



Shit Academics Say

@AcademicsSay

Follow



Ideal writing process:

1. Plan, strategize, proximal goals
2. Time management, self-monitoring, incremental progress
3. Revise, review, revise again
4. Writing goals accomplished
5. Self-respect and accolades

Actual writing process:

1. Netflix
2. Guilt

2:13 PM - 15 Dec 2017

Hacking your writing process

Or “How to trick yourself into doing what you need to be doing.”

Aim

Frequent, steady progress
towards achievable goals.

We all have different
motivators

External? Internal?
Fear? Praise?
Reward? Punishment?

**Identify yours, and make
it work for you**

External? Internal?

Fear? Praise?

Reward? Punishment?

External

Involves looping another person or people into your process

External

- Accountability buddy

Peer

Can be mutual writing support

Can help keep goals realistic

Can involve tangible rewards
(night out together, etc)

External

- Mentor*
 - Can give writing input, which may speed process.
 - May not have realistic expectations of rate of writing.
 - Desire to impress can be both positive and negative.

*This is often students' unconscious default, and it's a risky one.

External

- Public
 - Announce goals
 - Announce progress towards goals
 - Blog, Facebook, Twitter, Github

External

Key is frequent, consistent accountability checks.

External

Risk is “what happens when
your situation changes?”

Will your habits survive when
your circumstances change?

Internal

Harnessing your motivation to form effective habits

“The Power of Habit”

Habits

Cue → Routine → Reward

“The Power of Habit”

Habits

Cue → Routine → Reward

- Location
- Time
- Music
- Food

Habits

Cue → Routine → Reward

- Write
- Consistent tools

Habits

Cue → Routine → Reward

*Negative
Pain avoidance*

- Freedom from worry
- Reduced stress
- Freedom from fear



Jon Winokur 
@AdviceToWriters



Following

Work finally begins when the fear of doing
nothing exceeds the fear of doing it badly.
ALAIN de BOTTON

