Takeaways from The Art of Thinking Clearly by Rolf Dobelli

1. **Survivorship bias:** success cases are over-represented, leading us to overestimate our chances of success
2. **Swimmer's body illusion:** selection factors are confused with results
3. **Clustering illusion:** tendency to perceive patterns where there are none
4. **Social proof:** predisposition to follow others' behaviours, esp. in uncertain situations. Combat with being skeptical and challenging norms
5. **Sunk cost fallacy:** reluctance to abandon an undertaking due to incurred costs, though that has no relevance to future outcomes (irrational). Consider only the latter
6. **Reciprocity bias:** social predisposition to respond to actions in a similar manner (e.g. kind behaviour is returned, so is hostility)
7. **Confirmation bias:** we disproportionately focus on evidence that confirms prior beliefs and disregard contradicting information. Seek out disconfirming evidence and clarify milestones to ensure we do not overlook failures.
8. **Authority bias:** information with authority is perceived as more credible/influential
9. **Contrast effect:** the effect of an object is enhanced/diminished when perceived in relation to another, though it should have no bearing (beware discounts, cheap add-ons, beauty standards).
10. **Availability heuristic:** evaluation of a concept is determined by how readily examples come to mind, which distorts actual risks and decisions made. Make effort to consider relevant but less accessible information, e.g. alternative views.
11. **Narrative bias:** illusion of causality; tendency to connect disjointed, random occurrences into a cohesive, controlled narrative (stories). Consider omitted elements (*via negativa*) and be wary if the bias encourages risky decisions.
12. **Hindsight bias:** hindsight is 20/20; we modify our cognitions after an event such that the event seemed inevitable and logical, although we are poor forecasters in reality
13. **Overconfidence effect:** person's subjective confidence in his/her judgements is reliably greater than objective accuracy of those judgements – even pessimists.
14. **Chaffeur knowledge:** vs. real knowledge – people who have invested time and energy to genuinely understand a topic. Chaffeurs merely repeat it without real understanding. Know your circle of competence and recognise when you fall outside.
15. **Illusion of control:** tendency for people to overestimate their ability to control events
16. **Incentive super-response tendency:** people respond to incentives by changing their behaviour (e.g. if you pay per hour, people prolong their work). Reward both intent and result, and watch out for ways people may exploit the system.
17. **Regression to mean:** the natural tendency for phenomena to even out towards the average. If an extreme event happens, it is likely to return to the average in time (think normal distribution).
18. **Outcome bias:** tendency to evaluate a decision based on its outcome (good/bad) rather than the decision-making process. This is an error because no decision-maker in the past ever knows for sure how the risk will turn out. To avoid the influence of outcome bias, one should evaluate a decision by ignoring information collected after the fact and instead focus on the quality of the factors at play.
19. **Paradox of choice:** more choices decreases quality of decision-making, and leads to lower satisfaction. Set a list of criteria and stick to them; recognise that perfection is unattainable; and learn to love what you choose.
20. **Liking bias:** the more we like someone, the more likely we are to trust and help that person. Influenced by 1) attractiveness, 2) similarity to us, and 3) they like us too. To maximise this benefit: send people compliments and make them think you like them.
21. **Endowment effect:** people's willingness to **pay** for a new object is typically **lower** than the amount they are willing to **accept** to give up the object. e.g. people lowball for textbooks on Carousell but sell it at high prices. Related to loss aversion. Related to **mere ownership effect** – owning an item makes one evaluate it more positively.

Endowment effect applies even to near-ownership circumstances. Don't cling to things and consider whether the relationship you have to those items really matter.

22. **Groupthink:** phenomenon where desire for harmony in an ingroup leads to dysfunctional decision-making processes and irrationality. Symptoms include: illusion of invulnerability, illusion of unanimity, pressures toward conformity. Question tacit assumptions and always appoint a devil's advocate to break consensus.
23. **Neglect of probability:** we respond well to the magnitude of an event, but lack intuitive grasp of its likelihood (probability). Zero-risk bias: we prefer 0% risk even when the alternative may have better outcomes. When faced with emotional topics or serious threats, we respond more poorly to risk reduction stats.
24. **Scarcity error:** tendency to place higher value on an object that is scarce and lower value on those that are in abundance. The more difficult an item is to acquire, the more value that item is perceived to be. Arises from social proof and commitment. Reactance: when we are deprived of an object, we deem it more attractive. To counteract, assess products solely based on their qualities. And remember that most things *will* come back – like sales.
25. **Base-rate neglect:** when people are given generic information (e.g. statistics) and then specific information (e.g. anecdotes), the mind tends to focus on the latter. Disregard of fundamental distribution levels. Specific variant of **extension neglect** – cognitive bias whereby people ignore size of the set during an evaluation in which the size of the set is logically relevant, e.g. ignoring sample size and variability. Watch out for anecdotal information.
26. **Gamblers' fallacy:** the erroneous belief that if a particular event happens more often than normal in the past, it will "balance out" by occurring less in the future. This is problematic if the events are statistically independent, e.g. a dice roll. What happened in the past is unrelated to the future.
27. **Anchoring bias:** cognitive bias whereby an individual relies too heavily on an initial piece of information offered (the "anchor") to make subsequent judgements. Once this initial value is considered, subsequent negotiations and decisions will align towards it while dissimilar values are discarded. The more uncertain the value of something, the more susceptible people are to anchors. Use anchors to elevate your value, but also be wary of them when it comes to sales.
28. **Induction problem:** inductive thinking is the tendency to draw universal generalisations from specific observations. However, these generalised certainties are always provisional – think Black Swan event.
29. **Loss aversion** (Daniel Kahneman): people fear loss much more than they value gain, and are much more motivated to avoid loss even when this comes at the expense of potential gain. Exploit this when advertising by appealing to how a product may help you avoid losses/disadvantages.
30. **Social loafing:** the tendency for individual effort to depreciate when in a team setting. Groups' total productivity is less than the sum of its individual members working separately. Increases proportionally with group size, due to diffusion of accountability and deindividuation. Combat this by making individual contributions visible (measurement), and motivation. Related to risky shift.