



Fundamentals of Human Factors

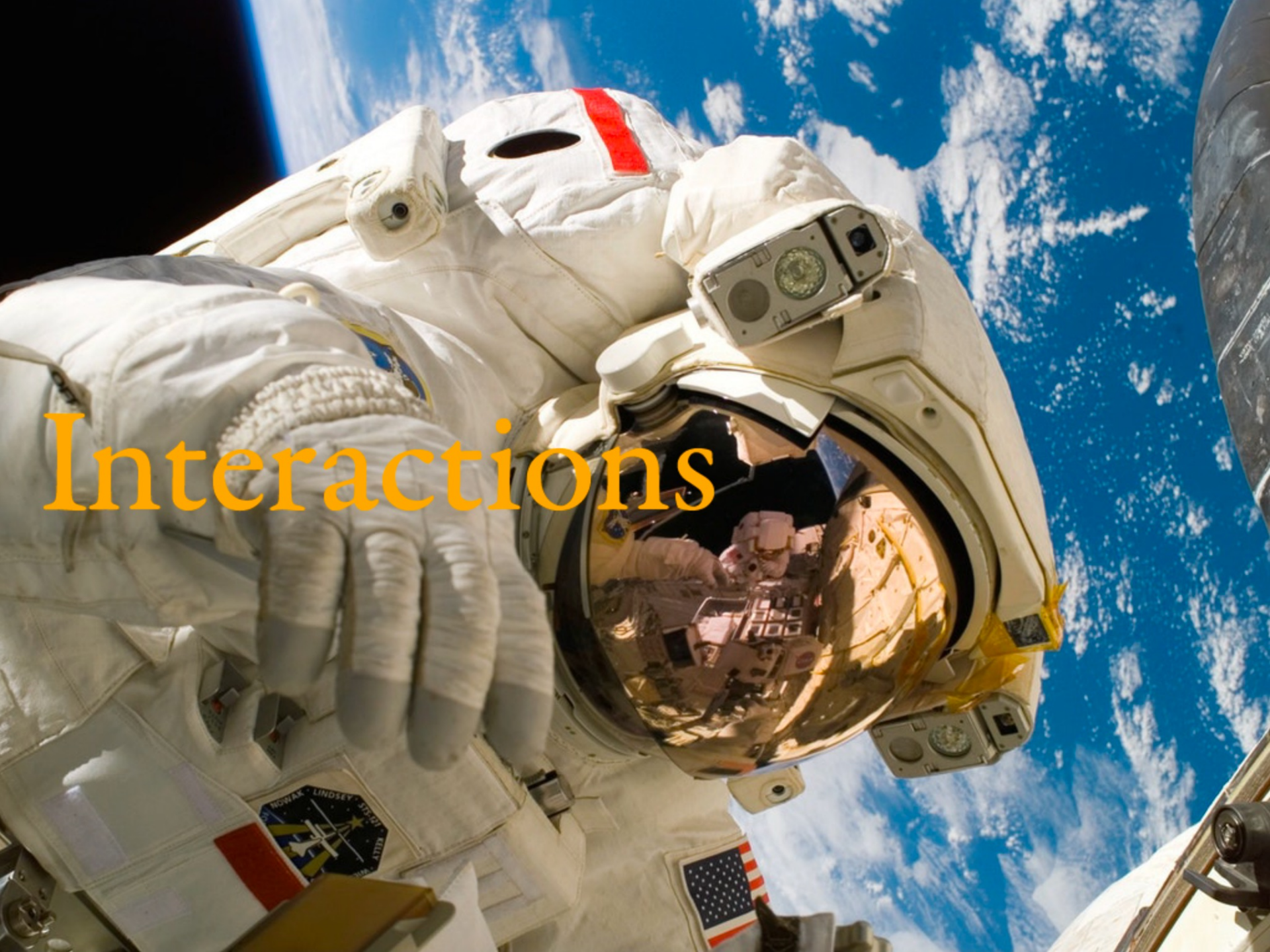
Fred Schenkelberg

People





Products

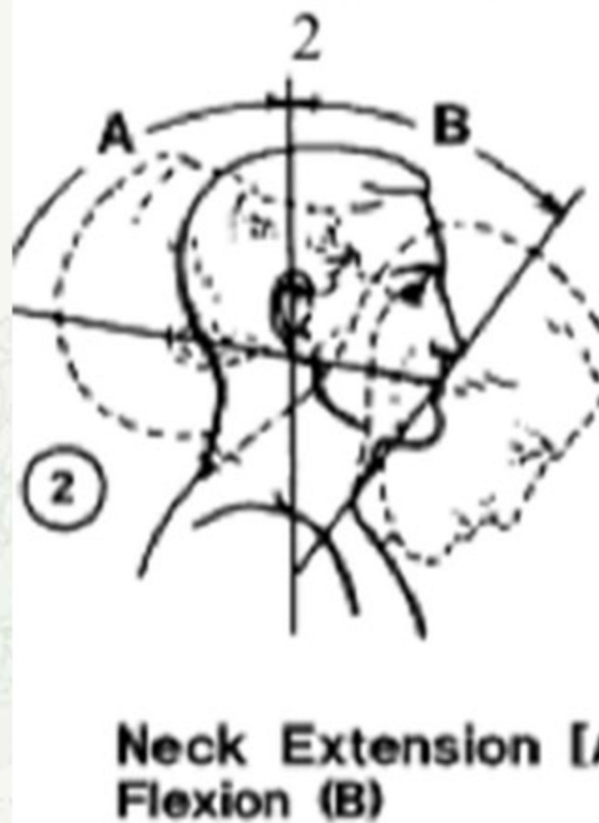
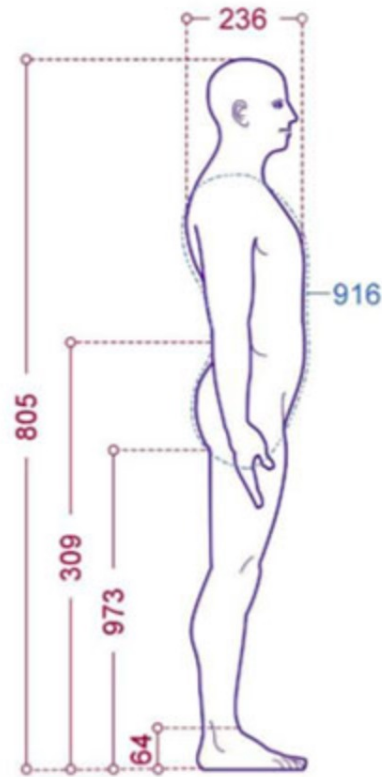


Interactions

If a person uses your
product incorrectly

is that considered a
product failure?

Physical Characteristics

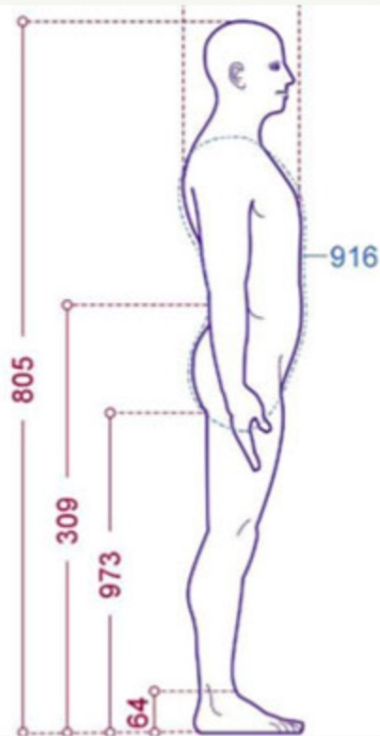


Size

Movement

Strength

Size of People



Anthropometry –
measurement of human body
lengths & circumferences

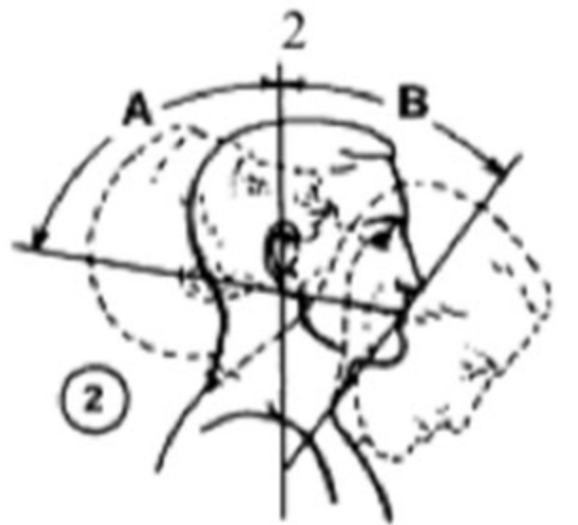
Min and max is not good enough

Worst case isn't good enough

Focus on getting the distribution

And, over time and enviromental
caused changes

People Move



Neck Extension [A]
Flexion (B)