#amwriting



Habits

Cue → Routine → Reward

*Positive
Fulfillment*

- Checking off lists
- Plotting progress
- Treat
- Activity

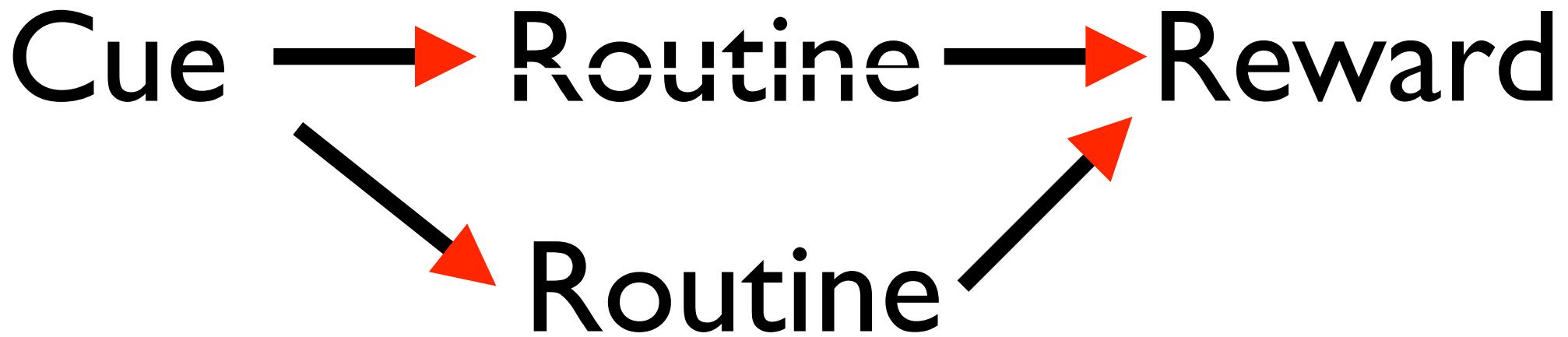
Habits

Cue → Routine → Reward

*Positive
Fulfillment*

Usually more
effective,
long term

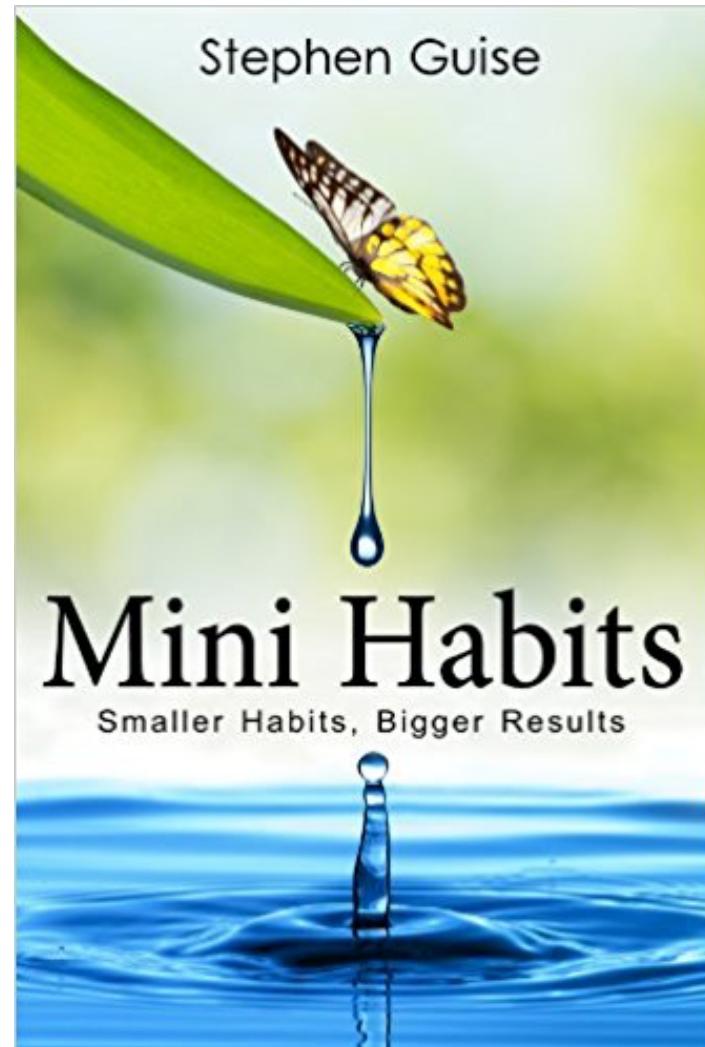
Changing Habits



Keep the cue, change the routine, improve reward*

*if needed

“Mini-Habits”



Keep your goals small
and trivial to achieve

- One push-up a day
- One sentence a day
- Read one abstract a day

Mapping your writing

i.e.,

“Outlining on steroids”

Why outline?

Outlining makes writing
more efficient.

Efficiency gains #1

- Partially answers “what do I want to say?”
- Clarifies “work still to be done”.
- Helps identify work w/ long lead time.

Efficiency gains #2

- Can get high-value input from collaborators at an early stage.
- Reveals structural problems in text early, before investing time writing.

What do I mean by “structural problems”?

Are you....

Explaining things in the wrong order?

Explaining too much at the same time?

Missing information?

Motivation unconvincing?

Line of argument confusing?

None of these are simple “language problems”

Explaining things in the wrong order?

Explaining too much at the same time?

Missing information?

Motivation unconvincing?

Line of argument confusing?

Structure can be flawed, even
when every paragraph is perfect.

You can't just tweak words and sentences to fix these.

Explaining things in the wrong order?

Explaining too much at the same time?

Missing information?

Motivation unconvincing?

Line of argument confusing?

You have to move or cut entire *paragraphs and sections.*

Structural problems:

Easy to fix early.

Harder to fix once text is
written

An aside: Cutting entire paragraphs and sections can hurt.

Explaining things in the wrong order?
Explaining too much at the same time?

Missing information?

Motivation unconvincing?

Line of argument confusing?

Put them in another document in
case you need to resuscitate.

Issues to consider when outlining

What points do I need to
make?

Issues to consider when outlining

What information do I
need to provide to make
those points?

