

SAMPLE

Psychology
Teach Yourself Series
Topic 9: Nature of Consciousness (Unit 4)

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Consciousness

Psychologists have grappled with the definition of consciousness for many centuries. It is a hypothetical construct, which means that it is not something that can be directly observed or measured. In fact, psychologists need to infer that consciousness exists through the observation of our behaviour. At its very essence, consciousness can be defined as our awareness of our own selves, our thoughts, feelings and behaviours. It also means that we are aware of our external environment or our surroundings.

Concepts of Normal Waking Consciousness

As it appears in Unit 4

Our consciousness is usually described as being on a continuum, ranging from high levels of focused attention through to the lowest levels of consciousness and coma.

The consciousness continuum looks like this:

	Selective Attention (focused)	Normal Waking Consciousness (NWC)
	Divided Attention	
	Daydreaming	Altered States of Consciousness (ASC)
	Meditation	
	Hypnosis	
	Light Sleep	
	Deep Sleep	
	Anaesthetized	
	Unconscious	

Figure 1: The consciousness continuum

When we are in normal waking consciousness (NWC) we are awake, alert and aware of our surroundings in a non-distorted manner. We have the ability to control our thoughts and feelings, and to change our behaviours if we wish. This is contrasted with altered states of consciousness (ASC).

Concepts of Altered States of Consciousness

As it appears in Unit 4

Altered states of consciousness are defined as any state that is distinctly different from NWC. They are different because our awareness of ourselves and our environment is altered or is different in some way. ASCs can be naturally induced (e.g. sleep), or can be chemically induced (e.g. when drunk).

Two ASCs that need to be understood in detail are daydreaming and alcohol-induced ASCs.

Alcohol-induced and drug-induced

As it appears in Unit 4

Alcohol is a depressant as it blocks the brain areas that control emotion and behaviour. In small doses alcohol may have a relaxing effect; however, at higher doses it can lead to major impairments in memory, motor function and attention. Under the influence of alcohol, people have slower reaction times and their awareness of their surroundings can change dramatically.

Depressant drugs depress the nervous system activity. Brain wave patterns of someone who takes a depressant drug, such as alcohol will have a decrease in brainwave activity and alertness. There is a relationship between blood-alcohol concentration and behaviour.

Stimulant drugs, such as caffeine, cocaine and amphetamines speed up the nervous system.

Altered States of Consciousness

Altered states of consciousness are states of consciousness that are distinctly different from normal waking consciousness.

Key characteristics of altered states of consciousness include:

- cognitive distortions;
- changes in emotional response;
- changes in self-control;
- disrupted and unreliable memories;
- distortion of time orientation.

Levels of Awareness

Attention is our ability to actively attend to or focus on some stimuli while ignoring others.

NWC	ASC
<ul style="list-style-type: none"> • Greater control over our attention levels. • Selective attention - our ability to focus on one stimulus while ignoring others (for example, focusing on your psychology exam and not hearing the examiner leaving the room). • Divided attention- our ability to focus on a number of stimuli simultaneously (for example, listening to music while going for a run). Divided attention can only occur when both tasks require lower levels of concentration. 	<ul style="list-style-type: none"> • Generally have lower control over our attention levels. • Selective attention is generally harder to maintain (meditation is an exception to this). • Divided attention is generally harder to achieve.

Content Limitations

Refers to the type of information we choose to attend to and how much we can take in at any given time.

NWC	ASC
<ul style="list-style-type: none"> • High levels of content limitation (we have more control over what we attend to or not and how we direct our thoughts). 	<ul style="list-style-type: none"> • Lower levels of content limitation • Thoughts are more incoherent and disorganised.

Controlled Processes

Controlled processes are tasks that require our focused and selective attention. They are generally tasks that are difficult and require high levels of concentration. Generally, we are only able to perform this task and no others simultaneously. They may be tasks that we are learning, or that we are unfamiliar with. An example of a controlled process is learning a musical instrument for the first time.

NWC	ASC
<ul style="list-style-type: none"> • Possible when in NWC. • Require high levels of concentration and selective attention. • Need to be undertaken individually. 	<ul style="list-style-type: none"> • Generally not possible when in an ASC because of the high levels of concentration required.



Solutions to Review Questions

1. Consciousness is on a continuum because there is not one distinct state. Our levels of awareness change and it is difficult to determine the point at which one's state of consciousness ends and the other begins. As such, it is referred to as being on a continuum of high, alert awareness to no awareness at all.
2. An ASC is any state that is distinctly different from NWC. It is different in terms of our perceptions, our cognitions, our levels of self-control, our emotional awareness, our perception of time passing and also in terms of the processes we are able to undertake.
3. Any appropriate example.
E.g. Controlled process- learning to drive.
Automatic process- driving after having your license for 20 years.

4. Perceptual Distortions

NWC	ASC
<ul style="list-style-type: none"> • Uncommon in NWC. • Perception in NWC is used as a baseline to determine what is normal. 	<ul style="list-style-type: none"> • Can be heightened (more receptive to stimuli e.g. hallucinating while on LSD). • Can be dulled (less receptive to stimuli e.g. not feeling pain while drunk).

Cognitive Distortions

NWC	ASC
<ul style="list-style-type: none"> • Thoughts are generally logical and cohesive. • Memory is unaffected. 	<ul style="list-style-type: none"> • Thoughts are more likely to be illogical and incohesive. • Memory (STM and LTM) can be affected. • Thoughts are slower.

5. Madeleine is most likely experiencing a daydream, this is a naturally occurring ASC. Evidence for this includes the fact that her focus of attention turns from the external environment to her internal thoughts. She is unaware of the teacher calling her name, she is thinking about the party on the weekend and fantasising about what she will wear. She is sitting in a class she finds boring (daydreams are more likely to occur when we are bored).

She will most likely perceive time as passing slower than in NWC.

6.

NWC	ASC
<ul style="list-style-type: none">• Accurate sense of self and identity.• Control over physical actions.• Control over emotional reactions.• Control over cognitions.	<ul style="list-style-type: none">• Distorted sense of self and identity.• Less control over physical actions (e.g. stumbling when drunk).• Less control over emotional reactions (e.g. laughing hysterically when drunk).• Less control over cognitions (e.g. not being able to remember the end of a story when drunk).• Note – Features of self control can also be heightened in some ASC's such as meditation.

7. In REM sleep we experience waves that are similar to beta waves. They have high frequency and low amplitude. They are sometimes called sawtooth waves.

8. Sleep spindles and k-complexes.

9. An EOG (electro-oculargram) detects, amplifies and records the electrical activity of the muscles that control eye movements. During REM sleep an EOG would display high levels of activity.

10. Questions such as:

- Rate your quality of sleep.
- How many times did you wake during the night?
- What activity did you do during the day?
- How much caffeine did you have during the day?