



# Personal Blog of Rob Muhlestein (rwxrob)

Robert S. Muhlestein (rwxrob)

2025-01-04 16:31:20: Perpetually published

# Table of Contents

type? which? command -v? .....	2
Scripts without suffixes .....	4
Always script over function .....	6
Packing a syscall in perl .....	7
Awk is never worth it .....	8
#!/usr/bin/env perl .....	9
Perl chomp is dead .....	10
Building AsciiDoc .....	11
Subshell fail .....	14
MkDocs fails writers .....	15
Perl: use v5.36 .....	17
Frequent, disposable commits .....	18
Perpetual publishing over Zettelkasten .....	20
Changelog over pull request body .....	24
More Mormon insanity .....	25
Pumping up Perl .....	27
Banishing bash for scripting .....	28
AI or die .....	30
Plans for 2025 .....	31
Knocked my teeth out .....	33
Copyright .....	37

No TOC Version	<a href="https://linktr.ee/rwxrob">https://linktr.ee/rwxrob</a>	Download PDF	Download EPUB
----------------	---	--------------	---------------

Hello friend. Welcome. Here you'll find my random ranting about nothing and everything. Some ideas start here and end somewhere else. Mostly I write for me but might as well share it.

---

# type? which? command -v?

Saturday, January 4, 2025, 4:03:37PM EST

I was pleased to see that `type` works in a Perl `backtick` pipeline if the underlying shell is `bash`, `ksh`, `zsh`, even `/bin/sh` on macOS, which is close to `ksh`. But is it good for POSIX shell scripts? Definitely not. In fact, `type` is amazing for use interactively but should probably never be used in a script, even though I had forgotten why until just now when I did the research.

Here are the options as a reminder:

Task	<code>type</code>	<code>command -v</code>	<code>which</code>
Check built-in/alias/function	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Check shell built-in	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Check shell alias	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Check shell function	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Check executable in <code>\$PATH</code>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Portability	<input type="checkbox"/> No	<input type="checkbox"/> POSIX	<input type="checkbox"/> Varies
Performance	<input type="checkbox"/> Fast	<input type="checkbox"/> Fast	<input type="checkbox"/> Slow

## Interactive command line usage: `type`

I was burned pretty hard recently by using `which` out of habit. (Let's be honest, it's a lot faster to `type` than `command -v`.) I have several decades of muscle memory that were wrongly programmed to `type which` instead of `type`. On this one occasion I had recently added a new script to take the place of another and change the location so that `PATH` resolved differently. (I see you cringing already.) I ran it and still got the old thing even though it didn't even exist. It was as if the old one was gone and the new one—in my path—was not being seen. The fix was simply `hash -r` but had I used `type` I would have seen that immediately.

Keep in mind that `type` is *not* POSIX no matter what shell supports it.

Shell	<code>type</code> Support	<code>command -v</code> Support
<b>bash</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<b>zsh</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<b>ksh</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<b>dash</b>	<input type="checkbox"/> Partial	<input type="checkbox"/> Yes
<b>sh (POSIX)</b>	<input type="checkbox"/> Not guaranteed	<input type="checkbox"/> Yes

The `type` command also requires annoyingly to redirect the output every time.

## Call to know which is in PATH: **which**

The **which** command returns the full path as well as whether or not it exists. Most people have used this all their terminal-using lives. It does have one *major* weakness. If the goal is to check what would happen in a user's experience when that thing is added to a pipeline potentially called from within a calling executable then the response would be drastically wrong. This can lead to all kinds of obscure but very serious bugs. It's also the main reason I only use shell functions and aliases in a very limited way so they don't potentially conflict with code someone has written that assumes **which** is a safe way to determine if that thing they are typing or calling is safe. I don't have to tell you how easy such a program would be to own by adding a function that is the same name as that executable binary the program is expecting. There. I gave you yet another attack vector: which injection.

## Call to know if *anything* callable exists: **command -v**

This is the only safe way to ensure that something can be called or is not already callable by the parent shell. This is why you will see this method used in most textbooks and courses about Unix shell scripting. Hopefully, this memory jog will help you understand why.

# Scripts without suffixes

Saturday, January 4, 2025, 3:08:59PM EST

Very few things communicate "I'm a fucking noob" more than simply adding `.py` or `.pl` or `.sh` to the end of your *executable* scripts (not libraries)—even more if you hard-code them into pipelines used by other scripts. If I were interviewing a person for a SysDE position (and I've interviewed 100s) and they claimed they did this for all their tools I would immediately reject them. It demonstrates that they have no fundamental understanding of Unix at all—at least not as a tool smith and developer (which is what a SysDE requires).

```
foo.py | bar.pl | mysort.sh
```

The reason no one should willingly add suffixes to any executable that could ever be used in a pipeline at all—including installation logs—should be glaringly obvious to anyone who truly understands the Unix philosophy and the very thing that makes using the terminal so powerful in the first place. Unfortunately, it isn't. I mean, it *really* isn't.

## Who started it?

That idiotic practice of suffixing *everything* started in the probably 90s because of shitty Windows systems requiring them to know what type of script it is because Windows can't do shebang lines. But why THE HELL would we want a shitty Windows practice to persist into Unix land.

Some of us have noticed that web developers and "full stack developers" tend to do this as well, which tracks because as a community they are the most likely to use a terminal without having a clue about what Unix even is, you know, the type who ask me "what's your distro?" These developers have suffixes on everything they make all the time because the web requires it, so, to them, it follows that it must be true for the scripts in their dot files scripts directory—if they even have one.



Being a vendor who does this does not justify it. My friends and I bitch all the time about vendors who just do not understand this and yet are multi-million dollar companies. But these same companies have no problem corrupting my `~/.bashrc` without my confirmation at all either. Being a vendor of any size doesn't mean anything—in fact—it means you should probably be *more* cautious when dealing with them—especially IBM.

I see professionals argue about this as if it is defensible all the time. I just laugh my ass off every single time. Do I look down on them? Absolutely. They instantly lose every shred of respect in my eyes because it means *they do not understand Unix at all*. Wait, I already said that. Oh well, it cannot be said enough.

