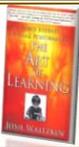


THE ART OF LEARNING

by Josh Waitzkin



Overview

Josh Waitzkin (on whom the movie *Searching for Bobby Fischer* is based) was one of the top chess and Thai Chi performers in the world. Here he teaches his lessons from mastering two seemingly separate skills.

PART 1. THE FOUNDATION

Chapter 1. Innocent Moves

Josh spent his younger years as a child playing chess in the NYC parks. He was noticed by Bruce Pandolfini who took him in as a young apprentice. Bruce started by ensuring Josh became comfortable with him first, and then began to guide Josh by asking him “why” Josh made certain incorrect moves. This helped correct any flaws in Josh’s underlying mental schemas for chess. For example, Josh preferred to make games more complex against his opponents, because chaos was where Josh thrived in seeing creative solutions. Bruce helped hone such strategies in a young Josh.

Chapter 2. Losing to Win

After eight-year-old Josh lost an important chess game against David Arnett, Josh’s parents took him fishing to clear his head. This allowed Josh to learn the value of taking breaks and relaxing. After some time, his father took Josh to play against the local chess players, and thus reinvigorated Josh. Josh learned that our sense of well-being is linked to our performance. Josh re-enters the chess tournament world, and notices he sometimes feels and intuits good moves before his conscious brain thinks of them.

Chapter 3. Two Approaches to Learning

1. Entity-Based: Such learning assumes that we only have innate abilities which are fixed. In other words, either you’re born with it or you’re not. Exemplified by saying “You’re a smart person” or “I’m bad at math.”

2. Incremental-Based: This assumes skills can improve, and is exemplified by changing “I’m not smart enough” to “I’m going to have to try harder!”

Studies have shown that entity-based feedback ends up stifling the ability for children to improve.

Chapter 4. Loving the Game

Josh purposefully guides chess games to states of chaos because that allows him to thrive. He cautions against using incremental-based learning as an excuse to avoid trying because “I don’t care about the results!” Rather, set short-term goals, and focus on the *process* of getting there. He discusses how to let go of things emotionally, and believes that you must accept life’s transience, always “*moving on to the next adventure.*” When you use every loss to learn and grow, losses become useful.

Chapter 5. The Soft Zone

The soft zone is visualized as a blade of grass, instead of a twig. A blade of grass can be thought of as both sturdy and flexible, compared to a brittle twig which is “strong” but snaps easily. “*The Hard Zone*” is being strong and trying to make the world submit to you via “*overpowering force*”; whereas “*The Soft Zone*” does not require a submissive world. For example, instead of expecting the noise of the competition to be quieter, Josh realized that he had to train himself to deal with the noise. He decided to deliberately practice chess near noisy NYC streets. In addition, he realized that instead of fighting and denying his natural emotions (which would be *The Hard Zone*), we must channel them to our advantage (*The Soft Zone*) by using them to heighten our focus. Become at peace with discomfort instead of avoiding it.

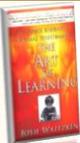
Chapter 6. The Downward Spiral

Eighteen-year-old Josh realizes that when he was previously in a good chess position but loses the advantage, he is extremely distressed. Comparatively,

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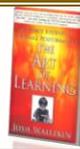
The Art of Learning (Page 1 of 5)





THE ART OF LEARNING

by Josh Waitzkin



when he is struggling and then *gains* position, he is joyful (even if rationally he isn't in the lead). He became emotionally attached to being in the lead, and equalizing the position was a blow to his emotions. Losing a position made him feel like he was losing the game. The desire for absolute perfection is fragile and brittle in The Hard Zone. We can't become emotionally frozen with the way things were in the past, because it creates a disconnect with the present reality.

