

CS 2104

Introduction to Problem Solving

Personality Types



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- Problem-solving is all about liberating ourselves from stuckness.
- You know you have a problem when you want to do something but you don't know what to do.

Problem-solving Profile

- All of us favour some forms of thinking over others.
- We're as much creatures of habit as of creativity.
- We develop the thinking styles we find successful, and allow the less successful styles to wither.
- Becoming more versatile means exploiting the styles of thinking we're good at and growing those styles we've used less.

What is your Style?

- You want to identify the problem-solving styles that work well for you and where your strengths lie.
- You'll also begin to see where you can grow new skills, to help you solve problems in new ways.

Myers-Briggs Type Indicators

E.g., four dichotomies define sixteen categories.

Each is a **continuum**, not a binary choice.

This is not “what you are”.

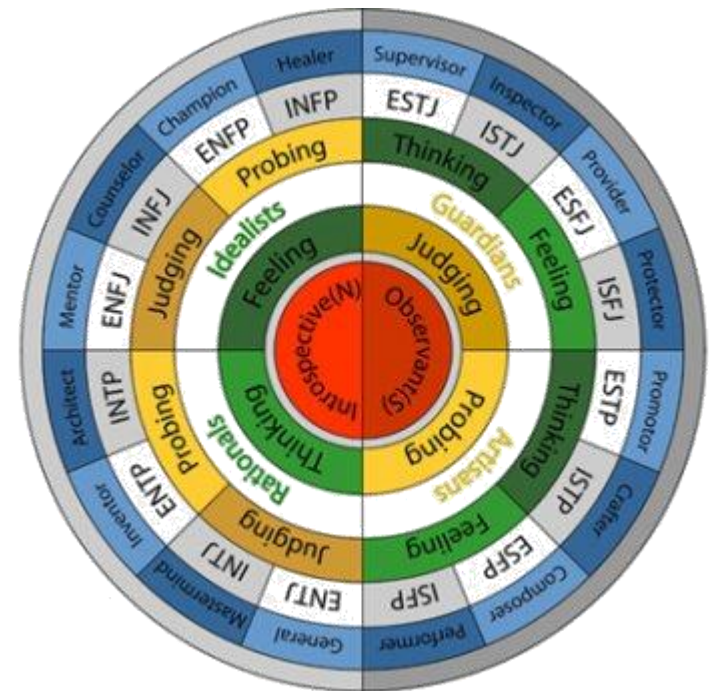
It is “right now, what you prefer” (and strength of preference).

For example, most introverts can operate in extrovert mode when needed.

Results can vary from test to test
or day to day by several points.

Category classifications are generally
consistent, between “adjacent” types.

Wikipedia has [good articles](#) for some types.



Why Does it Matter?

- Presumably, different types are better/worse at different tasks
 - CS needs an unusually broad range of types to get everything done
 - Numerical analysis vs. HCI
 - Managers, architects, programmers, testers, documentation writers
- How do you best learn and work? Interact in organizations?
- Type/type interpersonal interactions
- Team building

What Type Am I?

- Depending on which test you take/ your current mood, you might end up assigned to different categories on different attempts.
- Testers often defer to the person on “best fit” category.
- Be careful when reading the descriptions
 - They tend to be general
 - They tend to be a bit flattering (which category type is for scatterbrained people? For couch potatoes?)
 - In general, readers tend to agree with any generic assignment that they are given (Forer effect)

Potential Failings

- Is it accurate?
- Unstable: Lots of variation in results between instruments and over time
- Does it make sense to say there are 16 personality types?
- Does it actually predict anything?

Four Dichotomies

The words used for the poles on each of the four dichotomies have **technical** meanings

You can't interpret what these mean using the everyday definitions of the words

A person isn't "more judgmental" or "less perceptive" in these words' everyday meaning

- Introvert/Extrovert
- Sensing/iNtuition
- Thinking/Feeling
- Judging/Perceiving

Introvert/Extrovert [Attitude]

Defines the source and direction of energy expression for a person.

