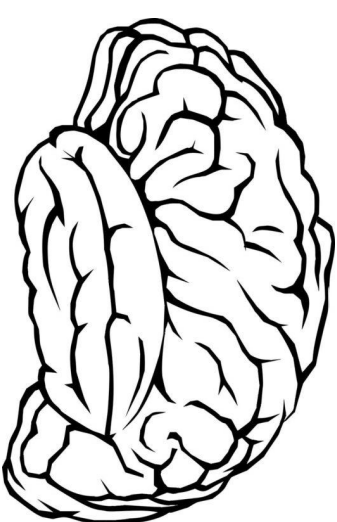




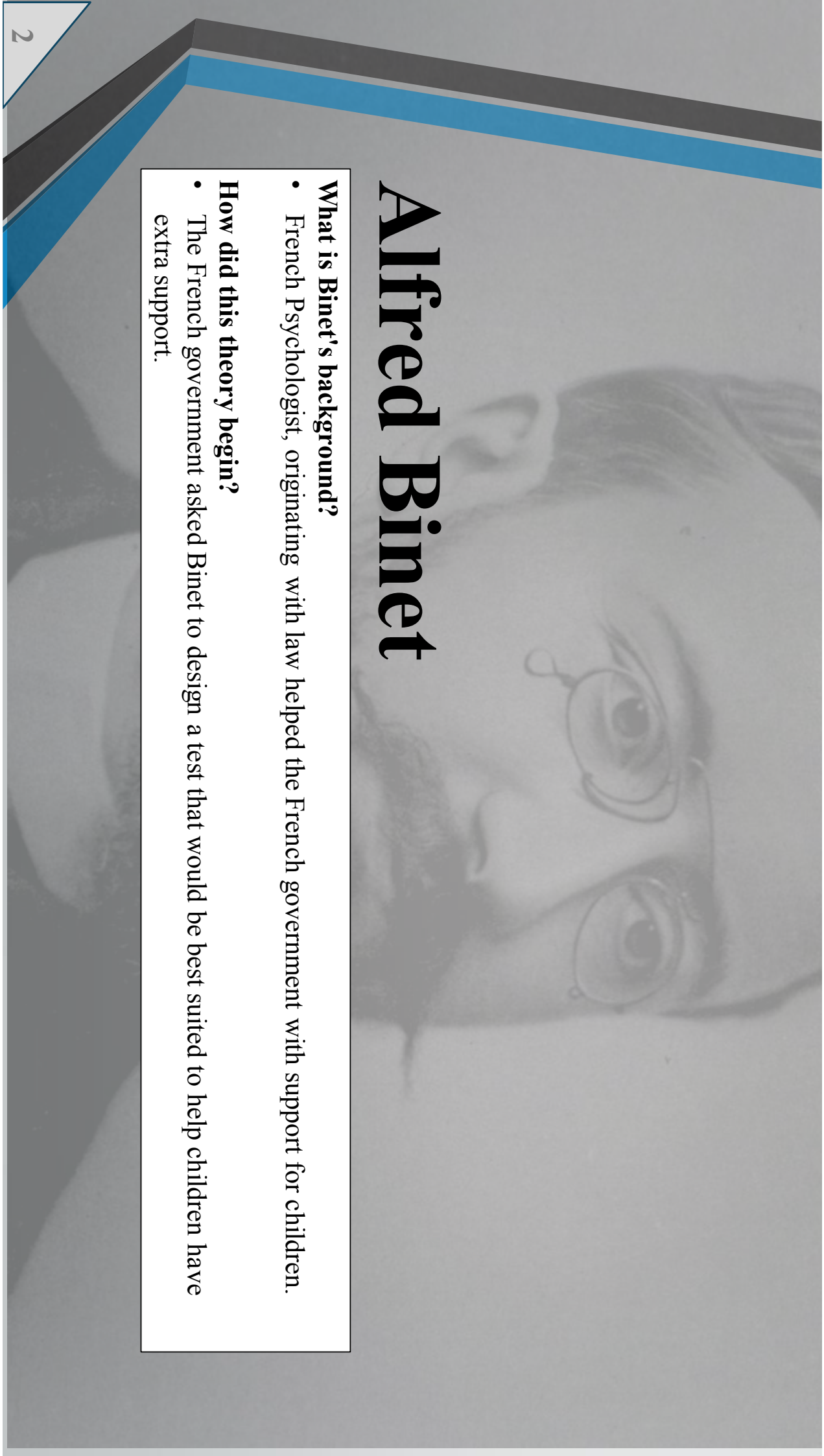
Alfred Binet and Howard Gardner's theories of intelligence

Alisha Phillips

What is intelligence?