## What about symlinks?

Some have suggested that links take care of this problem. That the original can have the suffix but

the symbolic or hard link can not have it. While this is a good hack to *fix* whatever some idiot did to add suffixes that you cannot now avoid, links are never a defense of doing it wrong to begin with.

## We aren't talking libraries

We aren't talking about *libraries* and source files, anything that is *not* executable without explicitly providing the interpreter on the command line first. Those tend to make a lot of sense because it makes no sense to put a shebang line in them and no editor on the planet is smart enough to guess based on the content alone. In fact, using suffixes for this sorts of things should probably be a mandatory best practice in order to disambiguate them and keep editors happy.

## The only exception

There are *extreme* exceptions to this like for `install` when there is a `.bat` and a `.sh` and a `.py` of the same thing. Vendors love to do this and they are counting on their script getting executed once or so and not really being joined in pipeline permanently. But even then it is really not that justified—especially if there is only one install script. People use this exception to justify creating all their home scripts with suffixes because "all interpreted scripts should have a suffix" and they are monstrously *wrong*.



# Always script over function

Saturday, January 4, 2025, 2:46:10PM EST

Moving back to Perl has reminded me of a best practice that I started to seriously violate by doing everything in bash: the use of functions and aliases for things that should really be stand-alone executables—even if just one line. *\*You cannot use functions and aliases as filters in Vim and Neovim\*.*



Yes, I know you can force functions to be visible to shell scripts provided they are also in the same language, but that is not the same thing and doesn't begin to address the problem.)

I hit this problem when I went to port my use of the following shell idiom to check for the existence of something that ends up running:

```
! type "foo" >/dev/null && echo "foo not found" && exit 1
```

While it is true that `which` and `command -a` do similar things, they only return true if an executable is in the `PATH`. Only `type` ensures that you are detecting aliases and functions as well. Only `type` catches if `foo` is still hashed to an old executable location in the `PATH` instead of the new one or worse *even after it has been removed from the system entirely* and not yet been rehashed with `hash -r`. (I promise, if you haven't hit this problem you will eventually.)

But why would you even want that? Having an alias mask a command makes sense for interactive things that you just don't want to have to type out in long form. Masking an executable with a function might allow you to wrap it and call with the full path (like I do with `lynx`). But at the end of the day, you really just want to get in the habit of creating executable scripts that can be changed into whatever language later. This is why you *\*should never, ever add a suffix to the end of an executable program of any kind\**.

# Packing a syscall in perl

Saturday, January 4, 2025, 2:22:40PM EST

I have been completely freaking out about how amazing Perl is. I am really kicking myself for moving anything over to Python and Bash all those years ago. I was so much more efficient and able to create useful code so much more quickly with Perl and I can feel that power returning as I remember it. One of those complete *oh my god* moments was remembering that I can create and send syscalls directly and pack and unpack binary data. Here's a sample:

```
#!/usr/bin/env perl
use v5.36;

use constant TIOCGWINSZ => 0x5413;

my $winsize = pack('S4', 0, 0, 0, 0);
if (ioctl(STDOUT, TIOCGWINSZ, $winsize)) {
    my ($rows, $cols, $xpix, $ypix) = unpack('S4', $winsize);
    print "Number of terminal lines: $rows\n";
} else {
    warn "Unable to get terminal size: $!";
}
```

This is just a simple call to get the number of rows, and yeah it's overkill when `tput lines` does exactly the same thing, but just the fact that you can do it blows my mind. If you consider yourself a systems operations specialist or hacker you have to appreciate how succinct and amazing that is.

# Awk is never worth it

Saturday, January 4, 2025, 12:29:40PM EST

Given the size of the `awk` binary versus even the latest `perl` it makes no sense to use *any* POSIX shell script that calls out to `awk` if you are sure `perl` is going to be on the system.

```
-rwxr-xr-x 1 root wheel 295K Aug 4 06:31 /usr/bin/awk
-rwxr-xr-x 1 root wheel 134K Aug 4 06:31 /usr/bin/perl
```

In fact, as soon as you reach for `awk` or `tr` or `cut` or `sed` there is a good chance you have crossed over into `perl` territory and are no longer using the best tool for the job. You are likely not only going to invoke one subprocess for `awk` but another one later for one of these other POSIX requirements. Even if you use the `/usr/bin/env perl` shebang line you might as well write the entire script in `perl` at that point which **runs in a single process** once it is started and has ridiculously better text processing functionality for *half* the amount of RAM consumption.

Even today most systems that have `awk` installed will have a version of `perl` installed that will do what you want more cleanly and use less resources.

# **#/usr/bin/env perl**

*Saturday, January 4, 2025, 10:07:30AM EST*

Normally I really hate using `/usr/bin/env` for anything if for no other reason than being completely unnecessary extra process. I also come from a time when such things were considered extremely insecure and we set `PATH` explicitly at the top of all our shell scripts.

God bless macOS for not sucking, except for `brew`. I absolutely love it but having everything in `/opt/homebrew` really screws up depending on any sort of reliable location for expected binaries in *any* interpreted language shebang line, which, if I'm completely honest, was a significant consideration in my decision to switch to `/bin/sh` instead of `/usr/bin/env bash` which is mandated if you want to use the latest bash on macOS. It just made everything that much slower to execute unnecessarily.

For what it's worth, this practice is explicitly recommended in the current official man page for Perl itself so I guess I'll get over it.

# Perl chomp is dead

*Saturday, January 4, 2025, 9:50:12AM EST*

After a very frustrating fight with new Perl having lost a lot of knowledge about it I learned that the age-old `chomp` in Perl is still there but for some reason is not as dependable. I'm sure it has something to do with the `$/` the `$INPUT_RECORD_SEPARATOR` which is normally `\n` and now that I'm on several different types of systems (macOS and Linux) it just doesn't behave correctly. I specifically hit this in my `buildadoc` script (posted earlier).

