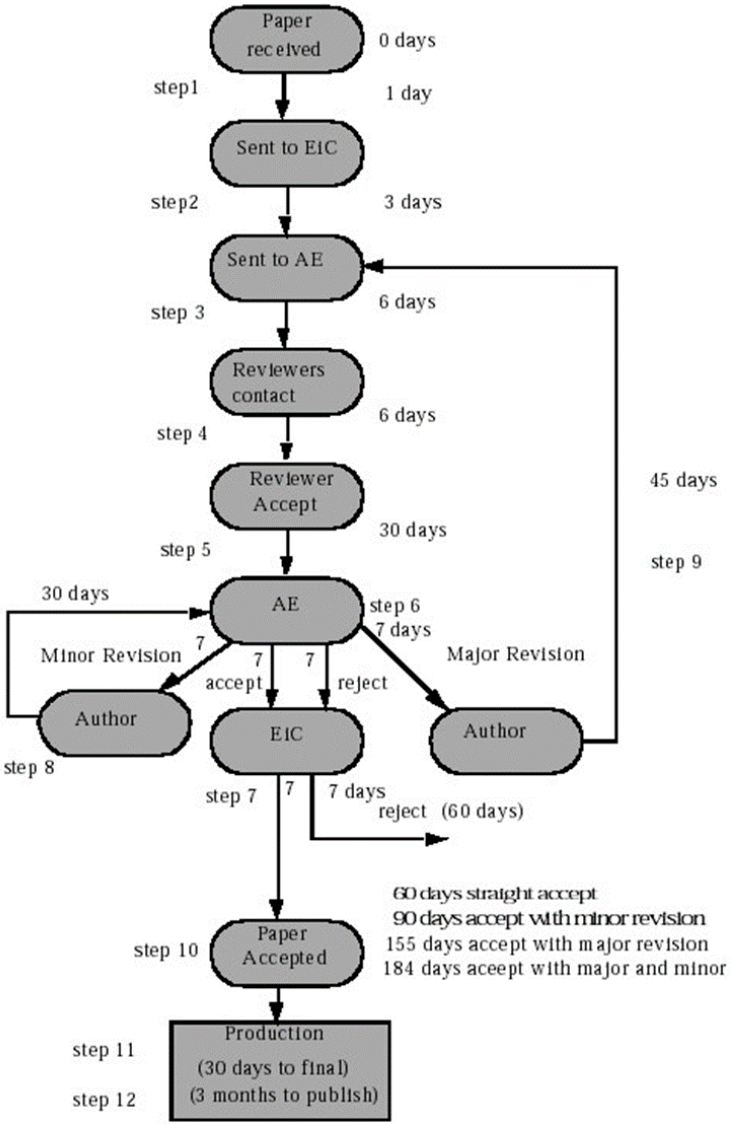
Review Process [Traditional]

- One or more reviews by subject matter experts
- Reviewers selected by editor
- Reviewer identity not disclosed to author (“blind” review)
- Author identity may (or may not) be disclosed to reviewer
- Editor has final decision



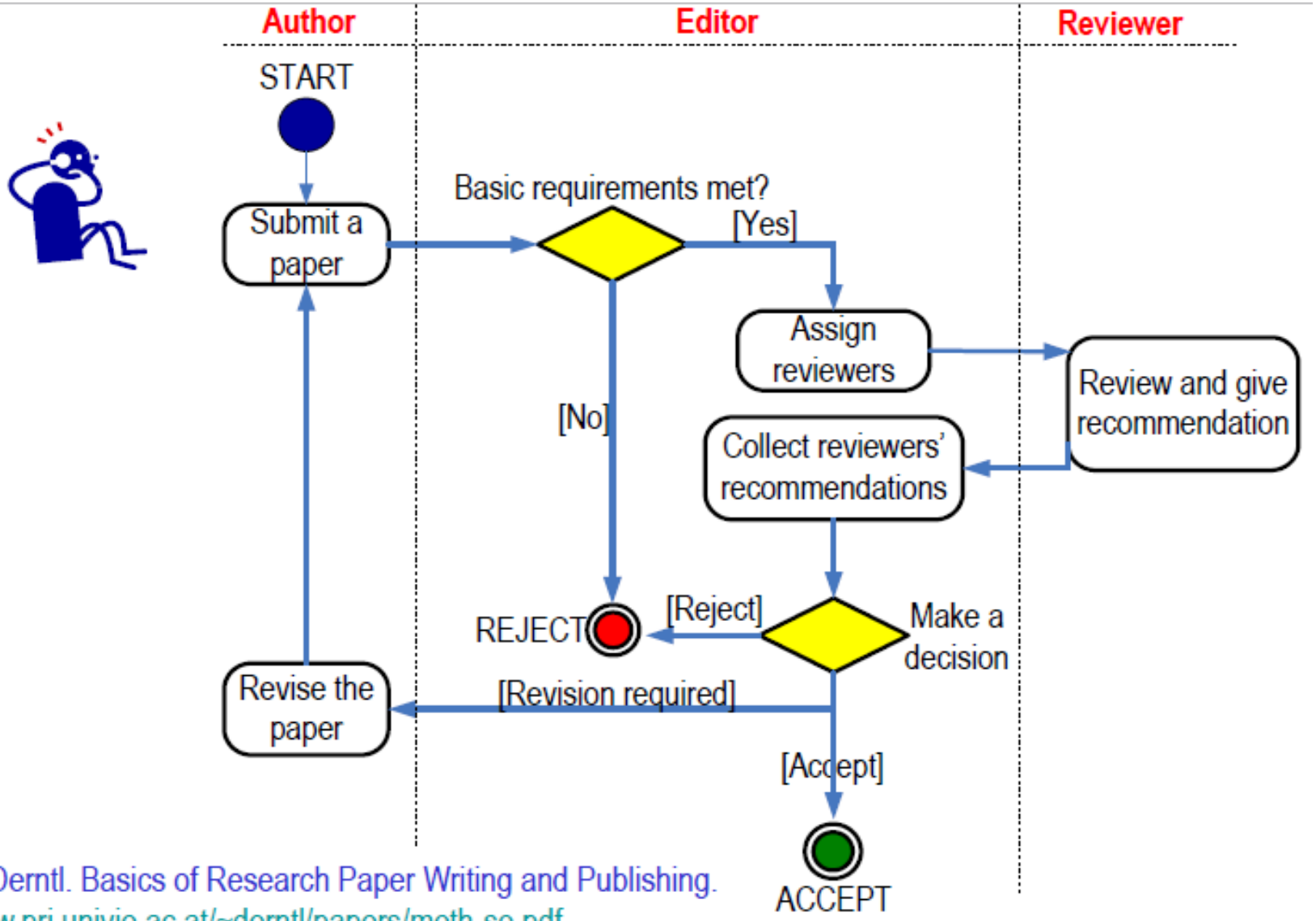
Most scientists regarded the new streamlined peer-review process as "quite an improvement."

