

# HOW MANY WAYS CAN THINKING GO WRONG? : A TAXONOMY OF IRRATIONAL THINKING pdf

## 1: Productive! Magazine

*How many ways can thinking go wrong?: a taxonomy of irrational thinking Tendencies and their relation to intelligence  
The social benefits of increasing human rationality and meliorating irrationality.*

This is the fourth and final part in a mini-sequence presenting Keith E. The psychology of rational thought. If you want to give people a single book to introduce people to the themes and ideas discussed on Less Wrong, What Intelligence Tests Miss is probably the best currently existing book for doing so. It does have a somewhat different view on the study of bias than we on LW: Below is a chapter-by-chapter summary of the book. It starts with the example of president George W. Stanovich then goes on to say that this should not be surprising, for IQ tests do not tap into the tendency to actually think in an analytical manner, and that IQ had been overvalued as a concept. For instance, university admissions frequently depend on tests such as the SAT, which are pretty much pure IQ tests. The chapter ends by a disclaimer that the book is not an attempt to say that IQ tests measure nothing important, or that there would be many kinds of intelligence. Separating Rationality and Intelligence talks about the phenomenon informally described as "smart but acting stupid". Dysrationalia is the inability to think and behave rationally despite adequate intelligence. Although dysrationalia may occur concomitantly with other handicapping conditions e. At the end, we return to the example of George W. On the other hand, other people were quoted as saying that Bush was "extraordinarily intelligent, but was not interested in learning unless it had practical value". Tony Blair repeatedly told his associates that Bush was "very bright". This is taken as evidence that while Bush is indeed intelligent, he does not have thinking dispositions that would have make him make use of his intelligence: Cutting Intelligence Down to Size further criticizes the trend of treating the word "intelligence" in a manner that is too broad. Stanovich points out that even critics of the IQ concept who introduce terms such as "social intelligence" and "bodily-kinesthetic intelligence" are probably shooting themselves in the foot. By giving everything valuable the label of intelligence, these critics are actually increasing the esteem of IQ tests, and therefore making people think that IQ measures more than it does. Consider a thought experiment. Imagine that someone objected to the emphasis given to horsepower engine power when evaluating automobiles. In an attempt to deemphasize horsepower, they then being to term the other features of the car things like "braking horsepower" and "cornering horsepower" and "comfort horsepower". Would such a strategy make people less likely to look to engine power as an indicator of the "goodness" of a car? Stanovich then continues to argue in favor of separating rationality and intelligence, citing surveys that suggest that folk psychology does already distinguish between the two. He also brings up the chilling effect that deifying intelligence seems to be having on society. Reviews about a book discussing the maltreatment of boys labeled feebleminded seemed to concentrate on the stories of the boys who were later found to have normal IQs, implying that abusive treatment of boys who actually did have a low IQ was okay. Various parents seem to take a diagnosis of low mental ability as much more shocking than a diagnosis such as ADHD or learning disability that stresses the presence of normal IQ, even though the life problems associated with some emotional and behavior disorders are much more severe than those associated with many forms of moderate or mild intellectual disability. Why Intelligent People Doing Foolish Things Is No Surprise briefly introduces the concept of the cognitive miser , explaining that conserving energy and not thinking about things too much is a perfectly understandable tendency given our evolutionary past. Framing and the Cognitive Miser extensively discusses various framing effects, and at the end notes that high-IQ people are not usually any more likely to avoid producing inconsistent answers to various framings unless they are specifically instructed to try to be consistent. This is mentioned to be a general phenomenon: Americans will provide much stronger support for the USA banning an unsafe German car than for Germany banning an unsafe American car. People will much more easily pick up on inconsistencies in the actions of their political opponents than the politicians they support. They will also be generally overconfident, be appalled at others exhibiting the same unsafe behaviors they themselves

