

A Three-Factor Model for Alcohol-Related Aggression

Jennifer D. Stoll

University of Liverpool

April 17, 2015

Assume for a minute that the mind operates, from the perspective as one who is performing actions, as an independent organ, that is, independent from volition. In that case, the mind automatically produces its thoughts dependent on focus without a need of thoughts to actively “be thought”. This presumed, volition purely becomes an act of inhibition, that is, a process of selection which automatically triggered ideas and related actions people let happen and which ones are dismissed. The automatic chatter of the mind, in this example, becomes a mixture of external sensations, internal memories, and the association mechanism between the two which the mind produces as long as there is input.

In this case, there are three main factors in which alcohol may influence behavior: (a) by narrowing attention to specific sensations or memories, (b) by changing the quality of the associations produced, for example, on a spectrum from primal to cognitively complex, and (c) by the ability to effectively suppress reactive behavior from being performed. Sklar and Nixon (2014) found that “alcohol disrupts pre-attentional sensory-filtering processes” (p. 4349). Harvey, Kneller, & Campbell (2013) confirmed that alcohol narrows attention to the central areas of images as well as recall (p. 969). This alone may cause a regression to more primal forms of behavior, focusing on motion and its associated reflexes that are likely more physical.

Interestingly, I was not able to find a study on alcohol and the quality of associative memory tasks. A working hypothesis would be that alcohol (dependent on the dose) improves associations but at the same time limits them to perceptive memory tasks that do not involve complex cognition. Alcohol has been found to increase stop-signal reaction times, thus negatively influencing response inhibition. Interestingly, it had no impact on lying, questioning the hypothesis of cognitive complexity (Suchotzki, Crombez, Debey, Oorsouw, & Verschuere, 2014, p. 74). Intoxicated people may still be able to execute complex, mental patterns that have been thoroughly learned, whereas only the construction of new, logically conclusive patterns is reduced.

The three discussed factors, taken together, effectively turn the human body into an associative reaction machine with a narrowed focus on physically prominent stimuli. Thus, reactive aggressive behavior may not be adequately suppressed if the context predisposes these associations. This may be the case in competitive environments, e.g. sports events or leisure activities in crowded locations that overemphasize mating behavior.

References

Harvey, A. J., Kneller, W., Campbell, A. C. (2013). The effects of alcohol intoxication on attention and memory for visual scenes. *Memory*, 21(8), 969-980.

Sklar, A. L., & Nixon, S. J. (2014). Disruption of sensory gating by moderate alcohol doses. *Psychopharmacology*, 231(2014), 4393-4402.

Suchotzki, K., Crombez, G., Debey, E., Van Oorsouw, K., & Verschuere, B. (2014). In vino veritas? Alcohol, response inhibition and lying. *Alcohol and Alcoholism*, 50(1), 74-81.