Peer Review Process



Source: http://virtual.vtt.fi/virtual/proj2/titb/authors/review.html

Peer Review Process



Michael Derntl. Basics of Research Paper Writing and Publishing.
http://www.pri.univie.ac.at/~derntl/papers/meth-se.pdf

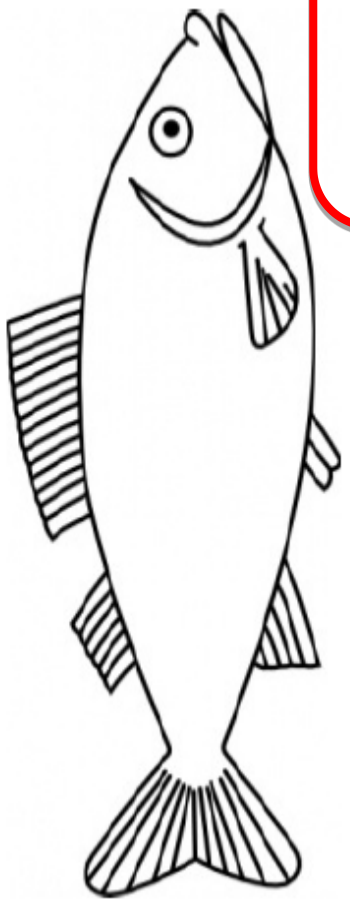
Reasons for manuscript **rejection** ☹

1. Inappropriate or incomplete statistics
2. Overinterpretation of results
3. Inappropriate or suboptimal instrumentation
4. Sample too small or biased
5. Text difficult to follow
6. Insufficient problem statement
7. Inaccurate or inconsistent data reported
8. Incomplete, inaccurate, or outdated review of the literature
9. Insufficient data presented
10. Defective tables or figures

Reasons for **accepting** ☺ a manuscript

- Important, timely, relevant, critical, prevalent problem
- Well-written manuscript (clear, straightforward, easy to follow, logical)
- Well-designed study (appropriate, rigorous, comprehensive design)
- Thoughtful, focused, up-to-date review of the literature
- Sample size sufficiently large
- Practical, useful implications
- Interpretation took into account the limitations of the study
- Problem well stated, formulated
- Novel, unique approach to data analysis

General Structure



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- **Acknowledgement**
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- **Supplementary Data**

•Title: should be short and appealing

•Authors: All those who participated in the paper/work

•Affiliation: University and Research Centres of all authors

•Abstract: Writen in the end, it sumarizes the general ideas of the paper (objective, methodology & some results)

Title

Describes, in as few words as possible, what the paper is about.

Computers in Human Behavior 63 (2016) 659–671

Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Full length article

Enterprise resource planning adoption and satisfaction determinants

Carlos J. Costa [a], Edgar Ferreira [a], Fernando Bento [a], Manuela Aparicio [a, b, c, *]

[a] Instituto Universitario de Lisboa (ISCTE-IUL) ISTAR-IUL, Portugal
[b] NOVA IMS, Universidade Nova de Lisboa, Portugal
[c] Unidcom/IADE, Portugal

ARTICLE INFO

Article history:
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Keywords:
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ERP
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Enterprise Resource Planning (ERP) systems are at the core of every firm. Making people use this costly and time-consuming investment is one of the most important issues to deal with. The main objective of the present study is to find the key determinants that open the door to user satisfaction and adoption. A theoretical model was set and an online survey was conducted to understand ERP users' perspective on such matters. The outcome was the model validation and the understanding that top management support, training, and the system quality are important constructs to assess adoption and user satisfaction. In fact, the latter (system quality) has a significant influence on the behavioural intention to use and also in the overall user satisfaction. As management support is a very relevant determinant to ERP usage. Accordingly, this study enlightens theory, by contributing to a new model of ERP adoption and satisfaction. It also provides relevant evidence to companies involved in the ERP implementation process.

Abstract

Summarizes the whole paper, including the results

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Keywords

Terms to the indexing process.

Keywords help in searching process too.

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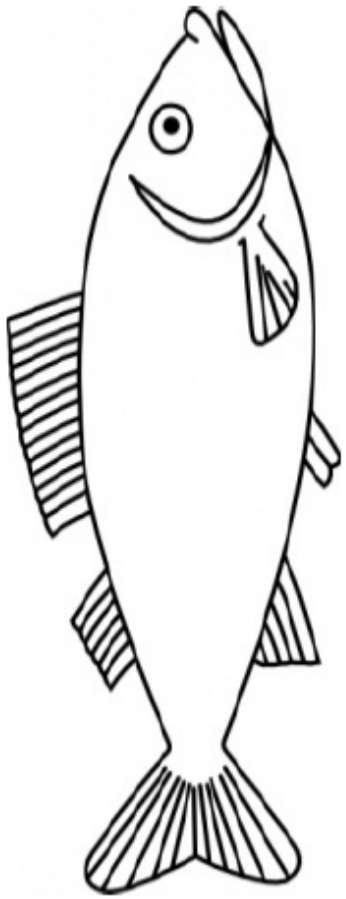