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exhibit, underestimate the degree to which biases influence our own thinking, and assume people understand their messages better than they actually do. The end of the chapter surveys research on the linkage between intelligence and the tendency to fall prey to these biases. It notes that intelligent people again do moderately better, but only when specifically instructed to avoid bias. A Different Pitfall of the Cognitive Miser: Thinking a Lot, but Losing takes up the problem of failing to override your autonomous processing even when it would be necessary. Most of this chapter is covered by my previous discussion of override failures in the Cognitive Miser post. Mindware Gaps introduces in more detail a different failure mode: It notes that thinking dispositions for actually actively analyzing things could be called "strategic mindware". The chapter concludes by noting that the useful mindware discussed in the chapter is not widely and systematically taught, leaving even intelligent people gaps in their mindware that makes them subject to failures of rationality. I mostly covered the contents of Contaminated Mindware in my post about mindware problems. A Taxonomy of Irrational Thinking Tendencies and Their Relation to Intelligence summarizes the content of the previous chapters and organizes the various biases into a taxonomy of biases that has the main categories of the Cognitive Miser, Mindware Problems, and Mr. Spock Syndrome because as Stanovich says, it is not a fully cognitive category. People with the syndrome have a reduced ability to feel emotions, which messes up their ability to behave appropriately in various situations even though their intelligence remains intact. Stanovich notes that the syndrome is most obvious with people who have suffered severe brain damage, but difficulties of emotional regulation and awareness do seem to also correlate negatively with some tests of rationality, as well as positive life outcomes, even when intelligence is controlled for. The Social Benefits of Increasing Human Rationality - and Meliorating Irrationality concludes the book by arguing that while increasing the average intelligence of people would have only small if any effects on general well-being, we could reap vast social benefits if we actually tried to make people more rational. Disjunctive reasoning, the tendency to consider all possible states of the world when deciding among options, is noted to be a rational thinking skill of high generality that can be taught. Much other useful mindware, like that of scientific and probabilistic reasoning. While these might be challenging to people with a lower IQ, techniques such as implementation intention may be easier to learn. An implementation intention is formed when the individual marks the cue-action sequence with the conscious, verbal declaration of "when X occurs, I will do Y. Finally, research has shown that an even more minimalist cognitive strategy of forming mental goals whether or not they have implementation intentions can be efficacious. For example, people perform better at a task when they are told to form a mental goal "set a specific, challenging goal for yourself" for their performance as opposed to being given the generic motivational instructions "do your best". Stanovich also argues in favor of libertarian paternalism: For instance, countries with an opt-out policy for organ donation have far more donors than the countries with an opt-in policy. This is not because the people in one country would be any more or less selfish than those in other countries, but because people in general tend to go with the default option. He also argues that it would be perfectly possible though expensive to develop general rationality tests that would be akin to intelligence tests, and that also using RQ proxies for things such as college admission would have great social benefits. In studies cited in this book, it has been shown that: Psychologists have found ways of presenting statistical information so that we can make more rational decisions related to medical matters and in any situation where statistics are involved. Cognitive psychologists have shown that a few simple changes in presenting information in accord with default biases could vastly increase the frequency of organ donations, thus saving thousands of lives. Americans annually pay millions of dollars for advice on how to invest their money in the stock market, when following a few simple principles from decision theory would lead to returns on their investments superior to any of this advice. These principles would help people avoid the cognitive biases that lead them to reduce their returns - overreacting to chance events, overconfidence, wishful thinking, hindsight bias, misunderstanding of probability. Decision scientists have found that people are extremely poor at assessing environmental risks. Psychologists from various specialty areas are beginning to pinpoint the cognitive illusions that sustain pathological gambling behavior -

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pseudodiagnosticity, belief perseverance, over-reacting to chance events, cognitive impulsivity, misunderstanding probability - behavior that destroys thousands of lives each year. Cognitive psychologists have studied the overconfidence effect in human judgment - that people miscalibrate their future performance, usually by making overoptimistic predictions. Psychologists have studied ways to help people avoid these problems in self-monitoring, making it easier for people to plan for the future overconfident people get more unpleasant surprises. Social psychological research has found that controlling the explosion of choices in our lives is one of the keys to happiness - that constraining choice often makes people happier. Simple changes in the way that pension plans are organized and administered could make retirement more comfortable for millions of people. Probabilistic reasoning is perhaps the most studied topic in the decision-making field, and many of the cognitive reforms that have been examined - for example, eliminating base-rate neglect - could improve practices in courtrooms, where poor thinking about probabilities have been shown to impede justice. They are examples of the types of outcomes that would result if we all became more rational thinkers and decision makers. They are the types of outcomes that would be multiplied if schools, businesses, and government focused on the parts of cognition that intelligence tests miss. Instead, we continue to pay far more attention to intelligence than to rational thinking. It is as if intelligence has become totemic in our culture, and we choose to pursue it rather than the reasoning strategies that could transform our world.

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## 2: Rational Thinking as a Process

*Positive thinking can go wrong, it even can be very dangerous. Now away from my own personal opinions, and away from what Jim Rohn or Tony Robbins have said, let's take a reality check to see how positive thinking can go REALLY wrong.*

Mencken Well-developed critical thinking skills will go a long way in impressing a potential employer. To put it short, employers want people whose skills are above average. Because of this, pretty much everyone preps to go into an interview ready to demonstrate these skills. But, most people fail to acknowledge the importance of demonstrating their critical thinking skills. Critical thinking is not faultfinding, derogatory, disparaging, or judgmental. You would get noticed for this, but not necessarily in the way you want to be noticed. Working well together “collaboration” is a proven way to test ideas. Employers want to promote people whose contributions add value to the organization. Therefore, critical thinking is not only fair-minded and analytical, but also judicious, diagnostic, and decisive. This is how you DO want to be noticed: If you can lead the group to make a solid decision that can be backed up with a well-considered evaluation, you will impress your supervisor in a good way. Potential employers want to know if you have the thinking skills that will give them a competitive edge. You may be wondering how you should get the message across that you have honed your critical thinking skills and that you are exactly the type of person who can help the organization reach its goals. Well, you know those common interview questions, like tell me about yourself, tell me about your strengths, what was your biggest accomplishment, why do you want this job, what challenges and problems have you faced in a job and how did you handle them? All of those questions give you golden opportunities to provide proof of your critical thinking skills. You know where else you can make your critical thinking skills shine? You may have heard the advice to follow-up with professionals who have agreed to network with you by sending them articles of interest to help foster a working relationship. The people who are impressed with your critical thinking skills will refer you for interviews, tell you about openings they know, and may even hire you themselves. Nowadays, some colleges and universities offer full courses in critical thinking. This would be a perfect way to get started on building your skills, or asking a professor or advisor what courses might be beneficial for you to take. It takes time to develop critical thinking skills, and no one expects a recent graduate starting a career to have the level of expertise that can swiftly provide an elegant, yet efficient solution. But if you take the time to carefully examine the problem, you can arrive at a solution that is both easy to understand, and, most importantly, correct.

