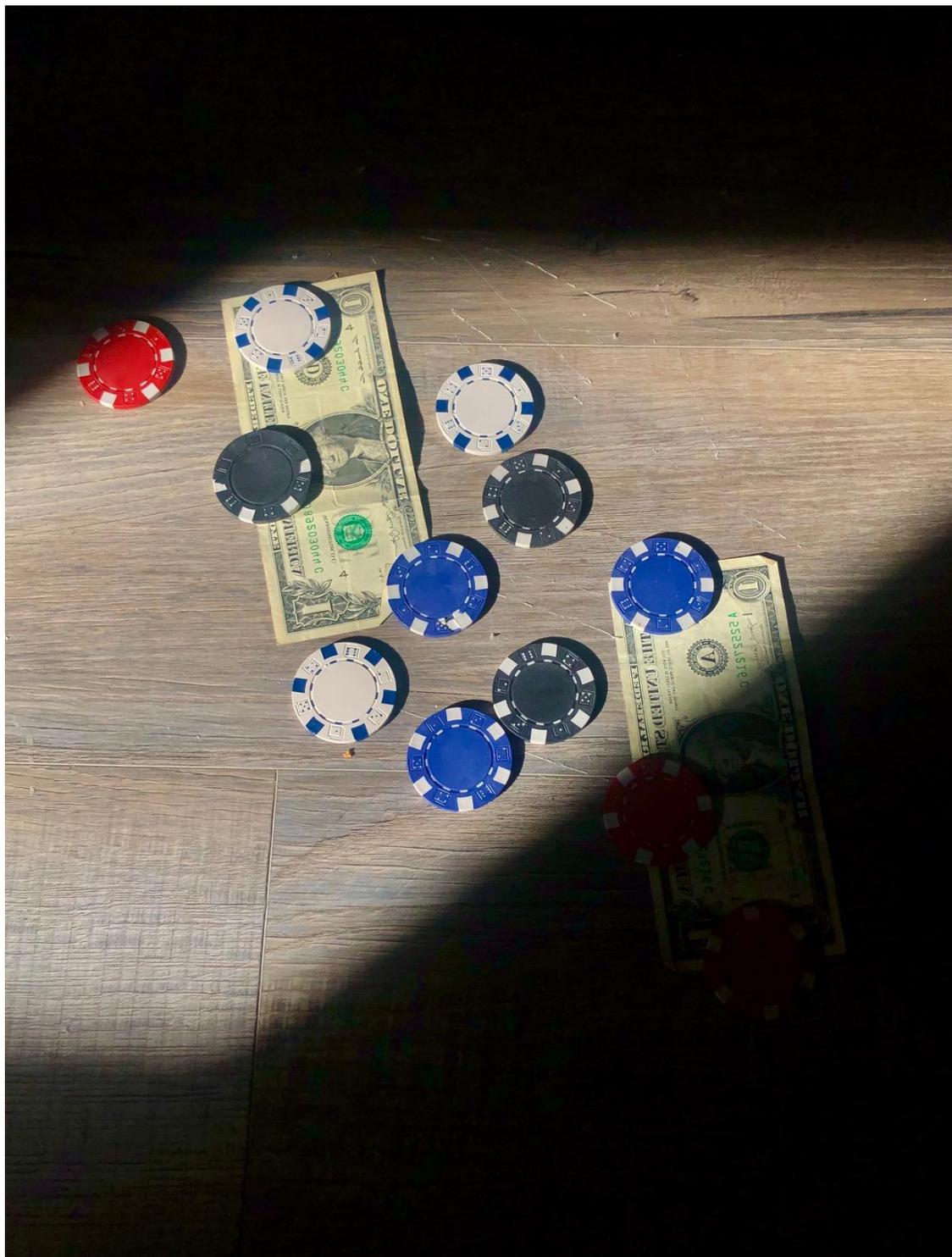


A Tough Pill to Swallow



A Tough Pill to Swallow shows the tragic reality of cigarette consumption and negative health outcomes and encourages the viewer to **think critically** about decisions regarding their health. The image depicts a **positive correlation** between the number of cigarettes consumed and the number of pills taken over time. This relationship shows that the use of cigarettes is correlated with the need for medical intervention. Additionally, the placement of the cigarettes and pills on a desk chair shows how one may feel stuck in place when experiencing health issues and fall into a trap of low exercise levels, which again feeds into health problems. The piece also begs the question of why so many people smoke. Forms of cognitive bias may influence the risk a smoker perceives in the moment. For example, if one is not experiencing a negative health impact in the current moment, they might fall into the trap of **confirmation bias**, where they assume that since the cigarettes are not showing problems yet they must be fine. Over time people develop major health problems because of falling into this trap.