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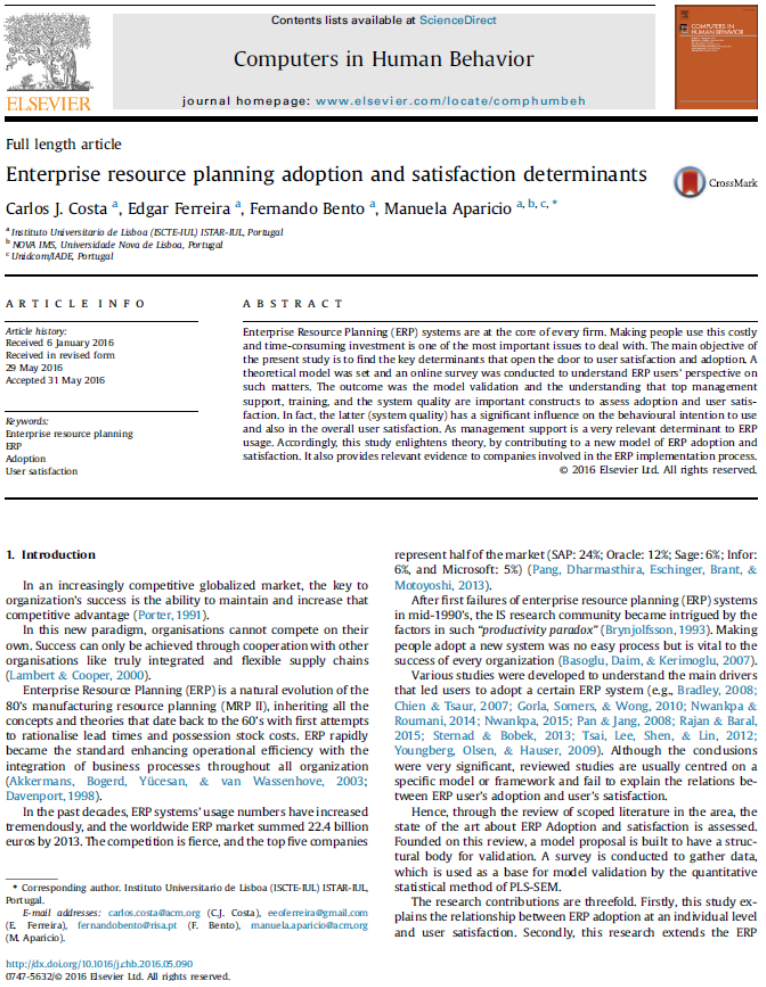
•Introduction gives a brief context of the topic, introduces the research gap (motivation), research objectives, and presents the paper structure

Introduction

Provides background for the research, identifies knowledge gaps, states the aims of the paper.

What did you do and why.



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1. Introduction

In an increasingly competitive globalized market, the key to organization's success is the ability to maintain and increase that competitive advantage (Porter, 1991).

In this new paradigm, organisations cannot compete on their own. Success can only be achieved through cooperation with other organisations like truly integrated and flexible supply chains (Lambert & Cooper, 2000).

Enterprise Resource Planning (ERP) is a natural evolution of the 80's manufacturing resource planning (MRP II), inheriting all the concepts and theories that date back to the 60's with first attempts to rationalise lead times and possession stock costs. ERP rapidly became the standard enhancing operational efficiency with the integration of business processes throughout all organization (Akkermans, Bogerd, Yücesan, & van Wassenhove, 2003; Davenport, 1998).

In the past decades, ERP systems' usage numbers have increased tremendously, and the worldwide ERP market summed 22.4 billion euros by 2013. The competition is fierce, and the top five companies represent half of the market (SAP: 24%; Oracle: 12%; Sage: 6%; Infor: 6%, and Microsoft: 5%) (Pang, Dharmasthira, Eschinger, Brant, & Motoyoshi, 2013).

After first failures of enterprise resource planning (ERP) systems in mid-1990's, the IS research community became intrigued by the factors in such *"productivity paradox"* (Brynjolfsson, 1993). Making people adopt a new system was no easy process but is vital to the success of every organization (Basoglu, Daim, & Kerimoglu, 2007).

Various studies were developed to understand the main drivers that led users to adopt a certain ERP system (e.g., Bradley, 2008; Chien & Tsaur, 2007; Gorla, Somers, & Wong, 2010; Nwankpa & Roumani, 2014; Nwankpa, 2015; Pan & Jang, 2008; Rajan & Baral, 2015; Sternad & Bobek, 2013; Tsai, Lee, Shen, & Lin, 2012; Youngberg, Olsen, & Hauser, 2009). Although the conclusions were very significant, reviewed studies are usually centred on a specific model or framework and fail to explain the relations between ERP user's adoption and user's satisfaction.

Hence, through the review of scoped literature in the area, the state of the art about ERP Adoption and satisfaction is assessed. Founded on this review, a model proposal is built to have a structural body for validation. A survey is conducted to gather data, which is used as a base for model validation by the quantitative statistical method of PLS-SEM.

The research contributions are threefold. Firstly, this study explains the relationship between ERP adoption at an individual level and user satisfaction. Secondly, this research extends the ERP

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http://dx.doi.org/10.1016/j.chb.2016.05.090
0747-5632/

Literature Review

Provides background many scientists call it the “state of the art”.

Gives an overview of what other scientists have done in the topic.

adoption model with the inclusion of three constructs: management support, training, and system quality. Thirdly this model explains 70% of ERP usage satisfaction.

2. Literature review

2.1. Enterprise resource planning (ERP)

Enterprise resource planning (ERP) systems are defined as “comprehensive, packaged software solutions that seek to integrate the complete range of a business's processes and functions in order to present a holistic view of the business from a single information and IT architecture”(Klaus, Rosemann, & Gable, 2000, p. 141).

These systems assume a modular structure and provide information integration across every business area using a shared database (Davenport, 1998). ERPs started in the mid-1990s and were used to outline and organize business processes across all the organizational groups. This integrative approach guaranteed that tasks and processes were always performed in the same way in every place the organization is (McAfee, 2009).

Traditionally oriented for capital-intensive industries ERP systems achieved a maturity state of development. Tough in recent years, ERPs are being introduced to other sectors, such as retail, education, finance, insurance, healthcare and hotel chains (Shehab, Sharp, Supramaniam, & Spedding, 2004).