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## 3: Thinking Problems: Correcting Our Misperceptions | Anxiety Network

*How Many Ways Can Thinking Go Wrong? A Taxonomy of Irrational Thinking Tendencies and Their Relation to Intelligence What Intelligence Tests Miss: The Psychology.*

Interpretations, Evaluations and Rules There are countless ways of looking at life - how can you know which help and which hinder? Fortunately, there are some guidelines. It is probably most useful to start by learning how to recognise irrational thinking. Why bother with problem thoughts? Otherwise, they remain untouched - and thus able to disturb you in the future. What does irrational mean? To describe a belief as irrational is to say: It distorts reality it is a misinterpretation of what is happening ; or it involves some illogical ways of evaluating yourself, others and the world around you - awfulising, discomfort-intolerance, demanding, and people-rating. It blocks you from achieving your goals and purposes. It creates extreme emotions which persist, and which distress and immobilise. It leads to behaviours that harm yourself, others and your life in general. The rules we live by Dr Albert Ellis, a clinical psychologist who is the founder of Rational Emotive Behaviour Therapy, proposes that a small number of core beliefs underlie most unhelpful emotions and behaviours. Here are a few samples of common irrational beliefs or rules for living [click here to view the full list](#): I need love and approval from those significant to me, and I must avoid disapproval from any source. People should always do the right thing. When they behave obnoxiously, unfairly or selfishly, they must be blamed and punished. I must worry about things that could be dangerous, unpleasant or frightening, otherwise they might happen. Events in my past are the cause of my problems, and they continue to influence my feelings and behaviours now. Everyone has a set of general rules of this kind. Some are rational, others are similar to those above. Mostly subconscious, the rules we hold determine how we react to life. When an event triggers a train of thought, what we consciously think depends on the general rules we subconsciously apply to the event. Why be concerned about your rules? While most will be valid and helpful, some will be irrational - and faulty rules will lead to faulty conclusions. It would then be there to bother you whenever some future event triggered it off. Interpretations and evaluations How do we identify those underlying, general rules? It involves going beyond the surface interpretations we make to our evaluations or personal meanings. In everyday life, events and circumstances trigger two levels of thinking: First, we attempt to interpret things in some way. John then jumps to the conclusion that she wants to leave. This is his interpretation. As well as interpreting things that happen, we also evaluate them in terms of what they mean to us. What personal meaning does John attach to the prospect that his wife might leave? He could, for example, regard it as a good thing if he wanted the marriage to end. But John evaluates it as a catastrophe that will lead to misery and prove he is a failure. He reacts accordingly, by feeling hopeless and putting himself down. Note that John is not directly evaluating what has happened his wife saying she is unhappy ; rather, he is evaluating his interpretation of what has happened. Using the ABC model, we can summarise the chain of events as follows: John interprets what is going on: Note, too, that interpretations can be true or false, and evaluations can be rational or irrational. You can, of course, both interpret and evaluate something quite rationally. Unfortunately, you can also get things wrong twice over. Say, for instance, your boss wants to see you. You can start by misinterpreting this. You guess that he must be upset with you, when all he wants to do is offer you a raise. It is also possible to get one right but the other wrong, e. Here are some more examples to show the differences between events, interpretations and evaluations:

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## 4: 4 Ways Groups Can Stifle Creativity

*How Many Ways Can Thinking Go Wrong? A Taxonomy of Irrational Thinking Tendencies and Their Relation to Intelligence Chapter The Social Benefits of Increasing Human Rationality--and Meliorating Irrationality Notes Bibliography Index*