Eyes
Head
Torso

Reach
Flex

Speed
Angle

Range of motion – keep it
comfortable

Strength Varies



Push/pull

Lift/shift

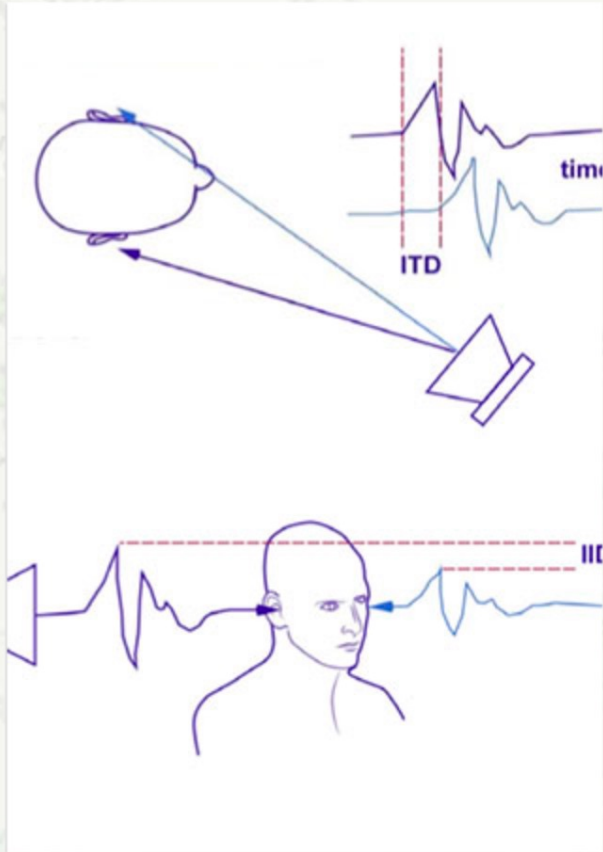
Grip/hold

what else?

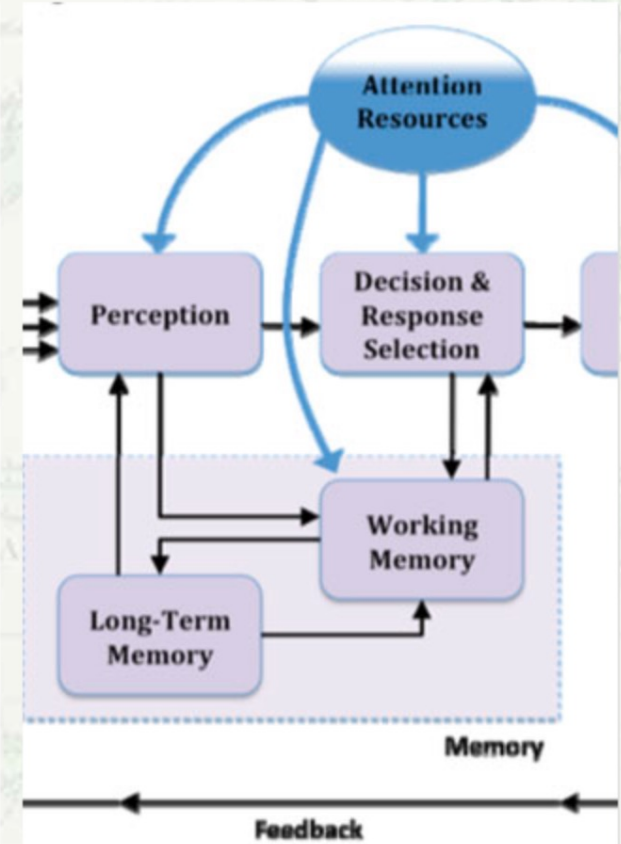
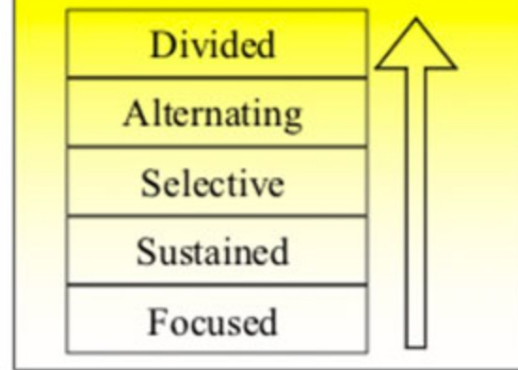
Just a little adrenaline

Where can you find
people data?