'Intelligence is mental quality that consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one's environment'.

Sternberg, R. J. (2023, November 18)



Alfred Binet

What is Binet's background?

- French Psychologist, originating with law helped the French government with support for children.

How did this theory begin?

- The French government asked Binet to design a test that would be best suited to help children have extra support.

Binet-Simon Scale

- 56 tests based on ages 3-13
- Attention, memory and problem solving
- Tasks determine intelligence and mental age* that got gradually harder
- Following a lighted match with your eyes
- Naming parts of the body
- Naming objects that are in a picture
- Recalling digits after being shown a long list testing memory skills
- Definitions (knowing the difference between words)
- Filling in missing words in sentences

- Final publication of tests in 1911 but with added tests for 12 - 15 years.

Malby J., Day L., Macaskill A., (2013) Personality, Individual Differences and Intelligence (3rd ed.).

Mental age

Binet believed that this test showcased a child's 'mental age' which is the age based on average abilities of children within that age group



An example of the Binet-Simon test of 1911

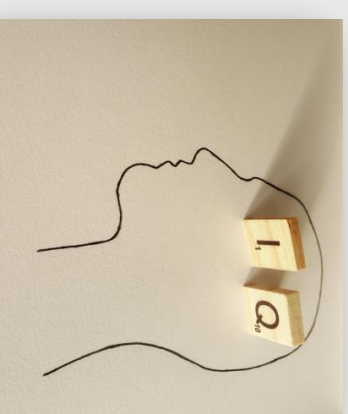
DIFFÉRENTES ÉPREUVES	ÉCOLES DE M. L. ET DE M. M. SITUÉES A PARIS RUE DES RÉCOLLETS ET RUE SAMBRE-ET-MEUSE				
	ÂGE DES ENFANTS				
	7 ans.	8 ans.	9 ans.	10 ans.	12 ans.
6 ans. Distinguer main et soir. . . . Définir par l'usage. Copier losange. Compter 13 sous simples. . . . Comparer 2 figures esthétiques.	10 10 9 9 9	10 10 10 10 10			
7 ans. Main droite, oreille gauche. . Décrire une gravure. Exécuter 3 commissions. . . . Compter 9 sous simples et dou- bles. Nommer 4 couleurs.	8 7 7 4 4	10 10 10 10 9	10 10		
8 ans. Comparer 2 objets de souvenir. Compter de 20 à 0. Indiquer lacunes figures. . . . Donner date du jour. Répéter 5 chiffres.	4 3 3 4 2	8 8 8 8 5	10 10 10	10 9 10	
9 ans. Rendre sur 20 sous. Définir mieux que par l'usage. Pièces de monnaie. Mois. Comprendre des questions fa- ciles.		4 3 2 2 2	10 6 10 8 9	9 7 9 10 9	10 7 9 9 10
10 ans. Ordonner poids. Copier dessin mémoire. Critiquer phrases absurdes. . Léger 3 mots en 2 phrases. . Comprendre questions diffi- ciles.		1 2	5 4 4 3 3	6 5 5 5 3	8 8 7
12 ans. Suggestion de lignes. 3 mots en 1 phrase. 60 mots en 3 minutes. Définitions abstraites. Phrases désarticulées.			2 2 2 1 1	3 4 4 2 4	8 5 4 4 7

Limitations of the Binet – Simon scale



- **Binet did not believe** that his one level of measuring intelligence was able to be done due to its high complexity.
- Binet stated that intelligence can be impacted by several different things as well as changing over time and can **only be compared with children with similar backgrounds**.

- The Binet-Simon scale did not take into consideration how complicated intelligence was going to be to measure which meant the scale was **providing a possible incomplete measure of intelligence**.
- Psychologists set out to make the modifications needed to supply a more complete picture, which led to the creation of **more comprehensive IQ tests**.



Stanford-Binet test

The Stanford-Binet test is done through **5 tasks and questions in categories being fluid reasoning, knowledge, quantitative reasoning, visual-spatial processing and working memory**. Both verbal and nonverbal responses are measured during this test, and each were given a measurement of IQ (intelligence quotient) either high or low scores.

How reliable is the Stanford-Binet test? Boyle, G. J. (2015).

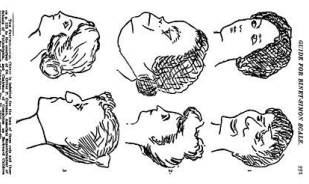
- The Stanford-Binet test is one of the **most trustworthy used in education** today
- It has undergone **validity tests**
- Most results are **treated as accurate**
- Individuals with **high scores** are usually cognitively sound, and those with **low test scores** often face some sort of cognitive disability/learning disability.