It prevents you from reaching your goals. It leads to unhealthy emotions. It leads to self-defeating behavior. Ellis saw that practically all of his clients held variations of a dozen or so irrational beliefs. Although in his later writings, he was able to condense the original irrational ideas into 3 core beliefs The Three Major Musts , it can be helpful to be aware of the original ideas that Dr. Ellis noted and his reasons for labeling them as irrational. The idea that it is a dire necessity for an adult human being to be loved or approved by virtually every significant other person in his community. Even if you could get everybody to like or love you, you would never know if they liked you enough, or if they still liked you. Different people have different tastes. Some people might like for example your new hairstyle; other people might hate it. Getting people to like you takes time and effort. Your life will no longer be your own. If you try too hard to be loved or approved, people will soon tire of your constant sycophancy, and they will not respect you. The idea that one should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile. Nobody can be good at everything. But by trying too hard to succeedâ€”especially if you try to succeed at everythingâ€”creates unnecessary stressors. To be successful often means you have to compete against others. That means you have to pay too much attention to what other people can do, instead of what you can do. Very often you have little or no control over your own abilities. Being alive and able to enjoy life makes your life worthwhile. The best way to learn how to do something is to just do it. The way to succeed is to practice, practice, practice and to learn from your mistakes. Mistakes and failure are not awful; they are a normal part of learning. Human beings fail and make mistakes all the time. The idea that certain people are bad, wicked, or villainous and that they should be severely blamed and punished for their villainy. Human beings are not perfect. Believing that others must do the right thing ignores the real world. We all do lots of things everyday. In fact, they may act worse as a way of getting revenge over their detractors. When you blame and punish yourself for your mistakes, you become fearful and depressed. When you blame and punish others for their mistakes, you become angry and bigoted. Then there is a danger that you will blame yourself for feeling afraid, depressed, angry or bigoted and become more upset. And then you blame yourself for feeling more upset and begin to feel even more upset, thereby setting up a vicious circle. If so, try not to do it again. If you can teach them to behave better, then do so. The idea that it is awful and catastrophic when things are not the way one would very much like them to be. The idea that human unhappiness is externally caused and that people have little or no ability to control their sorrows and disturbances. The idea that if something is or may be dangerous or fearsome one should be terribly concerned about it and should keep dwelling on the possibility of its occurring. If you can avoid dangerous events, then do so. In fact, worrying about them will probably make you deal with them less effectively. Instead, worrying will often make the event more likely. This sets up a vicious cycle: First they worry about seeing a spider, then they expect to see one, which makes them worry more. Now, instead of having just one problemâ€”dyingâ€”you have two problems: Worrying about things often makes them seem worse than they really are. Therefore, to stop worrying about something, convince yourself that it would be unfortunate if it happened, but it would not be awful. Instead of avoiding things you are afraid ofâ€”public speaking, for exampleâ€”go out of your way to practice doing them. The idea that it is easier to avoid than to face certain life difficulties and self-responsibilities. The relief you get from avoiding a difficult or unpleasant task is only temporary. You might feel better at the exact moment you avoid it, but later, you may regret your decision and wish you had faced the task when you had the opportunity. For example, you might avoid asking someone for a date, and feel immediately better because you had avoided the risk of rejection, but later you kick yourself for being so

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cowardly. When you tell yourself that a task homework, for example is so awful that you must not do it, you spend hours planning ways to avoid it, and then more hours thinking of an excuse for not doing it. The longer you put off doing the task, the longer you spend worrying about it. Instead of just getting it over and done with, you prolong your misery. The more practice we have at doing something, the easier it becomes. But if you avoid doing difficult tasks, you will never get the practice you need to make the job easier. If a job is unnecessary then it makes sense to avoid it. But if the job is going to make your life easier or more pleasant in the long run, then the sooner you do it, the better. You were not born lazy. There is no need to make life difficult for yourself by working too hard, doing unnecessary work. Life is for living. You only have one lifetime, so do as much as you can with it. Try things that might be difficult or unpleasant at first, and keep doing them until you get good at them and find that you enjoy them. The idea that one should be dependent on others and needs someone stronger than oneself on whom to rely. We cannot do everything for ourselves. But the more we can do for ourselves the better. If we become too dependent on others we lose control of our lives and allow others to make our choices and do our thinking. It makes sense to cooperate with one another, but it makes no sense to be totally dependent. It becomes a vicious circle. You cannot be certain the person or people you rely on will always be around. Therefore the more you can rely on yourself, the better. You are the only person who knows what you really want in life. If you rely on others to provide you with what you want, you may not get it. But if you rely on yourself, you have a greater chance of getting exactly what you want. For example, when you were a child, you may have been afraid of adults, and done whatever you could to please them so they would be good to you. You can now decide for yourself what you want out of life and you can, mostly, do whatever you please. Most problems have several solutions, but if you continue to rely on childish solutions, the less likely you will be able to find better, adult solutions. Blaming your problems on your childhood is just a poor excuse for not trying to solve your present problems. If you make the effort and really look, you can usually find solutions to the problems you have today. In the future, you will look back at today as being part of your past. By changing yourself today, you will be able to have a better future. There is no reason why you must feel upset if someone has a problem. We are all different, and other people will often do things that you disagree with. Even if someone is unfair or rude towards you, it is not the unfairness or the rudeness that upsets you, it is your belief that other people should be fair and polite. You have a lot of power to change yourself, but you have only a little power to change others. Getting upset does not give you more power to change others, in fact, it often reduces your influence. Some people like seeing you upset so, instead of changing, they may try to upset you more. Sometimes people will change because you are angry or upset with them. But is it worth it? Surely there are better, less painful ways to change people than making yourself feel bad. Being happy often involves changing the way you think, and changing the things you do. Getting upset or angry over what other people do is a poor excuse for not solving your own problems and changing your thinking. The idea that there is invariably a right, precise, and perfect solution to human problems and that it is catastrophic if this perfect solution is not found. Finding perfect solutions to all your problems is impossible. Most problems have several solutions. Or if you do use a less-than-perfect solution, you will make yourself unhappy because you think you should have kept looking for the perfect one. When you have a problem, make a list of several solutions. Then, instead of looking for the perfect one, choose the best solution from your list. Solving problems takes practice.

