# DIGITAL

PRINCIPLES, METHODS, & EXAMPLES

A

SHORT READ

BY

DAVID KADAVY

# DIGITAL ZETTELKASTEN

PRINCIPLES, METHODS, & EXAMPLES

# DAVID KADAVY



# CONTENTS

- 1. A bicycle for the mind
- 2. Low-effort production for a distracted world
- 3. Caveats about this book
- 4. What is a Zettelkasten?

A slip? A zettel? A note?

- 5. What is a Zettelkasten for?
- 6. Misconceptions corrected
  - 1. Note-taking does not take the pleasure away from reading
  - 2. Note-taking is not mindlessly writing down everything you read
  - 3. Note-taking is not boring
  - 4. Google is not a substitute for notes
- 7. <u>Digital or paper?</u>

<u>Digital notes are better for...</u>

Paper notes are better for...

**Caveats** 

8. Which app(s) to use? (Whichever you want.)

The joys of plain-text

What about syncing?

Markdown

WikiLinks (or Freelink)

9. Anatomy of a Zettelkasten

The journey of a note

Fleeting Notes

Literature Notes

Permanent Notes

A note about re-writing vs. copying/pasting notes

What's not worth writing?

Do you need dynamic updates?

10. How to read

Read

Export the highlights

Highlight the highlights

Condense the highlights into a literature note

Break literature notes into permanent notes

# Not all steps, not all books

- 11. How to name your files
  - 1. Phrases
  - 2. Unique ID number
  - 3. Folgezettel
  - 4. Some combination of the above
- 12. <u>Choosing keywords/tags</u> <u>Specific and unique keywords</u>

Linking vs. tagging vs. both

13. Comfortable rituals for upkeep

Comfortable contexts

Matching activity with context

14. Turning your notes into completed work

Tag Indexes

Stitching it all together

- 15. Metadata
- 16. <u>Begin</u>

Specific tools

Also by David Kadavy

About the Author

# [ 1 ] A BICYCLE FOR THE MIND

THERE'S a great video floating around the web of Steve Jobs, in the 1980s, talking about his vision for personal computers. He says he saw a study illustrating the distances various animals traveled per unit of energy. "The condor," he says, "used the least energy to move a kilometer. And humans came in with a rather unimpressive showing." But then the study tested the efficiency of a human on a bicycle. As Jobs recalls, "a human on a bicycle blew the condor away — completely off the top of the charts. And that's what a computer is to me....it's the equivalent of a bicycle for our minds."

Has the computer fulfilled this promise? Is it a bicycle for the mind? With some of the world's smartest psychologists and computer scientists employed with the aim of making online media more engaging, computers are often more like bumper cars for the mind.

My computer doesn't always feel like a bicycle for the mind, but it does when I use my Zettelkasten. My digital Zettelkasten allows me to seamlessly engage my thoughts with a high-powered database of the most interesting things I've read or thought – things I *know* I know, but which are just beyond the reach of my consciousness. It's what productivity consultant Ari Meisel would call an "external brain." Furthermore, when I create notes in my Zettelkasten, I'm effortlessly able to conjure insights that would have called for more mental energy than I have in the moment. A bicycle turns small efforts into tremendous output. A Zettelkasten – especially a digital one – is a bicycle for the mind.

#### LOW-FFFORT PRODUCTION FOR A DISTRACTED WORLD

WHILE COMPUTERS often feel like bumper cars for the mind, it's not the fault of the computers. As Nir Eyal has pointed out in *Indistractible*, humans have been prone to distractions for all of recorded history.

But now more than ever, our world is full of tiny bites of information. The first American newspaper was published monthly, but information became a commodity to be sold when the telegraph connected the globe in the mid 1800s. We're attracted to tiny bites of information, and social media apps and news headlines trade in those tiny bites. It's a vicious cycle.

When we consider writing a book or article, we constantly have to choose between doing that work or grazing on tiny bites of information. When we make this mental calculation, it's hard for big, daunting projects to compete with little dopamine hits.

But the Zettelkasten method hijacks our short attention spans to help us be productive. If you have a few minutes in the waiting room at the dentist, which are you going to choose: dig into a big project such as reading a dense book, or kill time with social media? When you have a digital Zettelkasten, there's a third option: do small things with small notes, straight from your phone. The tiny bites you'll be consuming happen to be the most interesting things you've ever read, or the most compelling thoughts you've ever had. Yet instead of these tiny actions adding up to essentially nothing, they feed your curiosity in a productive way and drive your projects forward.

# [ 3 ]

### CAVEATS ABOUT THIS BOOK

I AM A NON-FICTION SELF-HELP AUTHOR. I have a Zettelkasten for one reason: To do my job.

I've compiled this knowledge, and thought through the considerations presented in this book, primarily to that end. I've thought about how best to build a digital Zettelkasten for your workflow because that's what I've done for my own workflow. So, that has some limitations. I've tried my best to think about how the goals of others may differ from my own, but ultimately, I only know what's important to me.

I was motivated to write this book because when I started my Zettelkasten, I struggled to make sense of the information available. I was captivated by the idea of leveraging notes to retain knowledge, organize ideas, and write. I had had false starts with other techniques (such as the "commonplace book" author Ryan Holiday espouses). It was only because I had already looked for what the Zettelkasten method promised that I was able to persevere and wade through confusing YouTube videos, web articles, and forum discussions. I constructed a first-principles understanding of the technique, and was able to apply it to my own workflow.

A reader recently sent me this note:

I don't know if it's meditation or you reaching a new level professionally, but I feel like your writing is on FIRE!

There are a variety of reasons my writing suddenly got better, such as meditation — as this reader observed. But if I had to choose one reason, it's because I finally found a system that lets me leverage technology to connect the thoughts on the tip of my brain with things I just *know* I read about somewhere, but can't think of in the moment. Instead of using my brain power to try to remember things, I'm using it to write better articles, newsletters, and books. I finally found a bicycle for my mind.

I didn't set out to write this book to be the definitive guide to all things Zettelkasten. The method is relatively new to me, and has seen a recent surge in interest. The most helpful book I came across in building my own Zettelkasten was Sönke Ahrens' *How to Take Smart Notes*. But I still had to figure out a lot on my own. This book is the guide I wish I had when I was starting.

So that's one caveat: I'm an author, and this book is a product of me trying to be better at my job. You may be an academic, a journalist, or a comedian. Or, you may just want to retain what you've read. I've tried to think about what might be important to you, but I can't be someone else. That will affect the advice I give in this book.

The other caveat is about technology: The moment I publish this book, the technology I talk about will have changed. When it comes to specifics about technology, nothing beats a web tutorial on that software, or playing with it yourself. So, I'm trying to straddle the line between what you need to think about – no matter the technology – and what you specifically need to do with what tool. I titled this book *Digital Zettelkasten: Principles, Methods, & Examples* because I'm going to talk mostly about using the Zettelkasten method with digital tools, and I'm going to talk about specific software as little as possible. Instead, I'll talk on a higher level about the principles and methods to think about as you design your digital Zettelkasten, and decide on what software features you need. (I'll also share actual examples, demonstrating how notes in my Zettelkasten lead to new insights.)

I faced a similar future-proofing challenge with my first book: *Design for Hackers*, is a book that touches on rapidly-changing web-design technology, yet people still enjoy it a decade later. I hope this book can be useful both today and far into the future.

#### WHAT IS A ZETTELKASTEN?

IF YOU'RE READING a book about how to build your own Zettelkasten, you probably have a general idea what one is, so I won't go too deep into this.

Zettelkasten is German for "slip box" (Plural: Zettelkästen). In analog form, a Zettelkasten is literally a box filled with slips of paper, each slip with a note on it, as well as metadata used to organize those notes. The Zettelkasten method is a way of organizing paper in a non-hierarchical way. Instead of being restricted to keeping a note only under one category, or having to make multiple copies of the same note to put in various places, notes are organized so that you can arrive at one individual note through various routes, and that note can lead you to various other notes — much like today's internet, but in paper form.

The Zettelkasten method has been around since the sixteenth century, but its most famous practitioner was Niklas Luhmann, a German sociologist who used it to write seventy books and hundreds of articles.

Unlike a card-catalog in an old library, the purpose of a Zettelkasten is not to find an individual note, but rather to explore the connections amongst notes. This can help you collect knowledge to write papers and books quickly, and find areas you may need to research further. Additionally, the act of organizing a Zettelkasten often leads to unexpected insights that spring from the process of linking notes to one another, or assigning keywords to a note.

