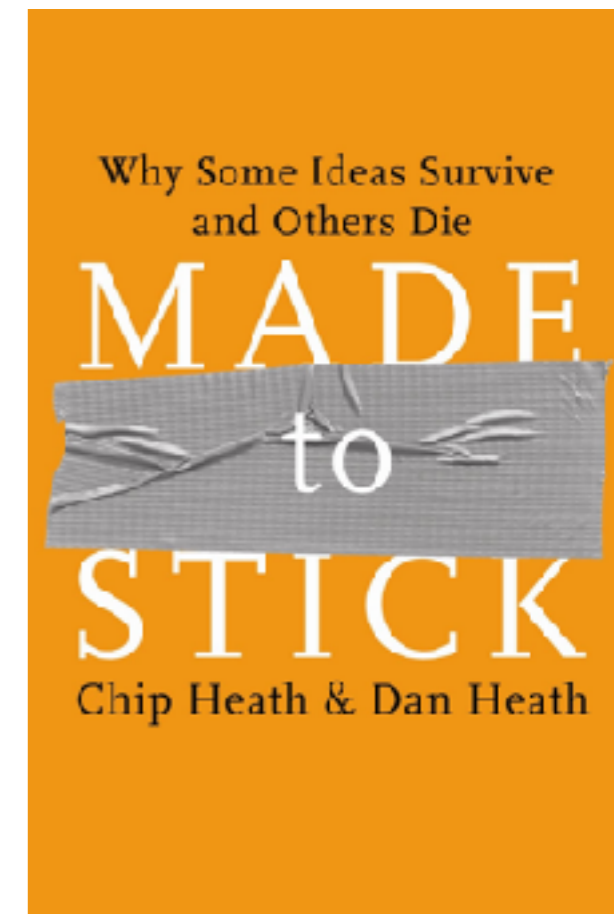
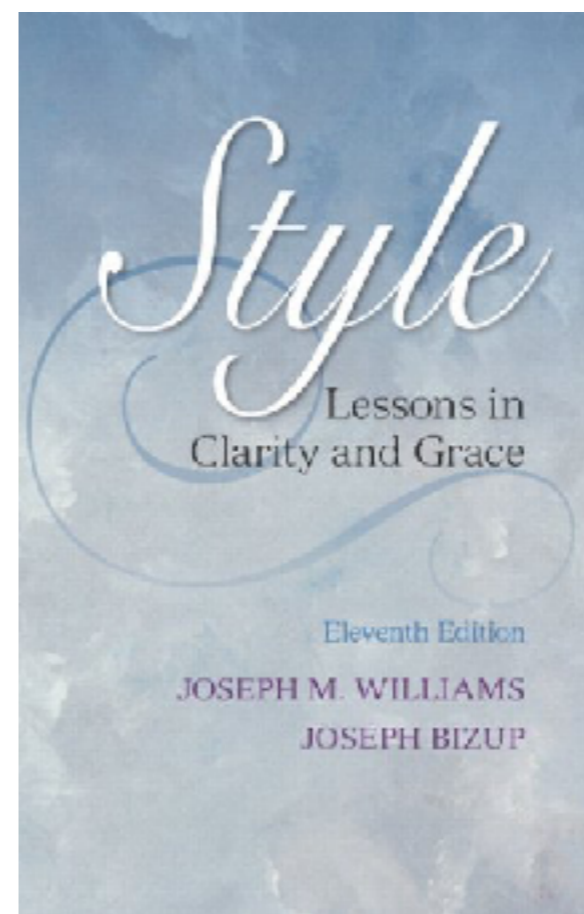
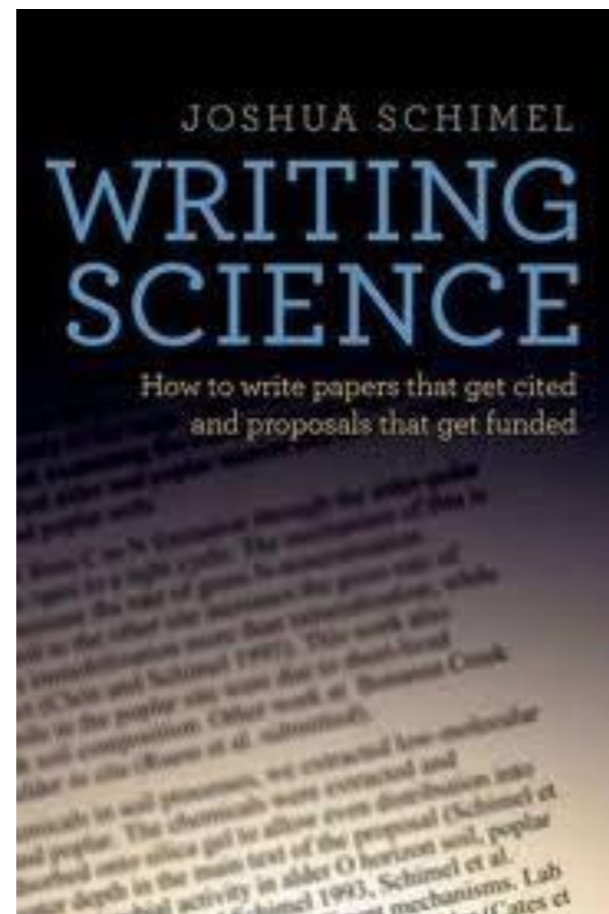
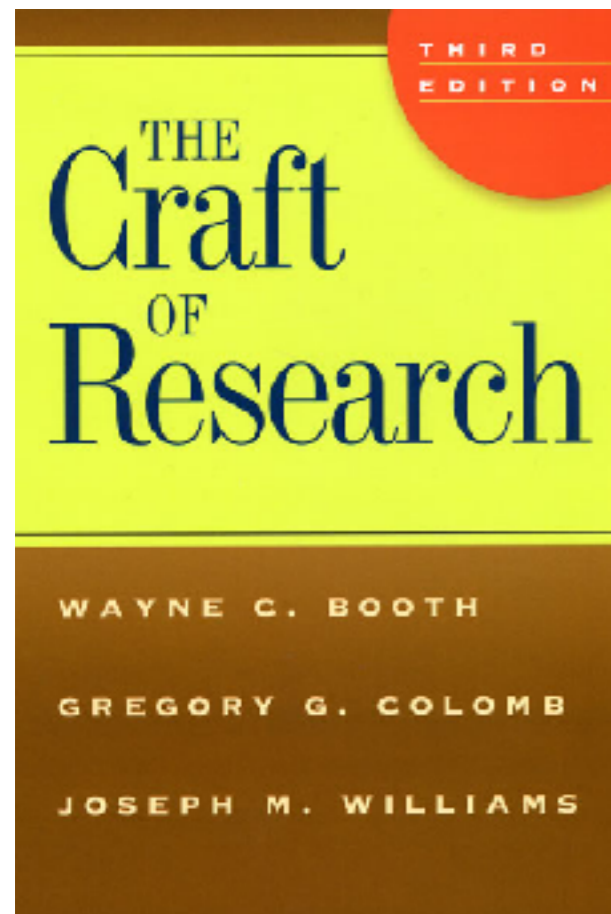
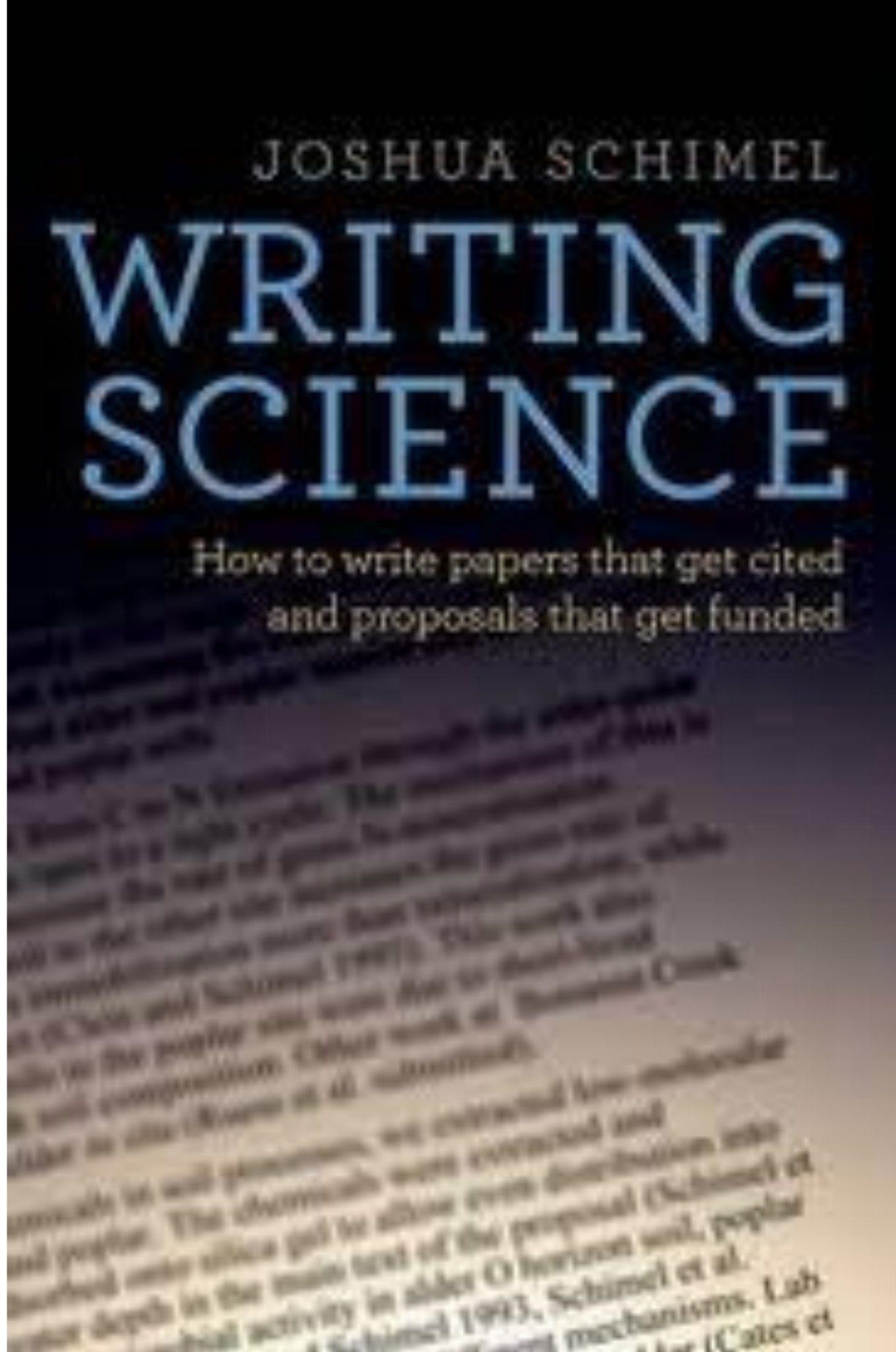