Limitations of the Stanford-Binet test

- Cultural bias: The test may be culturally biased and may not accurately measure intelligence in individuals from different cultural backgrounds.

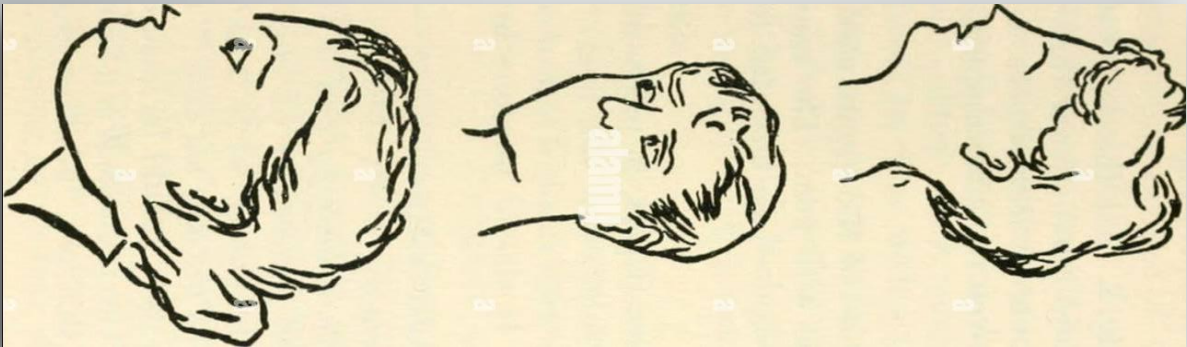


(a)



(b)

An example of the Stanford-Binet test question



+ 3 2 x 3 9 =
3 x 2 + 3 = 9

Memory for Objects

Bead Memory

Matrices

A B C D

Howard Gardner

Multiple intelligences

Gardner's view:

- Demands objectivity and measurement
 - Difficulties sharing findings of intelligence into educational settings
- Does not depend on a sensory system
- To challenge assumptions of intelligence in education

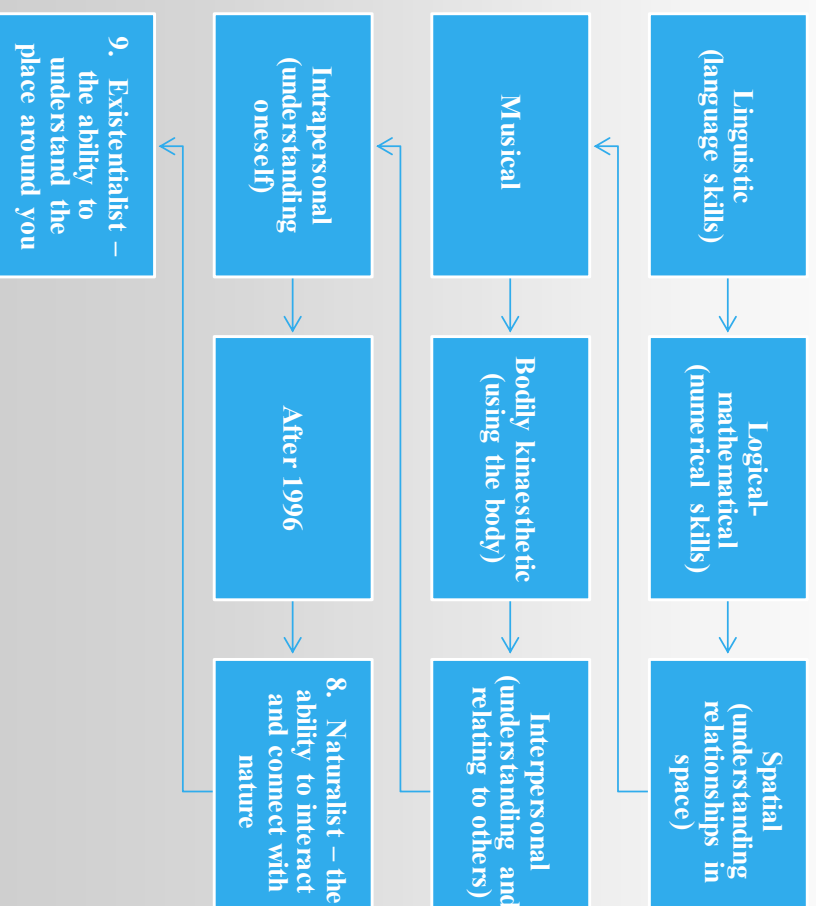


Davis, K., Christodoulou, J., Seider, S., & Gardner, H. E. (2011)