Seeing & Understanding



Hierarchic Levels of Attention

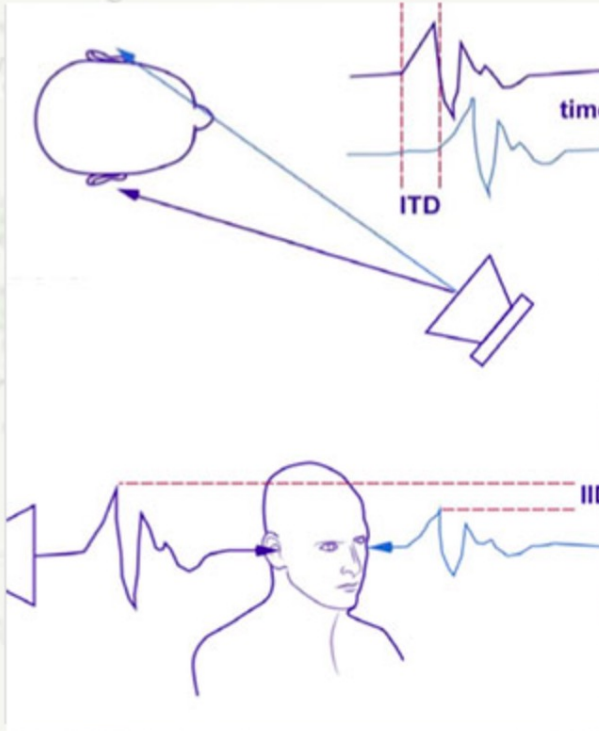


Senses

Priorities

Cognition

Sensing Your Product



Basic human senses

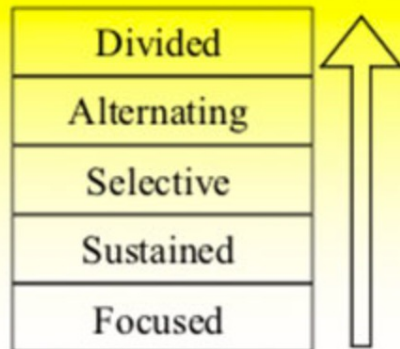
With limited human senses

Conventions and Cautions

Let's prompt the right next interaction

Matching Priorities

Hierarchic Levels of Attention

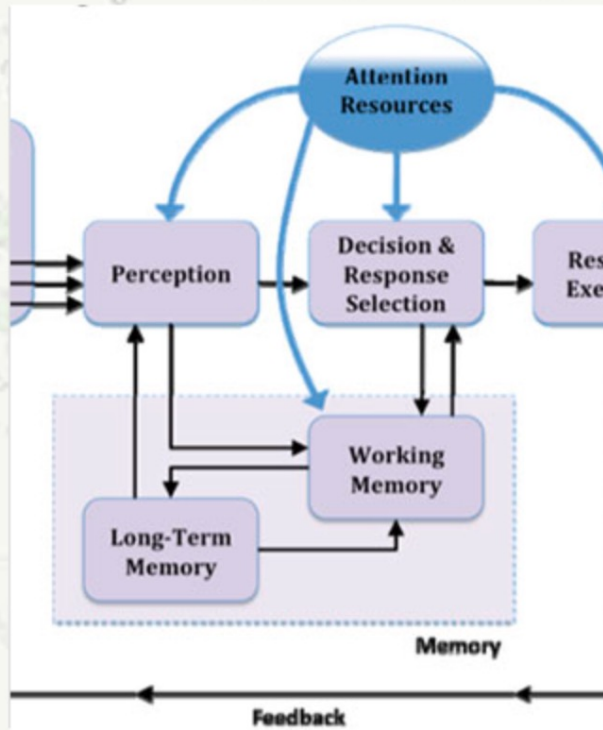


Just because I visited your site just now, doesn't mean I want to join your email list.

Alarms, warnings, priorities, next steps, emergencies vs normal

What is needed now?