Writing your Master's thesis

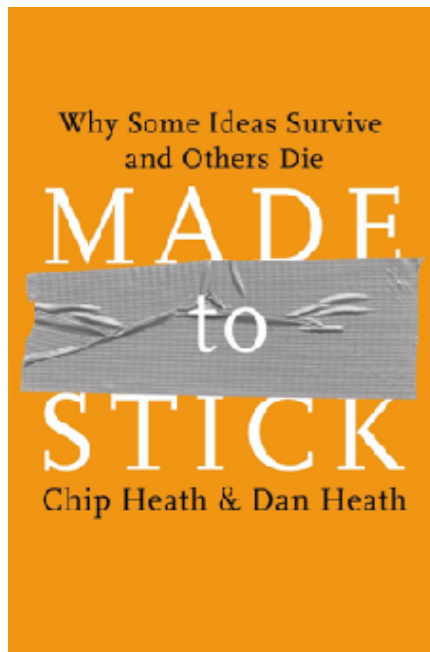
Martin Rosvall



Write papers that get cited



Making a story sticky



S: Simple
U: Unexpected
C: Concrete
C: Credible
E: Emotional
S: Stories

<https://www.youtube.com/watch?v=AR5AAWkjaMQ>

Simple + Stories + Unexpected + Emotional + Concrete + Credible

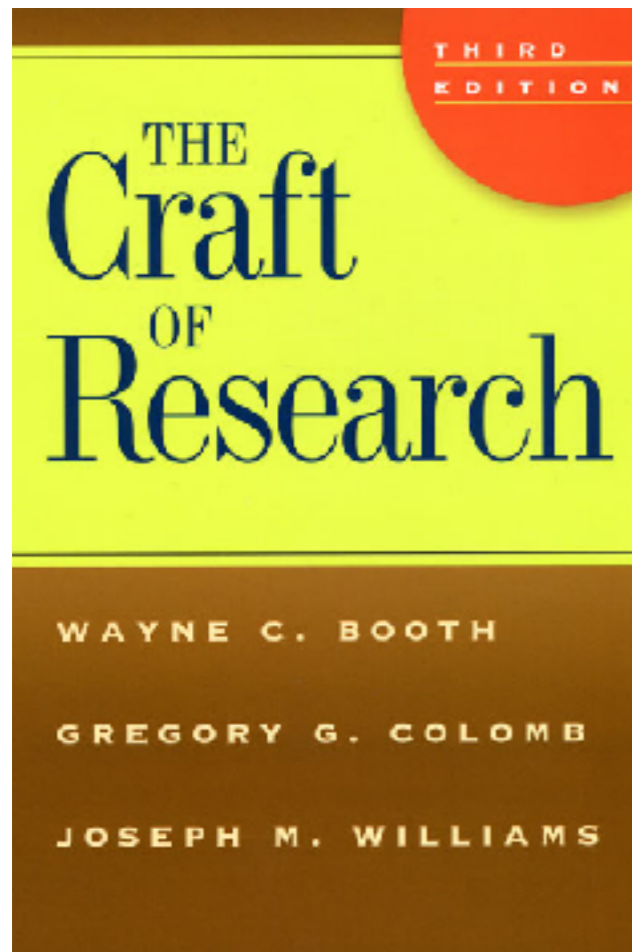
Making a story sticky – simple