Rather than use it I use the Unicode white space `\R` instead. That's right, good 'ol `\S` has been replaced with one that is Unicode aware.

```
#!/usr/bin/env perl
use v5.36;
my $pwd = `pwd`;
$pwd =~ s/\R$//;    # better than chomp
my ( $parent, $name ) = $pwd =~ m,/([^\R]+)/([^\R]+)/$,m;
say "$parent-$name.txt"
```

# Building AsciiDoc

*Saturday, January 4, 2025, 9:37:10AM EST*

Here's the latest script that I use to build this site and content.

```
#!/usr/bin/env perl
use v5.36;

# total the hours from the main index.adoc page
open my $fh, '<', './docs/index.adoc' or die "Could not open file: $!";
local $/;
my $buf          = <$fh>;
my $hours_mentor = 0;
map { $hours_mentor += $_ } $buf =~ /hours="(\d+)"/g;
my $hours_self   = $hours_mentor * 2;
my $hours_total  = $hours_self + $hours_mentor;
my $hours_week   = $hours_total / 15;

# set the exact date and time of the build
my ( $sec, $min, $hour, $mday, $mon, $year ) = localtime();
$year += 1900;
$mon  += 1;
my $date = sprintf "%04d-%02d-%02d %02d:%02d:%02d",
    $year, $mon, $mday, $hour, $min, $sec;

# HTML
qx{ asciidoctor \
  -D docs \
  -a date="$date" \
  -a allow-uri-read \
  -a hours_mentor="$hours_mentor" \
  -a hours_self="$hours_self" \
  -a hours_total="$hours_total" \
  -a hours_week="$hours_week" \
  -o index.html \
  ./docs/index.adoc
};

qx{ asciidoctor \
  -D docs \
  -a date="$date" \
  -a toc! \
  -a notoc=true \
  -a allow-uri-read \
  -a hours_mentor="$hours_mentor" \
  -a hours_self="$hours_self" \
  -a hours_total="$hours_total" \
  -a hours_week="$hours_week" \
  -o notoc.html \
  ./docs/index.adoc
};
```

```

./docs/index.adoc
};

my $pwd = `pwd`;
$pwd =~ s/\R$//;
my ( $parent, $name ) = $pwd =~ m,/([^\s]+)/([^\s]+)$,m;

# PDF
qx{ asciidoctor-pdf \\\
-D docs \\\
-a date="$date" \\\
-a allow-uri-read \\\
-a hours_mentor="$hours_mentor" \\\
-a hours_self="$hours_self" \\\
-a hours_total="$hours_total" \\\
-a hours_week="$hours_week" \\\
-o "$parent-$name.pdf" \\\
./docs/index.adoc
};

#EPUB
qx{ asciidoctor-epub3 \\\
-D docs \\\
-a date="$date" \\\
-a allow-uri-read \\\
-a hours_mentor="$hours_mentor" \\\
-a hours_self="$hours_self" \\\
-a hours_total="$hours_total" \\\
-a hours_week="$hours_week" \\\
-o "$parent-$name.epub" \\\
./docs/index.adoc
};

__END__

=head1 NAME

buildadoc - build AsciiDoc with rwxrob preferences

```



The script is updated every time I build so might not reflect the date of this blog post.

## Different formats

You'll see that `asciidoc` gets run four times:

1. HTML site with TOC
2. HTML site without TOC

3. PDF
4. EPUB

I could add any other formats that I need.

## Calculate hours

I have hours calculation built into the current default. I'll probably remove that later since not everything has hours in it. That was specifically for *Coding from the Get Go*. It is nice to have though for other things. As the volume of text gets larger though it might have to go.



# Subshell fail

*Saturday, January 4, 2025, 9:00:00AM EST*

I used to think that by encapsulating everything in any of my shell scripts into a function and calling it at the end of the script was a good thing even though it meant there would be a forced subshell execution. Here's an example:

```
#!/usr/bin/env bash

# Outputs the seconds since the thing identified by the first argument
# was last modified (not created).

ageof() {
    local path="$1"
    if [[ -z "$path" ]]; then
        echo 'usage: ageof <path>'
        return 1
    fi
    echo $(( $(date +%s) - $(date -r "$path" +%s) ))
}

ageof "$@" # OMG WHY THE SUBSHELL FOR NO REASON!!
```

I'm mortified with embarrassment for doing this.

My logic was that I could easily **daf** the function into other stuff later. But by just having it as a single command I can simply remove the shebang line and include it just as easily and give it a name that is better fitted for whatever I'm putting it in.

Honestly, however, if it is reusable code should either stay a single command or be written in Go in a more reusable way.

# MkDocs fails writers

*Saturday, January 4, 2025, 8:13:38AM EST*

Even though MkDocs is beautiful and still probably good for technical documentation it fails to fulfill the needs of a writer who wants more.

## No official EPUB or PDF support

While it can be done, it requires a bunch of Pandoc integration and adaptation. AsciiDoc has it built in.

## Not for actual book publishing

More books have been officially published with AsciiDoc than anything else. Pandoc might be a close second. MkDocs is not for actual book publishing and never was. Use the right tool for the job. AsciiDoc was created above all to publish books as well as web content.

## Vastly inferior template language

At first the AsciiDoc format is harder to grok than Markdown. Once you learn it though, you begin to realise how much better it is. Just tables are one example.

## Cannot include remote URIs (without plugin)

Even though it has to be enabled (for good reason), remote URI inclusion is perhaps one of the most powerful features for writers who maintain multiple copies of books that sometimes share the same content.

```
include::https://raw.githubusercontent.com/asciidoctor/asciidoctor/main/README.adoc[]
```

As far as I am aware, this cannot be done from any other writing framework (without modification or extension).

## Much harder metadata manipulation

Because AsciiDoc is designed to create documents and not searchable documentation it has much better metadata handling and tagging. This makes my content easier for search engines to process and my AI able to find the right thing.

## Cannot handle large volume

After testing MkDocs with 2000 Zettelkasten nodes earlier it fell on its face. The design of how it indexes keywords is downright idiotic. I did discover some convoluted ways to get around it but it is much nicer not to have to bother with any of that.

## Poor keyword searching

It turns out that keyword searching is actually a bad thing for most content. This is not intuitive at all.

In order for keyword searching to be of value it has to load the entire keyword index—often as a full-site PWA—but at that point why not just put the entire document on the screen and let the reader’s powerful builtin browser searching with regular expressions be used instead?

