

I Won't Say “Manual Testing”

(a better way to speak and think for serious testers)

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The dictionary doesn't help much.

manual /'manjʊ(ə)l /

adjective

relating to or done with the hands: manual dexterity.

(of a device) **operated or controlled by hand, rather than automatically or electronically**: a manual typewriter.

[attributive] **using or working with the hands**: a manual labourer.

noun

1 a book giving instructions or information:

a computer manual.

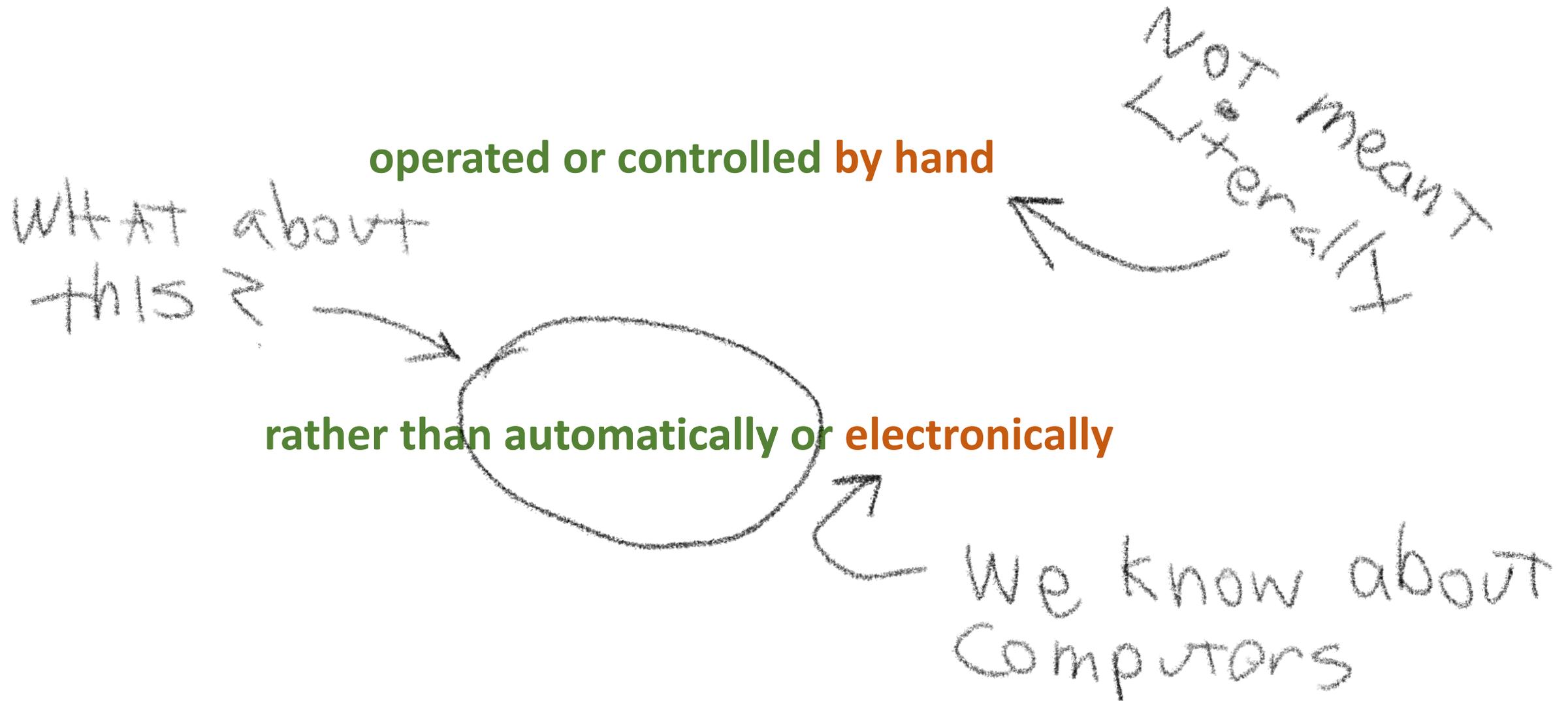
(in the Christian Church) a book of the forms to be used by priests in the administration of the sacraments.