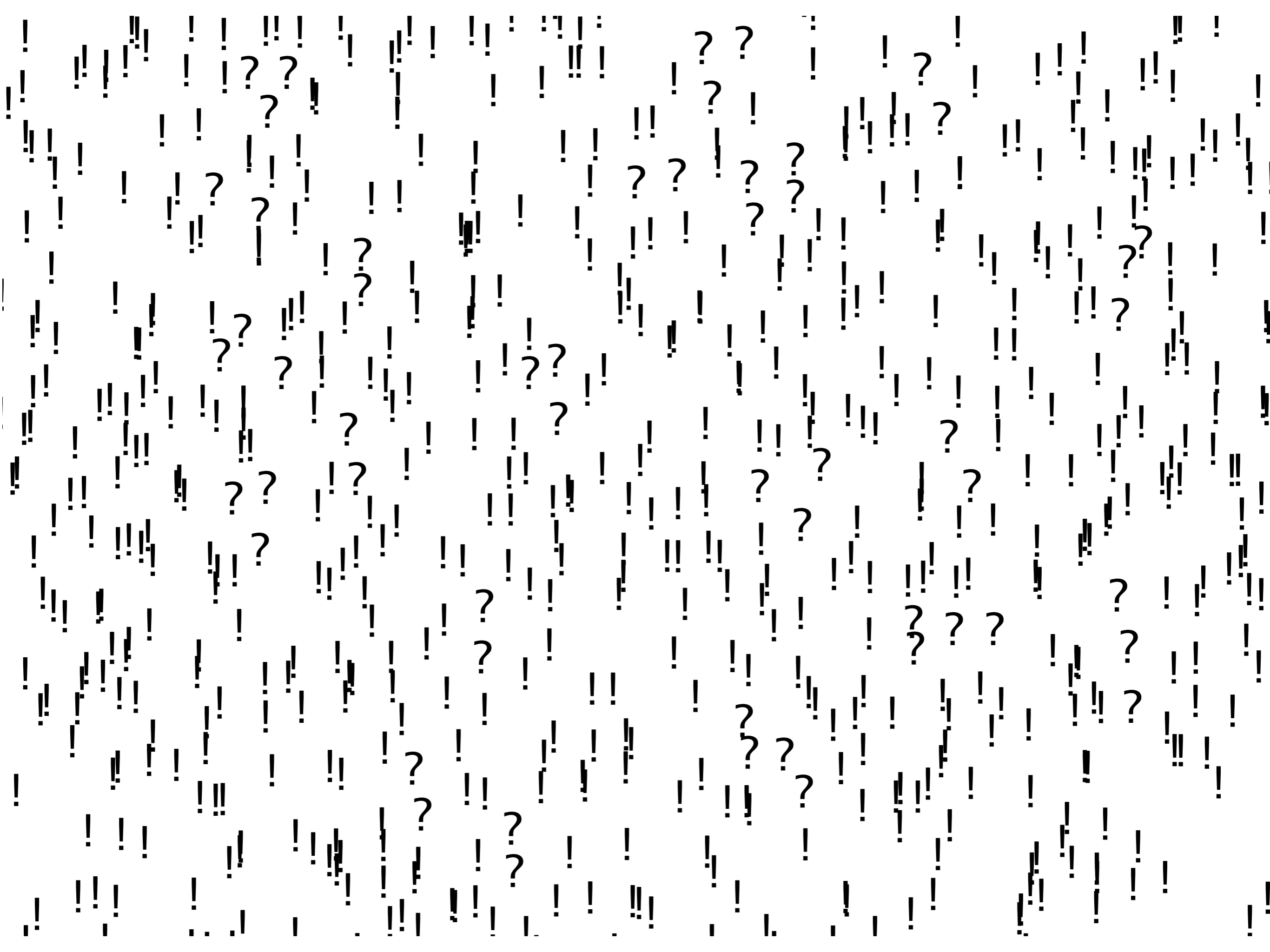
Mild exposure to CO can result in accumulated damage over time. Extreme exposure to CO may rapidly be fatal without producing significant warning symptoms.

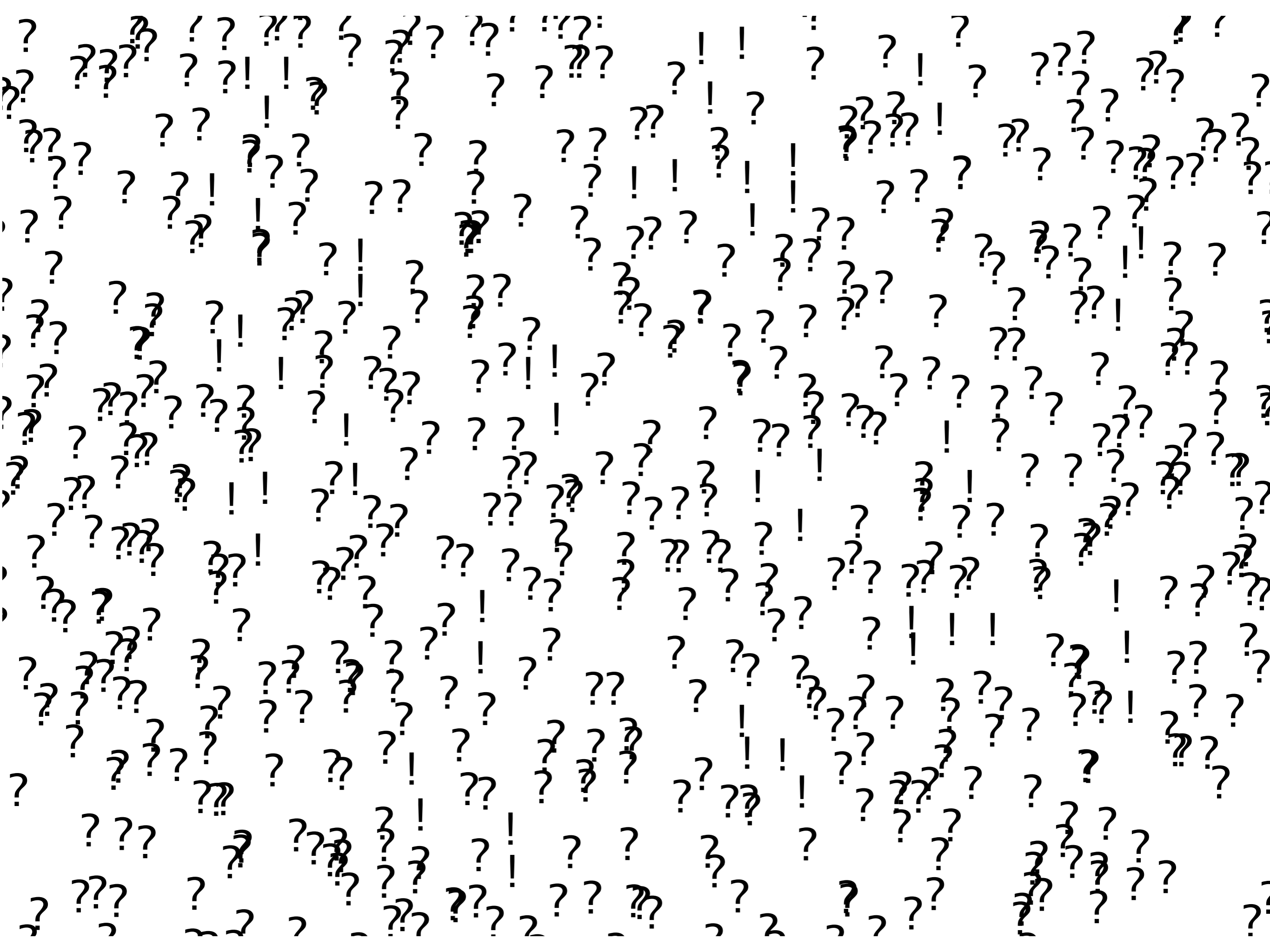
Using a generator indoors can kill you in minutes. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell. Never use inside a home or garage.