The Zettelkasten method was originally developed with the limitations of paper in mind, which led to certain characteristics. As writers, academics, and students adapt the method to digital tools, they run into questions about which characteristics that were present in the analog Zettelkasten method

should still be present in the digital Zettelkasten method. They're also finding that digital tools afford new capabilities (and limitations) that aren't present with analog Zettelkästen.

# A SLIP? A ZETTEL? A NOTE?

"Slip box" and "Zettelkasten" can be used interchangeably. A slip in a slip box can also be called a "zettel." Slips and zettels are also "notes."

# [ 5 ] WHAT IS A ZETTELKASTEN FOR?

Before you ask what trade-offs from analog technology you'd need to make in building your digital Zettelkasten, you need to know what your Zettelkasten is for.

A Zettelkasten helps you produce writing. As a writer myself, I'm biased in this viewpoint, but I have a hard time imaging an ultimate use for a Zettelkasten other than writing. Yes, a Zettelkasten helps you retain what you read — but so you can turn that knowledge into writing. Yes, a Zettelkasten helps you retrieve knowledge when your memory fails you — so you can turn that into writing. Yes, a Zettelkasten helps you decide what to read next and develop your ideas — it even helps you *have* ideas. But what is all that for? To produce writing.

A little more about each of those underlying purposes:

- **Retain what you read:** No more forgetting what a book was about the moment you finish reading it. The Zettelkasten method helps break reading down into a series of engaging rituals that repeatedly expose you to the most interesting things you've read thus helping you retain what you read.
- **Retrieve it quickly:** No more fumbling through pages to try to find that passage you want to reference. With your digital Zettelkasten, you can copy and paste the exact quote in seconds along with bibliographic information, if you choose to record it.
- Know what to read next: Your Zettelkasten helps you follow your curiosity in a productive way. If you're looking for something to read, you can look in your Zettelkasten to see what sparks your

- interest. Whatever you choose, exploring that topic will drive your writing projects forward.
- **Develop your ideas:** Instead of starting each writing project with a blank page, you already have written short passages you can stitch together to create an instant first draft.
- **Have ideas:** Because your Zettelkasten frees your mental energy from having to remember and retrieve things you read or wrote long ago, you have more mental energy available to think about new ideas. The act of organizing your notes is just enough a challenge to spark new ideas without burning yourself out.

Each of these things the Zettelkasten method helps you do build towards producing and shipping writing. What you do with that writing is up to you. Maybe you're an academic writing research papers. Maybe you're a professor preparing lectures. Maybe you're a student writing term papers. Maybe you just want to blow away your friends at the pub with your extemporaneous recall of all the books you've read recently. Or maybe you're a non-fiction author like I am. It's all writing, and the Zettelkasten method makes it all easier.

# MISCONCEPTIONS CORRECTED

LIKE MANY THINGS I've come to love, I was resistant to the idea of note-taking, when I first learned of it. Sometimes ignorance is more comfortable than learning, because learning means we have to go through the work of changing.

Here are, corrected, some misconceptions I had that held me back from note-taking.

#### 1. NOTE-TAKING DOES NOT TAKE THE PLEASURE AWAY FROM READING

I love the act of reading. I love to lounge on my couch with a book, and move my eyes over well-written words. So, I didn't want to make what I saw as a pleasurable activity into something not pleasurable. I didn't want to change my reading habits, and I didn't want to make reading harder.

Note-taking does not have to be harder than reading. In fact, note-taking can be broken down into a series of pleasurable and easy activities, all that build into something great. While I can only do so much long-form reading in a day, the activities involved in managing a Zettelkasten are varied. This means I can increase the amount of time I engage with my reading, writing, and thinking, without fatigue. These activities take place in various "mental states" (much like the Seven Mental States of Creative Work I presented in my book, *Mind Management*, *Not Time Management*). Instead of being one isolated activity, reading is now various activities, each feeding into the next.

Even so, you can still read "for pleasure." Not all my reading goes through my note-taking process. I still read just for the simple pleasure of moving my eyes over well-written words.

# 2. NOTE-TAKING IS NOT MINDLESSLY WRITING DOWN EVERYTHING YOU READ

When I first saw note-taking, it looked like a lot of mindlessly writing down everything you read. It seemed pointless. Why write down something you've just read? Why ruin the act of reading by stopping to write something down?

As someone who likes to think about new ideas, I also worried writing down things I'd read, especially mindlessly, would leave little room in my mind to think about my own ideas. I didn't want my mind to be completely filled with other people's ideas.

Now I know note-taking is not mindlessly writing down everything you read. Sure, it could be that if you did it wrong, but if you do it right, it's not. First, it's not useless to write down something you read. Even if you did it word-for-word, it would help you retain it. But the proper way to take notes is not to copy things word-for-word (except in the case of exact quotes). Instead, you re-write it in your own words, which is even more powerful. Second, you don't write down *everything* you read. You only write down the important things: Things that are interesting, relevant to your work, or that you otherwise want to retain.

#### 3. NOTE-TAKING IS NOT BORING

Some parts of note-taking *look* boring. This is especially true if you think note-taking is mindlessly writing down everything you read. Even if you know it's not that, re-writing something in your own words seems like it would be boring.

But, surprisingly, it's not. It's fun. There's little in this world more frightening than the blank page, and re-writing something in your own words is much easier than filling that blank page. It's not so easy it's boring, and it's not so hard it's a slog. It's just enough of a challenge to keep you engaged. Something about the act of writing with little effort trains your brain to feel less intimidated in other situations when you are, in fact, starting from scratch. The other activities involved in managing your Zettelkasten, such as adding keywords and linking notes, are also just enough of challenges to be fun, and are fun in different ways from rewriting passages.

Re-writing something in your own words also looks boring because it seems pointless. Clearly, it seems, nothing new could come from this – you just read it, after all. But simply directing your attention towards a passage of text and trying to re-write it gets you thinking about all the other things related to what you're writing. Your brain's associative engine is even more active when you add keywords and link notes.

Re-writing passages, choosing keywords, and linking notes to one another all cause you to think associatively. Thinking associatively has been shown to improve mood, so that explains why note-taking is deceptively fun.

#### 4. GOOGLE IS NOT A SUBSTITUTE FOR NOTES

I used to think, "What's the point of keeping a database of knowledge? All human knowledge is free on the internet. If I need to reference something, I can just search for it."

DuckDuckGo (or Google, if you must) is handy for quickly retrieving facts and figures while writing. But your notes are not simple records of facts and figures. They can be, but inherent in your Zettelkasten is your own thoughts.

Yes, you want to know that Scottish naval surgeon James Lind ran what is believed to be the first clinical trial by giving lemon juice to sailors, and thus preventing scurvy, in 1747. But that's not all you want to know. In your notes, maybe you've connected that to the fact the British Navy didn't start issuing lemon juice to its sailors for another forty years, meanwhile losing to scurvy 30–50 percent of each ship's crew. Maybe you've also noticed that Lind himself questioned his own findings. Maybe you connect that to the skepticism Ignaz Semmelweiss faced when he found that fewer women died after childbirth if, before delivering babies, they washed their hands.

You're not likely to find all those connections on a Wikipedia page. Even if you did, the idea that we shouldn't *know* anything, and should instead look everything up, is overrated. Yes, we should rethink educational curricula centered around memorization, but looking things up is at some point a waste of working memory. That's brain power that could be used to think creatively, rather than to try to grasp a bunch of facts just retrieved.

Not using your Zettelkasten as a substitute for memory may seem a contradiction, since one purpose of a Zettelkasten is to retrieve information you can't remember in the moment. But there's a big difference between using notes to jog your memory and using notes as a substitute for memory. One may think, Well you can jog your memory with internet articles. But your Zettelkasten doesn't just help jog your memory. The activities involved in managing it also help solidify your memory, so it needs less jogging in the first place.

Your Zettelkasten also lets you store incomplete thoughts and connections. Maybe you recognize that the British Navy didn't supply sailors with lemon juice well after it had been proved lemon juice would prevent scurvy, but it might take you many exposures to that note, and

being reminded of that information through various other notes, before you can connect it with something else to form a new idea you won't find on the internet.

Search engines and the internet are not a substitute for your notes. Your notes contain more than just simple facts, managing your notes builds your memory, and your notes help you store and develop ideas in-progress.