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### 5: I can't be the only one thinking this.. - September Babies | Forums | What to Expect

*-- A different pitfall of the cognitive miser: thinking a lot, but losing -- Mindware gaps -- Contaminated mindware -- How many ways can thinking go wrong? A taxonomy of irrational thinking tendencies and their relation to intelligence -- The social benefits of increasing human rationality, and meliorating irrationality.*

Actionable customer service tips and ideas, delivered weekly. No sales pitches, no games, and one-click unsubscribe. Are you struggling to come up with ideas for your next blog post? Our colleagues get to see the mocks, rough drafts, and specs, and can have a significant influence on how they develop, usually for the better. But this nascent stage is also where groups need to be the most cautious. Here are four mistakes every team should look out for when creating an environment conducive to creative work. Creating a culture of defensiveness Expecting your first idea to be right places undue stress on the creative process. Solutions become more obvious when you fill in the gaps around them with trial-and-error. Studies even show good, novel ideas rest on the willingness to continually rethink a problem. Unfortunately, this straightforward reality is made complicated thanks to human nature. Avoiding this problem is all about the tone you set. Our editorial team noticed this recently: We renamed that stage so it was clear these were concepts that could be worked on, not pitches that needed defending. In the earliest stages of the creative process, lowering the barrier to entry can help raise the collective bar. Forcing synthesis work to happen in groups The research and written sermons denouncing group brainstorming are pretty convincing. When other people are talking, the rest of the group has to wait. This can cause contributors to lose focus on their ideas or dissuade them from speaking at all. Although many brainstorming sessions try to leave evaluation out until later, everyone knows the group is quietly reacting to their ideas as soon as they hear them. Meetings are conducive to compromise because they dilute the average level of experience in a setting built around spontaneous suggestions. The result is a collective search for common ground, and common ground is most easily found on the simple issues. Groups will always be better at piecing things together than they are at creating the individual pieces. But meetings and brainstorming clearly have their place. Instead of giving immediate feedback, ask questions. Applying the wrong amount of process A blank canvas imposes the burden of unlimited scope. This leads to a bureaucratic mess, where even chance thoughts have to be run through the meat grinder of process. Like many tradeoffs, the right balance between order and freedom is key. Adapted from a keynote given by Pete Myers at Mozcon Editorial teams live with this problem. When creativity is blocked by an especially tough problem, getting a new perspective helps. Gregory Ciotti Greg is a writer, marketing strategist and alum of Help Scout. Connect with him on Twitter and LinkedIn.

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## 6: Becoming a Critic Of Your Thinking

*What Intelligence Tests Miss Ways to Avoid Thinking How Many Ways Can Thinking Go Wrong? A Taxonomy of Irrational Thinking Tendencies and Their Relation.*