Chapter 7. Changing Voice

The concept of "*leaving numbers to numbers*" is introduced. He describes how after fully understanding the mathematical concepts of certain chess positions, they become so subconscious that one can intuitively feel the chess board. After a game, he'd identify a bad move he made, and spend hours poring over the details in computer simulations. He made sure to fully understand why it was a bad move. Afterwards he'd be able to intuit the better move the next time that a similar situation appeared. He describes "*leaving numbers to numbers*" as integrating technical information into intuitive, natural "flow"-like information in our neurons. He describes how emotional issues in his personal life (e.g. with his girlfriend) would seep into his chess life, causing poor performance. He makes a connection between real life and chess, realizing he must embrace the changing nature of the universe and adapt with it. He then used this against his opponents. For example, if his opponent was an over-calculating person who needed to be in control, Josh would purposefully guide the board to chaos, and vice-versa.

Chapter 8. Breaking Stallions

Josh discusses different coaches he had, and which styles of teaching worked for him (e.g. coaches with rigorous disciplined training styles versus coaches who allowed Josh to have his own natural style). When breaking stallions, we can either freak it out until it's submissive, or we can approach indirectly. To gain its

trust so "*rider and animal feel like one*", is how he preferred to be taught chess. Yet he cautions that embracing a natural creative style must be "*tempered by a practical, technical awareness.*"

PART 2. MY SECRET ART

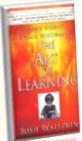
Chapter 9. Beginner's Mind

Josh then moves on to discussing his venture into Thai Chi. He started learning breathing techniques, which he touts as inordinately useful in all areas of life; we don't realize how tense we usually are! He discusses increasing his physical awareness by practicing martial arts. He sees a connection from his chess experience, realizing that Thai Chi masters "*read the body like a great chess player reads the board.*" He believes that modern man's breathing has unfortunately changed from a natural deep breathing to a hectic breathing style, due to our frantic society.

Chapter 10. Investment in Loss

Josh starts using his Thai Chi training to compete in Push Hands competitions. His first encounter was with a 64-year-old man whom Josh thought he'd have no trouble defeating. Yet this opponent demolished Josh, exerting powerful force with seemingly minimal effort. One impediment to growing is a fear of giving up old, comfortable habits. He claims that if a person enters a new endeavor without ever making the same mistake twice, he'd truly be a force to be reckoned with. People who have a desperate need to win will rarely learn from their mistakes; this desperate need to win will ironically cause their skill level to stagnant, thus decreasing their ability to win. Their emotional desire to always be right, and to always be in control, stunts their growth. After Josh started getting used to repeated defeats, he stopped fearing losses. Only then was he mentally open to noticing flaws in his opponents' games. After being defeated by Josh, his opponents would typically allow their fragile egos to take over, prevent them from





THE ART OF LEARNING

by Josh Waitzkin



learning from their mistakes. Young athletes need to first internalize basic skills before being expected to win; the humility and openness to learn is necessary to become their best. While Michael Jordan made more last-minute shots than any other player, few realize he also *missed* more last-minute-shots.

Chapter 11. Making Smaller Circles

Josh discusses how modern man always is trying to learn more variety, but never deeply learns anything. In his mind, by delving into the details and deeply learning something, it becomes intuitive. Afterwards, your mind is free to build on that knowledge. Step-by-step we should slowly keep internalizing what we're learning. After which, we can move on to more complicated skills. We must be able to perfectly perform a skill slowly until it's internalized. Once a skill is internally, we can gradually increase the speed by which we perform the skill. He discusses "*making smaller circles*" as turning technical skills into "*feelings*" after many repeated hours of practice. He links this understanding from Thai Chi back to chess by realizing that certain grandmasters (e.g. Michael Adams) can control the center of the board while seemingly being nowhere near the center. What is difficult for a chess Master to grasp, a Grandmaster sees intuitively. To summarize: Josh believes that depth is better than breadth, because depth allows for subtle internalization. This frees our conscious mind to be more creative, once we can intuit and "*feel*" our skills, akin to a grandmaster.