Making a story sticky – unexpected



From topics to questions





Interest → Broad topic → Focused topic → Questions → Significance

Interest → **Broad topic** → Focused topic → Questions → Significance

Tolstoy → Free will in Tolstoy

Aviation → The history of commercial aviation

Interest → **Broad topic** → **Focused topic** → Questions → Significance

Free will in Tolstoy → The *conflict* of free will and inevitability in Tolstoy's *description* of three battles in War and Peace

The history of commercial aviation → The *contribution* of the military in *developing* the DC-3 in the early years of commercial aviation

Interest → Broad topic → **Focused topic** → **Questions** → Significance

Topic: I am studying the cause of the disappearance of large North American Mammals,

Question: because I want to find out whether the earliest people hunted them to extinction...

Topic: I am studying the electromagnetic radiation in a section of the universe,

Question: because I want to find out how many stars are in the sky...

Interest → Broad topic → Focused topic → **Questions** → **Significance**

Topic: I am studying the cause of the disappearance of large North American Mammals,

Question: because I want to find out whether the earliest people hunted them to extinction,

Significance: in order to understand whether native peoples lived in harmony with nature or helped destroy it.

Topic: I am studying the electromagnetic radiation in a section of the universe,

Question: because I want to find out how many stars are in the sky,

Significance: in order to understand whether the universe will expand forever or collapse into a new big bang.

Show us what we don't know and why it is important

Topic: I develop novel algorithms that take advantage and make use of today's data explosion to study flows through social and biological systems,

Question: because I want to understand the continuously changing organization of such systems,

Significance: in order to address pressing research questions in finance, public health, and system genetics,

Practical application: thus allowing us to make reliable predictions and prescribe effective interventions.

Show us what we don't know and why it is important

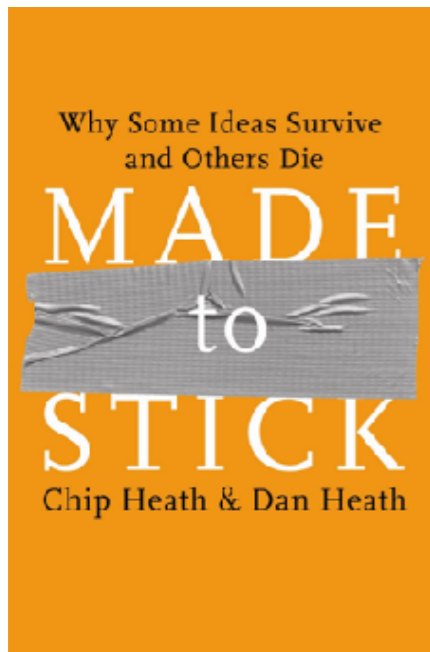
Topic: I am studying _____,

Question: because I want to find out what/why/how _____,

Significance: in order to help us understand _____,

Practical application: so that _____.