Issues to consider when outlining

What ancillary information
do I need to include for
completeness/reproducibilty?

Issues to consider when outlining

What order provides the
most natural transitions
between topics?

Issues to consider when outlining

What order will help the
reader understand my
procedure/results?

Ordering your outline

Follow similar rules as
ordering sentences within a
paragraph.

Ordering your outline

- Simple to complex
- General to specific
- Familiar to unfamiliar
- First to last
- Certain to speculative
- Obvious to subtle
- Straightforward to profound

You can't *always* do this...

- Simple to complex
- General to specific
- Familiar to unfamiliar
- First to last
- Certain to speculative
- Obvious to subtle
- Straightforward to profound

That's fine, if you signal to the reader
when you're taking a detour.

Ways to signal a detour

- “Before we X, we must first Y...” And later, “With Y in hand, we can now return to X...”
- “We color code the points according to X (calculated in Section Y below)...”
- New sub-section heading.

Common problem

Many things in astronomy
are inter-related.

Yet somehow, you have to
pick a presentation order

Tips for complex topics

Present straightforward
data before discussing
interdependencies

- Plot with mass results
- Plot with metallicity results
- Plot with SFR results
- Discussion of plots about how mass,
metallicity, & SFR are connected

Tips for complex topics

You don't need to say
everything about a topic the
first time it's mentioned.

It is “safe” to introduce familiar
information out of sequence.

Strategies for developing your outline

“Word Stack”

Make a list of *absolutely everything* you need to mention in a section.

“Word Stack”

Do not order your list or
prioritize!

Just get it all down so you
remember to find a place for
everything.

The word stack becomes:

A starting point for organizing
your outline

and

A reference to make sure your
outline is complete

Revising your outline

Very similar to revising presentations

Revising an outline/ presentation

- “Oh wait, I need to explain this first”
- “This part is too long”
- “I need to spend more time discussing this plot”
- “I need to add some background info”

Other points about outlining

It is ok to talk about something more than once, especially in a long paper.

Subsequent times normally have more detail & nuance.

How to talk about something more than once

I. Match level of detail to what context requires.

2. Only give detailed view once.
All other mentions are “framing” or “reminders”

Example where result depends on application of new method

- Intro: Gives *high-level, general principles*.
- Methods: Gives *technical details*
- Discussion/Analysis: Gives *reminder suitable for someone who skipped ahead from the abstract*

Other points about outlining

An outline is not a contract

You *will* have scientific and textual insights that require revisions.

Other points about outlining

The closer you get to “topic sentence” level, the more useful your outline will be

Definitely helps efficiency....

Tools for outlining

How do I map out the
structure of my paper or
proposal?

Tools for outlining

Ye olde ascii file

Tools for outlining

A LaTeX file of the paper,
w/ section headings,
bulleted lists, & figure
captions

Tools for outlining

Powerpoint/Keynote

Good for people who are more
confident about teaching &
presenting than writing

Tools for outlining

Index Cards

One idea per card.
Also useful if you find you have
to restructure a paper.