Understanding



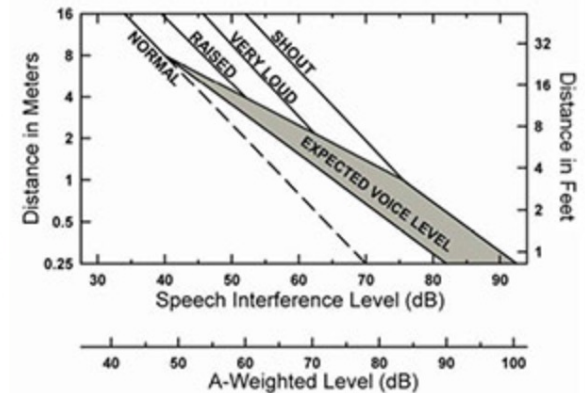
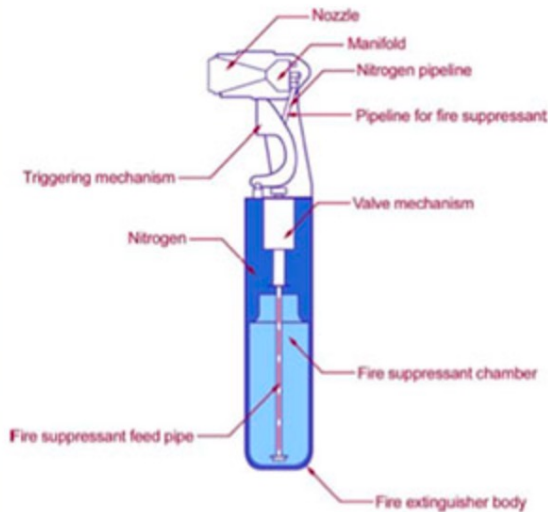
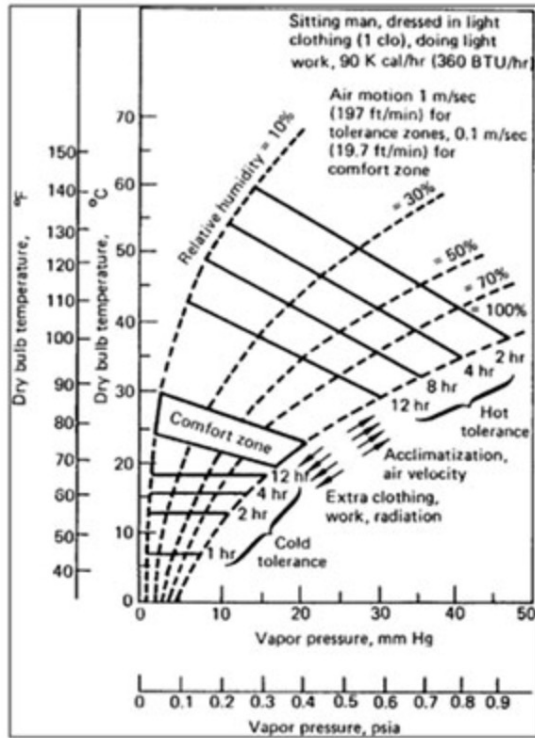
The person in the system has to comprehend the current state and available options going forward

When not intuitive

Do you push or pull

a door?