#### DIGITAL OR PAPER?

I DESIGN my workflow so that I can be exposed to new information, absorb that information, retrieve and develop and link that information, and turn it into writing — with minimal friction, like a bicycle. I want the maximum output for the mental energy I invest. Note that "maximum output" does not necessarily mean the number of words I type, nor that I publish. I also want them to be quality words. Also, what I'm investing is "mental energy" and not time. When creativity matters, as the title of my third book states, productivity is about *Mind Management*, *Not Time Management*.

As you decide whether you want your Zettelkasten to be paper-based or digital, ask yourself this same thing: Which will be more like a bicycle for the mind? I don't mean that as a rhetorical question — depending on your workflow, it's possible that slips of paper in a box would be more efficient than digital notes. Or, maybe you'll want a mixture of the two: digital notes for an "external brain," and paper notes for specific projects.

Bicycles change gears. Depending upon your strength, energy level, and the terrain, one gear works better than another. The same is true of our tools. You can't use a piece of technology without it also using some part of you. Just as pumping up a steep hill in a bicycle's lowest gear would fatigue you, always using the highest-power tool can expose you to distractions that limit the depth of your focus on the contents of your notes.

Some things to consider as you decide whether digital notes are better than paper:

#### DIGITAL NOTES ARE BETTER FOR...

# Searchability

- Digital notes allow you to search your whole database.
- Paper notes allow you to find specific information only through these ways: by keyword, by links from other notes, by note title, or by manually sorting through notes.

# **Portability**

- Digital notes allow you to access and edit your notes from anywhere, as long as you have a device.
- Paper notes, you have to bring with you.

# **Backup**

- Digital notes are stored on your devices, as well as backed up on the cloud.
- Paper notes can easily be destroyed or lost.

# **Speed**

- Digital notes can be typed, linked, and searched quickly.
- Paper notes are written by hand, printed out, or typed on a typewriter, all of which can slow you down.

# **Mutability**

- Digital notes can be revised easily.
- Paper notes have to be re-created to be revised.

# **Dynamism**

- Digital note changes can update across all places that note is referenced.
- Paper note changes can only be made to one note at a time.

# Collaboration

- Digital notes can be shared with colleagues anywhere in the world to collaborate on projects.
- Paper notes are hard to collaborate on, since they have to be dealt with physically.

#### PAPER NOTES ARE BETTER FOR...

# **Tactility**

- Paper notes can be shuffled, stacked, and arranged next to each other easily.
- Digital notes are cumbersome to arrange next to one another for comparison.

#### **Focus**

- Paper notes don't have internet access, notifications, nor software updates to distract you.
- Digital notes expose you to every distraction available on your devices.

#### Retention

- Paper notes may help you remember the material better. Research suggests that writing by hand improves retention.
- Digital notes may not challenge you to process the information you're writing, thus preventing you from learning it.

# **Privacy**

- Paper notes are hard for hackers or other surveillants to access.
- Digital notes can be accessed by others, especially if stored on a cloud service.

#### CAVEATS

Your Mileage May Vary on these comparisons. Your personal preferences and abilities may reverse the advantage: You may find it easier to sort through digital notes than paper, or you may find the slow rate with which you're exposed to new information with paper notes reduces your focus. The tools you use may shatter assumptions made in these comparisons: You may not write your paper notes by hand, you may not write your digital notes by typing, and maybe given your tools and lifestyle digital notes are, in fact, more private than paper notes. Or, your workflow may make some concerns moot: Maybe having changes in one note reflected across all references to that note isn't critical to your workflow.

# WHICH APP(S) TO USE? (WHICHEVER YOU WANT.)

THERE ARE dozens if not hundreds of note-taking apps. The options available are overwhelming, and more apps are getting added to the pile, while other apps die off. But note-taking doesn't have to be complicated. So, I recommend an approach that doesn't rely on any particular app. I recommend plain-text files.

#### THE JOYS OF PLAIN-TEXT

Plain-text files are a great option for a digital Zettelkasten because:

- **Plain-text files are data-portable:** There are countless apps you can use to access your plain-text notes. If you decide you no longer like an app, you can stop using it and start using another. You can even use multiple apps, each for certain features you like, or which work better on one device versus another.
- **Plain-text files are simple:** Many note-taking apps are bloated with features for creating different elements, most of which you can create with plain-text anyway. With plain-text, you don't slow yourself down choosing fonts or fancy formatting. Using Markdown which I'll describe in a bit you can do the formatting you need, without your fingers leaving the keyboard.
- **Plain-text files are lightweight:** Your plain-text notes take up very little storage space.
- **Plain-text files are fast:** No more waiting for your notes to load up in bloated software. You can search and access your notes incredibly fast.
- **Plain-text files are offline-compatible:** Some note-taking apps don't allow you to access your notes when not connected to the internet, or make you pay extra for the privilege. Your plain-text files are stored on your various devices, so you can access them even when offline.
- **Plain-text files are future-proof:** As long as there are computers, you will be able to read plain-text files. Some transhumanists may argue with me, but it's true. I'd bet on it.

#### WHAT ABOUT SYNCING?

If you choose plain-text notes, your digital Zettelkasten will consist of those files, arranged in folders on your hard drive (more on folder structure in a bit). This idea often confuses people. "But what about syncing?," they ask. We're so used to having our notes locked away in a proprietary format on a proprietary server a notes-app company manages for us, we've forgotten we also use other synching services that can sync files we own.

You can sync your notes on syncing services such as Dropbox, iCloud, or Google Drive. Many note-taking apps for various devices support these services. If you don't trust your data to third parties, you can set up you own WebDav server. If you want to collaborate with colleagues in a way that you don't overwrite each other's work, you can use Git. Still some note-taking apps, such as Obsidian, provide encrypted syncing services. You may worry about vendor lock-in, but since Obsidian is for plain-text files, you could easily take your notes with you if you decided to no longer use their service.

#### MARKDOWN

One advantage of plain-text is its simplicity, but that also can be a drawback. You want your notes to be easy to read, and formatting such as headers, bold text, and italics helps with that. The Markdown language gives your text files formatting, without vendor lock-in or bloated file sizes. Many programs can give you a rich-text view of your Markdown files, but the raw text is easy to read, too.

Markdown interprets basic cues, in plain text, as formatting. Some common examples:

```
# Here's a header
Here's some body text. *Bold*. **Italic**.
- List item 1
- List item 2
[Link anchor text](http://website.com)
```

In preview mode on a Markdown-compatible app, that might look like this:

# Here's a header

Here's some body text. Bold. Italic.

- List item 1
- · List item 2

Link anchor text 2

If the plain-text version is still too hard to read, many Markdown-compatible apps meet you halfway by previewing formatting as you type in

# Markdown, like so:

```
# Here's a header

Here's some body text. *Bold*. **Italic**.

- List item 1
- List item 2

[Link anchor text] (http://website.com)
```

Rather than the .txt extension of plain-text files, Markdown files have the .md extension. There are many more formatting options for Markdown. The full details of the language are beyond the scope of this book, but you can easily find a manual with a web search.

# WIKILINKS (OR FREELINK)

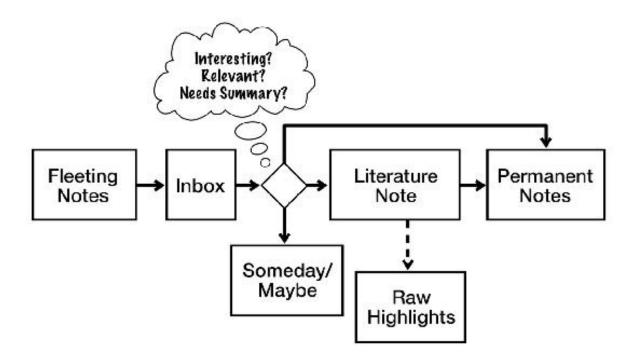
Another technology that makes Markdown useful is an extension some apps use called WikiLinks (aka Freelink). This is an added feature to Markdown that makes it possible to link to other Markdown files in your Zettelkasten using easy-to-read and -write plain text.

For example, if you have a Markdown file called "is ego depletion real.md", you could link to it from within another Markdown file by typing [[is ego depletion real]] (I'll cover the pros and cons of various file-naming conventions later). Some apps vary slightly in their support of WikiLinks in that they will search the entire Zettelkasten for a file of this name, regardless of what folder it's in. In other apps, the file will only be linked if it's in the same folder.

Plan your digital Zettelkasten accordingly, but just because two different tools differ in their support of WikiLinks does not mean you can't use them both. Currently, I use one tool that links across the entire database, and another tool that does not. But because I use these tools for different tasks, this difference in compatibility doesn't slow me down. When I use the tool that doesn't link across the entire database, I don't create links. As I'll show later in the book, creating links is a separate activity.