ERP is a multidisciplinary, and interdisciplinary field of study and the research community contribution is diverse and comprehensive (Moon, 2007). A study by (Esteves & Bohorquez, 2007) showed that the most investigated area is the implementation phase, in which success is by far the main topic. Although system usage and evolution are also addressed, other fields of study such as adoption still need more contributions.

The term ERP was coined in 1993 by the Gartner Group based in Stamford, CT. The company started to publish regular reports on the ERP technology where the inclusion criterion was the integration extent across the various functional modules (Jacobs & Weston, 2007).

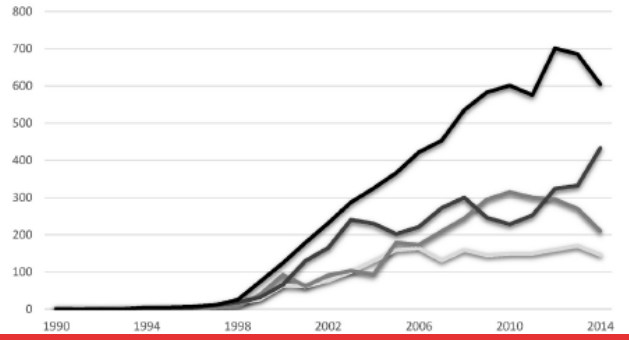
Subsequently, research in ERP increased over the past years. To acquire a general idea of the evolution of published literature about ERP, main academic databases were scanned for the term *“Enterprise Resource Planning”* in the period 1990–2015. Fig. 1 summarizes the results of ERP bibliometric research (due to figures discrepancy, and to have an easier reading from the graphic, a factor of 0,1 was applied to Google Scholar search results).

These results reveal the growing interest in ERP over the past 25 years. The first relevant increase in the number of published work about ERP was in the year of 1997 with four times more hits than the previous year. Since then, the amount of work on ERP research has increased exponentially over the first decade of the 21st century with a considerable leap of 74% in 2000 (related to 1999) and an explicit growth of 346% at the end of the first decade (2009) when compared with 2000. Consistent with this growth, the numbers also show that ERP still is a prominent field in the research community, with about 6200 search results on average in the 2009–2014 period (Google, 2015).

2.2. Recent ERP empirical studies

As seen before, ERP research is vast and disperse. After a closer look at published literature, it is clear that the main focus has been the implementation phase success and system's technical aspects, neglecting themes like ERP system adoption (Esteves & Bohorquez, 2007; Moon, 2007; Pairat & Jungthirapanich, 2005; Shehab et al., 2004). This paradigm seems quite confusing when research indicates that software selection and preparation is the critical part of the implementation project (Shaul & Tauber, 2013). Therefore, stakeholder's adoption in ERP systems implementation can give a clearer insight on how to approach this early stages problematic (Hwang, 2005).

First, ERP adoption is mainly studied using several models and extensions mainly based on the contribution of psychology's Theory of Planned Behaviour (TRA) (Fishbein & Ajzen, 1975) in IS technologies research (Wu & Chen, 2005). Although there are various models that explain user's adoption, the Technology Acceptance Model (TAM) (Davis, 1986, 1989) is the most referenced in\ this area of research (Basoglu et al., 2007; Lee, Kozar, & Larsen, 2003; Venkatesh & Bala, 2008; Venkatesh, Thong, & Xu, 2012). Secondly, researchers working on ERP system's success in most cases apply the DeLone & McLean (D&M) IS success model (DeLone, 1988) as the main tool to evaluate the system's implementation success (Mardiana, Tjakraatmadja, & Aprianingsih, 2015). In this case, success is understood as net benefits for the individual and



Literature Review

- In this part should be referred/cited the main authors on the topic
- Should entail various perspectives how the topic was studied
- Here only scientific references are accepted, from scientific papers, articles, or other scientific publications

Instruments in Literature Review

- Each paper you read should keep a register in order to reuse the information
- Do a fast read of the paper first & register in a table:

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	….	….	…	…	…	…	…
…	…	…	…	…	…	…	…

- Add new, for example to instruments used and techniques

Instruments in Literature Review

For Literature Review.

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	….	….	…	…	…	…	…
…	…	…	…	…	…	…	…

Instruments in Literature Review & Empirical Work

For designing data collection instruments
For Results Discussion

For designing data collection instruments
For Results Discussion

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	….	….	…	…	…	…	…
…	…	…	…	…	…	…	…

Search Techniques

- Use search terms of the “same family”
  - (eg: computer science, computer technologies...)
- Use operators AND, OR, XOR (for two diferent terms, or one or another but not both at the same time)
- Use Truncations (eg: comput*)
- Combine synonyms: or, and (+), not (-)
  - (eg: computer and information or IT)
- To search na exact word **“_____”**
  - (eg: “ computer science”)
- For searching in specific domains; site:edu site:pt
- For searhing in titles (eg: allintitle: information systems)
- For searching in specific type of files; (eg: filetype: pdf)
- Use operators “?” or “$” for compound words
  - (eg. ecommerce ou e-commerce, mobile banking, m-banking)

Digital Libraries of Reference

- **National**
- https://www.iscte-iul.pt/contents/estudantes/520/biblioteca-iscteiul
- http://www.b-on.pt/
- http://www.rcaap.pt/
- **International**
- http://dl.acm.org
- http://ieeexplore.ieee.org/Xplore/home.jsp
- http://aisel.aisnet.org/
- http://dblp.uni-trier.de/
- https://scholar.google.com
-

Methodological Approach

Describes all study steps.

- Includes:
  - –Samples
  - –Sampling methods
  - –Data collection (methods/instruments)
  - –Data analysis (methods)
  - –Ethical statements
  - –(Some references)

vention "*educates*" users about ERP's usefulness.

Thus, we hypothesize that management support (MANS) influences positively the ERP usefulness.

H11. Management Support has a positive effect on Perceived ERP Usefulness.

According to Urbach et al. (2010), having management support is essential to motivate system's use.