Environment Considerations

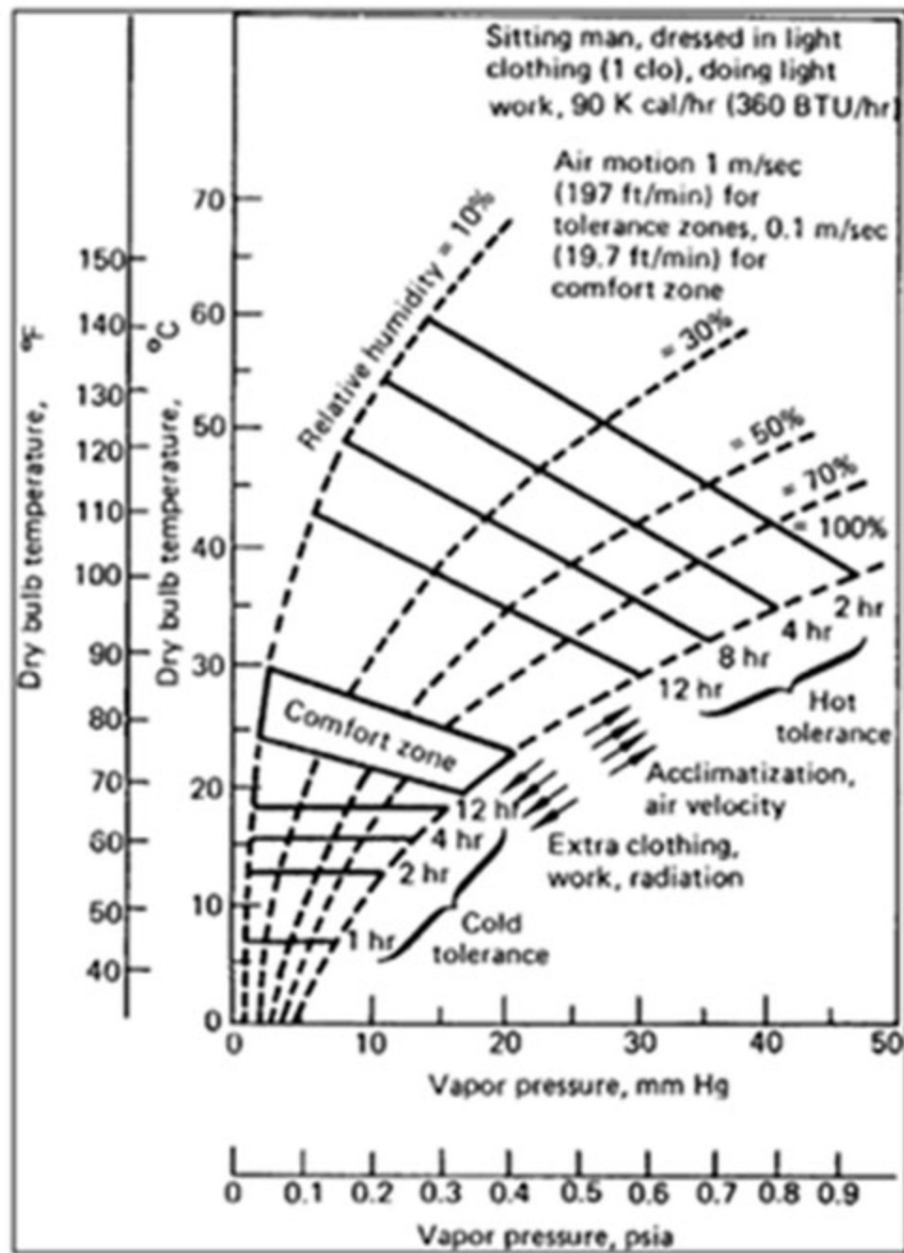


Weather

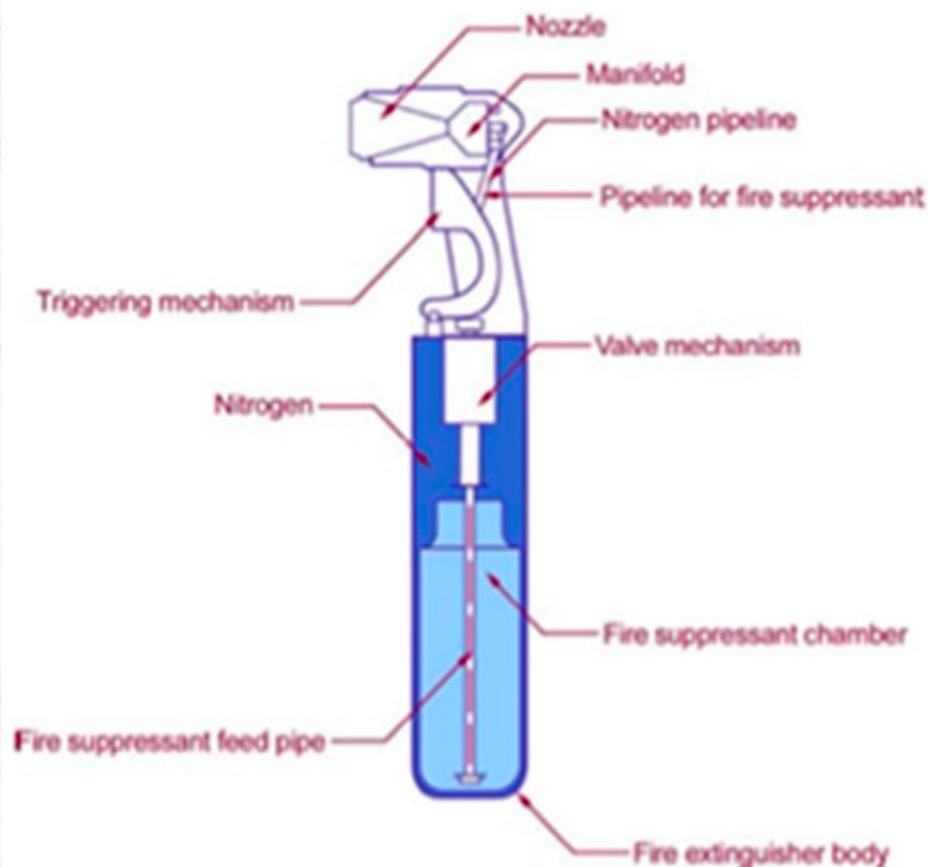
Patterns

Variation

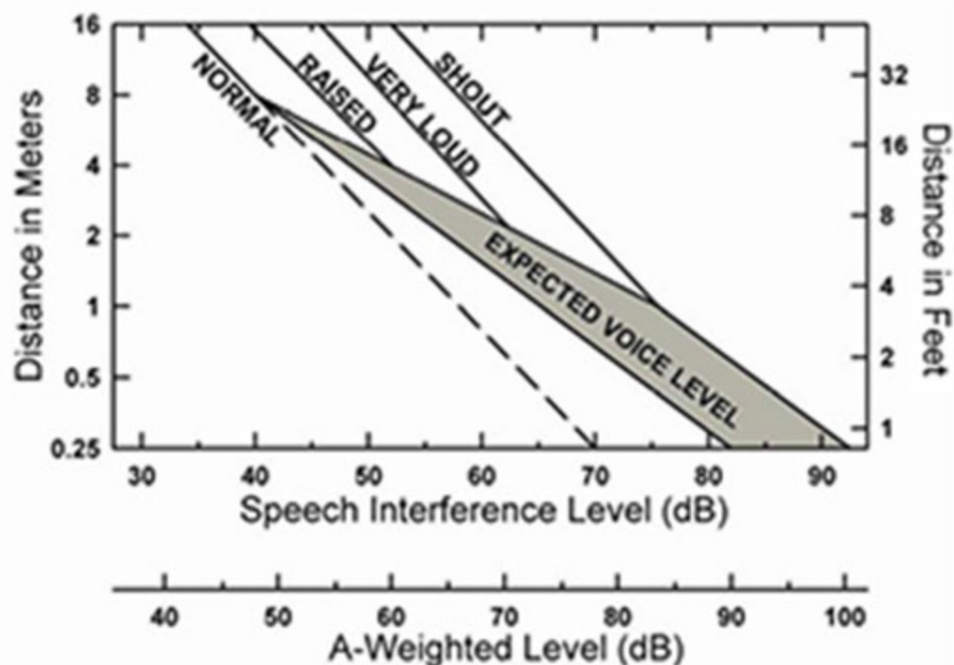
Internal or External Weather



Patterns and Local Norms



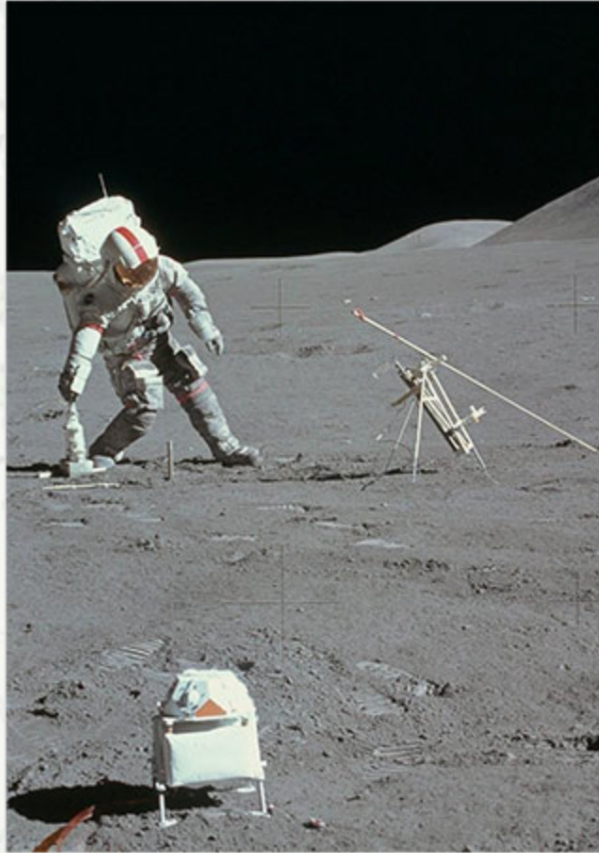