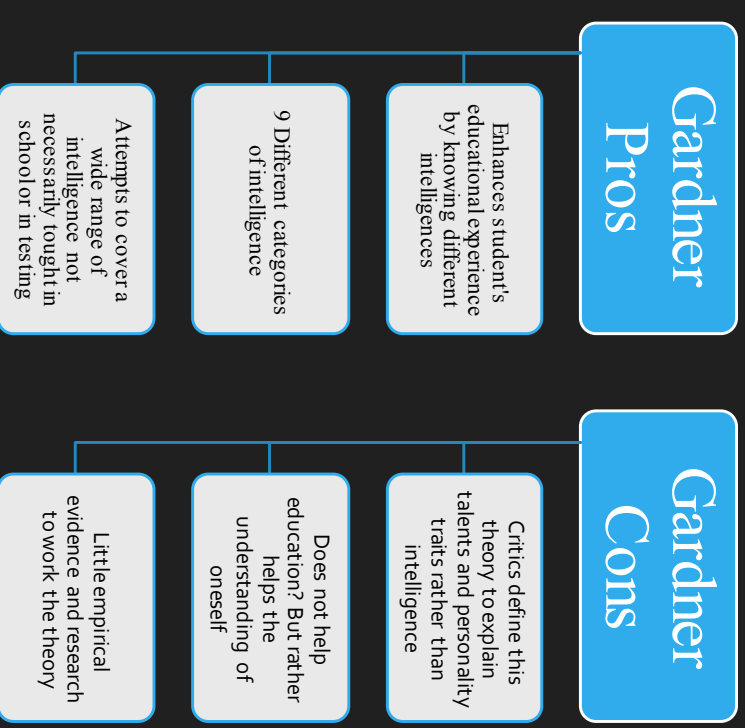
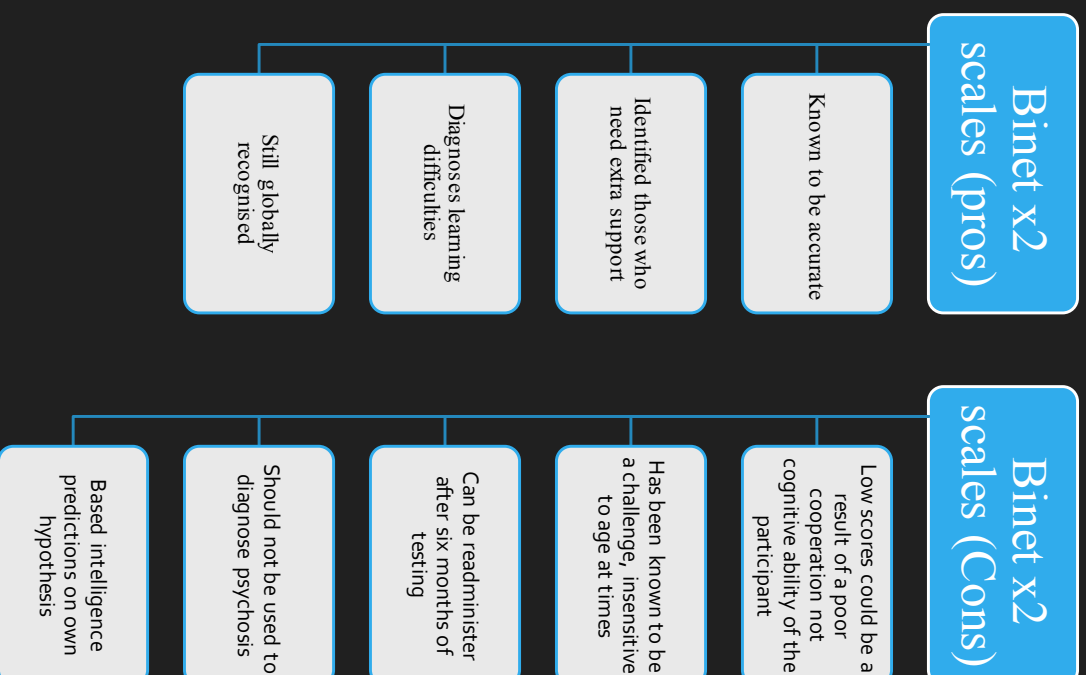
Malby J., Day L., Macaskill A., (2013)

Gardner's theory of Multiple intelligence

Gardner had the theory that there were multiple intelligences correlating with places in the brain, the areas that he thought of as 'intelligences' are stated below.. (Gardner, H., 1987).



Binet vs Gardner





Thank you for listening

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