Making a story sticky



S: Simple – *find the core*

U: Unexpected – *surprise, curiosity*

C: Concrete – *universal language*

C: Credible – *easy to believe, detail*

E: Emotional – *curiosity for reader*

S: Stories – *characters, action, development*

<https://www.youtube.com/watch?v=AR5AAWkjaMQ>

Simple + Stories + Unexpected + Emotional + Concrete + Credible

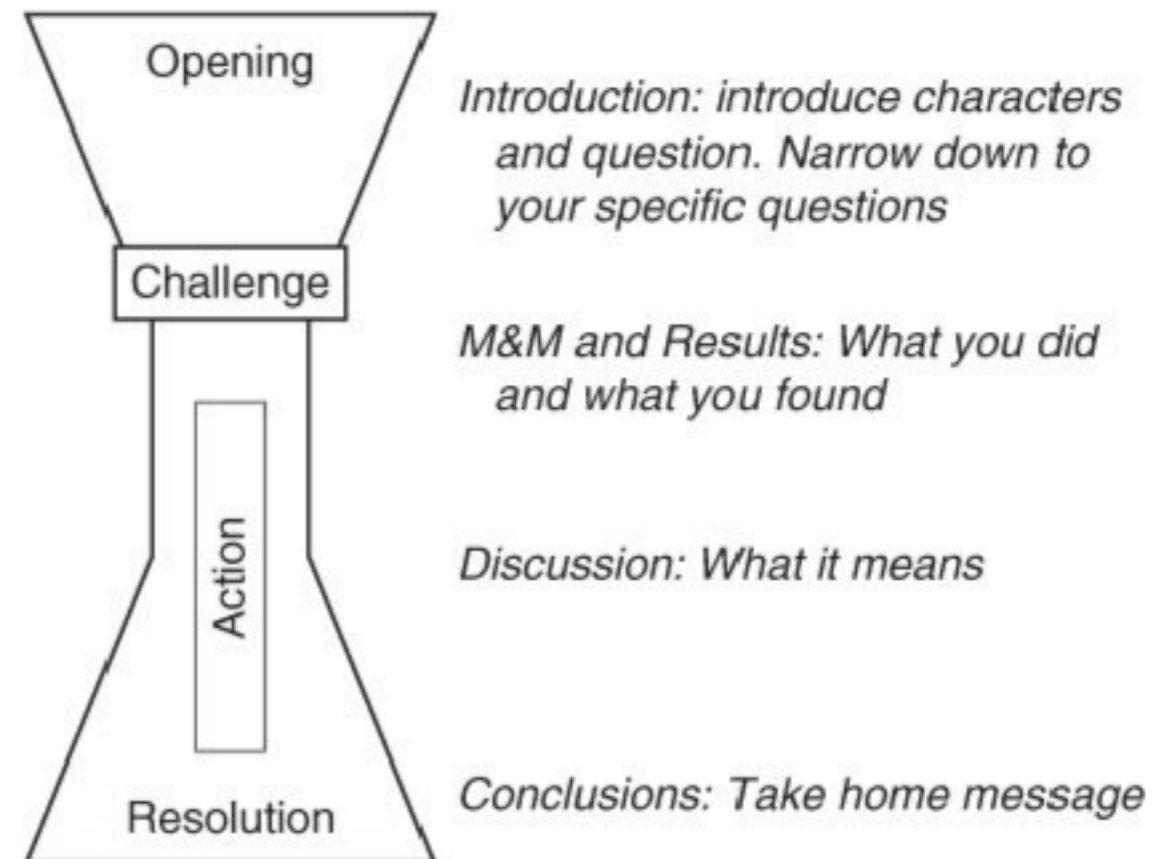
Story structure

Opening: Whom is the story about? Who are the characters? Where does it take place? What do you need to understand about the situation to follow the story? What is the larger problem you are addressing?

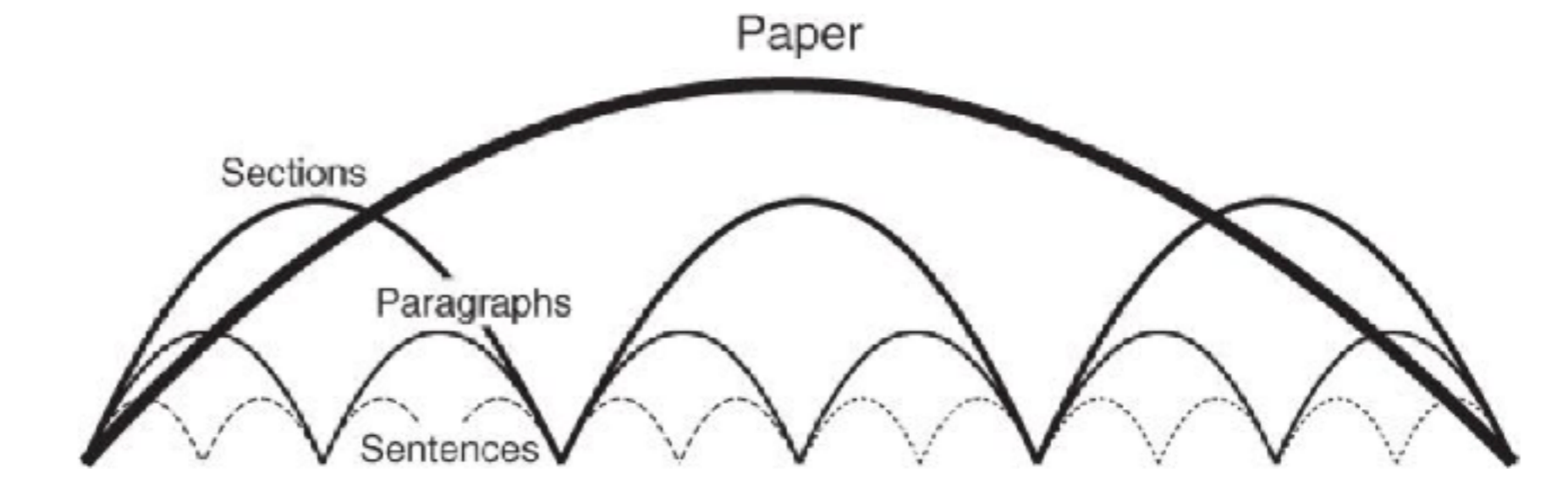
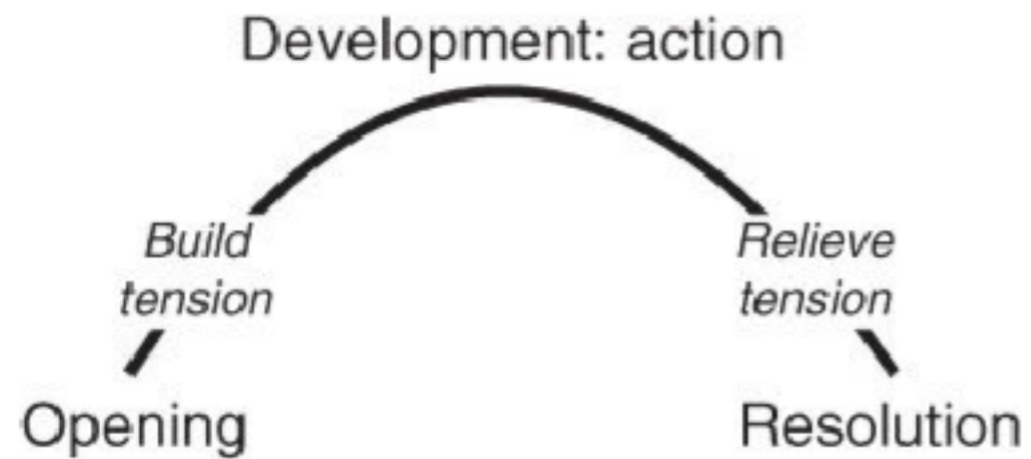
Challenge: What do your characters need to accomplish? What specific question do you propose to answer?

Action: What happens to address the challenge? In a paper, this describes the work you did; in a proposal, it describes the work you hope to do.

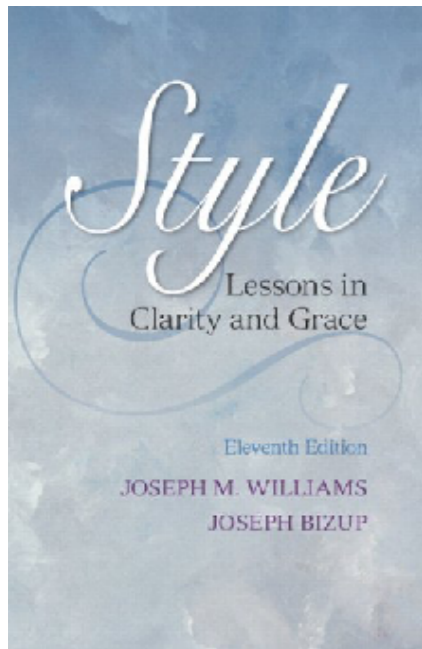
Resolution: How have the characters and their world changed as a result of the action? This is your conclusion— what did you learn from your work?