An *extravert* has a source and direction of energy expression mainly in the external world. Act/reflect/act. Energy/motivation decline with inactivity.

An *introvert* has a source of energy mainly in the internal world. Reflect/act/reflect. Needs downtime after action to reflect.

These meanings are different from common use.

Introverts reflects before acting, and might need plenty of “reflect time” after acting, but can still enjoy and interact at a party without being shy.

An extrovert might draw strength from acting rather than from reflecting, but that doesn't tell us whether he/she is a “loud” person or not.

Sensing/Intuition [Function]

Defines the method of information perception

Sensing means that a person believes mainly **information received directly from the external world** – tangible and concrete facts drive patterns. This indicates the person is more **present oriented**, **methodical**, and **precise**.

Intuition means that a person believes mainly **information he or she receives from inside (books, memories)** – how facts fit into the pattern. This indicates the person is more **future oriented**, subject to “**flashes of insight**”, and **dislikes routine**.

Says what you prefer to focus on

You often need to use the opposite to “check”

Thinking/Feeling [Function]

Defines how the person **processes information** (**decision making**). Both strive to make rational decisions. Both can be practiced/strengthened.

Thinking means that a person makes a decision mainly through **logic/reason**. This indicates the person is more **detached and impersonal**.

Feeling means that, as a rule, he or she makes a decision **holistically, including emotion**. Look at from “inside” and strive to reach balance/harmony/ consensus with values. This indicates the person is **more personal and subjective**.

“Heart vs. Head”

You will trust your preferred approach better, but most have some ability to work in either mode.

Judging/Perceiving [Lifestyle]

Defines how a person implements the information he or she has processed.

Judging means that a person **organizes** all his life events and **acts** strictly **according to plans**. **Prefers things decided**. Prefers things **on time**. Might **seem inflexible**.

Perceiving means that he or she is **inclined to improvise** and **seek alternatives**. Likes to **leave things open**. More likely to **push deadlines**.

Personality Types Example

INTJ (Introvert iNtuition Thinking Judging)

Strength in each dimension (ex: moderate I vs. E, moderate N vs. S, moderate T, strong J)

Occurrence in population (this one is about 1-4%)

While I tend toward INTJ, on any given day/test, I might register as ESTJ or INTJ.

But the INTJ descriptions make me clearly self-identify.

Introvert/Extrovert
Sensing/iNtuition
Thinking/Feeling
Judging/Perceiving

Type Distribution In Population

ISTJ 11.6%	ISFJ 13.8%	INFJ 1.5%	INTJ 2.1%
ISTP 5.4%	ISFP 8.8%	INFP 4.4%	INTP 3.3%
ESTP 4.3%	ESFP 8.5%	ENFP 8.1%	ENTP 3.2%
ESTJ 8.7%	ESFJ 12.3%	ENFJ 2.4%	ENTJ 1.8%

What is the CS Personality?

- What is the “public perception” of CS?
- What is your perception?

	General	Engineering
E/I	70/30	33/67
N/S	30/70	47/53
J/P	50/50	61/39
F/T	50/50	26/74
F/T: Male	40/60	23/77
F/T: Female	60/40	39/61

Relevance to Education

- Different types prefer various teaching/testing styles
 - Sensing and Judging types prefer memorization and recall
 - iNtuition types prefer hypothesis/essay
 - Most in population are sensing
 - Most faculty are intuition
- Engineering students are split evenly N/S, but these groups have different needs

What Do Learning Styles Mean?

- Active learners need to do something with info – discuss, study in group
- Reflective learners need to think about it
- Sensors like facts, memorization, method
- Intuitors like innovation, can lose patience, need to avoid unnecessary mistakes
- Visual learners remember what they see
- Verbal learners remember what they hear/read
- Sequential learners work bottom up, know pieces but might not see relationships
- Global learners work top down, relate to the big picture, need a framework to fit the pieces to

Lead, follow, or get out of the way.

Thomas Paine

If you're not part of the solution, you're part of the problem.

Eldridge Cleaver



