

The Lady Macbeth effect – how physical cleanliness affects moral cleanliness

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“Out, damn spot! Out I say!” In Macbeth’s fifth act, Lady Macbeth’s role in the treacherous murder of Duncan takes its toll, and she begins obsessively washing her hands to alleviate her guilty conscience. Now, some four centuries after Shakespeare penned his play, scientists have found that physical and moral cleanliness are just as inextricably linked as he suggested.

The link between bodily cleanliness and moral purity is evident throughout the world’s cultures. Cleansing ceremonies are common in religions. Christians and Sikhs literally wash away their sins through baptism, while the act of wudu sees Muslims prepare for worship by cleaning their bodies. Our language too reveals hints of an overlap – a ‘clean conscience’ is free of guilt, while ‘dirty’ is a word for thieves and traitors.

Chen-Bo Zhong from the University of Toronto and Katie Liljenquist from Northwestern University have now revealed the strong links between unblemished hands and stain-free hearts in a series of clever psychological experiments.

They asked two groups of people to remember a good or bad deed from their past. Afterwards, the volunteers solved a simple word puzzle by filling in the missing letters in three incomplete words: W_ _H, SH_ _ER and S_ _P. Remarkably, those who remembered unethical deeds thought of cleaning-related words, like shower, wash and soap, about 60% more often than other words that could equally have fit, like wish, shaker and step. Those who remembered ethical actions showed no such preference.

In another experiment, Zhong and Liljenquist wrongly informed a different group of people that they were taking part in a study investigating links between handwriting and personality. They asked each person to copy a first-person short story, where the protagonist either helped or screwed over a colleague.

Later, the subjects were asked to rate certain household products in terms of desirability. Those who copied selfish stories were much more likely to want cleaning products like Dove soap and Crest toothpaste compared to those who copied selfless tales. Both groups showed equal preferences for random goods like batteries and post-its.

Clearly, memories of moral indiscretions, even if they are not one's own, bring thoughts of cleanliness to the front of the mind. Zhong and Liljenquist believe that physical acts that reduce our levels of physical disgust have a knock-on effect in making us feel morally purer. After all, physical and moral disgust are very similar, with repulsive smells or comments eliciting the same facial reactions and activating overlapping brain regions.

But does it really work? Does cleansing truly absolve our minds of our sins? In a final experiment, the researchers find that, to an extent, it does. People were once again asked to describe a past wrong and some were allowed to wipe their hands with an antiseptic wipe. They were then asked if they would help out another graduate student by helping to pay for a research study. 74% of those who were not offered the wipe agreed. But many of those who wiped their hands also removed their moral stains, and only 41% of them offered help. Physical cleansing effectively halved the chances of future selfishness.

While physical cleanliness clearly goes some way towards restoring moral integrity, it would be foolish to assume that hygiene is a miracle cure for guilt. As Zhong and Liljenquist themselves admit, "There are surely limits to the absolution afforded by a bar of soap."

Reference: Zhong, C. (2006). Washing Away Your Sins: Threatened Morality and Physical Cleansing. *Science*, 313(5792), 1451-1452. DOI: [10.1126/science.1130726](https://doi.org/10.1126/science.1130726)

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