Internal structure



Communicate to your reader as clearly as you can

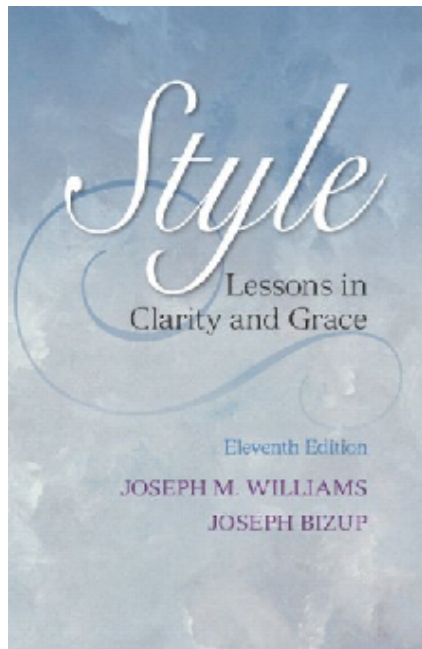


Readers want:

S U M M A R Y : P A R T 2			
A simple English sentence is more than the sum of its words; it is a system of systems.			
Fixed	Topic		Stress
Variable	Short, simple, familiar		New, long, complex
Fixed	Subject	Verb	_____
Variable	Character	Action	_____

1. Sentences to get to the subject of a main clause quickly
2. Sentences that get past the subject of a main clause to a verb quickly
 - Keep subjects short
 - Open sentences with familiar information
3. Verbs that name specific actions
4. Complexity at the end of sentences
 - End sentences with new information
5. A series of sentences to open with the same subject

Communicate to your reader as clearly as you can



Plan your paragraphs, sections, and the whole on this model:

Researchers have made strides in the **early and accurate diagnosis** of *Alzheimer's*, [But those diagnoses have raised A NEW HUMAN PROBLEM about **informing** *those at risk* before they show any *symptoms of it.*] point

Open each unit with a relatively short segment introducing it.

End that segment with a sentence stating the point of that unit.

Toward the end of that point sentence, use key terms that the rest of the unit develops.

Not too long ago, when physicians examined an older patient who seemed *out of touch with reality*, they had to **guess** whether that person had *Alzheimer's* or was *only senile*. In the past few years, however, they have been able to use **new and more reliable tests** focusing on genetic clues. But in the accuracy of these new tests lies the RISK OF ANOTHER KIND OF HUMAN TRAGEDY: Physicians may be able to **predict** *Alzheimer's* long before its overt appearance, but such an **early diagnosis** could PSYCHOLOGICALLY DEVASTATE AN APPARENTLY HEALTHY PERSON.

In the longer segment that follows, use consistent topics (underlined).

Repeat key terms introduced toward the end of the opening segment (boldfaced, italicized, and capitalized).

Make every sentence follow the old-new principle.

Order sentences, paragraphs, and sections in a way that readers understand.

Make all sentences relevant to the point of the unit that they constitute.

Active vs passive voice



**Who is the story about? Who is the subject?
Where do you want to direct the reader's
attention?**

See that lady with the shopping bag?
She's pelting a mime with zucchini.

See that mime? He's being pelted with
zucchini by the lady with the shopping bag.

See that lady with the shopping bag? A
mime is being pelted with zucchini by her.

The active voice paints the story for the reader. The passive voice gives only the outcome.

~ Steven Pinker's Guide to Classic Style ~

Dos and Don'ts

Eliminate Metadiscourse - Metadiscourse is writing about the writing. Signposting is a famous example ("in the first section we will do x"... "in this first section we will..."). Sometimes this is necessary, but it should be kept to a minimum and should be conversational in nature ("as we have just seen"... "let's start by looking at this")

Don't confuse the subject matter with your line of work - You are trying to explain some important subject matter to the reader, don't get bogged down in debates only relevant to those in your line of work, and don't constantly harp on about how difficult or controversial what you are trying to say really is. This is a major problem in academic writing, e.g. where philosophers talk about what other philosophers say and do, rather than about actual arguments and theories.

Exception: Sometimes the object of joint attention really is what others in your field of work say, e.g. you want to talk about a debate between two famous academics.

Minimise Compulsive Hedging - "Many writers cushion their prose with wads of fluff that imply they are not willing to stand behind what they say". Thus we have the persistent use of adverbial qualifiers "seemingly", "apparently", "nearly", "partially". To be sure, some of this is necessary. But it is tedious if overdone and many times readers will imply the necessary qualifications. Save the qualifications for the claims that need to be qualified.

Complementary rule: Avoid excessive use of intensifiers too: they often detract from the impact of what you are saying.

Avoid cliches like the plague - Cliches were originally effective and punchy ways of conveying different ideas - they brought to mind powerful sensory metaphors and analogies. But overuse has robbed them of this value. Try to come up with new, punchy metaphors yourself, and don't mix metaphors either.

Discuss Abstract Ideas, but Avoid Abstract Nouns - This one takes a little explaining. It's perfectly okay to discuss abstract concepts and ideas, but you should avoid further abstraction. So avoid using verbal coffins like "issues", "models", "level", "perspective" to convey abstract ideas. Example: "Individuals with mental health issues can become dangerous" becomes "People who are mentally ill can become dangerous".

Remember: Nominalization is a dangerous weapon - This is the process of turning a verb into a noun -- e.g. *affirming* into *affirmation*. Academics and bureaucrats tend to overuse nominalizations. Not only do they strip your prose of agents and actors, they are often used to avoid accountability, e.g. the classic politician's defence "Mistakes were made".

Adopt an active, conversational style - Use the first and second person pronouns, don't talk about the article or book as though it were independent of you ("this article will argue that..."). Use the active voice if possible, e.g. if you are giving important instructions to someone (e.g. "X can result in accumulated damage over time" vs "Never do X: it can kill you in minutes").

But it's okay to use the passive voice (sometimes) - the passive voice is much maligned in writing guides, but it's okay to use it sometimes. Just remember the guiding principle: you are trying to direct the reader's attention to something in the world. The active voice directs their attention to the doer of the action; the passive voice directs their attention to the person or object to whom the action is done. Sometimes it's the latter to which you want to direct attention.

