Qualitative and Quantitative Data

Qualitative data are based on words and descriptions. A case study, for instance, might include the information that a person's thinking is coherent, his/her behaviour sociable and his/her personality prone to anxiety and extroverted. This is all **qualitative information**.

Quantitative data, in contrast, are based on **numbers**. Any numerical measurement is a piece of quantitative data. This includes data such as school grades since they represent a number or a ranking.

Researchers in psychology like to work out ways to turn qualities into quantities. For instance, in order to measure a quality such as "sensation seeking" (see the mini-scale below), they design tests that produce a **numerical score** rather than a **description**. An intelligence quotient (IQ) is a score or a piece of quantitative information. It is a numerical representation of a person's intelligence. Yet a person's ability to think, reason, solve problems and deal with the environment is much more complex than a single number.

By turning a quality into a quantity through generating some kind of score, a researcher tends to lose the depth present in descriptions of an individual's personality or behaviour. The **advantage** is that the researcher gains the opportunity to compare individuals with other individuals and groups of people with other groups of people. It is possible to carry out **statistical analyses,** graph the results and so perceive trends and differences between groups of different cultures, ages and genders.

Psychologists use both kinds of data and each has its **advantages** and **disadvantages**.

The exercise below is a simple example of how a psychologist might turn an aspect of a person's personality into a number.

Measuring Sensation Seeking

This exercise is based on a shortened version of the "Sensation Seeker Scale" (Zuckerman, 1994). Therefore, it provides at best only a rough approximation of your status on this personality trait.

"True" indicates that the item expresses your preferences most of the time. "False" means that you do not agree that the item is generally true for you.

Ⓣ Ⓕ **1** I would really enjoy sky-diving.
Ⓣ Ⓕ **2** I can imagine myself driving a sports car in a race and loving it.
Ⓣ Ⓕ **3** I prefer my life to be secure and comfortable most of the time.
Ⓣ Ⓕ **4** I usually like emotionally expressive or artistic people, even if they are sort of wild.
Ⓣ Ⓕ **5** I like the idea of seeing many of the same warm, supportive faces in my everyday life.
Ⓣ Ⓕ **6** I like doing adventurous things.
Ⓣ Ⓕ **7** A good photograph should express peacefulness creatively.
Ⓣ Ⓕ **8** The most important thing in living is fully experiencing all emotions.
Ⓣ Ⓕ **9** I like to be comfortable when I go on a vacation.
Ⓣ Ⓕ **10** Doing the same thing every day really gets to me.
Ⓣ Ⓕ **11** I love snuggling in front of a fire on a wintry day.
Ⓣ Ⓕ **12** I would like to try several types of drugs as long as they didn't harm me permanently.
Ⓣ Ⓕ **13** Drinking and being rowdy really appeals to me on the weekend.
Ⓣ Ⓕ **14** Rational people try to avoid dangerous situations.
Ⓣ Ⓕ **15** I prefer Figure A to Figure B.
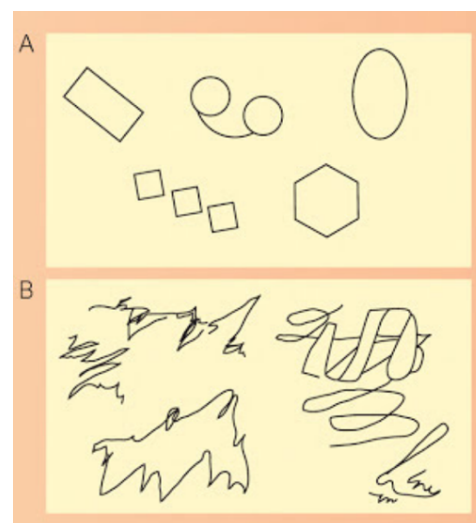
Give yourself 1 point for answering "true" to the following items: 1,2,4,6,8, 10, 12 and 13. Also give yourself 1 point for answering "false" to the following items: 3, 5, 7, 9, 11, 14 and 15. Compare your total to the following norms: 11-15, high sensation seeker; 6-10, moderate sensation seeker; 1-5, low sensation seeker.

Now apply your hard-won knowledge...

a Is it qualitative or quantitative data? Mark ⓐ or ⓑ.

Your ATAR at the end of Year 12	ⓐ qualitative	ⓑ quantitative
Teacher's comment on your work ethic	ⓐ qualitative	ⓑ quantitative
The age at which 100 babies start to walk	ⓐ qualitative	ⓑ quantitative
Your grades in the end-of year exam	ⓐ qualitative	ⓑ quantitative
The number of words used by a 3-year-old	ⓐ qualitative	ⓑ quantitative
Nature of child's vocabulary, e.g. full sentences	ⓐ qualitative	ⓑ quantitative
Case study of a person in solitary confinement	ⓐ qualitative	ⓑ quantitative
Number of classes you attend in 1st semester	ⓐ qualitative	ⓑ quantitative
Comments in a thank you message to a friend	ⓐ qualitative	ⓑ quantitative
Descriptions of Australian politicians' behaviour	ⓐ qualitative	ⓑ quantitative
Percentage who vote for each political party	ⓐ qualitative	ⓑ quantitative

b Fill in the table below with information about each type of data. Some cells are filled in already.

Type of Data	Qualitative Data	Quantitative Data
Definition →		Based on numerical information that can be statistically analysed and graphed
Example of your own personal data→		
Advantage →	Provides in-depth information about an individual's experiences and perspectives	
Disadvantage →		

c Think of a quality that you would like to be able to turn into a quantitative measure, e.g. sociability, interest in music, level of addiction to social media, etc. Generate 5 statements to which you could respond with either T or F, as with the scale above.

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