2 a vehicle with manual transmission.

3 **an organ keyboard played with the hands not the feet.**

– ORIGIN late Middle English : from Old French manuel, from Latin manualis, from manus 'hand'.

The Oxford English Dictionary relies on idiom and a general reference to our area of expertise.



This definition is more helpful...

automatically /ˌɔːtə'matɪkli/

adverb

- 1 (with reference to a device or process) by itself **with little or no direct human control**
 - the kettle automatically switched off when it boiled.
 - (with reference to a firearm) continuously until the pressure on the trigger is released
 - the recovered weapons had been illegally modified to fire fully automatically.
- 2 **without conscious thought or attention**; spontaneously:
 - although I used my best Italian, the receptionists automatically replied in English.
 - as a necessary and inevitable result** of a fixed rule or particular set of circumstances
 - his passport was automatically revoked
 - the winners of the Division 2 final are not automatically promoted.

So, this is the **opposite** of manual...

without conscious thought or attention

with little or no direct human control

as a necessary and inevitable result

And, this is **manual**...

with

~~without~~ conscious thought or attention

Personal Experience; Insight; Growth

with

~~with little or no~~ direct human control

Responsibility; Choices

Creative

as a ~~necessary and inevitable~~ result

Experiments; Discoveries

When you want to say “Manual Testing” consider these more specific alternatives

Aspects

- **Attended** (my presence is needed)
- **Experiential** (I interact realistically)
- **Exploratory** (I make choices as I go)

Opposite

- **Unattended** (I could be asleep)
- **Instrumented** (my experience is distorted)
- **Scripted** (choices are made for me)

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“I performed attended tests.”

This means that I personally witnessed or performed important actions that characterized the testing.

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“I performed experiential testing.”

This means that my encounter with the product was practically the same as that of a particular kind of user I had in mind.

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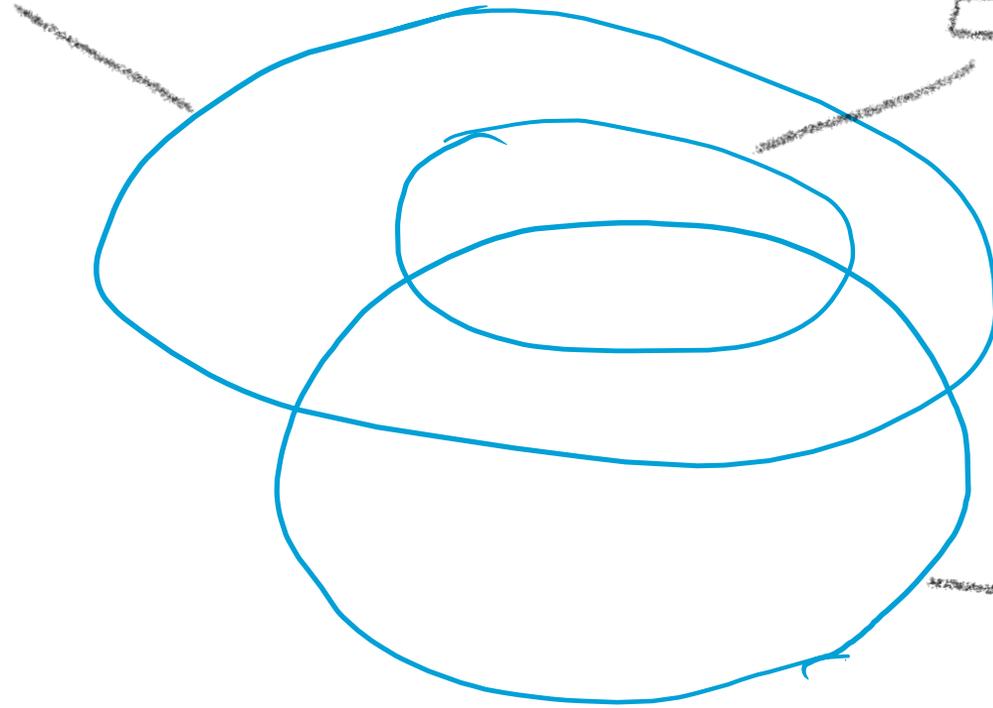
- **Unattended** (I could be asleep)
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“My testing was mostly exploratory.”