Guiding Principle

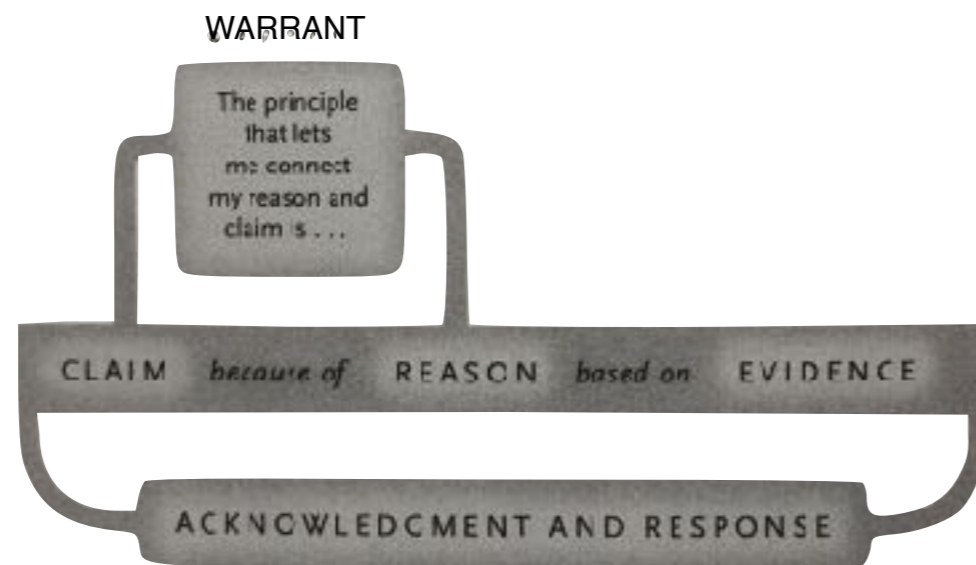
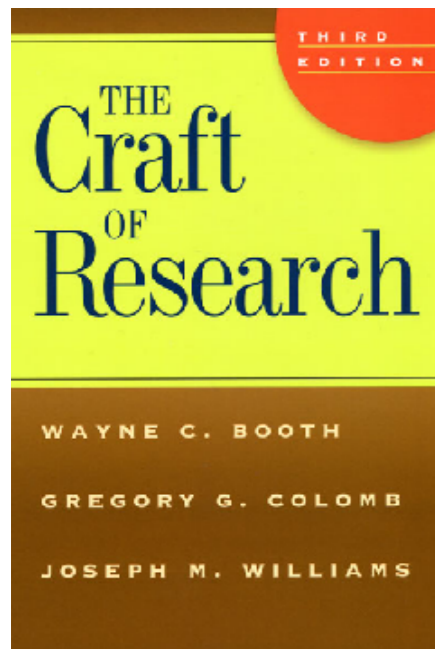
Write as though you are having a conversation with the reader, trying to explain to them some object of joint attention (an actual object/event/person, a concept or idea, a theory, an argument, a debate etc.)



Revise, revise, revise, revise, revise, revise, ...

Have fun!

Good arguments convince the reader



CLAIM

–What do you think?

REASON

–Why do you think that?

EVIDENCE

–How do you know that's true?

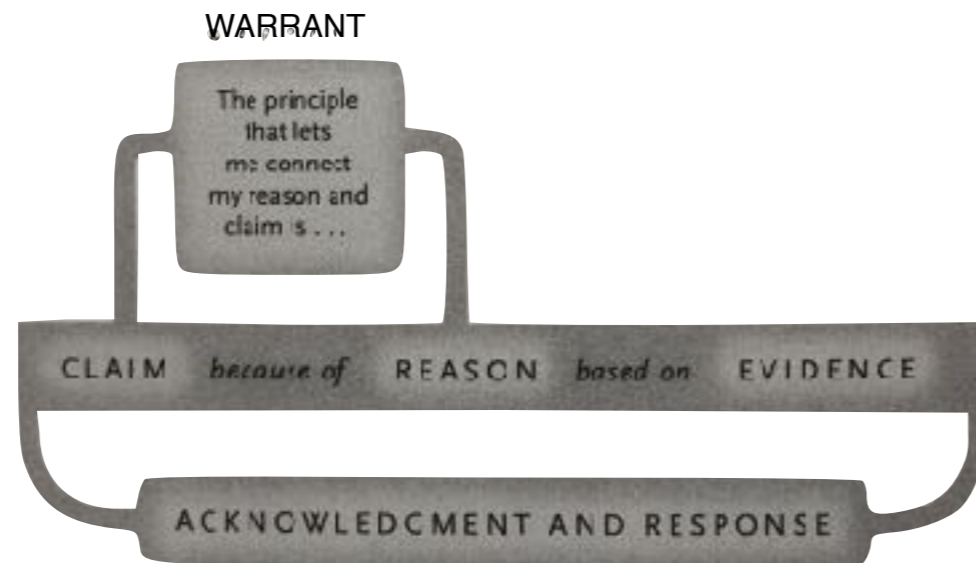
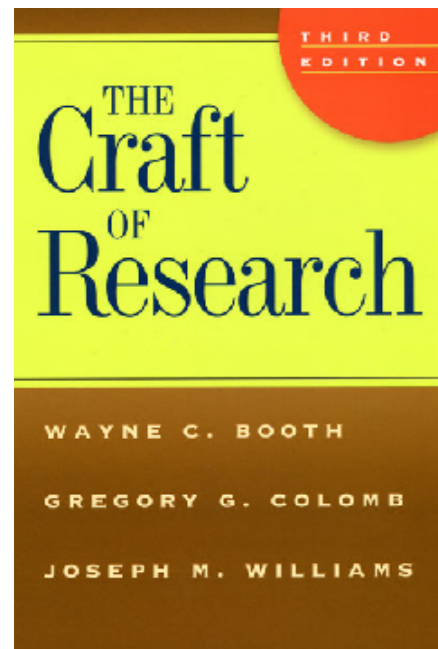
WARRANT

–Why do the reasons/evidence support the claim?

ACKNOWLEDGEMENT/RESPONSE

–What about alternative views or contrary evidence?

Making arguments



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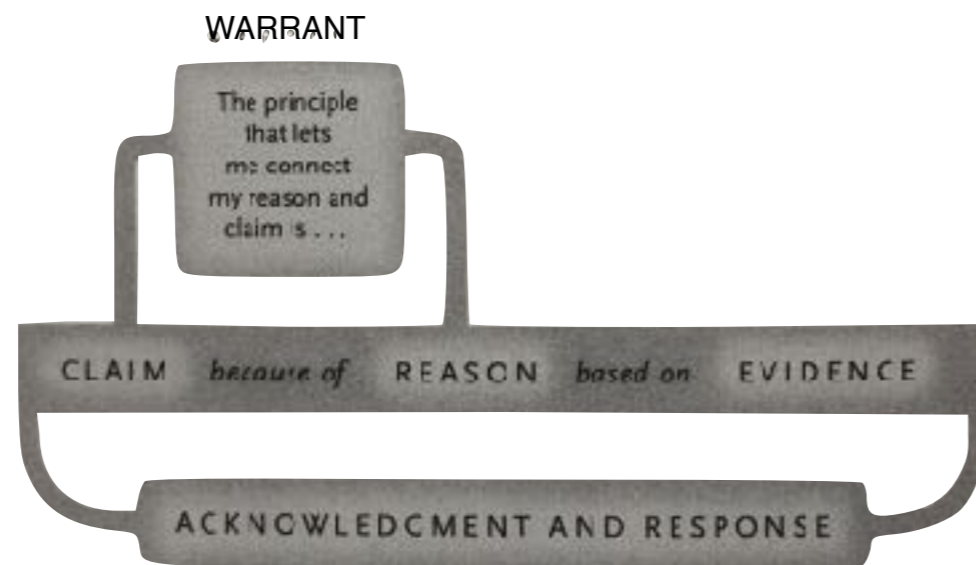
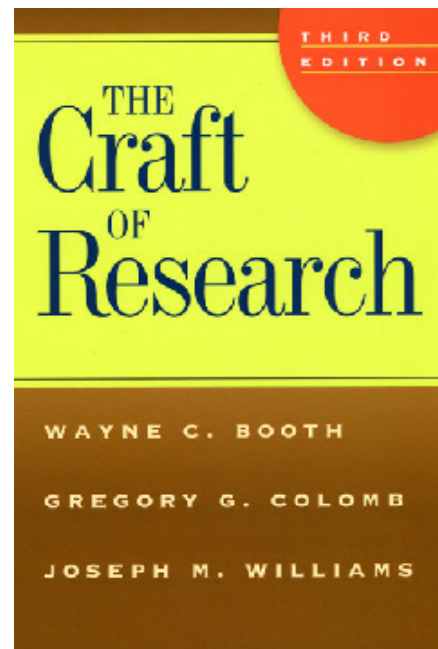
–Why do the reasons/evidence support the claim?