## ANATOMY OF A ZETTELKASTEN

Here's the workflow I suggest as a starting point for your digital Zettelkasten.



The traditional Zettelkasten consists of three main types of notes (I'll break these down, with examples, in a bit).

• **Fleeting Notes:** Notes you take "on the fly."

- Literature Notes: Condensed notes of an entire article, book, etc.
- **Permanent Notes:** Notes summarizing a single idea. These are assigned keywords and linked to other notes.

Literature notes and permanent notes are organized into their own respective folders in your Zettelkasten. Fleeting notes are casual, so can be in many places, such as on scraps of paper or in a notes app on your phone.

Aside from your "Literature Notes" and "Permanent Notes" (or "Slip Box"), I suggest three other folders:

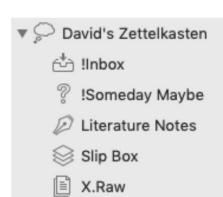
- Inbox
- Someday/Maybe
- Raw

**Inbox** is where I put fleeting notes that need to be processed. It may contain thoughts I've written down, something a friend has recommended I look up, or highlights from my reading. Processing the contents of the inbox will be a regular ritual in managing your Zettelkasten.

**Someday/Maybe** is borrowed from the *Getting Things Done* productivity system. You often come across things that are interesting, but not interesting enough and/or not relevant enough to your current projects to investigate further. The "someday/maybe" designation helps reduce worries that the idea might fall through the cracks, without obligating you to follow up on the idea right now.

Raw is for storing the "raw," exported highlights from books or articles. You'll be condensing these highlights, but sometimes those condensed highlights aren't enough. Maybe you search for a word that was in the source material, but didn't make it into your condensed highlights. Maybe there's an exact passage you want to reference, but you didn't keep that passage word-for-word in your literature notes or permanent notes. By keeping the raw highlights in your database, you can search and quickly find the exact passage.

Heres what that folder structure looks like for my Zettelkasten:



#### THE JOURNEY OF A NOTE

Here are some ways notes might flow through the system:

- **Books:** As I read an ebook, I make highlights (fleeting notes). I later export those highlights to plain text and keep them in my "Inbox," so I know they need to be processed. I condense those highlights into a literature note. I make permanent notes for each of the most interesting ideas. I store the highlights I exported in my "Raw" folder.
- **Conversations:** Over dinner, a friend tells me about an interesting story. I make a fleeting note in my pocket notebook. I later look up the story, and make a permanent note about it.
- **Podcasts:** While listening to a podcast, I hear a great quote. In a notes app on my phone, I jot down a rough timecode, and a twoword description of what the quote is about. I later re-listen to that part of the conversation, and capture the exact quote in a permanent note.

The main types of notes in a Zettelkasten, in more detail:

#### FLEETING NOTES

Fleeting notes are notes you take "on the fly." They're casual, and may be disorganized. You can take fleeting notes on cocktail napkins, slips of paper, a note-taking app on your phone, in a paper notebook, or even in the margins of your books. Highlights on an ebook reader even qualify as fleeting notes.

The purpose of a fleeting note is to say, "here's something interesting I might want to remember or refer to some day." You need to record just enough information to later decide whether you want to turn your fleeting note into a literature note, permanent note, or someday/maybe.

Some examples of fleeting notes, from my own Zettelkasten:

- **A highlight from a book** I had read, which was sent to me by a service called Readwise. I had exported the highlight to my inbox.
- **A tweet I had written.** I "liked" my own tweet, which triggered an automation that sent the tweet to my inbox.
- A quote I had heard on a podcast. In this case, the quote was short and simple enough I was able to write it word-for-word in a notes app on my phone. I later sent it from the app to my inbox.
- **An idea I recorded in my pocket notebook.** I just wrote a couple words I knew would jog my memory. I later re-wrote it as an electronic note in my inbox.
- A thought I recorded in my larger notebook. I was freewriting, and one passage stuck out to me. So I underlined it and later rewrote it as an electronic note in my inbox.

You can record fleeting notes in any way that is comfortable for you. The one thing you're trying to accomplish is to record the thought in a place where you feel confident you'll get a chance to think about it more. Then, you can get back to what you were doing.

### LITERATURE NOTES

Literature notes are informal summaries you write about a piece of media you've consumed. Whether you've read a book or an article, listened to a podcast, watched a documentary, or had a conversation with an expert, a literature note is something you can review to remind you of the main points you learned. This often takes the form of a bullet-point list, perhaps broken up by topic.

You usually write literature notes using fleeting notes as a source. For example, as I'll explain more in a bit, when I write literature notes for a book, I refer to the highlights I've exported from the book.

While literature notes are good reminders for quick review, the act of writing literature notes also ensures you understand the material. Aside from direct quotes, literature notes are in your own words. To write literature notes, you have to think about what you learned, and how you might explain it to a friend (or your future self). This helps you remember the material better than you would otherwise.

### PERMANENT NOTES

Permanent notes are explanations of a single idea, annotated with metadata about the subject of the note, other notes that note is related to, and the source of the note.

You usually write permanent notes using literature notes as your source. You take only the most important ideas from your literature notes, and turn them into singular notes you can connect with other notes. Once you have many permanent notes, you can construct a rough draft for an entire article or book.

Permanent notes are the ultimate destination within your Zettelkasten for the best ideas you have or come across. In fact, your permanent notes *are* your Zettelkasten. The permanent note is the last stop for an idea before you synthesize it into something new.

The process of writing fleeting notes, rewriting those as literature notes, and rewriting those again as permanent notes — only to rewrite those in finished works — may seem wasteful. In our digital and highly-automated world, we're tempted to search for some special pen that will record everything we write as digital text. Some note-taking apps tout features that allow text to dynamically update across many different places. At the least, we're tempted to copy and paste to be more "efficient." This is the wrong way to think about it.

Our concept of productivity is still stuck in an assembly-line modality. But great ideas are not constructed in a linear and step-by-step process that would be more "efficient" if only those steps were done faster. Yes, Henry Ford's assembly line went quickly by eliminating waste, but the cars had to be designed first – a process that wasn't so easy to speed up. The bottleneck to the production of great ideas is not the speed at which you can write, nor the amount of writing you have to do. Just think of how much thought and preparation went behind Einstein writing  $e=mc^2$ .

This takes us back to the misconceptions I presented earlier in this book, such as that Note-taking is boring, or that Note-taking is mindlessly writing down everything you read. Until you try it, it seems boring or pointless to write down, in your own words, something you've just read – or something you've already written. I, myself, often resist re-writing. But I go ahead and do it and usually I'm presented with something I didn't expect: I get hung up on a word and realize I didn't understand the idea as well as I thought I had, I come up with a more clear way to explain the concept, or the way the note relates to another note pops into my mind. Bit by bit, I'm learning to trust the process, quit whining, and re-write.

The longest-lived stories come from the oral tradition. In the ancient world, storytellers traveled around, telling the same stories over and over. This was like Darwinism for storytelling. The stories changed slightly with each re-telling, so that by the time they were written, only the most compelling elements survived. When you take the extra time to re-write, only the clearest and most compelling elements survive – not to mention that you further internalize the knowledge.

So, resist the urge to copy and paste. Even when you're recording an exact quote, take the extra effort to re-write it (very carefully!) You'll be surprised what you discover.

### WHAT'S NOT WORTH WRITING?

There are still things that aren't worth writing, much less re-writing. If you truly know something by heart, it's not worth writing down (unless it's to connect it to something else). Your Zettelkasten is for retrieving information, but in the process of writing notes for retrieval you're also learning the information. If you neither need to learn it nor retrieve it, there's not much point in writing it down. (Just don't fool yourself, as we tend to overestimate how well we'll remember something later.)

This is one of many "threshold" questions in managing your Zettelkasten: At what point is something worth writing a note on? Some people figure, It's digital. It's not costly to write down, so write down a lot. Others choose to slow down the process, such as by writing by hand to force themselves to write only the most important things. I'm somewhere in between. I try to write down only the important things, but I limit myself only because I don't want to spend all my brain power thinking about other people's ideas. I want to leave mental energy left over to daydream and see what I come up with on my own.

### DO YOU NEED DYNAMIC UPDATES?

Some apps allow you to write something once, and reference it from various places. This seems really slick, but is it necessary? I think it's an overrated feature. First, there's the value of re-writing, which I just covered. Next, there's context: As Marshall McLuhan said, "The medium is the message." The characteristics of each medium call for you to express the same idea in a different way. An email subject line is different from a tweet, which is different from an article, which is different from a speech. Each medium calls for different information density and complexity of language.