This means that I did not enter the test activity with a detailed or immutable test procedure in mind; nor was anyone dictating to me what I had to do.

Attended

Experiential



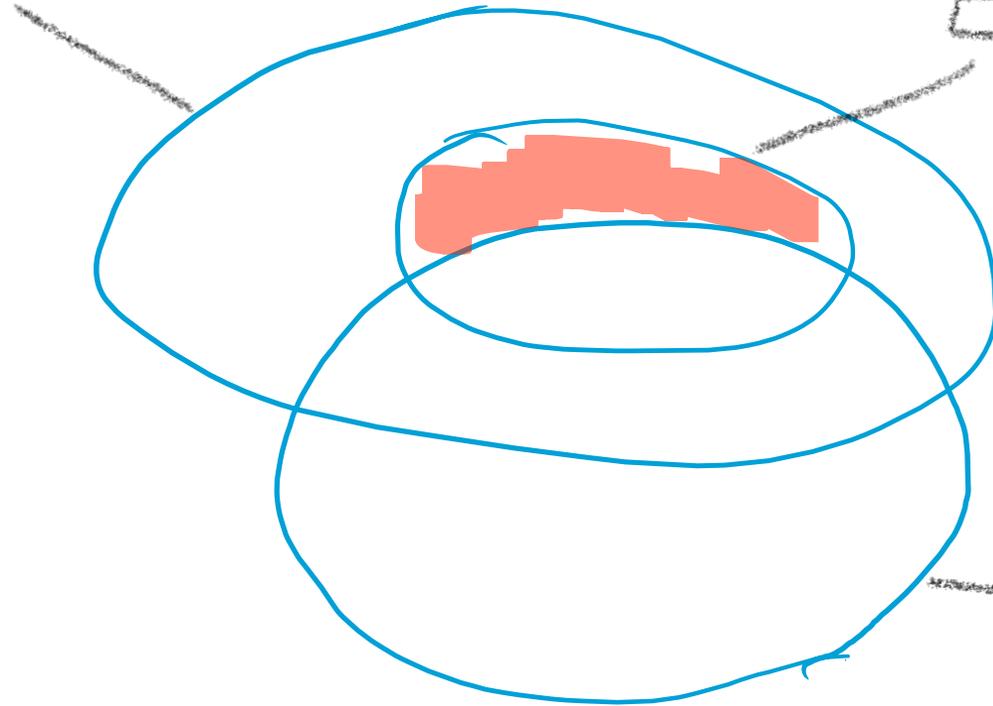
Exploratory

These are not synonyms, but they do overlap. They combine into five configurations.

Each configuration is a kind of “manual testing.”