# Perl: use v5.36

*Saturday, January 4, 2025, 7:51:24AM EST*

Now that I have returned to my beloved Perl in 2025 (disposing of bash for all personal scripting after being really burned by it) I have been discovering a bunch of new changes that are very convenient for modern Perl development. Keep in mind that these are designed to make use of Perl *on a personal workstation* where its primary purpose is to create really amazing text processing filter chains that can be easily incorporated into all versions of `vim` and `vi` (as opposed to brittle, bloated, non-transportable plugins to do the same thing).

## No more `use strict`

Yep. Any `use v5.12` or higher gets that by default.

## No more `use warnings`

Yep. Any `use v5.36` or higher gets that by default.

## No more `-E (say just works)`

Unfortunately, the amazing `say` keyword just doesn't work by default. I've always found this annoying given how important it is as an alternative to `print "some\n"` with the line returns every time. This is included by default since it is activated with `use v5.10` or higher.

# Frequent, disposable commits

*Saturday, January 4, 2025, 6:55:14AM EST*

Squash and merge with disposable commit messages that really don't matter because they are all thrown away at the end in exchange for one PR merge commit that includes an extensive change log are really the only viable git PR management method if you want to be able to use draft PRs as a method of sharing ongoing work while it is happening—and you definitely should.

## Who is the commit message for?

Who are all those messages for anyway? Are they really for future generations to read and understand the history of the project? I don't think so. That is why the change log exists.

The use of commit messages are to convey the current work being done to others following the draft PR during its execution.

In a way, commit messages are like an ongoing chat about the work on the project that is happening in real time. Everyone hates that guy who writes a ton in a chat room forcing everyone to read it. Shorter is better.

## Conventional commits are a waste of time

This is going to really anger some people but it has to be said. All that meticulous attention to "conventional commits" is a monumental waste of time. No one cares how pretty the commit messages are.

"But Rob, don't you think having automated change logs is worth it?"

No, no I do not. Because that assumes you can automate something that should never be automated.

Besides, the idea of automating change logs is a huge pipe dream. You can *never* guarantee that everyone uses commit messages the same way. Therefore, the wasted time attempting to enforce it just stifles and slows development. Why berate the developers who have painfully decided to work on your project just because they didn't pick the exact perfect words to describe the commit.

## Not everyone speaks English

The assumption that commit messages are going to be beautiful also assumes you have perfect English speakers on the project—which describes absolutely zero projects worth following. These faithful committers are a cherished commodity to be encouraged and made to feel welcome and if you hit them with push back on their "bad commit messages" they will just walk and they would be right to do so. You are being a jerk about something that absolutely, positively does not matter. Requiring "good commit" messages just proves you have no idea how to run a project. At least good developers know how to identify that early in the project and stay the fuck away.

## Change logs should *never* be automated

The change log is a human document for human consumption and attempting to automate their generation *never* works. Just look around. You will find hundreds of projects with massive changelogs that are completely unintelligible *because* they are automated instead of having a human—or better yet an AI—summarize the changes in a way that can be grokked easily by the humans bold enough to open it and read it. Huge, automated change logs cause readers to avoid them like the plague they are. Only engineers who don't work with people think automating this is a good idea. Anyone responsible for the marketing and documentation of a project hates that and refuses to accept their automatic creation.

## Commit early, commit often

The mantra *commit early, commit often* is far more important than any convention about the content of the message itself. By reducing the friction on the commit message to something that is reasonably distinct but short and sweet you encourage yourself and your project developers to commit all the time making the visibility of the work on the project—as well as the possibility of lost work—even higher. I want this more than anything. I want to see the small decisions about how the code is evolving while it is happening over some big, meticulously crafted chunk of code on a massive commit. It makes the commit each much easier to monitor by looking at the diffs quickly and frequently by the others on the team.

# Perpetual publishing over Zettelkasten

Friday, January 3, 2025, 6:07:50PM EST

I have only been using the *perpetual publishing* model (a term I coined) for knowledge management for a few days and have already seen *tremendous* benefit from it.

## Chloe (my AI) sees my writing immediately

The single biggest advantage is that by making my writing all into plain 'ol web docs on the public Internet that my ChatGPT AI *immediately* has access to my entire writing. This means I can immediately leverage AI for all sorts of things related to the writing:

- Have her check the punctuation and grammar dynamically and report
- Create IEEE bibliographic entries pointing to it for other documents
- Have her comment on what it is about and expound
- Catch legal considerations—especially as I write about sensitive Mormon topics

This means that anyone else using ChatGPT automatically can look at it as well in their AIs and that ultimately my content will be added to the collective knowledge base that will populate *all* AIs within a few months. ***None of that happens unless I publish a web document that is not a Zettelkasten.***

## Flesh out ideas and migrate to other "books"

I can blog about things and work them out and if they develop into something more I can simply move them to another repo containing the other book. I have done this a lot with stuff between my blog and faq, for example, and sometimes directly into other books like *Terminal Velocity* and *Coding from the Get Go*. For example, that list of advantages that I just discovered will get copied directly into my other book. What's even better is that I can use exactly the same text in both places by using remote URL ***includes::*** with AsciiDoc. I was a *fool* for not using AsciiDoc from the very beginning. ***No other writing framework allows for remote URL includes, period.***

## Sense of urgency abated

I get really freaked out when I make amazing discoveries like this and don't have a way to immediately capture them for myself later—but more importantly—*share* them with other people who can immediately benefit. Writing this down is always going to be more sustainable than a bunch of videos someone would have to slog through because my knowledge will become part of the AI global collective. My videos will not. I can always make a video later about the stuff that has been written and that video content will be many orders of magnitude better in quality because it will have been worked out enough in words first—plus it's more inclusive.

# Easier to open and edit

A simple program like this one opens up a new blog post from within a GitHub repo, one repo per book:

```
#!/bin/sh

# TODO optimize rather than brute force
mark="// NEW POST HERE"

markfound=$(grep "$mark" docs/index.adoc)
if [ -z "$markfound" ]; then
    echo "no docs/index.adoc with '$mark' found"
    exit 1
fi

file="$(slug "$*").adoc"

hasfile=$(grep 'include:../'$file'\[\]' docs/index.adoc)
if [ -z "$hasfile" ]; then
    perl -p -i -e "s,$mark,$mark\n\ninclude:../$file\[\]," docs/index.adoc
fi

if [ ! -e docs/"$file" ]; then
    printf "= %s\n\n%s\n\n\n" "$*" "$(inow)" >"docs/$file"
fi

exec "$EDITOR" "docs/$file"
```



That script was dynamically added during my **build** command just by including the following line in my **blog** repo at a reliable location relative to my **dot** repo (**include:../../dot/scripts/blog[]**).