One exception may be — and this is a big exception for Zettelkasten users — academic writing. Academic articles may require the same introduction of the current knowledge in the field, presented at the opening of each article. If you can avoid re-writing the same passage, and if you can update the same language in many articles-in-progress from one place, maybe that's a benefit.

Whether you want to dynamically reference text in your Zettelkasten depends upon your workflow. But I think re-writing isn't that bad. In fact, I think it's good.

### HOW TO READ

The main sources of notes in your Zettelkasten will likely come from your reading of books or articles. Making good use of this reading so that you retain it and can use what you learned in your writing calls for a different approach to reading. Here's the process to follow when you really want to absorb what you're reading:

### **READ**

As you read, make fleeting notes. The "best" way to do this is to physically take notes while you're reading: Highlight things and write in the margins or in a separate notebook. I personally don't find this a comfortable way to read, so I just highlight on my e-reader. If I have a thought I want to capture, I'll leave a note along with a highlight to help me later process it.

### EXPORT THE HIGHLIGHTS

When you're finished with the book, export the highlights. I like to export to Markdown. A service called Readwise, which imports your highlights automatically, makes it easy to export to Markdown. There are other ways to access your highlights from an e-reader, but it depends upon your platform and is subject to change, so it's best to search the web for your platform.

### What if it's a paper book?

If you're reading a paper text, you of course can't export your highlights to Markdown. In this case, you have two good choices: You can go straight to the next step of highlighting your highlights, or you can skip to the following step of condensing your highlights. It depends what's a comfortable workflow for you, and which helps you narrow your notes down to the most interesting ones, while also retaining what you're reviewing.

### Read digitally if you can

I love the feeling of reading a paper book, but I've learned the value of reading everything I can digitally. I was forced to make the shift when I moved to South America, where books in English are scarce. Almost every book I've read the past several years has been digital. I mourned the loss of paper books, but now I'm glad I made the switch. Having instantly-searchable, and portable access to your highlights, and being able to search your books for things you want to reference but didn't highlight, is incredibly powerful. Even if you love paper books, I strongly encourage you to go digital, at least for reading you plan to include in your Zettelkasten.

### HIGHLIGHT THE HIGHLIGHTS

Once you've exported your highlights, review them and highlight, once again, the parts of those highlights that are the most interesting. This is a mental energy management technique: When you were reading the book, you were more focused on reading it, not on thinking deeply about whether or not a passage was useful. Now as a separate task you're asking yourself which parts are interesting enough that you want to re-write them in your own words later.

With plain-text Markdown highlights, I "highlight" simply by bolding text in a text editor. If you're reviewing in a paper book, you could use another color of highlighter or underline with a pen.

Here's a highlight, with bolded text, from Sönke Ahrens' book on the Zettelkasten method, *How to Take Smart Notes*:

The educational psychologist Kirsti Lonka compared the reading approach of unusually successful doctoral candidates and students with those who were much less successful. One difference stood out as critical: The ability to think beyond the given frames of a text (Lonka 2003, 155f). Experienced academic readers usually read a text with questions in mind and try to relate it to other possible approaches, while inexperienced readers tend to adopt the question of a text and the frames of the argument and take it as a given. What good readers can do is spot the limitations of a particular approach and see what is not mentioned in the text.

For some readers, the academic article cited would be the most interesting part of the passage. As I reviewed this highlight, I could foresee using Ahrens' takeaway in a future article, so that's the part I highlighted. What you choose to highlight always depends upon what's most relevant to your work.

(Tiago Forte calls the highlighting of highlights "progressive summarization.")

### CONDENSE THE HIGHLIGHTS INTO A LITERATURE NOTE

Look at the highlights of your highlights and re-write the interesting ones in your own words. You're now turning your fleeting notes into a literature note. It's okay not to summarize every highlight. Only worry about the information you most want to learn or that you can foresee wanting to use in the future.

Let's look again at the part of Ahrens' passage which I highlighted:

Experienced academic readers usually read a text with questions in mind and try to relate it to other possible approaches, while inexperienced readers tend to adopt the question of a text and the frames of the argument and take it as a given. What good readers can do is spot the limitations of a particular approach and see what is not mentioned in the text.

I re-wrote that in my own words, like so:

Experienced readers ask questions while reading and relate to other possible viewpoints. Inexperienced readers take the viewpoint as a given. They don't think about what's not mentioned in the text.

Again, the way you might re-write such a passage might be different. I'm using less-precise language than Ahrens'. I dropped qualifiers like "usually" and "tend to," because that fits better the kind of writing I do. That's what makes it "in your own words" — you re-write it as you might write it in a finished piece.

This is the part of the process where I get the most ideas about how a passage applies to any projects or theories I'm working on. That does sometimes happen in the act of reading, or in the act of highlighting highlights, but a couple things make condensing highlights a fruitful time for ideation: One, I've been exposed to the information a few times at this point, and it has had time to incubate in my mind – the "passive genius" I talked about in *Mind Management*, *Not Time Management* has done some work for me. Two, this is when I'm finally writing. By trying to think of

how to describe the passage in my own words, I activate the associative machine, which often causes the current idea to collide with some other idea in my mind. Associative thinking promotes a positive mood, so it shouldn't be a surprise how fun this task is.

If writing a passage makes me think of something related, I write it in parentheses. For example, I highlighted (twice) this passage — about choosing keywords for organizing notes — from elsewhere in Ahrens' book:

The archivist asks: Which keyword is the most fitting? A writer asks: In which circumstances will I want to stumble upon this note, even if I forget about it?

I re-wrote that like so, and and added my own thoughts in a sub-bullet, in parentheses:

- \*\*Don't choose keywords by which is most appropriate. Choose keywords based upon how you'd like to be reminded of that note. So by the topics you are interested in.\*\*
  - (So like instead of filing an "apple" amongst "fruits", if you like to study storytelling, you might file it under "symbols of discord," as a reference to the apple's role in the stories of Adam and Eve or the Judgement of Paris.)

In reality, re-writing this passage didn't make me think of the example in parentheses. Rather, I stopped and made myself think of an example, to solidify the concept in my mind.

Also notice the passage I'm re-writing doesn't say anything about "the topics you are interested in." I pulled that from the context of the passage, or from another highlight. It's okay to not re-write each passage individually. If concepts belong together, consolidate.

Finally, notice that my condensed passage is bolded (or highlighted). I bolded it because I thought it was one of the most important ideas included in the literature note. In this way, it's a highlight of a highlight.

### BREAK LITERATURE NOTES INTO PERMANENT NOTES

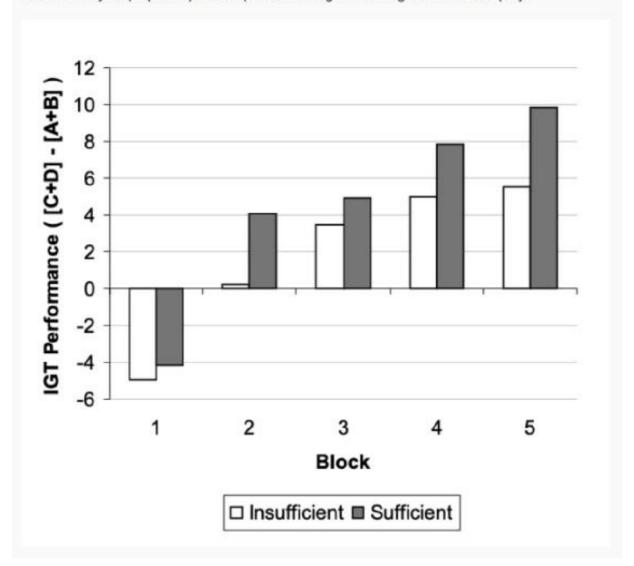
Now take only the most interesting ideas from the literature notes, and turn each into individual permanent notes. Permanent notes should have one idea per note. Later, I'll show you how we can mix and match these singular ideas to create articles and books.

The passages I've shown you so far didn't make it into permanent notes. In fact, most things you write in fleeting notes or literature notes won't become permanent notes.

Here's a portion of one of my permanent notes:

In a gambling task where participants normally learn patterns to improve their performance, a study found that those who were told there was little time to play the game performed worse than those who were told there was plenty of time to play the game.