With similar conclusions, several recent studies point out that this management encouragement can largely influence the use frequency of ERP systems (Bradley, 2008; J.; Nwankpa & Roumani, 2014; Pan & Jang, 2008).

Hence, we expect that the management support (MANS) may increase effective ERP use (USE).

H12. Management Support has a positive effect on ERP Use.

4. Empirical methodology

4.1. Measurement instrument

The research model was validated through the quantitative method using previously proven and tested scales to operationalize each construct and increase validity. Hence, in the development of the measurement instrument items were adapted from the previously confirmed empirical studies.

Considering the reviewed literature, a set of items was selected for each construct. After a thorough discussion, the most appropriate a group of items from previously validated empirical studies was chosen to have into consideration the validity and model's best fit.

Afterward, a first draft was created and pre-tested with a panel of ten randomly chosen ERP end users from different organizations. The first part included an introduction and a set of sample characterization questions. On the second part, the chosen model's

Results

Statistical results or Software test results are presented here.

Take special attention to the visual part of your tables and figures.

Table 4
Measurement model results.

Construct	Item	Outer loading	Internal reliability	Composite reliability	Cronbach's alpha	AVE	Discriminant validity?
BI	BEHI1	0.956	0.913	0.977	0.964	0.933	Yes
	BEHI2	0.956	0.914				
	BEHI3	0.985	0.971				
MANS	MANS1	0.958	0.917	0.935	0.864	0.878	Yes
	MANS2	0.916	0.839				
PEOU	PEOU1	0.934	0.872	0.966	0.953	0.877	Yes
	PEOU2	0.915	0.837				
	PEOU3	0.946	0.896				
	PEOU4	0.951	0.904				
PU	PUSE1	0.970	0.941	0.980	0.973	0.924	Yes
	PUSE2	0.957	0.916				
	PUSE3	0.970	0.941				
	PUSE4	0.948	0.899				
SYSQ	SYSQ1	0.883	0.780	0.965	0.956	0.821	Yes
	SYSQ2	0.913	0.833				
	SYSQ3	0.929	0.863				
	SYSQ4	0.924	0.854				
	SYSQ5	0.873	0.761				
	SYSQ6	0.914	0.836				
TRAI	TRAI1	0.947	0.898	0.944	0.911	0.848	Yes
	TRAI2	0.967	0.935				
	TRAI3	0.844	0.712				
USE	USE1	1.000	1.000	Single Item			
USS	USS1	0.957	0.915	0.981	0.975	0.930	Yes
	USS2	0.964	0.929				
	USS3	0.967	0.934				
	USS4	0.970	0.940				

that each indicator is associated with only one construct. The cross-loading table shows that indicator's outer loadings are greater than all of their loadings on other constructs. An item loading is considered high if the loading coefficient is above 0.600 and considered low if the coefficient loading is below 0.400 (Gefen & Straub, 2005).

Since cross-loadings, indicators are considered a rather liberal criterion regarding discriminant validity, a more conservative approach to assessing discriminant validity was also taken into consideration. The Fornell-Larcker criterion validates constructs by comparing the square root of Average Variance Extracted (AVE) with the results of the latent variable correlation (Fornell & Larcker, 1981; Hair et al., 2011). This criterion is based on the idea that a construct shares more variance with its associated indicators than with any other construct, Table 5 reports that comparison. It shows that all the model's constructs are validated, and that measures of different constructs differ from one another.

The results of the measurement model show the item's reliability and convergent validity. In other words, the model's LV, behavioural intention (BI), management support (MANS), perceived ease of use (PEOU), perceived usefulness (PU), system quality (SYSQ), training (TRAI), use (USE), and user satisfaction (USS), are well represented by all the questions posed to ERP end-users. Once the measurement model is confirmed regarding reliability and validity using PLS, the next step is to assess the structural model.

Table 5
Interconstruct correlation and square root of AVEs.

	BI	MANS	PEOU	PU	SYSQ	TRAI	USE	USS
BI	**0.966**							
MANS	0.460	**0.937**						
PEOU	0.659	0.380	**0.937**					
PU	0.711	0.460	0.584	**0.961**				
SYSQ	0.689	0.327	0.750	0.592	**0.906**			
TRAI	0.557	0.301	0.611	0.485	0.604	**0.921**		
USE	0.451	0.401	0.366	0.433	0.320	0.257	**Single Item**	
USS	0.744	0.393	0.705	0.722	0.832	0.596	0.356	**0.964**

Notes: Diagonal elements are square roots of average variance extracted (AVE), Off-diagonal elements are correlations.

5.2. Assessment of the structural model

Before the assessment of the structural model we tested all the constructs for multicollinearity, which is considered to be a threat to model experimental design (Farrar & Glauber, 1967), we calculated the variance inflation factor (VIF). Test results showed that multicollinearity does not exist, all variance inflation factors obtained were lower than 4.671, which is well below than the threshold of 10 (Diamantopoulos & Siguaw, 2006; Gujarati & Porter, 2009).

The structural model's quality was evaluated using bootstrapping, a resampling technique that draws a large number of subsamples retrieved from the original dataset. In this case, 5000 subsamples were used to determine the path's significance within the structural model (Henseler, Ringle, & Sinkovics, 2009). Structural model results can be observed in Fig. 3.

After establishing the validity of the structural model, the structural paths were assessed to test the research hypotheses. Training ($\beta = 0.176$, $p < 0.010$), Management Support ($\beta = 0.264$, $p < 0.001$), and Perceived Ease of Use ($\beta = 0.377$, $p < 0.001$), explain 42.7% of the variation in Perceived Usefulness. In another hand, Training ($\beta = 0.248$, $p < 0.001$) and System Quality ($\beta = 0.600$, $p < 0.001$), explain 60.1% of the Perceived Ease of Use.