Attended

Experiential



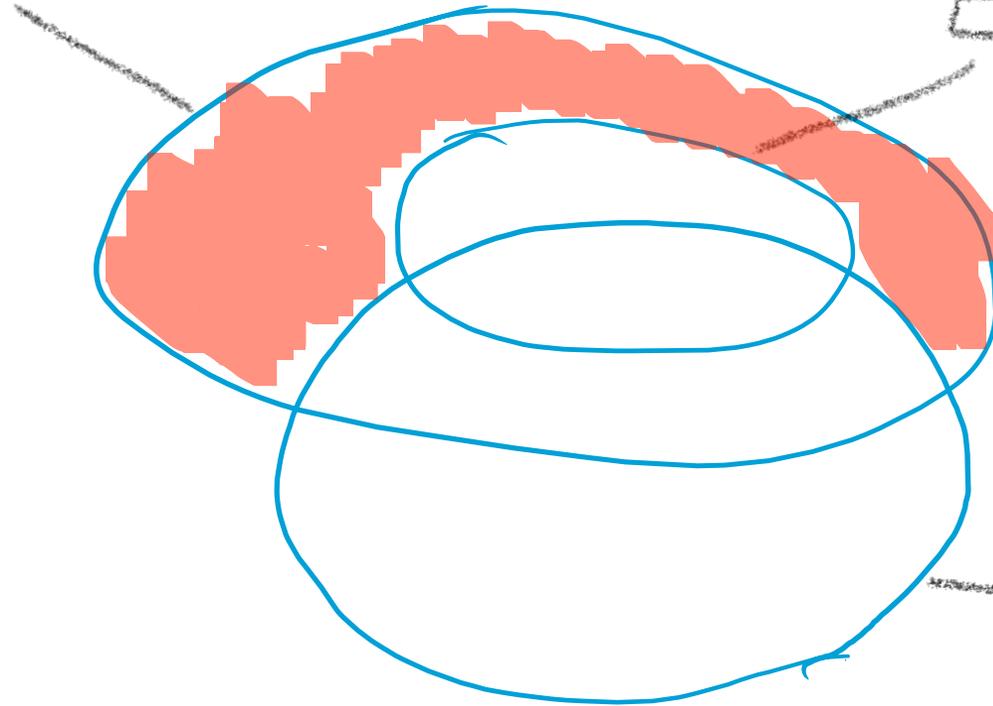
Exploratory

Attended and experiential, but not very exploratory

Following a detailed script that reflects how a user might interact with the product.

Attended

Experiential



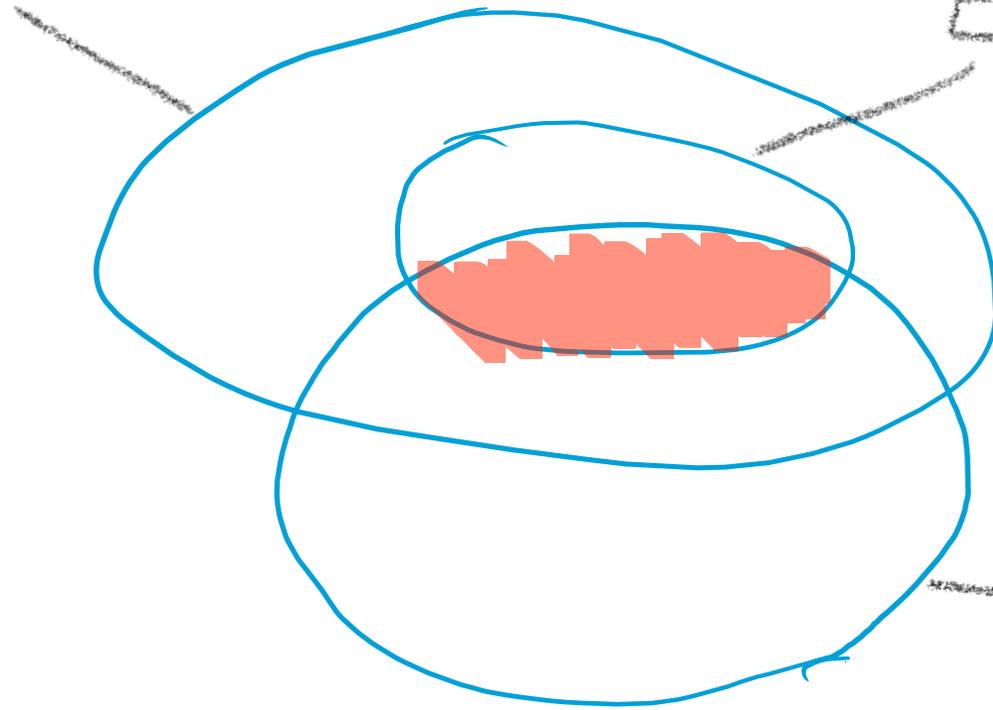
Exploratory

Attended, but neither experiential nor very exploratory

Watching an automated script to see what it does and intervene if it gets stuck.