There was no difference in the time available. Merely the perception of being short on time was enough to reduce performance. The perception of time pressure reduced the learning that normally helps participants improve at the game during the course of play.



This is the "meat" of the note. It's an admittedly poorly-written but simple expression of the idea. Most of my notes don't include images, but in this one I included a graph showing the effect found in the study.

The note also has several other components: My own thoughts, links to related notes, which literature note it came from, and keywords used to

organize the notes.

Here are my links to related notes:

## # Related

- [[Harvard- Time pressure reduces creativity]]
- Is being busy like having brain damage? [[prefrontal cortex damaged patients didn't learn | VMPC patients also failed to learn on lowa Gambling Task]]

My notes are written in Markdown, so this calls for some explanation. The words within double brackets, "[[", are names of notes, as in the Markdown example I gave earlier. However, the portion after the pipe, "|", in the second bullet point is a description I wrote of the link that better fits the context of this note. The words after the pipe are what will display, in place of the note title, when this note is interpreted by a Markdown-compatible application. What's important in this context isn't that "prefrontal cortex damaged patients didn't learn," but that such patients failed to learn in the exact same task as did normal people under time pressure. I also wrote a pre-amble before my link, "Is being busy like having brain damage?" Again, I wrote this for what was appropriate to the context of the link.

Next, I have a link back to the literature note from which I wrote this permanent note. That looks like this:

via: [[perceived time pressure reduces pattern recognition]] - lowa Gambling Task

I mentioned "Iowa Gambling Task" after the link because that will jog my memory in this context — that's the name of the task the subjects did. The Iowa Gambling Task isn't critical enough to my work to be included in the title of the literature note for the study, the general findings of which were "perceived time pressure reduces pattern recognition."

Finally, I included a keyword. I'll talk more later about keywords, but in this case, there was only one:

#TimePressure

Depending upon the work you do, you might want to include more-detailed bibliographic information. My work doesn't generally require footnotes, and when it does, I usually just retrieve them manually. If you're writing academic papers, you might want to include the bibliographic information in a separate note, and dynamically include it in all notes related to that article.

This is a long process for reading a book or an article. It perpetuates the myth that note-taking is boring. But, you don't have to follow this process for every book or article you read.

I still do plenty of reading "for pleasure." This could be fiction books, or skimming articles or books to gauge my interest in digging deeper.

What I mentioned above is the process I follow for books or articles I most want to retain. Sometimes I don't export my highlights, nor highlight those highlights. Sometimes I don't make permanent notes from my literature notes. It all depends upon my level of interest in the material. My level of interest in the material depends upon what projects I'm working on.

If you try this process and it feels boring to you, it may be because the material you're reviewing doesn't feel relevant, doesn't interest you, or you already know the material too well to justify taking notes on it. Don't feel like you have to follow every step of the process. Sometimes it's more productive to review old notes, read something new, or write something than it is to process what you've just read.

### HOW TO NAME YOUR FILES

A BIG DEBATE amongst Zettelkasten practitioners is file-naming convention. The way you name your files will determine how efficiently you're able to create new notes and work with old notes. Do your file names communicate something to you about the contents of the note? Do they help you find related notes easily? Are they future-proof, in case you later decide the note is about something different than what you originally thought? These are all questions to consider when deciding how to name your files.

Here are a few of the most popular approaches to naming your files:

### 1. PHRASES

## ls ego depletion real

**What it is:** Make your filenames a meaningful phrase. For example, "prefrontal cortex damaged patients didn't learn" was the filename of one of my notes in a previous example.

**Pros:** The best thing about phrases is you're able to tell what the note is about from the filename, as seen in search results or a link to the note from another note. However, some practitioners prefer to declare what a note is about by putting a title at the top of the note. They then use one of the other naming conventions, below. (This may be less useful in some applications and contexts than others, depending upon whether it's easy to preview the first line of the note.) Thinking of what to name a note can slow down your process, but this is a benefit because it forces you to stop, think about the note, and describe it in your own words.

**Cons:** You may later decide the note is about something else, or otherwise see fit to change the name of the note. This will break any links to that note throughout your entire Zettelkasten. But, some programs automatically update links. If not, you can still use find/replace to search your Zettelkasten and change all links.

### 2. UNIQUE ID NUMBER

# 20210414080511

**What it is:** Name your file with a unique ID that has nothing to do with the contents of your notes. You can set up text-expanding software to generate the ID from a keyboard shortcut. Many practitioners use a timestamp expressing YYYYMMDDHHMMSS, like: 20210414080511.

**Pros:** The main benefit of a unique ID is you never have to worry about breaking links by changing the filename. This is also a faster way to name notes, which isn't necessarily a benefit, since it's helpful to think about what a note is about.

**Cons:** A unique ID has nothing to do with the contents of the note, so it doesn't help you find a note.

### 3. FOLGEZETTEL

# 23a2c5b

**What it is:** This is the most complicated naming convention. It's also the naming convention the most famous Zettelkasten practitioner, Niklas Luhmann, preferred.

Folgezettel is German for "follow-up slip." When you use this naming convention, you name your note with a unique ID that is coded according to the topic of the note. As you follow the number/letter combinations in the unique IDs, you follow a sequence of thoughts.

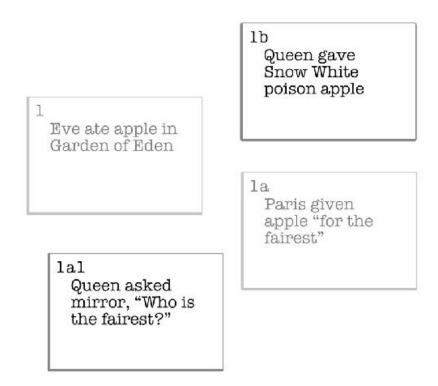
Note 1 might be, "Eve ate an apple in the Garden of Eden, committing the original sin." Note 1a might be, "Zeus gave Paris an apple labeled, 'for the fairest,' triggering the Judgement of Paris, then the Trojan War."

l Eve ate apple in Garden of Eden

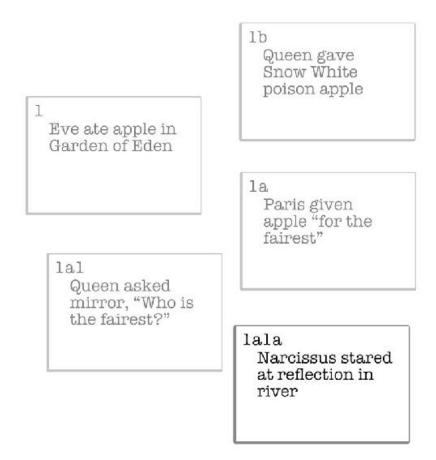
la Paris given apple "for the fairest"

In this case, note 1a extends the line of thought presented by note 1: an apple as a symbol of discord in storytelling. You might add another note, 1a1, "The Queen in *Snow White and the Seven Dwarves* asked the mirror, 'Who is the fairest of them all?" – building on the theme of use of "the fairest," in storytelling. That may prompt you to make a note 1b, "The

Queen in *Snow White and the Seven Dwarves* gave Snow White a poison apple – another example of an apple as a symbol of discord.



There would be no wrong or right way to decide how to number these notes, as long as — to you — they followed a line of thought. Notice that note 1 started us talking about apples as symbols of discord, but by note 1a1 we were talking about "the fairest," or beauty competitions as sources of discord. We could create note 1a1a, "Narcissus was so captivated by his reflection in the river, he stared at it until he withered away." Now we're talking about a character viewing his or her reflection as a demonstration of vanity. We've connected the part about the Queen in *Snow White* talking to her mirror to two separate lines of thought — one about "the fairest," and the other about reflections.

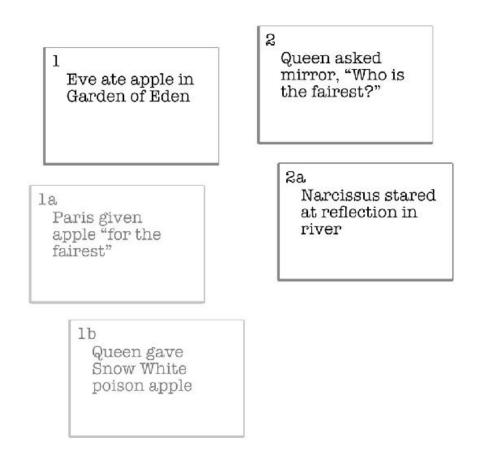


**Pros:** The Folgezettel method is good because it allows every note to have a unique ID, and that ID holds meaning. Through repeated exposure, these numbers and letters start to mean something to you, and you never change your filenames. Additionally, this method forces you to think more about each note, deciding how it fits within the context of your work. The final good thing about Folgezettel is as you view a note, any adjacent notes in your list of filenames are related to that note. This makes it easier to build your notes into larger works.