Time of Day or Season Variations



How important is

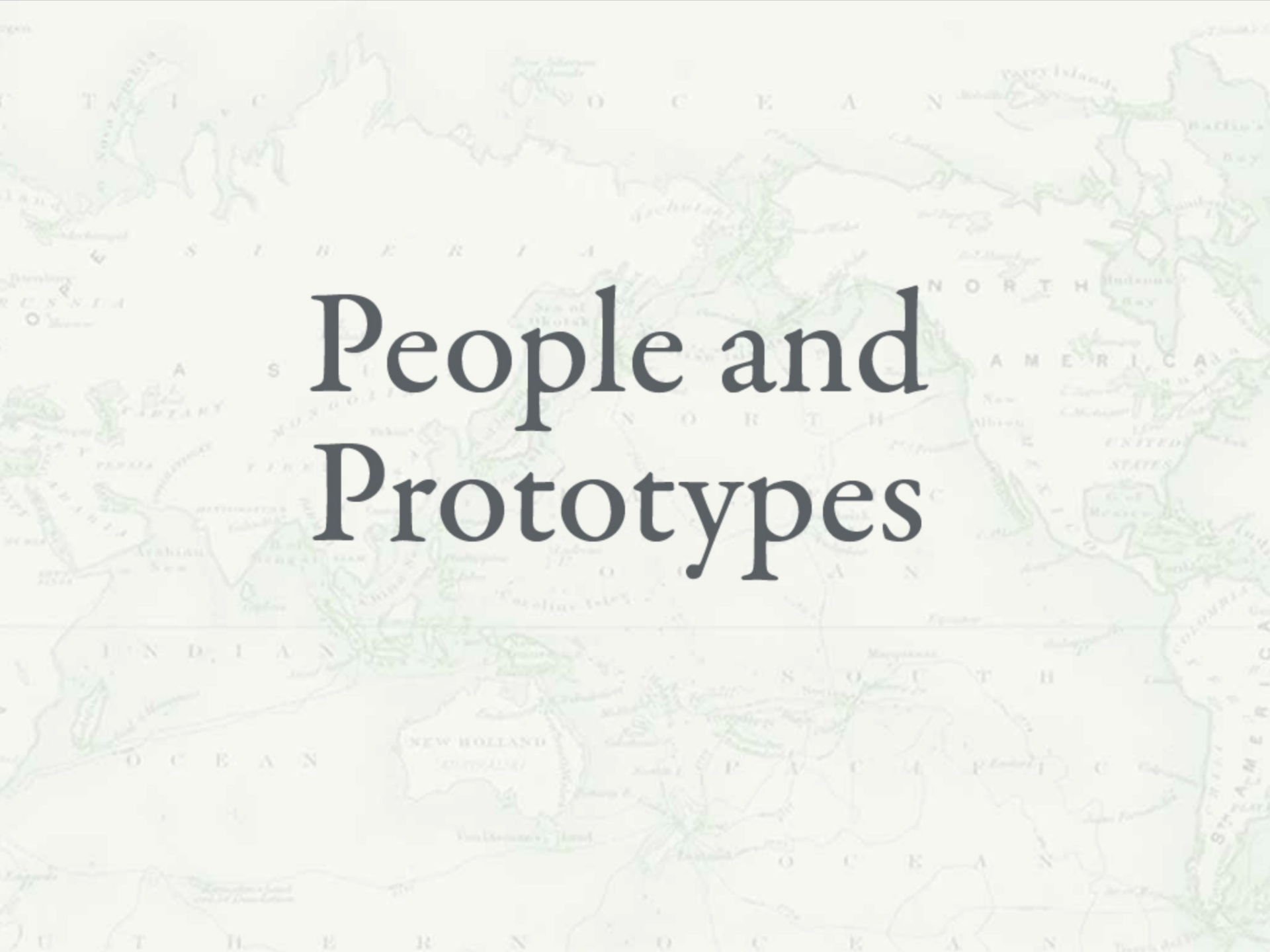
making the interface
obvious?

Human Centered



Requirements Prototypes Reviews

People and Requirements



People and Prototypes



People and Reviews

Would designing for
an average person
work?

In Summary

Interactions



People



Product



Variation



More Information

Visit [AccendoReliability.com](https://www.AccendoReliability.com)

Let me know if you have any questions.

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Go out and question then plan to end any currently running stress screens.