Behaviour Intention is explained in 63.1% by the constructs of Perceived Usefulness ($\beta = 0.426$, $p < 0.001$), Perceived Ease of Use ($\beta = 0.188$, $p < 0.050$) and System Quality ($\beta = 0.600$, $p < 0.001$). Behaviour intention ($\beta = 0.338$, $p < 0.001$) and Management Support ($\beta = 0.246$, $p < 0.001$) explain 25.1% of the ERP system Use while the same Use ($\beta = 0.100$, $p < 0.010$) together with System Quality ($\beta = 0.800$, $p < 0.001$) explains 70.2% of the variation in User satisfaction. All paths are statistically significant and, therefore, all hypotheses are supported.

The presented model supported all paths having, at least, a small

Discussion

Fig. 3. Structural model results.

predictive impact, as seen in Table 6. The five dependent latent variables are explained in more than half of the variances except PU and USE. User satisfaction (USS) with $R^2 = 0.702$, behavioural intention (BI) with $R^2 = 0.631$, and Perceived Ease of Use (PEOU) with $R^2 = 0.601$, present values that can be considered substantial. Q^2 is a measure of the predictive success, and positive values confirm the model's predictive relevance (Geisser & Eddy, 1979; Stone, 1974). Results show positive values for Use ($Q^2 = 0.256$), Perceived Usefulness ($Q^2 = 0.393$), Perceived Ease of Use ($Q^2 = 0.525$), Behavioural Intention ($Q^2 = 0.576$) and User Satisfaction ($Q^2 = 0.649$).

6. Discussion

6.1. Hypotheses discussion

All presented hypotheses were empirically supported for ERP systems. Though the given model shows predictive capacities supporting all hypotheses, results show different levels of support. These singularities will be addressed below.

Results show that the model's inner triangle, *i.e.* hypotheses 1, 2, and 3, show different effects. All effects are significant and positive but have different strengths. In the first hypothesis, perceived usefulness has a very significant influence on behavioural intention ($p < 0.001$) and also has medium effect explaining this relation ($0.350 > f^2 > 0.150$). The relation between perceived ease of use and

Table 6
Results of hypotheses tests.

Hypotheses	Independent variable	→	Dependent variable	Findings	Conclusion
H1	Perceived Usefulness (PU)	→	Behavioural Intention (BI)	Positively & statistically significant *** ($\hat{\beta} = 0.426$, $p < 0.001$)	Supported with medium effect
H2	Perceived Ease Of Use (PEOU)	→	Perceived Usefulness (PU)	Positively & statistically significant *** ($\hat{\beta} = 0.377$, $p < 0.001$)	Supported with small effect
H3	Perceived Ease Of Use (PEOU)	→	Behavioural Intention (BI)	Positively & statistically significant * ($\hat{\beta} = 0.188$, $p < 0.050$)	Supported with small effect

Study comparisons with other studies.

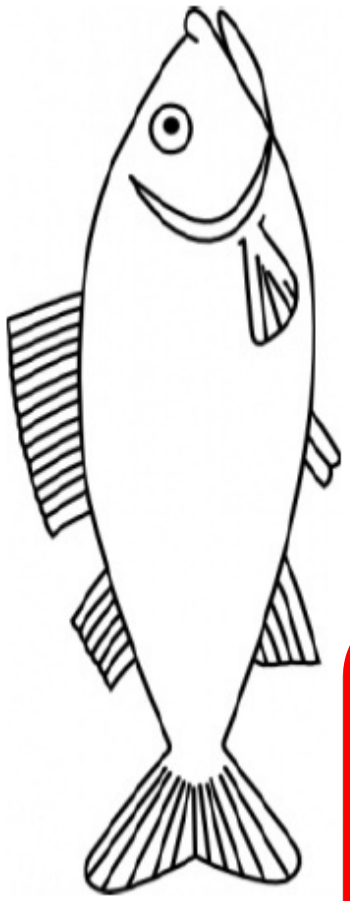
Data interpretation

- Study's limitations
- How data fits/contradicts published work

Discussion

- Several references

General Structure



- **Title**
- **Abstract**
- **Keywords**

- **Main text (IMRAD)**
  - Introduction
  - Methods
  - Results
  - And
  - Discussions

- **Conclusion**
- **Acknowledgement**
- **References**
- **Supplementary Data**

- At the end only global conclusions
- Funding/ Grants
- REFs
- Appendixes A, B, C, D….

Conclusions

Study conclusions and future works.

In this section do not refer to other studies/authors.

Future works are to be placed here too.

studies that studied the same kind of relations (J. Nwankpa & Roumani, 2014; Rajan & Baral, 2015; Youngberg et al., 2009).

Hypothesis 11 shows management support impact on perceived usefulness. This relation is positive, highly significant ($p < 0.001$), and shows a small effect ($0.150 > f^2 > 0.020$) explaining perceived usefulness. Results are consistent with Bradley's (2008) qualitative study on how management support was required but wasn't the most important fact explaining project's success. Also Nwankpa and Roumani (2014) sustain that management support is important educating users about ERP system usefulness.

Considering reviewed literature, results on training effect on perceived usefulness and on perceived ease of use are somewhat disappointing. Model results show that training has a medium significance ($p < 0.010$) and a small effect ($0.150 > f^2 > 0.020$) towards perceived usefulness (hypothesis 6), and a high statistical significance ($p < 0.001$) but also small effect ($0.150 > f^2 > 0.020$) explaining perceived ease of use (hypothesis 7). Literature stresses the critical importance of this specific construct's contribution to IS adoption in general and in ERP systems in particular (Bradley, 2008; Rajan & Baral, 2015; Ruivo et al., 2014; Youngberg et al., 2009). Although is also positively and significantly related to the model, training is the weakest independent latent variable.

System quality is without a doubt the most influencing independent LV of the model. This construct impact on perceived ease of use is vast ($p < 0.001$) and has a large explanatory effect ($f^2 > 0.350$). This result is consistent with the previous ERP adoption study by Sternad and Bobek (2013). Hypothesis 9 shows a weaker link of system quality with behavioural intention, presenting a small explanatory effect ($0.150 > f^2 > 0.020$) and high statistical significance ($p < 0.001$). However, the system quality may be related to the extent of ERP implementation, as long as it can create the initial conditions for application integration and business process enhancements (J. K. Nwankpa, 2015). The ERP modularity characteristics can provide the possibility of a different scope and depth level of implementation. This relationship needs further studies.