**Cons:** The main con of Folgezettel is it's unnecessary in a digital Zettelkasten. Folgezettel is most advantageous in a paper-based Zettelkasten, because it allows you to easily arrange paper based upon how a sequence of notes follow one another.

But, Folgezettel forces a hierarchical arrangement of notes in a system that is supposed to be non-hierarchical. We could have made different decisions with the above examples. If note 1 had been about Eve eating the

apple – to start off a thread about apples as symbols of discord, and if note 2 had been about the Queen talking to her mirror – starting off a thread about mirrors, then Narcissus staring at the river would have gone under 2a.



That way, we would have a different top-down organization of the same notes. Yet we'd still want to connect the note about the Queen asking "who is the fairest?," to the note about Paris getting a golden apple labeled "for the fairest." How would we do that? We'd do it with either links or keywords.

l Eve ate apple in Garden of Eden Queen asked mirror, "Who is the fairest?"

2a

la

la Paris given apple "for the fairest"

2

at reflection in river

Narcissus stared

1b Queen gave Snow White poison apple

Queen asked mirror, "Who is Eve ate apple in the fairest?" Garden of Eden #forthefairest 2a. Narcissus stared 1a. at reflection in Paris given river apple "for the fairest" #forthefairest 1b Queen gave Snow White poison apple

Folgezettel was especially powerful in a paper-based Zettelkasten because it helped arrange notes in an order in which they were easy to find. Niklas Luhmann's Zettelkasten had a directory of topics, with one or two note names used as entry points into that topic. From there, Luhmann could navigate from note to note either by looking at adjacent notes, or following links to other notes.

But there's little Folgezettel numbering allows you to do you can't do with digital notes that have phrases as filenames. In a digital Zettelkasten, you don't need to name notes so they cluster together around a topic. You can quickly follow links from one note to another, you can view together all notes related to a keyword, and you can even see which notes link to the note you're viewing. Additionally, your search isn't limited to the main

topics or links of the note - every word in your note will show up in a search of your Zettelkasten.

# 23a2c5b • is ego depletion real » Question

**What it is:** You can mix phrases, unique IDs, and Folgezettel to come up with your own filenaming conventions — and/or add whatever other data you think is useful to your filenames. For example, you might start each filename with a Folgezettel code, add a useful phrase, and use a keyword or a unique character to help with other properties.

For example, the note about Narcissus could be named "1a1a - Narcissus stared at his reflection - Example." You'd have the Folgezettel code you created, a useful phrase, and the "Example" keyword could help you find various categories of notes. You could have in your filenames other categories such as Quotes, Facts, and Stories, which would help you find the right category of information to fill in the gaps as you write.

**Pros:** The best part of mixing your own file-naming convention from a variety of techniques is you can customize it to your workflow.

**Cons:** The worst part of mixing your own file-naming convention from a variety of techniques is there's no end to how much time and energy you could waste tweaking it. You might never do anything productive with your Zettelkasten because you're always experimenting with file-naming conventions. When you do have a substantial Zettelkasten, you might create a lot of work for yourself re-naming everything to comply with your latest convention. Also, this method isn't future-proof. If you change a part of a filename, you'll have to change the links to it — which of course isn't so hard to do in a digital Zettelkasten.

### CHOOSING KEYWORDS/TAGS

Choosing the right keywords or tags for your Zettelkasten allows it to work as a non-hierarchical database of your knowledge and ideas. As you collect notes related to a given topic, you start building the raw materials for a finished piece.

But your first instincts for how to choose keywords for a note may hurt more than they help. This quote from Sönke Ahrens's *How to Take Smart Notes* explains how to choose effective keywords:

The way people choose their keywords shows clearly if they think like an archivist or a writer. Do they wonder where to store a note or how to retrieve it? The archivist asks: Which keyword is the most fitting? A writer asks: In which circumstances will I want to stumble upon this note, even if I forget about it? It is a crucial difference.

Your Zettelkasten is for turning your knowledge and ideas into writing. Presumably what you're writing will offer a unique perspective. So avoid generic keywords, such as "Psychology." This may be hard if you're in the beginning stages of researching a subject, but as soon as possible, create keywords based upon patterns you see, which inform theories you're working on.

### SPECIFIC AND UNIQUE KEYWORDS

Choose keywords that are specific to an idea, and unique from generic ideas. For example, one note I have is based upon the advice of screenwriting instructor Robert McKee. In his book, *Story*, McKee says:

A finished screenplay represents, obviously, 100 percent of its author's creative labor. The vast majority of this work, 75 percent or more of our struggles, goes into...creating the climax of the last act.

For my permanent note, I of course re-wrote McKee's advice in my own words, but what keywords did I include in the note? The generic topics of this note are "writing" and "screenwriting." If I'm thinking like an archivist, those are they keywords I would use. Those keywords would help *other people* find the note based upon generic categories of knowledge. But I'm not thinking like an archivist, I'm thinking like a writer. I'm not interested in nor qualified to write broadly on the topic of screenwriting, much less writing at-large. This passage is interesting to me instead because it fits a specific pattern I've noticed in advice from great writers. This advice reminds me of other writing advice, this time from Ernest Hemingway:

I've seen the marlin mate and know about that. So I leave that out. I've seen a school (or pod) of more than fifty sperm whales in that same stretch of water and once harpooned one nearly sixty feet in length and lost him. So I left that out. All the stories I know from the fishing village I leave out. But the knowledge is what makes the underwater part of the iceberg.

An iceberg? Hemingway explains further in another passage:

The dignity of movement of an ice-berg is due to only one-eighth of it being above water.

Hemingway is saying that what you see in a piece of his writing is the tip of the iceberg. There's more knowledge going on behind the scenes. He's not telling you everything he knows, yet that knowledge is adding grace and confidence to his writing.

This philosophy Hemingway shares is so beautiful, and rings so true to what I've learned as a writer, it deserves its own keyword. I call it the Iceberg Principle.

McKee's advice is about how seventy-five percent of the work on a screenplay goes into the climax. This advice is connected to Hemingway's observation about icebergs. So my permanent note for the McKee quote is not tagged #writing, nor #screenwriting, but #IcebergPrinciple.

As I collect examples that support (or refute) the Iceberg Principle, I'll be collecting the raw materials to write a piece — or even a short passage — on this idea (or I'll discover it's not a useful idea after all). Though, if Hemingway's observation is true, I might include only a fraction of the notes I've collected in the finished piece.

The two notes from Hemingway and McKee could be not just tagged with #IcebergPrinciple, they could also be linked to one another. They could even share the same root Folgezettel ID. Should they be both linked and tagged (and, if applicable, share the same ID)? This is a rhetorical question for you – there's no right answer.

On one hand, it's redundant to link them to one another if they already share the same tag. Using the search function, you can find all notes related to the tag. On the other hand, that's not as prominent a connection as if one note linked to another.

Another question is If note A is linked to note B, should note B also link back to note A?

I, personally, try to err on the side of simplicity. If two notes share the same tag, I will only link the two if they are especially relevant to one another. Also, if I link note A to note B, I generally won't link note B back to note A. Instead, I rely on a feature in my note-taking app that shows me which notes link to the note I'm viewing. In this way, when I'm viewing note B, I can see that note A links to that note, without having to explicitly link note B to note A. However, if I am viewing note B well after I've linked note A to it, I may make a redundant link from B to A, to help along my thinking.

# COMFORTABLE RITUALS FOR UPKEEP

IF YOU AREN'T CAREFUL, maintaining a Zettelkasten can feel like a lot of work. This is especially true if you're like me, and you want to minimize the time you spend on a computer. You can make it easy and fun if you design comfortable rituals for managing your Zettelkasten.

# COMFORTABLE CONTEXTS

I've designed my rituals for managing my Zettelkasten around "contexts." I ask myself, In what situations can I work on my Zettelkasten?, and How can I make sure I'm comfortable throughout the process?

The four main contexts around which I've designed my own rituals are: active, lying down, reclining, and upright. This way, I'm only at my computer a fraction of the day. I also can manage my Zettelkasten when I'm out and about.