Translate this page from English Print Page Change Text Size: Linda Elder and Dr. No matter what your circumstance or goals, no matter where you are, or what problems you face, you are better off if your thinking is skilled. Poor thinking, in turn, inevitably causes problems, wastes time and energy, engenders frustration and pain. Critical thinking is the disciplined art of ensuring that you use the best thinking you are capable of in any set of circumstances. We all have multiple choices to make. We need the best information to make the best choices. What is really going on in this or that situation? Are they trying to take advantage of me? Does so-and-so really care about me? Am I deceiving myself when I believe that. What are the likely consequences of failing to. If I want to do. How can I be more successful in doing. Is this my biggest problem, or do I need to focus my attention on something else? Successfully responding to such questions is the daily work of thinking. However, to maximize the quality of your thinking, you must learn how to become an effective "critic" of your thinking. And to become an effective critic of your thinking, you have to make learning about thinking a priority. What have you learned about how you think? Did you ever study your thinking? What do you know about how the mind processes information? What do you really know about how to analyze, evaluate, or reconstruct your thinking? Where does your thinking come from? How much of your thinking is vague, muddled, inconsistent, inaccurate, illogical, or superficial? Are you, in any real sense, in control of your thinking? Do you know how to test it? Do you have any conscious standards for determining when you are thinking well and when you are thinking poorly? Have you ever discovered a significant problem in your thinking and then changed it by a conscious act of will? If anyone asked you to teach them what you have learned, thus far in your life, about thinking, would you really have any idea what that was or how you learned it? I suppose in my life I have more or less taken my thinking for granted. I have never really studied it. It just happens in my mind automatically. It is not a subject in most colleges. It is seldom found in the thinking of our culture. But if you focus your attention for a moment on the role that thinking is playing in your life, you may come to recognize that, in fact, everything you do, or want, or feel is influenced by your thinking. And if you become persuaded of that, you will be surprised that humans show so little interest in thinking. Yet once this thinking is done and we move our thinking to a higher level of quality, it is not hard to keep it at that level. Still, there is the price you have to pay to step up to the next level. To become better at thinking, you must be willing to put the work into thinking that skilled improvement always requires. Improvement in thinking, in other words, is similar to improvement in other domains of performance where progress is a product of sound theory, commitment, hard work, and practice. Consider the following key ideas, which, when applied, result in a mind practicing skilled thinking. These ideas represent just a few of the many ways in which disciplined thinkers actively apply theory of mind to the mind by the mind in order to think better. In these examples, we focus on the significance of thinking clearly, sticking to the point thinking with relevance, questioning deeply, and striving to be more reasonable. For each example, we provide a brief overview of the idea and its importance in thinking, along with strategies for applying it in life. Realize that the following ideas are immersed in a cluster of ideas within critical thinking. Though we chose these particular ideas, many others could have instead been chosen. There is no magic in these specific ideas. In short, it is important that you understand these as a sampling of all the possible ways in which the mind can work to discipline itself, to think at a higher level of quality, to function better in the world. Clarify Your Thinking Be on the look-out for vague, fuzzy, formless, blurred thinking. Try to figure out the real meaning of what people are saying. Look on the surface. Look beneath the surface. Try to figure out the real meaning of important news stories. Explain your understanding of an issue to someone else to help clarify it in your own mind. Practice summarizing in your own words what others say. Then ask them if you understood them correctly. You should neither agree

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nor disagree with what anyone says until you clearly understand them. Our own thinking usually seems clear to us, even when it is not. But vague, ambiguous, muddled, deceptive, or misleading thinking are significant problems in human life. If we are to develop as thinkers, we must learn the art of clarifying thinking, of pinning it down, spelling it out, and giving it a specific meaning. When people explain things to you, summarize in your own words what you think they said. Strategies for Clarifying Your Thinking State one point at a time. Elaborate on what you mean Give examples that connect your thoughts to life experiences Use analogies and metaphors to help people connect your ideas to a variety of things they already understand for example, critical thinking is like an onion. There are many layers to it. Just when you think you have it basically figured out, you realize there is another layer, and then another, and another and another and on and on Here is One Format You Can Use I think. Can you give an example? Let me tell you what I understand you to be saying. Did I understand you correctly? Stick to the Point Be on the lookout for fragmented thinking, thinking that leaps about with no logical connections. Start noticing when you or others fail to stay focused on what is relevant. Focus on finding what will aid you in truly solving a problem. Is this or that relevant to it? It selects what is germane, pertinent, and related. It is on the alert for everything that connects to the issue. It sets aside what is immaterial, inappropriate, extraneous, and beside the point. What is relevant directly bears upon helps solve the problem you are trying to solve. When thinking drifts away from what is relevant, it needs to be brought back to what truly makes a difference. Disciplined thinking intervenes when thoughts wander from what is pertinent and germane concentrating the mind on only those things that help it figure out what it needs to figure out. How is this connected? Does my information directly relate to the problem or task? Where do I need to focus my attention? Are we being diverted to unrelated matters? Am I failing to consider relevant viewpoints? How is your point relevant to the issue we are addressing? What facts are actually going to help us answer the question? What considerations should be set aside? Does this truly bear on the question? How does it connect? Question Questions Be on the lookout for questions. The ones we ask. The ones we fail to ask. Listen to how people question, when they question, when they fail to question. Look closely at the questions asked. What questions do you ask, should you ask? Examine the extent to which you are a questioner, or simply one who accepts the definitions of situations given by others. Most people are not skilled questioners. Most accept the world as it is presented to them. Good thinkers routinely ask questions in order to understand and effectively deal with the world around them.

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## 7: Rational and Irrational Thought: The Thinking That IQ Tests Miss - Scientific American

*How Many Ways Can Thinking Go Wrong? A Taxonomy of Irrational Thinking Tendencies and Their Relation to Intelligence summarizes the content of the previous chapters and organizes the various biases into a taxonomy of biases that has the main categories of the Cognitive Miser, Mindware Problems, and Mr. Spock Syndrome.*