Chapter 12. Using Adversity

We must be able to create little spurts of inspiration in ourselves, not being dependent on the external world to inspire us. Josh purposefully returns to studying the basics if his technique isn't improving, which can jolt little creative insights. He discusses how NFL players will typically study their performance from past seasons during their off-season. This offers a valuable

opportunity to jolt their internal inspiration and creativity.

At one point in his Thai Chi training, Josh injured his hand. Yet instead of complaining about being at a disadvantage, he used that situation to practice competing with only one hand. Once he started to improve his skills with one hand, he realized how much his opponents were handicapping themselves by being dependent on two hands. Josh would typically use this to his advantage: if at any point in a competition he could control *two* of his opponent's limbs with only *one* of his, he had a free limb himself to work with. He relates this to war, politics, legality, business, and careers. For example, instead of complaining about getting fired, we should use that extra time to learn a new skill. He discusses using setbacks to "*deepen your resolve.*" In addition, athletes can even *purposefully* create adversity for themselves by switching their dominant hand, thereby deepening their understanding of the game.

Chapter 13. Slowing Down Time

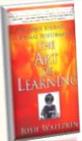
Peak performance is described as "*calm with a razor's edge.*" He claims that intuition bridges the gap between the conscious and unconscious mind. By delegating our subconscious as simply some illusory machinery, we are missing out on opportunities to use it to our advantage. He discusses our brain's natural ability to group relevant information for easy access in memory. For example, chess masters can better memorize unseen chess positions if they were from real games, as compared to random scattering of chess pieces across the board.

To use this principle to his advantage, he first trained in chess with isolated pieces (e.g. just a bishop and a king versus a king). After he internalized that end-game, he then trained with a bishop and knight versus a king (thus making smaller circles). Essentially, he gradually allowed his brain "*chunk*" the bishop with the knight,

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The Art of Learning (Page 3 of 5)





THE ART OF LEARNING

by Josh Waitzkin



and slowly added pieces to this training process. This end-game isolation practice is contrary to how most players train (most simply memorizing openings). This technique allows him to intuit and feel the pieces on the board relative to one another, realizing the value that different combinations of pieces have.

Nearly all the top-level performers at an endeavor such as chess have mastered the technique and technical skills to the same level. At which point the competition boils down to psychological games and style. Grandmasters can see much more when just glancing at a board, due to having internalized the basics. Essentially, they are physically looking at less and yet mentally seeing more.

In Thai Chi, whenever Josh was defeated by a sparring partner, he requested that his opponent break down the move which defeated Josh. Josh forced himself to internalize his opponents' skills. By internalizing the moves, Josh is using much more information in each 1-second time interval than someone who has to consciously think more. Thus, he is *"slowing down time."*

Chapter 14. The Illusion of the Mystical

Once he internalized the techniques, Josh realized that subtle changes in breathing patterns during a competition could give away his opponents' intentions. Yet instead of trying to don a poker face, which would be against Josh's natural inclinations (The Hard Zone), Josh lets his opponents read every expression of his, while using *"smaller circles"* to subtly guide the interaction. For example, if he was feeling confident, he might appear outwardly over-confident. His opponent would then wonder if Josh overcompensating and trying to cover something up.

To make even smaller circles, once his opponents caught on that Josh was genuinely confident, Josh would purposefully act confident when he was feeling cautious, thereby using his opponent's pattern recognition to Josh's advantage. He developed more

subtle techniques for *"systematically controlling [his] opponents' intentions."* For example, he would purposefully push against his opponent in Thai Chi several times to condition his opponent to respond in a certain way (i.e. to push back against Josh). Afterwards, Josh would move out of the way, letting his opponent fall. The opponent would not be aware he had been mentally conditioned during the match; Josh would appear to mystically make his opponent fall forward. Josh would purposefully make his opponent feel confident & powerful by *"feigning unhappiness and backing up"*, so Josh could take advantage of this (conditioned) overconfidence in his opponent.