Attended

Experiential



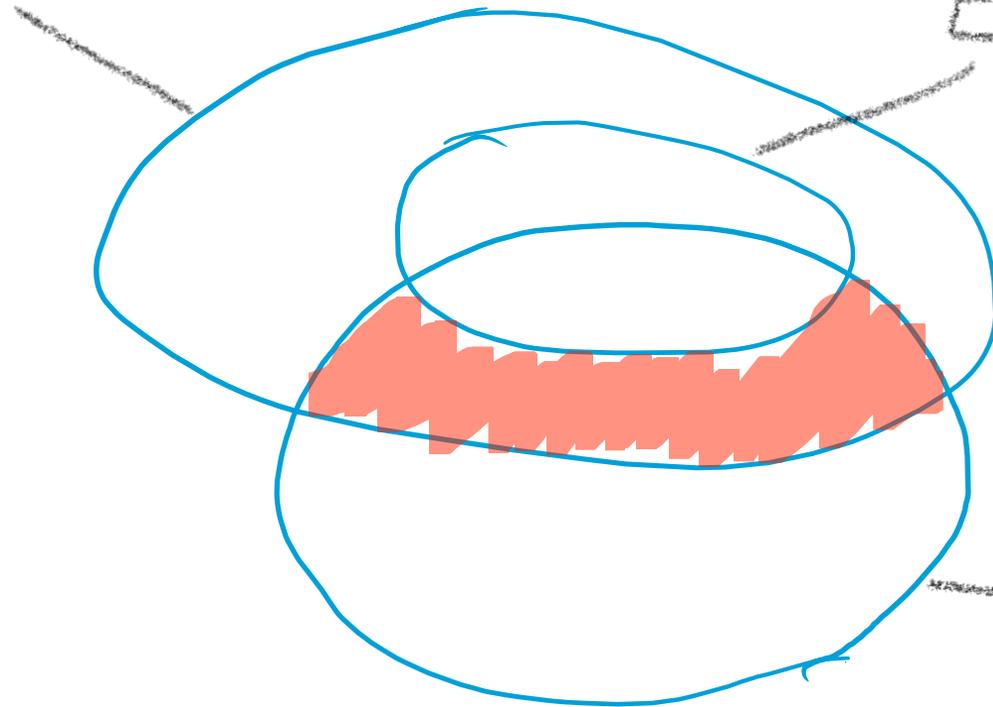
Exploratory

Attended, experiential, and highly exploratory

Interacting with the product in a natural way, using it for its intended purposes. Asking questions and investigating mysteries.