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When an area has fewer hard freezes, it can expect higher medical costs to cope with diseases carried by subtropical insects that do not survive freezes. **Europe and North America must thus expect higher health care costs**, because global warming is moving the line of extended hard freezes steadily north. In the last one hundred years, the line of hard freezes lasting more than two weeks has moved north at the rate of roughly...

Making arguments



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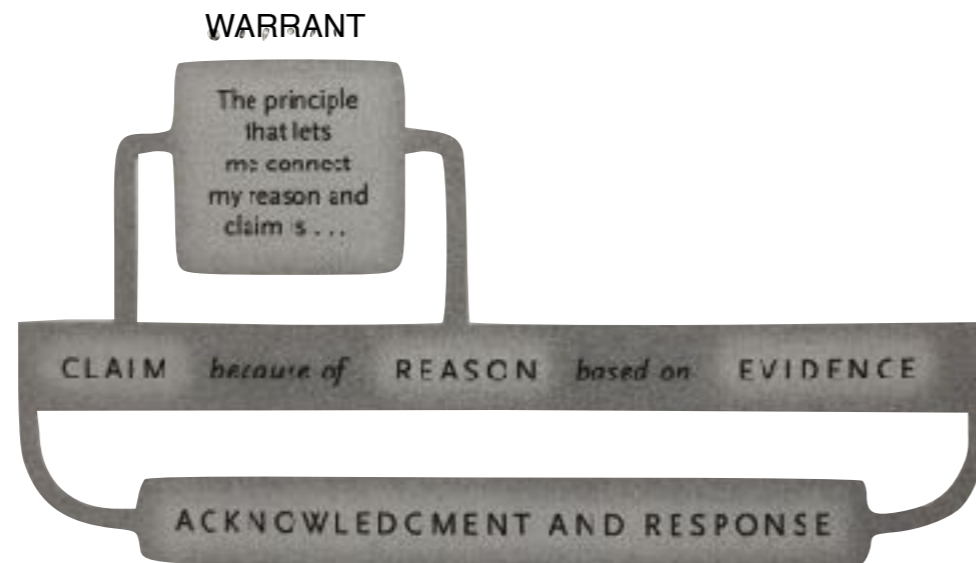
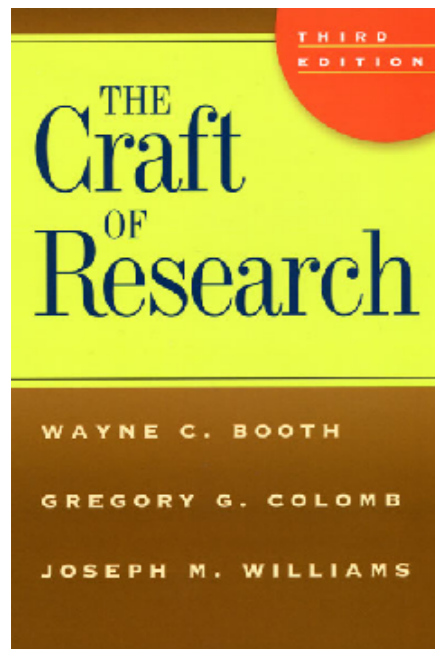
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Making arguments



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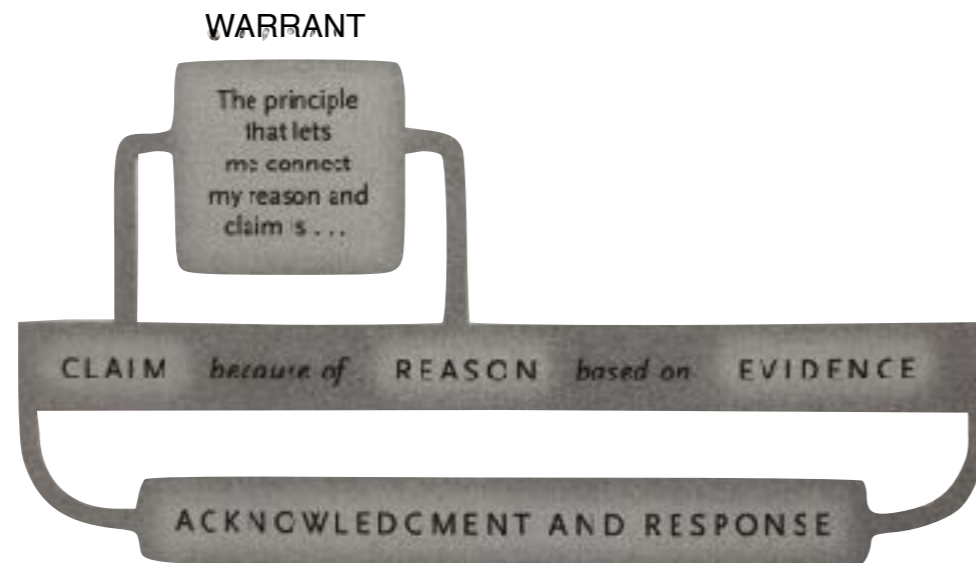
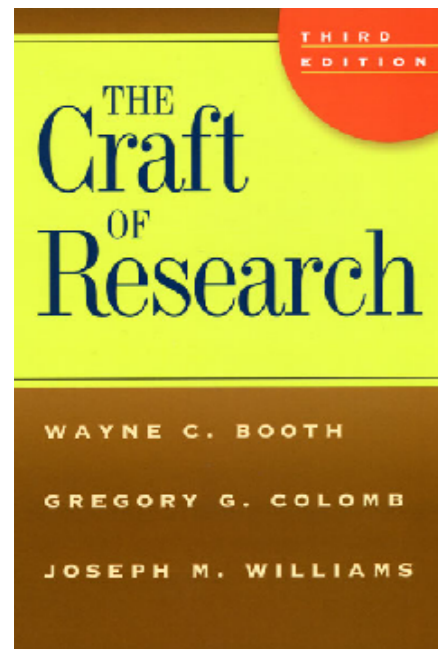
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Making arguments



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