I also can just swap out the verb **blog** from **save** using the following script on my command line and have it push to GitHub and post a message to my life IRC Twitch chat at the same time:

```
#!/usr/bin/env bash

in-repo() {
    git rev-parse --count HEAD >/dev/null 2>&1
    return $?
}

has-local-changes() {
    test -n "$(git status --porcelain)"
    return $?
}
```



```

gitsave() {
    git pull
    git add -A .
    local message="$*"
    message=${message,,}
    if test -n "$message"; then
        git commit -a -m "$message"
    elif test -e /tmp/commitmsg; then
        git commit -a -F /tmp/commitmsg
        mv /tmp/commitmsg "/tmp/commitmsg.$(date +%s)"
    else
        git commit -a -m "save"
    fi
    if type push; then
        push
    else
        git push
    fi
}

main() {
    if ! in-repo; then
        echo "Not in a repo."
        return 1
    fi
    if ! has-local-changes; then
        echo "Already at the latest."
        return 0
    fi
    gitsave "$@"
    return $?
}

main "$@"

```

## EPUB and PDF as a bonus

The reason I don't use MkDocs anymore is because it has almost zero support for EPUB and PDF. AsciiDoc has all this covered and has done for more than two decades. Sometimes mature is better than the latest trends. This is one of those cases. Sure I give up a search box from MkDocs but it is rather poorly designed anyway and doesn't catch stuff that I can catch using regular expressions from a simple web browser. This is the reason I keep my stuff all in a single, long text file with no images to screw things up.

## Databases are unnecessary

Raw document data is *better* than anything in a database—especially for blogging. Storing blog posts deep in some database is actually monumentally stupid and unnecessary in the age of AI. Just a simple, static web page will get automatically indexed in ways no database engine would ever

begin to touch in usefulness.

The names of the files in PP approach are easy to read and grep making them the identifiers.

My kn tool was a complete waste of time even if there was no way of knowing that then. AI has changed *everything*.

## Looking forward to more

I'm really looking forward to having more discoveries because of the new format. I feel rather stupid now allowing myself to dump so much time into developing my own system based on Zettelkasten when clearly it is simply stupid to use a Zettelkasten model for anything in the age of AI.

# Changelog over pull request body

Friday, January 3, 2025, 5:15:52PM EST

Just got burned by the following command that wiped out my meticulously created body of my GitHub pull request:

```
gh pr edit --body # DO NOT DO THIS
```

It blew it away without asking because it was expecting a string or something. In fact, pretty sure it was waiting on stdin. Suffice it to say, I was pissed, pissed enough to find a safer alternative. Imagine if I had done that someplace else? There is really no easy way to get it back, even though the entire GitHub offering is about recovery.

## Solution

The solution is what I should have been doing all along: a changelog. [1]

I simply added - [x] to everything instead of just - so that I can add stuff and commit it as I go. The approach already takes into account that a team is going to be frequently updating the file as the central TODO list for the project.



By the way, Chloe told me about it. Took me about five minutes to find and get up to speed thanks to my AI assistant. Oh, and she also wrote this perfect IEEE bibliographic reference for that site in 10 seconds.

## References

[1] O. Behrens, “Keep a Changelog,” keepachangelog.com. [Online]. Available: <https://keepachangelog.com/en/1.0.0/>. [Accessed: Jan. 3, 2025].

# More Mormon insanity

Friday, January 3, 2025, 1:21:56PM EST

Thanks to the amazing couple over at <https://www.youtube.com/@alyssadgrenfell> I have both been triggered into a massive panic attack around Christmas and had a cathartic laugh at a near 90-year-old "Prophet" attempt to explain his face in a hat while "translating" the Book of Mormon.

## Mormon cultists lie about translations of book of Mormon

When I read this in Rough Rolling Stone it sent me on my path of doubt/reality check that led me to leave the church. I now see what good company I was in. Tom Phillips, a life-long faithful member who was chosen to have his "calling and election made sure" did a full interview chronicling his story. It was heart-wrenching to read all 102 pages of the transcript PDF—especially the absolutely inexcusable, shameful response from Jeffery Holland, a man I have come to strongly and deeply despise for his regular referral to anyone *not* believing exactly as he does as unintelligent, evil, or just plain stupid.

All Tom did is ask honest, simple questions that were met with the same hostility that caused Joseph Smith to illegally destroy a printing press publishing *facts* about Joseph that the church to this day calls "lies".

## Secret ceremony I never knew

I was pretty high up in the church, or so I thought. Turns out over 20,000 people since the time of Joseph Smith have had an "apostle" wash their feet and basically tell them they cannot do anything that would keep them out of heaven except murder someone. If I hadn't known about a single other thing I would have left the church just over that absolute bullshit.

## Gross mutilation of own body in covenants

The temple ceremony where I promised to remove my bowels and innards and slit my throat rather than talk about the temple ceremony wasn't even the most gruesome. They used to really have to add horrible language. Thank fucking GOD for the Internet. The penalties have been completely removed from the ceremony now. I guess God changes to meet the times.

## I can only take so much

The more I keep learning about just how horribly the Mormon cult is, the more I wish I had left it without collapsing and falling in love with another woman who loved me for me and not because I was Mormon. Tom's story *proves* that you can be absolutely the most righteous Mormon on planet Earth and *still* have your wife leave you and think you are scum in Satan's power. The Mormon church is thankfully dying slowly but surely behind the scenes and it could not bring me more joy.