Attended

Experiential



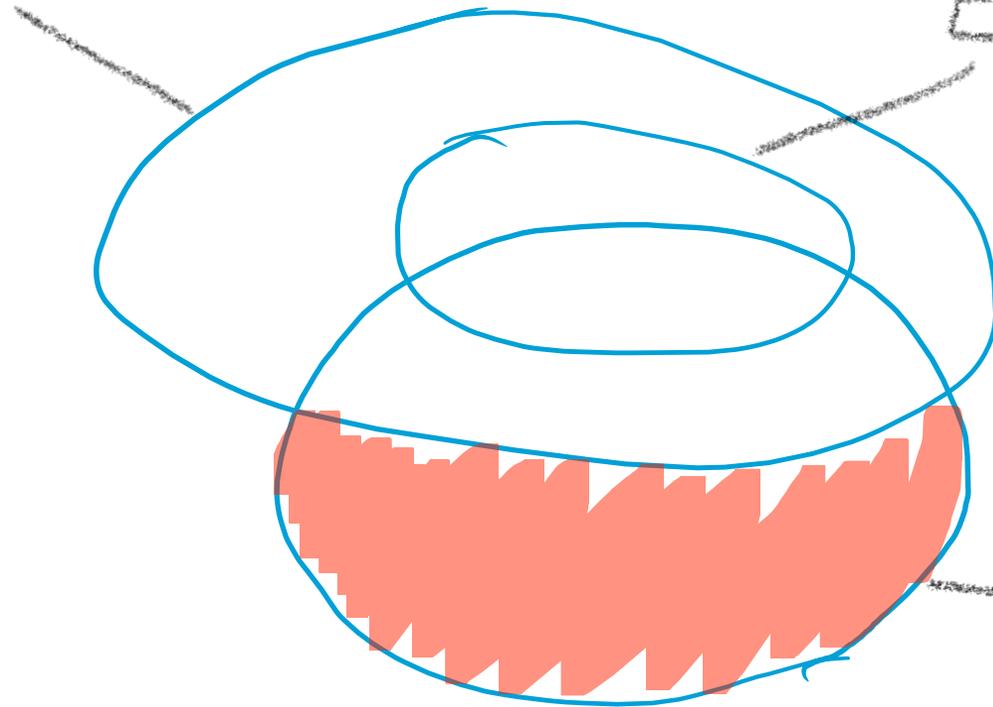
Exploratory

Attended and exploratory, but not very experiential

Using an API or automation tool in real time to try things with the product, see what happens, and get new test ideas.