Other opponents (such as Daniel Caulfield) would use similar techniques with Josh, and they would both begin a deeply psychological battle of *"smaller circles"*. They ended up trying to manipulate each other through their blinking and breathing patterns. Football quarterbacks can use similar tricks, darting their eyes to certain receivers to try to manipulate the opposing team into moving in the wrong direction.

PART 3. BRINGING IT ALL TOGETHER

Chapter 15. The Power of Presence

We must be at peace with pressure, being able to withstand discomfort, instead of getting torn apart by the pressure. Always stay present in the competition, and try to constantly *"maximize each moment's creative potential."*

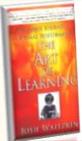
Chapter 16. Searching for the Zone

Josh used to train for chess in loud environments, forcing himself to develop an inner focus and peace regardless of the external world. Giving 100% effort too early in a competition puts you at the risk of burnout; we must learn to pace ourselves. Instead of our performance being fragile and dependent on feeling inspired on a given day, we must practice sustained peak performance. This leads him to learning about the

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The Art of Learning (Page 4 of 5)





THE ART OF LEARNING

by Josh Waitzkin



principle of interval training. He believes that short periods of peak performance followed by relaxing, is better than trying to sustain peak performance for longer time periods. He learns the value of letting go of everything mentally in-between performances, in order to recharge for the next bout of peak performance. Additionally, cardiovascular interval training (running your hardest for 30 seconds and then resting) is a method for training yourself to better handle mental exhaustion.

Chapter 17. Building Your Trigger

Josh trained at several performance centers reserved for world-class athletes and executives. He discusses a man "Dennis" who would get stressed out before important business meetings. Dennis was most relaxed when playing catch with his son. Josh had Dennis develop a very specific half-hour routine before every catch with his son (a light snack, stretching, and listening to a certain song). After several months of this, Josh had Dennis work on gradually compressing that routine into a 2-minute routine (a smaller snack, faster stretch, and shorter song). Then, whenever Dennis was preparing for a business meeting, he'd quickly run through his 2-minute routine. His mind had been conditioned into expecting a catch with his son, and as such would enter a relaxed state. This technique put Dennis into peak performance mode for his meeting.

Chapter 18. Making Sandals

"To walk a thorny road, we may cover its every inch with leather or we can make sandals."

When faced with dirty opponents, our natural instinct is to get angry, which is exactly what such opponents wish to do. Rather, Josh focused on seeking out dirty opponents to practice against, to train himself. Preparing for imperfection and taking personal accountability is better than denying reality and hoping for a cooperative world. You can even channel natural

anger into increased intensity. When an opponent tries to incite anger in us, and fails, this actually causes the opponent to get angry himself and become flustered.

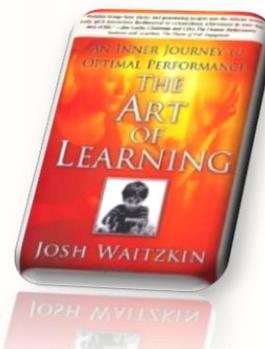
Chapter 19. Bringing It All Together

We must always use our own personalities and dispositions to our advantage. We must avoid complacency, as *"mediocrity can be self-nurturing."* Recognizing how much Josh had to learn (and staying humble) helped him become more skilled. Josh purposefully studied tapes of his opponents prior to any competition to pick up subtle weaknesses he could exploit. He discusses how great competitors work on *"penetrating the macro through the micro"*. In essence, extrapolating general principles (macro) from deep subtle study of individual actions (micro). Josh learned how to embrace the chaos, and seek out more difficult opponents to practice against.

Chapter 20. Taiwan

This chapter goes into the details of him competing for the title of World Champion in Taiwan. He had to deal with dirty judges, competitors who were just as skilled at making smaller circles as him, and facing off against competitors who pushed him mentally and physically.

The following is a link to the Youtube video: <https://youtu.be/leuf-5pZaaw>. He ended up tying for first place. *"Buffalo and I swayed on the first place podium together, hugging, and holding each other up."*



(Click [here](#) to purchase the book.)

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The Art of Learning (Page 5 of 5)