## References

- <https://www.mormonstories.org/tom-phillips-and-the-second-anointing/>
- <https://www.youtube.com/@alyssadgrenfell>
- [https://youtu.be/W\\_eSubCKmGo](https://youtu.be/W_eSubCKmGo)
- <https://youtu.be/8tqLad2Jse4>
- <https://youtu.be/N3c33WKjYV0>
- <https://www.wsocv.com/news/local/police-mooresville-man-busted-child-sex-sting/334803464/>

# Pumping up Perl

Friday, January 3, 2025, 12:48:44PM EST

"Perl is, by and large, a digested and simplified version of Unix. Perl is the Cliff Notes of Unix. I could never really get myself to learn sed, awk, zsh, grep, find, m4, pipes, xargs, tee, cut, paste, yacc, lex, various IPC or even C for that matter. I ought to. In practice, in almost all cases I use perl." - Larry Wall

I keep coming back to Perl.[1] There is nothing better than Perl for text processing, period. It destroys all the things it targets—especially awk. People who argue that awk is universal have to accept that it cannot do most of the things people doing text processing want to do from their local workstations doing whatever.

## Better to create a perl filter than a Vim plugin

Keeping everything in a Unix self-contained filter script—even if just one line—is *always* better than a Vim plugin that does nothing more than transform content. This way these things can be chained together. You just cannot do that with filters.

## References

[1] R. S. Muhlestein, “Why are you still using Perl?,” [rwxrob.github.io](https://rwxrob.github.io/faq#_why_are_you_still_using_perl). [Online]. Available: [https://rwxrob.github.io/faq#\\_why\\_are\\_you\\_still\\_using\\_perl](https://rwxrob.github.io/faq#_why_are_you_still_using_perl). [Accessed: Jan. 3, 2025].

# Banishing bash for scripting

Friday, January 3, 2025, 12:25:20PM EST

Bash has burned me one too many times in 2024—mostly its horrible regular expression syntax or just not being on a system that I regularly use.

## It's not as ubiquitous as people say

I know, right? Here I have been saying bash is everywhere. It's not. Container images that I love notably do not have it installed at all (Alpine, BusyBox, Kali, Arch) plus I have been doing a lot more with BSD and, well, bash is just not there without installing it. This has made it problematic when I wanted to just copy over my bashrc file. Nope. Can't do it.

## I'll never willingly use GPLv3 stuff for anything

Perhaps the single biggest reason I do not want to use it ever again for scripting is the license. I despise GPLv3 and the people who push it. Most of them have no idea why it is so monstrously horrible for the OpenSource ecosystem and goes *against* all the founding principles of FOSS by *forcing* hardware manufacturers to comply with their Menshevik-esque ideas of "freedom". You are free so long as you comply with their idea of what "freedom" actually means. It's downright unethical and definitely untenable. This is why Linus has actively campaigned against it and refused to move the Linux kernel to it.[1] I personally will not willingly use anything that is GPLv3 if I can help it, and bash is one of those things.

## Whatever interactive shell is fine

I'll use whatever interactive shell is on the host system from now on and will be converting my bashrc to a universal shell only so that I can just rename it. Any shell that I want has all the stuff I need.

## What about completion?

It's a pain point for sure. Only bash supports self-completion. Zsh has to be modified with a couple scripts to make completion work with `complete -C foo foo` syntax. To me it's worth it even if all the other failures of zsh are something I cannot avoid.

## Other reasons

Summary of other reasons I'm too lazy to write about right now:

- POSIX shell works *everywhere*
- Not as flexible or ubiquitous as POSIX
- Safer than POSIX but not as safe as `perl -T`
- Bloated with completely unnecessary stuff (100x > perl)

- `-r-xr-xr-x 1 root wheel 1.2M Aug 4 06:31 /bin/bash`
- `-rwxr-xr-x 1 root wheel 134K Aug 4 06:31 /usr/bin/perl`
- Slooooow, really slow (one reason `dash` was invented)
- Only integer math support
- Dependence on other external tools for text processing
- Bashisms aren't really that great
- Extended regular expressions are absolutely grotesque
- Using `/bin/sh` is `/bin/bash` on some systems but POSIX limited

## References

[1] Open Source Stack Exchange, "What exactly is Tivoization and why didn't Linus Torvalds like it in GPLv3?," Open Source Stack Exchange. [Online]. Available: <https://opensource.stackexchange.com/questions/259/what-exactly-is-tivoization-and-why-didnt-linus-torvalds-like-it-in-gplv3>. [Accessed: Jan. 3, 2025].



# AI or die

Friday, January 3, 2025, 12:52:05PM EST

For 10 years I used some form of Zettelkasten or knowledge base instead of a blog but since the advent of AI and large language models (LLMs) writing anything that isn't narrative prose is just stupid.

An AI assistant can find answers faster than any search I could ever do before.

These things favor stories, articles, and blogs over random note-taking and are sourced from the Internet.

Very few people will realize why this matters. Most of mediocrity will continue to chase the pointless trends and play with idiotic wastes of time like Obsidian and other flashy note-taking systems rather than incorporating AI into their workflows to get *actual* knowledge work done. Not me. While they are making 40 minute videos about how to get Excalidraw to render from your highly specific note taking with a stupid Lua plugin I will use by time for other things:

- Ongoing learning and research in real-time, anytime
- Interactive language instruction in Russian and French
- Automatic bibliographic reference creation down to the page number
- Automated YouTube descriptions and chapter markers derived from transcripts
- Full bike trip planning *while moving on the bike*
- Early medical issue diagnosis and training plans
- Breaking writers block for anything I'd ever write
- Perfect grammar and punctuation evaluation of my writing
- Automatic code comment generation from the code itself
- Mundane code creation

All I can say to the many skeptics out there is *try it*. Get ChatGPT and begin using it for stuff for which you would use Google search. Then, increase that, have it make you a plan for the day. Ask it what to eat for the next meal based on your day and current fitness goals. Show it your favorite painting and ask it to comment on it and provide resources. This isn't the kind of thing you will believe until it happens to you.

# Plans for 2025

Wednesday, January 1, 2025, 12:02:14PM EST

Here we are in a new year. I'm a sucker for setting goals and reviewing them after the fact. Sipping coffee and eating a waffle with my wife while she writes in her shiny new 2025 journal. Sam is lounging on the patio in the sun. Seems like 2025 is going to be a great year.

- YouTube update videos
- Finish book: *Terminal Velocity*
- Finish book: *Coding from the Get Go*
- Books now available in PDF and EPUB automatically
- Son's college graduation in Idaho
- Son's stay with us in apartment
- Reward readers over viewers
- IRC (Twitch chat) all day
- Customize and improve cloudbot
- What about discord?