In this study management support and system quality are key drivers to use and to user satisfaction, correspondingly. These dimensions can be related to change management and with ERP selection (Ranjan, Jha, & Pal, 2016), this is a relevant aspect needing to be studied.

Finally, the difference between hypotheses related with user satisfaction (H5 and H10) are quite revealing of system's quality weight in explaining user's perceptions about an ERP system. We have hypothesis 5 with a weak linkage between use and user satisfaction regarding statistical significance ($p < 0.050$), and in explanatory capabilities (small effect: $0.150 > f^2 > 0.020$). In opposition to this result, system quality showed a very high statistical significance ($p < 0.001$) as well as a large effect ($f^2 > 0.350$) when explaining user satisfaction. Our results confirm what other ERP studies suggested: System quality (SYSQ) is a key component to take into consideration (Chien & Tsaur, 2007; Tsai et al., 2012).

Thirdly, results suggest that user satisfaction can be largely explained by system quality. System quality should be observed as a decisive construct when assessing an IS system, specifically ERP systems.

6.3. Practical implications

The presented model offers a mean of organizations to assess and predict the adoption and user satisfaction of their ERP systems. As seen before, ERP systems' adoption and user satisfaction are multidimensional and interdependent, and while some relations are stronger than others, the analysis should never isolate or reject one particular construct.

Although management support and training showed a lesser significance, this does not mean the influence should be disregarded since the influence exists and is statistically supported.

However, results are quite clear: system quality has the best explanatory capabilities and can largely and directly explain user satisfaction. Hence, practical implications for industry should be taken into account when implementing and maintaining an ERP system.

A correct understanding of the organization real necessities and requirements is vital to ensure that the configuration and parameterization of the needed functionalities are process oriented and without any clutter. Another implication is the importance of ensuring that all system components (hardware and software) are well balanced and integrated to assure fast and reliable data access.

6.4. Limitations and future work

The present study has some limitations. First, the sample data was collected from several organizations representative of major industries but doesn't have a comprehensive and exhaustive industry-wide panorama. Also, the sample was obtained from just one European country and represents a nationwide perspective. Although the results are statistically relevant, further surveys with a larger territorial scope will increase the model's explanatory capabilities.

The proposed model suggest a deeper study of the influence strength of System Quality with the other constructs. The most intriguing finding relates to the explanatory capabilities of this construct (SYSQ) opposed to the classical adoption and success theories when studying user satisfaction.

7. Conclusions

Nowadays, ERPs are at the core of every modern and competitive business. This multidimensional IS manages all the information flow and is critical for every organization stakeholder. Therefore, it is vital to understand what motivates individuals to use best the given ERP system. Hence, the present study aims to find the main determinants influencing ERP user adoption and satisfaction.

Literature review points out to three most significant constructs influencing adoption and satisfaction (independent LV) which are

References

- Full list of work cited
- Format may vary
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  - –IEEE
  - –Harvard
  - –(…)

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During writing

- Proofreading your article
- Language Tool (FOSS)
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- Article (Scientific Journal, ISSN)
  - 10 to 25 pages (or 8000 words usually)
- Paper (Conference proceeding, ISBN)
  - Full paper (6 to 8 pages)
  - Short paper (4 to 6 pages)
  - Poster (up to pages or more it depends on the publication)

43

Writing an article: where to start?

The White Rabbit put on his spectacles.

"Where shall I begin, please your Majesty?“- he asked.

"Begin at the beginning,“ the King said gravely, "and go on till you come to the end: then stop."