Attended

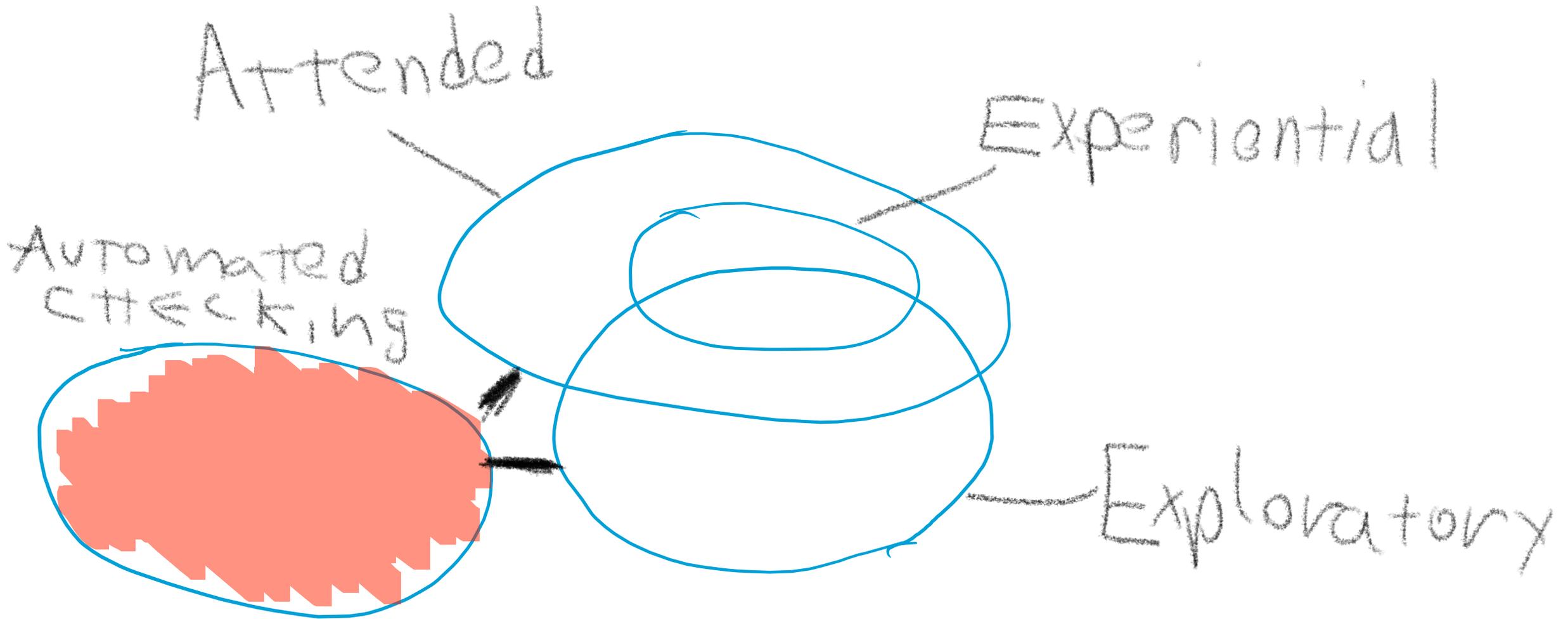
Experiential



Exploratory

Highly exploratory, but neither attended nor experiential

Giving another tester instructions and later hearing results. Then, reacting to those results and providing updated guidance.



Not Manual At All: neither attended, nor experiential, nor exploratory
Automated output checking is not, by itself, testing, but it is often a major component of testing.

Testing is inherently human (but tools can help).

All testing is, *to some degree...*

Transformative,
as opposed to merely **transactional**

Interpretive,
as opposed to merely **literal**

Speculative,
as opposed to merely **demonstrative**

Tacit,
as opposed to merely **explicit**

Bug Reporting Pipeline

The bug...

Social
Competence



1. exists
2. is producible
3. is produced
4. is observable
5. is observed
6. is comprehended
7. is authenticated
8. is differentiated
9. is reported
10. is received
11. matters

Example: Testing a random date generator

The screenshot displays the RStudio interface with three main panels:

- Source Editor:** Contains R code for testing a random date generator. The code includes a title "Random Date Testing", output, and HTML document settings. It runs a shell command to execute a Python script: `"" [sh, echo=FALSE, results="hide", eval=TRUE] pytest get_random_data.py`. Below the code, a terminal window shows the test results: `Test session starts ----- platform win32 -- python 3.8.2, pytest-6.2.1, py-1.10.0, pluggy-0.13.1 rootdir: c:\code\testing\randomdates plugins: allure-pytest-2.8.31, cov-2.10.1, forked-1.3.0, html-2.0.1, metadata-1.11.0, ordering-0.6, rerunfailures-9.1.1, xdist-2.2.0, seleniumbase-1.52.2 collected 3 items get_random_data.py ... [100%] ----- 3 passed in 44.38s -----`
- Code Beauty:** A web-based tool for formatting code. It shows a "Random date generator" snippet with a "Dark Theme" button.
- Console:** Shows the execution of R commands: `png("C:\code\testing\randomdates\rdates-diffshisto.png") hist(rddtppdiffs) dev.off() null device 1 > y1 = max(rddtppdiffs) > ran=runif(length(rddtppdiffs))*200*365.25 > plot(sort(rddtppdiffs),y1lim=c(0,y1),main="Distribution of Differences",ylab="number") > par(new=TRUE) > plot(sort(diff(sort(ran))),y1lim=c(0,y1),ylab="number",col=2) > hist(rddtppdiffs,breaks=100,main="Histogram of Date Differences") > hist(sort(diff(sort(ran))),breaks=100,main="Histogram of R Random Value Differences") > names(knitr::knit_engines$get())`
- Environment/History/Connections:** Shows search results for "get".
- Files/Plots/Packages/Help/Viewer:** Displays R documentation for the `corgram` function. The documentation includes a description: "The corgram function produces a graphical display of a correlation matrix, called a correlogram. The cells of the matrix can be shaded or colored to show the correlation value." and a list of arguments such as `x`, `type`, `order`, `labels`, `panel`, `lower.panel`, `upper.panel`, `diag.panel`, `text.panel`, `label.pos`, `label.rot`, `col.labels`, `font.labels`, and `rotation`.

Final Argument: An Appeal to Pride

Nobody in our industry is called a “manual programmer” or “automated programmer.”

Ask yourself, why?

Answer: Because everyone already knows that programming is done with the mind, and not the hands.

Why don't people think the same thing about testing? Let's change that!

Automated Programmer

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