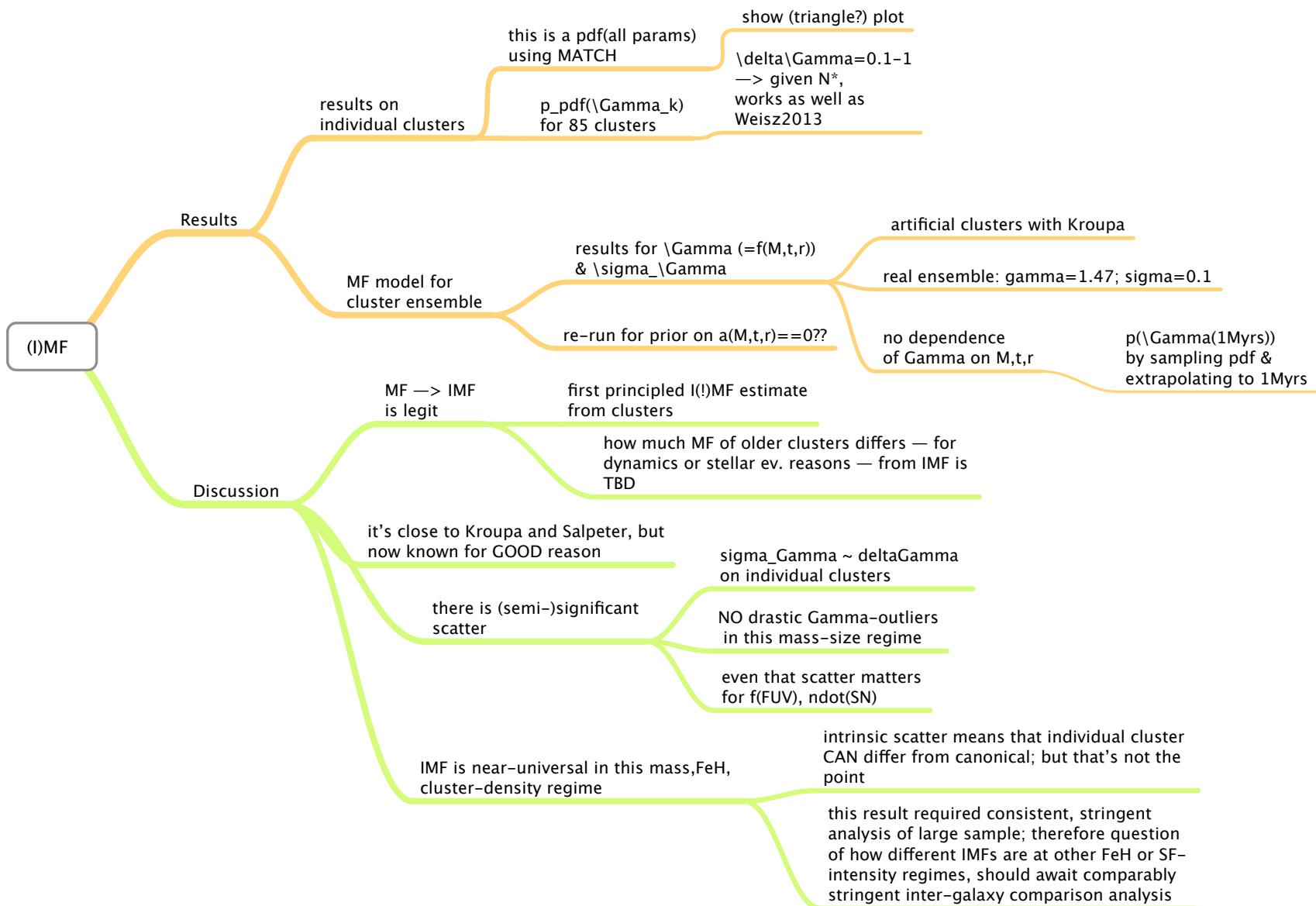
Outline for “Immortal Life of Henrietta Lacks”



<http://niemanstoryboard.org/stories/rebecca-skloot-immortal-life-of-henrietta-lacks-interview-narrative/>

Tools for outlining

“Mind mapping”



<http://mindnode.com>

Has free trial. Paid version lets you drag & drop nodes.

<http://www.xmind.net> is another free Mind Mapping tool.

Word Stack + Outlining Exercise

“Surviving your first year of
graduate school”

Results of previous exercise

Wordstack:

learn github
get enough sleep
managing expectations
cookbooks rock
get a calendar
learn to set reasonable goals
talk to other grad students
prioritize goals
have something other than grad school to destress
take stock of progress
get a plant and nurture the crap out of it
be ok if plants die. it's the cycle of life
go outside sometime
take a coding bootcamp
do your work with classmates
develop healthy relationships with stimulants and downers
don't answer emails at night
don't send emails at night

Maybe within subsections, repeat structure of "do's" and "don'ts"

What is grad school

- Classes
- Certification exams
- Research
- Personal experiences
- Challenges with the above

Work Habits

- Classwork
- Research
- Skill sets
 - Internal
 - External?

Personal Habits

- Short term (weekly daily)
- Long term (overall)