Lewis Carol

Alice's Adventures in Wonderland

Writing a Paper

1. Think
2. Plan

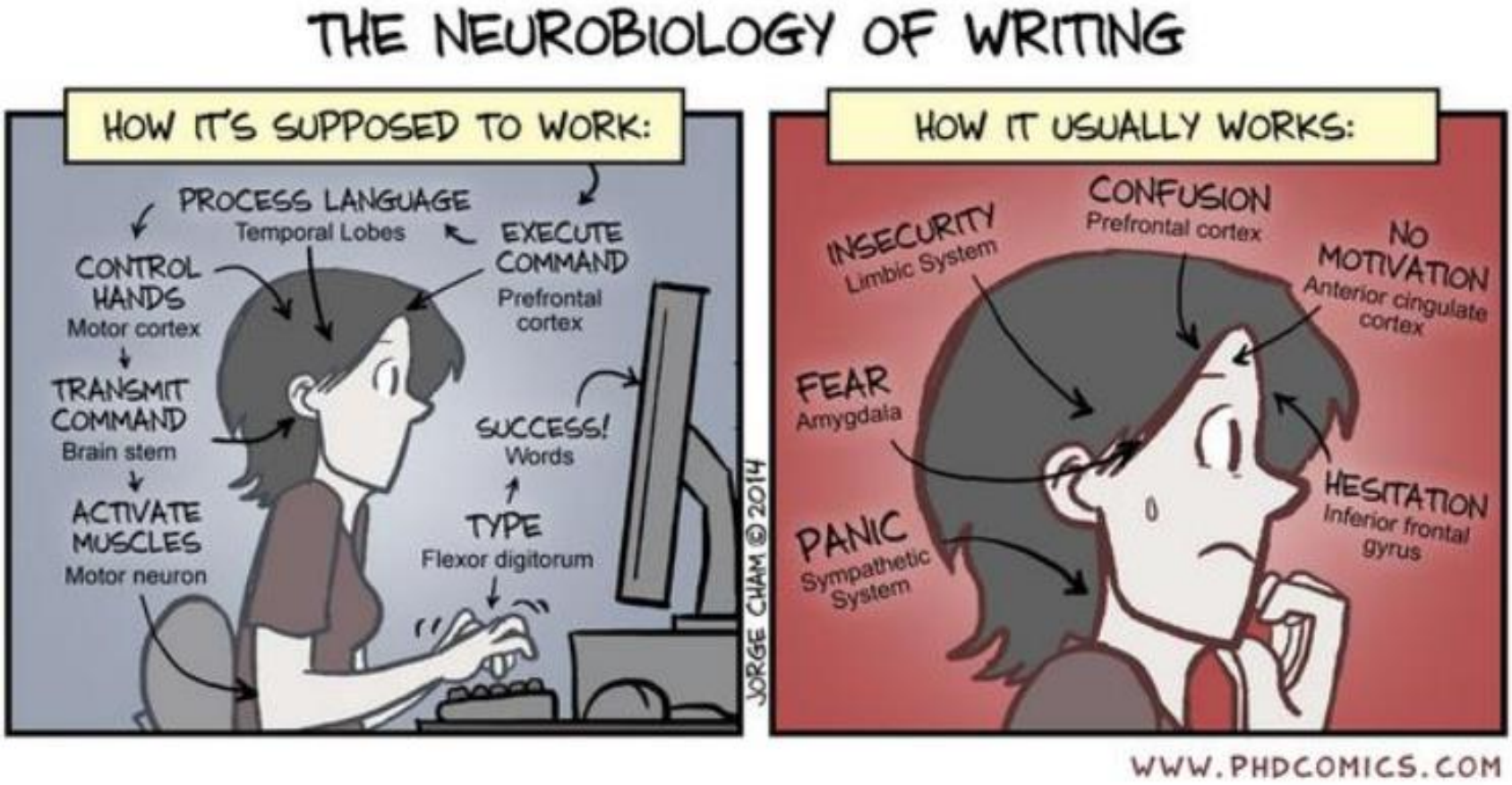
Preparation before starting

3. Write
4. Revise

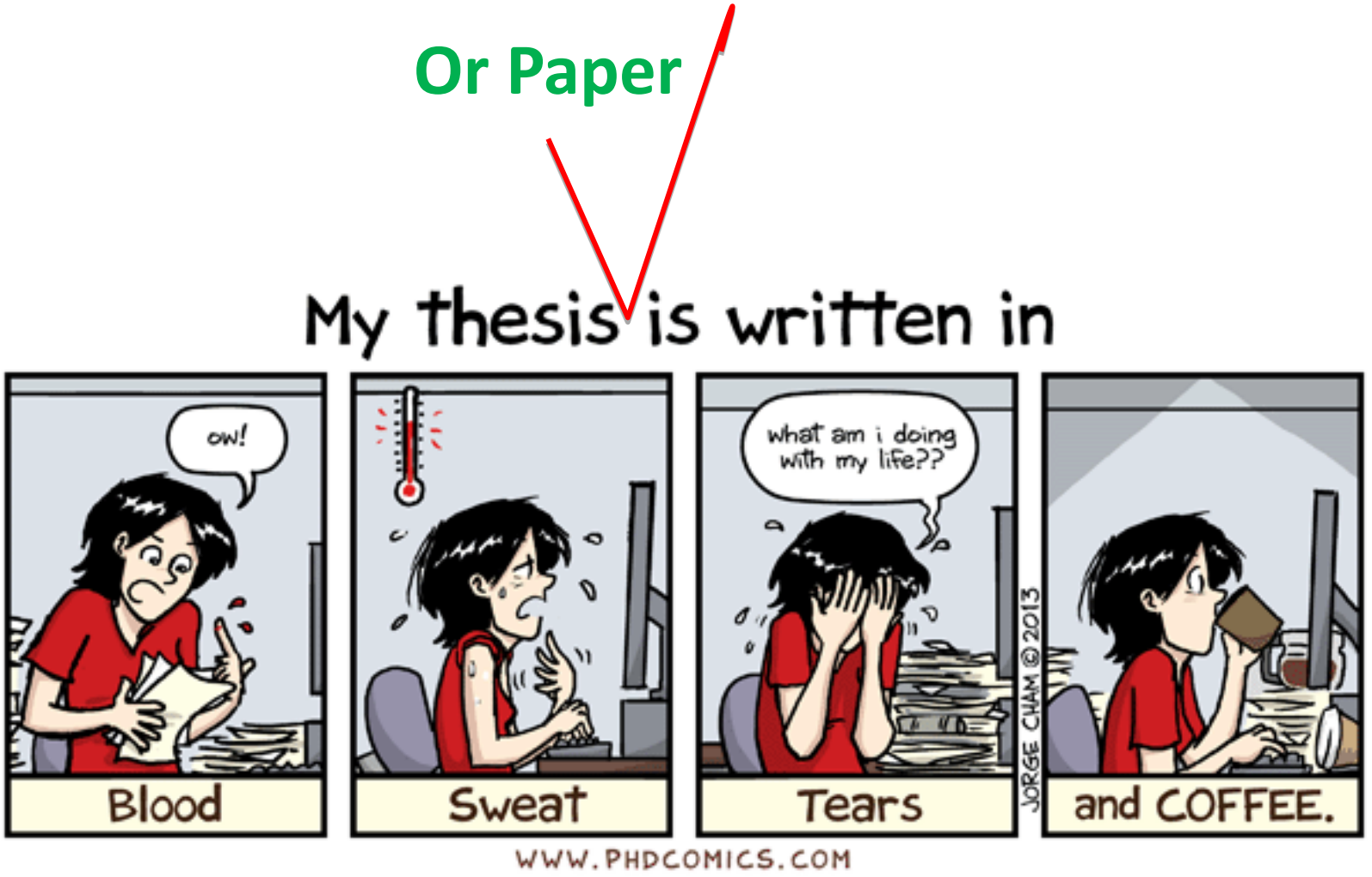
Writing process

Writing Process

Writing Mood…



How it is actually done ;)



Assignment:

- Presenting a Problem (Introduction)
- Literature Review
- Presenting Conceptual Solution
- Implementing/Illustrating a solution (*technologies*)
- Conclusions

Example of Technology

Blockchain

Business Intelligence (e.g. PowerBI)

Cloud Computing

Collaborative Systems

Content Management Systems

Crowdsourcing & Crowdfunding

Data mining - Weka

Data Science (e.g. Jupyter)

DBMS (e.g. SQLite)

NoSQL

Enterprise Resource Planning (ERP)

Mobile App (e.g. MIT App Inventor)

Python

RPA