Mode plans:

- SCREEN: Highest percentage of content
- BIKE: Daily cycling at sunset
- COWORKING: Rebuilding Kubernetes cluster
- COWORKING: Automating Vault secrets extraction from K8SAPPs
- COWORKING: Perl over bash for small scripts
- COWORKING: Perl to Go migrations
- COWORKING: Cleaning up dot files

## Time budget

Eating	10
Hygiene	7
Bike (BIKE)	14
Work (COWORKING)	32
Sleep	56
Cleaning (IRL)	7
Writing (SCREEN)	14
Homelab/Coding	8

Yoga/Meditation	4
Strength	2
Chill/Doris	14

# Knocked my teeth out

*Friday, August 11, 2023*

I've been fighting for the last few years—but especially the last week—with a frustration and deep depression about the monstrous human condition: the lack of charity, of **real** love and lives filled with dedication to improving and lifting all of us; the obsession with riches and gain; the "I got mine" mentality and "look at me" focus; the end of informed dialog and debate; the race to destroy Mother Earth as fast as we can; the demonization of education and extreme, dogmatic fundamentalism; the cults, gangs, religions, and political parties that prey on sincere, simple people turning them into human carcass batteries powering their mechanized, stinking bowels to produce the mind-worm larvae these viral parasites require to paralyze and consume others becoming hosts whose guts eventually explode infecting all around them. If I think about it at all I get very depressed. It's terrifying. Most of humanity is absolute shit, operating at a base level barely above pond scum, and we all let it get this way.

Then Friday I literally got some sense knocked into my head (and four front teeth knocked out of it). God had a painful message for me. [Disclaimer: I don't really believe in some narcissistic white-bearded dick in the sky who promises multiple wives if I do what he says (although once upon a time I did). It's a metaphor.]

Thursday night I had an amazing ride around Jetton Park and met some amazing people along the way. I sat on the point watching the sunset with my Twitch friends just realizing the contrast from the day before (at Trump golf course). It was overwhelming. I felt like it was a turning point, but the Universe apparently had even more in store for me.

Friday night I covered the interactive art where we had our feet washed by the artist, then ate a meal where each of us had to feed the person across the table. We were bound and our primary hand made useless. I joked and laughed with Nicole, one of my wife Doris' new BFFs. Nicole's an artist and a teacher and just as demented and fun as Doris. I felt very fortunate to be paired with her.

Of course, I streamed the whole thing.

I was on a huge high after the dinner at sunset and seeing my wife in her new position as Project Manager of the McColl Center having only been a renting local resident just two years ago. Now, in many ways, she's running the place (with others of course). She's found so much fulfillment and seeing it just makes me overwhelmed with joy (a cliché word, but apt).

I set out after that on the bike to discover whatever I could find in Charlotte. Cycling is about exploration (for me anyway). We (the chat and I even though I was the only on biking) biked through the different party zones following/stalking the drunk people doing different things.

Then I was inspired to go to The Common Market, my favorite place to hang out in Charlotte because of the amazing people who choose to hang there. I was hoping to find Kevin and Jo there, the bike messengers who took me in a few weeks earlier.

It was no loss. Drinking a PBR I met some of the most amazing videographers in the region. One was actually filming at the McColl earlier and recognized me (since we were capturing around each

other the whole time). Turns out this was the place he chose to crash after the other events as well, the "after party" as it were. I had such a great time talking to Kevin (same name as messenger) and Surf about their creative and life experiences. They were really into the streaming thing and I later asked Doris about it and, since she is Program Manager now, she offered that I do a workshop for all the live streaming I do and how to setup a rig to do it. The idea of approaching IRL streaming as a legit videographer just makes me very excited. I hadn't thought of IRL streaming as an art form, but it really is, it's a live form of video/photo journalism. Thinking of IRL streaming as art wasn't something that really hit me until that night. I left with even more appreciation for it and all the people I've been fortunate to meet and "interview" through it.

I only had three beers, but my stomach was pretty empty. So I grabbed a slice at Fuel Pizza where I got to capture people randomly dancing to the DJ tunes there. It was a great slice. I could see the place where Doris and I first starting doing Yoga together, the place where I was when I **knew** I would eventually marry her. I was filled with a high like few I could have hoped for. Then I started my way home.

Not a block from pizza place I found myself on a well-lit downhill. I had been turning my front light on and off all night and had not thought to turn it on in this part of town. A woman left-turned from a dead stop in the parking on the side of the street stopping in the middle of the road. I had no where to go. I almost made it around, but I didn't and ended up leaving my teeth in the street.

<https://youtu.be/uI2NCjcDQCQ?si=oJ8yOpP6YqSCpqif>

After reviewing the time stamps in the video between when I was collided and when I first sent a chat message, I'm pretty sure I got knocked out for about two minutes. I hit at 6:34:40 in the video and first message at 6:36:51 "missing my front teeth". I don't remember getting myself to the grass, only sitting there. So either I was completely incoherent, or the two women carried me out of the street.

The woman who I collided with who was in some sort of party dress I think and I think had blonde hair (I never got a good look) helped me to the side of the road where I sat on the grass and just remember blood spewing everywhere from my face. She was very polite and called an ambulance. Must have been freaked out for sure. I got enough blood on my pants that the paramedics cut them off to see if I hurt my leg anywhere (thankfully I didn't).

Another very kind woman, a brunette, bent over in front of me, crouched down, just looking into my eyes the whole time telling me I'd be okay. I blabbered something about my teeth missing and she walked up and found them returning them to me. Just before the firetruck and ambulance and cop car arrived she disappeared. She was just such a nice person. I must have been a very ghastly site. I mean, the photos I posted should probably have a warning or something because they look so awful. But this amazing young woman just stayed with me until help arrived. I get all emotional just thinking of her. It was her Friday night. There was no reason for her to stop and get involved, but she did. I still don't know where she came from. She might have been one of the people in the car. I'll never know her name, but I will **never** forget her. THAT is humanity, Rob. I had forgotten.