Richetti and Benjamin B. Tregoe Table of Contents Chapter 1. Rational Thinking as a Process Solutions to significant problems facing modern society demand a widespread qualitative improvement in thinking and understanding. We need a breakthrough in the quality of thinking employed by both decision makers and by each of us in our daily affairs. The news media are rife with examples of questionable responses or solutions to situations and events. We all, average citizens to world leaders, struggle to develop creative, workable solutions to pressing problems and issues. Parents wrestle with helping their children successfully navigate in an increasingly complicated world. A lack of thought does not characterize most of these scenarios, but rather an incomplete consideration of the situation. Typically, poor decisions or other mistakes are a result of flawed or incomplete thinking, not the absence of thinking. This book is about rational thinking. The phrase is not a redundancy. Contrary to popular opinion, not all thinking is rational, at least as we would define rational. Rational thinking is the ability to consider the relevant variables of a situation and to access, organize, and analyze relevant information e. Indeed, several authors have defined intelligence, at least in part, as the ability to solve problems. For example, Sternberg writes: Successful intelligence as I view it involves analytical, creative, and practical aspects. The analytic aspect is used to solve problems, the creative aspect to decide what problems to solve, and the practical aspect to make solutions effective. Rational thinking helps us arrive at a conclusion to be able to do something i. Rational Thinking as a Series of Steps Much of what we do in everyday life involves a processâ€”a series of actionable, repeatable steps that can be performed to accomplish a desired goal. For example, we have a process for baking a cake, writing an expository essay, and changing a tire. A process is a meaningful, repeatable series of steps that produces an outcome. Every process requires inputs to produce some output. To make delicious barbecued ribs output , we need fresh meat, a tasty sauce, and other ingredients inputs. We also need to ensure that the grilling process is good. In arriving at a conclusion, we must take a series of inputs and do something to them a process. The Rational-Thinking Process The same logic that applies to the ribs applies to the rational-thinking process. A sound conclusion output requires high-quality inputs e. Focusing on the inputs is not enough to ensure success; we need to give equal attention to the process or what we do with the inputsâ€”how we collect, organize, and analyze them. A group of student-athletes has been asked to recommend a districtwide substance abuse policy for all student athletes. The output for this situation would be the substance abuse policy. What would the inputs be? They might be statistics on substance abuse by student athletes or opinions from students, coaches, administrators, parents, and board members on what should be done. As with most complex situations, some ideas and opinions might conflict. How do the students get from juggling all these inputs to developing a sound student-athlete substance abuse policy? The process of rational thinking is needed. But where did we learn to think rationally? Typically, they learn through osmosis or experience. If you ask most people what steps they go through while thinking, they are unable to articulate them. Consequently, they are unable to critique their own thinking processâ€”and unable to teach others. Myers uses an analogy to show this difficulty: When we see a juggler effortlessly tossing oranges in the air, we fail to appreciate the first stumbling efforts and the hours of practice that laid the groundwork for that proficiency. The same holds true for expert critical thinkers. All experts started as novicesâ€”struggling with basic concepts, questions, and issuesâ€”as they developed the thought processes that would help them make sense of things. The problem is that by the time they have achieved their expertise, many of those thought processes have become so automatic, internalized, and implicit that the experts have difficulty explaining explicitly how they think. What if you had no model for how to drive, how to start a car, how to put the car in gear, and how and when to brake? How many of you would put

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your year-old behind the wheel without providing any driving instruction, either formally or informally? Yet a similar situation occurs when our children are expected to think rationally. Furthermore, who taught us the basics of rational thinking? Where did we learn to arrive at sound conclusions? How will our children learn? The main reason that rational thinking is not addressed in the same way as learning to drive, write, or play a sport is that it has been treated primarily as an invisible process. The focus in a thinking situation is typically on gathering the inputs—information, data, and opinions—not on how to organize and analyze them. Consequently, rational thinking has been an invisible process. What are the unintended but real consequences of allowing thinking to be an invisible process? Here are a few: We are forced to learn about thinking through trial and error—an inefficient and often costly way to learn. Without an understanding of what constitutes good thinking, we cannot proactively critique and improve own thinking. We are forced to assess our success after the fact. We are limited in our ability to teach others to think rationally. If we do not clearly understand the process of thinking, how can we help others improve their thinking? What do we teach? Beyer addresses this concern: A second obstacle to effective teaching and learning of thinking skills lies in our failure to identify with precision those cognitive operations that constitute the individual skills we choose to teach. If we knew the essential components of these thinking skills, we could devise better ways to teach these skills to students. Little knowledge is transferred from one situation to the next, leading us to overrely on experience, which may or may not be relevant to a new situation. Working with others may be chaotic and difficult in the absence of a common approach. Everyone tends to approach a situation from a slightly or vastly different angle. Imagine someone learning to drive in a carful of people who all drive differently and are all coaching the driver to do different things. We overrely on content. That content is an essential and important part of rational thinking is unquestionable. After all, a conclusion requires some consideration of content. Often, we may have the information needed, but we use it ineffectively. Our process, not our content, is faulty. Different Strategies for Different Situations Different situations require different types of thinking. Taken at face value, this rationale makes sense. Yet most problem-solving tools tend to treat all problem situations the same. Such tools are some variation on the following approach: Identify the problem, gather information, brainstorm possible solutions, select the best solution, and implement it. Treating all problem situations with the same approach, however, is akin to a doctor treating all complaints with aspirin. If you have a headache, aspirin may help. If you have nausea or difficulty breathing, however, you will probably require a different treatment. Beyer sees a similar approach in education: We sometimes use labels with different meanings to stand for a single skill. For instance, many educators equate problem solving with decision making, and many others also equate reflective thinking with either or both of these—despite the fact that each phrase describes a particular set of subskills that are used in a unique order to accomplish a different kind of task. Clearing up the ambiguities regarding which thinking skills to teach and how we define each is an important first step toward improving the thinking skills of students. Four Types of Situations Situation.