Here's each of those contexts, more in-depth:

- Active: If I'm cooking, taking a shower, or having dinner conversation with friends, I might come across an idea. I often listen to podcasts while active, and conversations are of course a great source of ideas. If I'm active and I come across an idea, I want to capture it. I also want something to do when waiting in line or at the dentist, besides scrolling through social media.
- Lying down: For me, lying down is the most comfortable way to read a book, whether on my couch, or in my hammock. This is how I prefer to do most of my reading, and that's a main reason I usually don't take detailed fleeting notes while reading. I mostly highlight on my e-reader, occasionally accompanying the highlight with a short note.
- **Reclining:** Reclining is a wonderful position for creative thinking, which is probably why writers such as Michael Chabon do a lot of writing while reclined as did Truman Capote. I do most of my writing in my recliner. I use an over-bed table, like you might see in a hospital, to position my tablet and keyboard over my recliner.
- **Upright:** I spend as little time as I can on my computer. I have a desk that easily converts from standing to sitting and back, and I try to mix up between the two.





Generally, I reserve my computer time for linking, tagging, and organizing notes; I summarize fleeting notes while reclining; I read while lying down; and I take fleeting notes while active. I also access my notes in various stages from my phone while waiting in lines, at restaurants, or in waiting rooms. This context is especially good for highlighting my highlights from a book.

# MATCHING ACTIVITY WITH CONTEXT

Here's a table describing which activities I do in which contexts:

	Fleeting	Literature	Permanent	Other
Active	capture ideas, note podcast timecodes, triage inbox	highlight highlights while waiting	N/A	N/A
Lying Down	highlight while reading, brainstorming	highlight highlights	N/A	N/A
Reclining	brainstorming	summarize highlights	N/A	write
Upright	triage inbox	N/A	create, tag, & link permanent notes	create tag indexes

The goal is to – as I described in my book, *Mind Management*, *Not Time Management* – match my mental state to the type of thinking I want to do. With enough variety in those mental states, I can always make progress, like a perpetual note-taking machine.

# TURNING YOUR NOTES INTO COMPLETED WORK

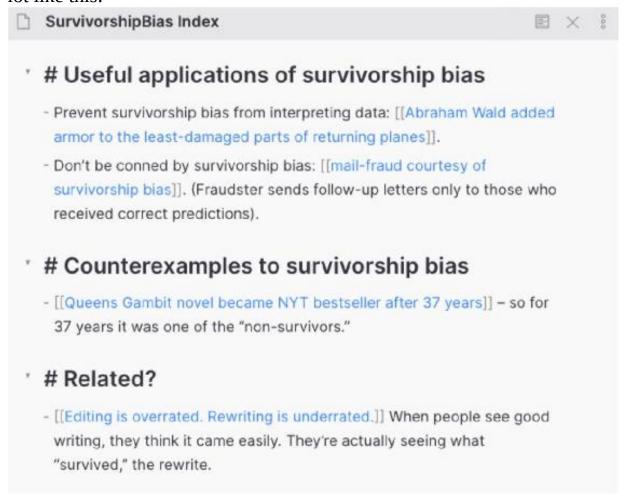
THE POINT of a Zettelkasten is to turn your notes into completed writing. The act of note-taking helps solidify knowledge in your mind, while developing miniature rough drafts you can turn into completed writing.

# TAG INDEXES

I often find that after taking notes on a topic I'm ready to write a rough draft from scratch, based only on the knowledge I've retained. But when that feels like a leap, I start with a tag index.

In a digital Zettelkasten, you can easily review all notes associated with a tag — either with a quick search, or through the interface of any tags-compatible text editor. But a tag index gives you even more context to the notes that cover a topic.

For example, when I wrote an article about misconceptions around Survivorship Bias, I created a tag index for #SurvivorshipBias. It looked a lot like this:



This is a very short example, but you can see how you could construct an entire outline for an article or book.

(Note that #SurvivorshipBias may seem like a generic keyword. In this case I had a non-generic theory in mind as I was using it.)

# STITCHING IT ALL TOGETHER

You might not make a tag index at all, and you might jump straight to writing. Some people dream of dynamically including the contents of each note to magically construct an already-written article from existing notes. As I've said, I think that's overrated.

I use my tag index as a starting point. I rearrange the index according to how an article might flow, then I re-write from scratch in a separate document. In this way, I've eliminated any chance of writer's block, as I can mostly copy what I've already written. But in the process of re-writing, I always find a more crisp way of stating my point, and I often get additional ideas that aren't in my notes.

# METADATA

THE METADATA you include in your notes helps narrow your searches in the future, and/or speed up your writing process when you create completed work. At the same time, choosing to include too much metadata can slow down your processes and make maintaining your Zettelkasten feel like a chore.

I personally keep my metadata as lightweight as possible. For example, here's the entirety of one of my notes, including metadata:

# She estimated that, with a few exceptions, each chapter of Gone with the Wind was rewritten "at least twenty times." \* # My Thoughts This is a good example of how much work actually goes into something. You think a writer sits down and crisp writing comes out, but it doesn't. \* # Related - [[Robert McKee - don't use every idea]] - [[Robert McKee says the work that goes into the climax is 75 of story work]] Daily Rituals by Mason Currey #Einishing #IcebergPrinciple #Example #CreativeWaste

A lot is "missing" in the metadata here. Who was the author of *Gone with the Wind*? The name escapes me at the moment. I didn't even include it in the note, because I created this note from a highlight that was sent to my email inbox by Readwise. The highlight didn't happen to include the name of the author. After I received the email with the highlight, I copied and pasted it into my inbox. I later processed the note, and still didn't record the name of the author. If I ever decide to use this example in my writing, I'll look up the name of the author (Margaret Mitchell).

Technically, that isn't metadata, but rather valuable information. What is metadata is the name of the book it came from, *Daily Rituals*, and the author of that book, Mason Currey. There's even metadata missing there.

There are actually two different versions of *Daily Rituals*, each with a different subtitle. Readwise didn't include the subtitle when it sent the highlight to my inbox. I didn't bother writing in the subtitle myself because

I'm confident I know which version it comes from. Even if I forget, upon trying to retrieve the original source, I need only search through two books – using the search function on my e-reader – to find out which one it is.

You can easily come up with edge cases for why I should have more specific metadata: What if my memory is not as good as I forecast it to be, what if I lose access to my e-reader copies of the books, or what if one day there are hundreds of different *Daily Rituals* books? Each of these *might* happen, but the chances are low enough I'm willing to risk it to more quickly capture my note.

You may have a different approach to metadata. I think this is especially true if you're using your Zettelkasten for academic writing, where the author's names or titles of works might not be as ingrained in your mind, and where you will definitely need to cite the bibliographic information at some point.

Some people have a whole list of metadata points they capture for every single note. They use text-expanding software that allows them to - by typing just a couple characters - generate this entire list. Like so:

Title:

Author:

Web:

Date Created:

Date Edited:

Tags:

Experiment with different amounts of metadata. As you retrieve and work with notes, notice what information you find yourself fetching regularly. When you're retrieving things from your own memory, ask yourself how likely it is you'd still remember that information in a month, in a year, or in many years. Ideally, you'll arrive at an approach to metadata that doesn't slow down your note-taking, but that still makes it easy to retrieve and work with your notes.

I HOPE this short book has helped you think through building a digital Zettelkasten that suits your workflow. You probably won't build the perfect Zettelkasten from the start. Now that you have an idea what considerations are important and what actions you need to take to maintain your Zettelkasten, the first thing to do is merely begin. See where the sticking points are in your workflow, and refer back to this book if you need help. (If you struggle with perfection paralysis, I have a book for that: *The Heart to Start: Stop Procrastinating & Start Creating*).

# SPECIFIC TOOLS

As I said at the beginning of this book, technology moves too quickly to mention many specific tools. If you want to see what tools I and other Zettelkasten practitioners are currently using, visit my website at <a href="kdv.co/zet">kdv.co/zet</a>.

# ALSO BY DAVID KADAVY

<u>Mind Management, Not Time Management: Productivity When Creativity Matters</u>

<u>The Heart to Start: Start Procrastinating & Start Creating</u>

<u>Design for Hackers: Reverse-Engineering Beauty</u>

# **Short Reads**

How to Write a Book

# ABOUT THE AUTHOR

David Kadavy is the bestselling author of *Mind Management*, *Not Time Management*, *The Heart to Start*, and *Design for Hackers*. David was a design advisor at Timeful, where he applied his mind management principles to productivity features now used by millions: Google bought Timeful in 2015, and integrated its features into Google Calendar. David lives in Medellín, Colombia.