The Last Two Dollars



The Last Two Dollars highlights the **negative correlation** between time spent gambling and money in your pocket. This piece also highlights the presence of **confounds**. If someone is a professional poker player and makes wages and has sponsorships outside of amateur casino gambling, then even when he or she experiences a negative correlation between time gambled and money lost, they still face a net positive for being present at the poker game. A professional poker player would be a **confound** in an experiment exploring the overall negative correlation between the relationship of money possessed and time gambling. *The Last Two Dollars* invokes **hindsight bias**. In the heat of the moment while gambling, someone may feel invincible, no matter their prior understanding of the risks involved or the statistical likelihood of winning using a given strategy. Hindsight bias allows this overconfidence and makes it hard to accept losing, especially when reexamining all the different scenarios that could have played out.

Chicken and The Egg



In the *Chicken and The Egg*, we do not know which came first: did the chicken lay the egg or did an egg hatch into the first chicken? You need an egg to have a chicken, right? Even though we do know eggs certainly came before chickens, this piece shines light on the **directionality problem**. We know the chicken and the egg are related, but the age-old adage begs the question of which caused the other. In **correlational studies** it is important to examine all evidence by **thinking critically** and considering the directionality problem before jumping to conclusions. In a more literal sense, someone who **sees relationships that don't exist** may think that there are better health benefits from eating both chicken and eggs together. We know there is not a correlation between consuming the two products together and seeing better health outcomes, but someone may be convinced there is a relationship if they see relationships that do not exist.

Armed and Dangerous



Armed and dangerous shows a **positive correlation** between the accumulation of weapons and participation in war and other forms of armed conflict. More weapons are correlated with more violence. The words “war and conflict” written in the textbook and positioned inside the pump of the B.B. gun push the viewer to consider the existence of war and conflict. When **thinking critically** one wonders how we can allow violence to persist if we understand its origins and history, as dictated by the textbook. If one grows up in a violent environment or is predisposed to situations of conflict, they could fall into the trap of **taking mental shortcuts** and see violence as the only logical answer. If violence is the easiest or most logical response for someone, biases in their mind will engrain them to instantly think to impose violence and take these mental shortcuts, no matter what the textbook or outside influence would say.

Glossary

Confounds: Anything that affects a dependent variable and that may unintentionally vary between the experimental conditions of a study. Only the independent variable should vary (Gazzaniga, 2018, p. 48).

Confirmation bias: The tendency to place great importance on evidence that supports one's pre-existing beliefs. A selective sampling of information contributes to confirmation bias (Gazzaniga, 2018, p. 7).

Correlational Studies: A research method that describes and predicts how variables are naturally related in the real world, without any attempt by the researcher to alter them or assign causation between them (Gazzaniga, 2018, p. 43).

Critical Thinking: Systematically questioning and evaluating information using well-supported evidence (Gazzaniga, 2018, p. 4).

Directionality Problem: A problem encountered in correlational studies; the researchers find a relationship between two variables, but they cannot determine which variable may have caused changes in the other variable (Gazzaniga, 2018, p. 45).

Hindsight bias: once one knows the outcome, they interpret and reinterpret old evidence to make sense of that outcome, often attempting to create parallels or find relationships that do not exist (Gazzaniga, 2018, p. 7).

Negative Correlation: A relationship between two variables in which one variable increases when the other decreases (Gazzaniga, 2018, p. 45).

Positive Correlation: A relationship between two variables in which both variables either increase or decrease together (Gazzaniga, 2018, p. 43).

Seeing relationships that do not exist: The tendency to perceive that two events that happen at the same time must somehow be related or attempting to find relationships in scenarios where two things may be unrelated. This can lead to superstitious behavior (Gazzaniga, 2018, p. 7).

Taking Mental Shortcuts: When one follow simple rules, called heuristics, to make decisions. This can lead to inaccurate judgments and biased outcomes. An example is when things that come most easily to mind guide our thinking (Gazzaniga, 2018, pp. 7-8).

Reference List

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