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## 8: Types of thinking

*A lot of us suffer from irrational thinking which can affect our lives in a dramatic way. It can separate the successful people in life from the unsuccessful ones, it can mean the difference between loving someone and hating someone, it can be the difference between peace and war. All wars, Yes I.*

Correcting Our Misperceptions Thinking Problems: Correcting Our Misperceptions by Thomas A. Although some of these "thinking styles" may come very naturally to us, it is always possible to change or restructure thinking so that we can be more rational, allowing life to be more enjoyable and productive. Our emphasis in therapy is always toward the practical: That is, how can I take the information I learn in therapy and apply it to my daily life, so that my life can be calmer and more peaceful, and I can better cope with the difficulties I face in life? Here are some "thinking problems" that many of us share. Emotional reasoning I think and act based on how I feel. When I get into this "vicious cycle" of thinking, it is hard to think realistically and remember all the good and positive things in your life. The negative things we dwell upon are not helpful to us at all. They lead us to think even more negatively and we get stuck in this cycle of "over thinking" and the "racing" thoughts about negative events that have happened and which we think will continue to happen. Learn to put a stop to this negative vicious cycle of thinking and to replace these ANTs thoughts with rational, progressive statements and thoughts that are more realistic. Magnification I blow things all out of proportion. Someone does something or says something to me that I perceive negatively and I make a much bigger deal out of it than I should. This magnification then leads to the vicious cycle of negative ANTs thinking we just discussed. Realize that I am probably making a mountain out of a molehill. Do I need to deal with people who are always putting me down or who are projecting blame at me? Sit back and calmly assess the situation. Labeling yourself All of us have many more positive elements of our personality than we realize. In addition, we have the capacity to strengthen and increase our good qualities. It is very true that anything you learned that is negative and that holds you back from happiness can be unlearned. In fact, with the right information and the right motivation, this is much more than possible, it is almost a certainty. No one has to live by labeling themselves negatively, and limiting what they feel they can do, when the mind and thought patterns can be changed. Thankfully, there are many more healthy and positive solutions to these problems than any of us recognize. Our goal should be to live happy, content, and peaceful lives. This may take some shifting of priorities, changing of thoughts, and some motivation, but it is always possible and always well worth the effort. The truth always conquers the lies if you let it.

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*Note, too, that interpretations can be true or false, and evaluations can be rational or irrational. You can, of course, both interpret and evaluate something quite rationally. Unfortunately, you can also get things wrong twice over.*

All wars, yes I mean ALL, are caused by irrational thinking. In this article I will look at seven common irrational thoughts and hopefully if you suffer from irrational thinking it will help you to change. If someone criticizes me there must be something wrong with me There are many reasons why people criticise each other but it does not mean there is something wrong with you if they do criticize you. It means they have a differing opinion to you which is fantastic as without differing opinions in the world it would be a terrible place to live. I must always seek approval in order to feel good about myself Many people have thought this at one time or another in their lives, however it becomes damaging when it is an entrenched belief. There is no way you can please everybody all the time so there is no point in even trying. Trying new things in your life is a way for you to grow and learn more about yourself. You have control over your thoughts and therefore your actions. Your thoughts and actions will determine your life. If you constantly blame others for the way your life has turned out you have given all your power away to other people. Take the control back and take responsibility for your thoughts and actions. I was rejected which means there is something wrong with me This is over generalizing like the person who was rejected in a relationship. They think it always happens to them and they must somehow be unworthy of love. If I feel happy about life something will go wrong Another common irrational thought. You deserve all the happiness you make for yourself; your past is your past. If there are still issues lurking from your past that is blocking you from feeling happy about today speak to someone about it. Do not tinge your present and future thoughts with bad memories or else your present and future thoughts will get infected and your life will always stay the same. How to stop your irrational thoughts Simple! Just catch yourself every time you have an irrational thought or self-defeating thought and replace the wording of your internal thought. For example, you are driving on a beautiful day and a bird decides to shit on your car. If birds always shit on his car his car would be floating in the stuff. So catch yourself with untrue statements such as: There are a lot more irrational thoughts out there and you have to be conscious to catch yourself thinking them. I hope this article helps you to catch your irrational thoughts and brings your life into perspective. He currently works with the homeless dealing with issues such as drug addiction, and alcoholism. He has a degree in Psychology and has been a counsellor to alcoholics. Also an affiliate marketer and writer he has penned 3 books on personal development and making money online.

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