In fact, this entire night was God tripping me all over again, reminding me what a fucking dumb ass I can be. I can just imagine God up there, "How can I get through to this idiot that all people don't suck? Oh I know ..." But that wasn't the end of it. There were still plenty more amazing people to come on my bloodied path.

Maria and Ben were my paramedics. Ben was so bubbling and amazing. You would think that picking up broken people all day would eventually wear you down, but not Ben, and not Maria. They were smiling the whole time helping me out. Keeping me smiling through my toothless, bloody face. These amazing people **choose** this life. Every single day they take part in a broken system to help people in need despite all the corporate greed and political fuck-up that is American medical system. Ben and Maria don't care. They know it's the best we have and they have committed their lives to living in the broken system even if means all they can do is what they can **in spite** of the system. Do they languish in anguish over the state of humanity? Do they do tik-tok and Insta all day? Maybe, but not when they were patching my old face up and cutting off my pants. Two more people I will never forget.

While waiting for my turn to be seen by the ER doc I realized I was still streaming, just not from my IRL rig. I checked my phone. And as if God or Doris' Pixie knocked it out of my bag, my backup battery for my phone fell out of my bag onto the floor. An orderly saw it and gave it to me just as I realized my phone was at 2% and about to die. I plugged it in and had my entire streaming community there worried and wishing me the best. I always say that my friends on Twitch **are** my friends, and boy did they seem like it then. I know I've never met some of them, and may never meet them, but my God, they are **real** friends to me. While the chills started hitting me from shock of staring at the ceiling wondering about everything I found them and they kept me laughing all the way through it. Seriously, I think it helped keep me from going deeper into shock. People sent me private messages with their personal contact information and everything. These people, as much as they love to troll me, really cared. I've always known that, but it was a great reminder.

While I was laying there with the neck brace on wondering if I'd broken my neck (which I didn't, thank God) I had the unfortunately opportunity to hear what the ER goes through on a Friday night: people vomiting all over; drunk/autistic dude wandering around almost busting his head open falling having the hospital cops lock him up, then watching him break out and them call an emergency to get all the staff to tackle the guy and put him back into the room; the elderly woman and her husband having breathing problems; and all the doctors and nurses and orderlies and cops trying to keep the place from devolving into whatever it would become otherwise. I gained such an appreciation for every one of those strangers, including those who were there for whatever reason. The drunk autistic guy was particularly hard for me to take in.

Doris arrived to watch all of that as well. We both were very aware that could happen to any or our sons as well given a different circumstance? Where were that guys parents? Friends? He had no one. I had Doris. Her worried German eyes never teared up. I got her to grin a few times. She packed me up a bag of clothes not even knowing where I was or if I would be staying in the hospital. She was obviously worried, but didn't show it. She's such a rock, for everyone. That's what everyone keeps telling her at the McColl. I'm the lucky bastard who gets to call her my wife. Doris and I have been going through some trouble recently, stupid shit really, and there's never been a moment where my stupidity was more fully realized. I could hear God again, "Hey dumb-ass, remember this woman I hand delivered to you in a way that you could never forget I exist? Yeah, treat her right, you fucking moron." (That's how God talks in my head.)

They took me away for CT scans. What a zen experience that was, all the pretty colors. I think I might have been drunk a little still which made it all the more intense. It was like I was in some scene from Charlie and the Chocolate Factory. I was mesmerized. I wanted more.

Another doc took a bunch of X-rays. Nothing broken. Amazing sense of humor on that guy.

Another male nurse cleaned up my gross beard getting as much blood out as possible. He was like "oh shit" when he uncovered my lip laceration (that I got 3 stitched for later).

Later the ER doc would come in. My wife called him a "TV doctor" (meaning she thought he was hot, and he was). Strangely, while making small conversation as he stitched up my face we ended up talking about the state of the human condition and the lack of dialog. We both got legitimately into it. He was clearly from a more conservative place. We even talked about America and Europe and everything. In fact, I wonder how long we were there, because we had a very stimulating conversation while he sewed up my bloody face. When he left he said, "thank you" in a way that was very clearly sincere. He was all excited about talking about that stuff, almost like he doesn't get to talk to people much about that stuff in his line of work. I would never have imagined such a cool conversation could have happened in those conditions, but it did. Again, humans rock.

It was Doris' night and I hate that I had to take it all over with this crap. She never once said anything about it, just happy I was okay. I joked about upping my life insurance payout and she said, "Well then I'd just have more reason to kill you." Yeah, our sense of humor is really fucking demented. We laughed enough to hurt my face and made it home watching the sunrise in the final few miles. We went in, Sam sniffed me a lot but never got worried, "What, no eggs tonight?" I had a shower, and collapsed. So did they.

Earlier that night at the pub I pulled up my phone to exchange Instagrams with Surf (the Videographer hired by Apple, etc.) and the time was 11:11. To numerologists this means "a new beginning". I never got into that shit, but my wife likes to play with it. I hate to say it, but I feel like all of this has been a very distinct starting point for something very new, a new Rob perhaps, but maybe more.

Every time I give into the urge to run my tongue over my missing teeth I'll remember all of these amazing people and **know** that humans are awesome and amazing, that **these** people working a late Friday-night shift, that few people ever see, that they that matter. You won't hear about them. They don't do social media much. They're too busy being awesome. But they are there and they matter. I can never forget that, again.

# Copyright

Copyright © 2024 Robert S. Muhlestein (rwxrob). All rights reserved.

The code portions of this book are dedicated to the public domain under the terms of the **Creative Commons Zero (CC0 1.0 Universal)** license (<https://creativecommons.org/publicdomain/zero/1.0/>). This means you are free to copy, modify, distribute the *code portions only*, even for commercial purposes, without asking permission, and without saying where you got them. This is so there is no fear your creations are your own after learning to code using them.

The non-code prose and images are licensed under the more restrictive Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0) (<https://creativecommons.org/licenses/by-nc-nd/4.0/>). This means that no non-code prose or image from the book may be reproduced, distributed, or transmitted in any form or by any means, without the prior written permission of the copyright holder. This includes remaking the same content in different formats such as PDF or EPUB since these fall under the definition of derived works. This restriction is primarily in place to ensure outdated copies are not redistributed given the frequent updates expected.