# Tiger's Chaos Theory 

By

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## Quality Chess

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## Preface

## "Though this be madness, yet there is method in't" - Hamlet

What started out as a book about creativity ended up as something else - but not quite. It is a book about navigating chaos, calibrating your intuition in outrageous situations; about the limits of the possible, and about spotting zebras. I believe I have an obsession with queen sacrifices, and no one will doubt me at the end of this book.

Historically, intuition has often been contrasted with logic, and seen as a weaker, whimsical and less valuable version of the real thing. In chess, we cannot do without intuition. I will argue that there are certain things intuition should be used for, and others that it should not be used for. I hope to help you improve your intuition in certain areas in which calculation may previously have seemed like the only choice.

There are numerous situations where we subconsciously filter out good moves because they come into conflict with our intuition. In Chess for Zebras, Jonathan Rowson quotes a Sufi saying: "When you hear hoofs beat, think of a zebra" to illustrate "being more open to experience and less constrained by convention" and thus "allowing yourself to think differently." For a long time, I was very much into zebras; I was looking for them everywhere, and it was my ambition to become the best zebra-spotter you had ever heard of. In one sense, this book is a guide to recognizing and handling rare types of zebras. Your intuition is likely to generalize and recognize the sound of horses - but if you calibrate your intuition, you will start to detect the subtle difference in sound between horse and zebra hoofs.

Some chess players seem to bend the rules again and again, producing moves that we do not understand, at least at a glance. The creativity shown by the likes of Morozevich and Ivanchuk is often credited to "genius" - and that may well be a part of it. However, creativity is also a learnable skill to some extent. Players who make a habit of looking "outside the box" will eventually make their box bigger. When one of these players carries out an amazing move or concept which you don't understand, the explanation might be that what lies outside your box is inside theirs.

For more than twenty-five years I have collected games that challenged my perception of chess, and over that period I have slowly changed my way of thinking about the game. I used to seek chaos for chaos's sake, but nowadays I rely more on my ability to actually evaluate the consequences of pressing the chaos button. I have arrived at some kind of theory of chaos, and although it is neither complete nor clear to me, I want to share the ideas I have formulated.

I believe the potential to do something genius-like is within the reach of anyone - but it does take effort to reach for it. In Stiller by Max Frisch, the main character reflects on a person who he "cannot stand", who is "more intelligent" than himself, but only "uses his intelligence to avoid mistakes" (all freely quoted from my memory). I will try to push you away from such an attitude, towards madness. But I promise there will be method in't.

Tiger Hillarp Persson
Malmö, May 2024

## Introduction

"The situation has provided a cue; this cue has given the expert access to information stored in memory, and information provides the answer. Intuition is nothing more and nothing less than recognition." - Herbert Simon

It is unlikely that chess was invented or discovered in a moment of creation; rather it evolved through hundreds of mutations into the game we now know. (There were games played on an $8 \times 8$ grid, in Greece, in the third century BC.) The first known mutation, the Chaturanga, had its own history - one which we can never know. These earlier mutations continue to haunt the game into our days. As such, I see chess as a gathering of ghosts, bound together by their mutual history.

Chess is a logical yet paradoxical game. Sometimes we can capture the reason for a move in a few words ("the bishop is well placed on the long diagonal"); at other times the logic becomes more complex ("the bishop belongs on the long diagonal, but for now it needs to keep an eye on h6"); and sometimes, the logic behind a move becomes outright obscure ("no other move fulfils the requirements of the position"). I see no way to bring all these ghosts into a straight line; to build a grand theory of chess. Collisions and paradoxes are just part of the game, and I neither can nor want to pretend that it should be otherwise.

If you try to deal with chess, or any other complex system, with only the help of formal logic, you will end up with false conclusions. There are far too many factors with far too intricate relations for logic to be of more than a rudimentary aid. Not that logic does not have a part to play - but it is not enough in its purest form. You need ways to deal with immense amounts of information; something which can lead you in the right direction when trying to make a choice. I am referring to that mystical being which most chess players refer to as intuition. Much of this book is about finding ways to fine-tune your intuition so that it helps you in extreme situations.

Let me start with a not-too-complex example.

# Daniel Semcesen - Tiger Hillarp Persson 

Stockholm 2016


After twenty-odd moves of not the most precise chess, Black is on top. I spent a few minutes calculating the consequences of my next move and felt no doubt that it was the strongest - so I played it.

## 23... Ofxe4! $^{\prime}$

This move simply wins the game, and it is verging on the superfluous to calculate anything in order to make that assessment. First of all, the white centre is destroyed, and Black gets two pawns for a piece. Secondly, the e-file is opened, and White has serious tactical problems with the position of the bishops. Thirdly (and here some calculation comes in), I can press through with ...c4-c3. Furthermore, White's coordination is non-existent, with the rook stranded on h3 and the knight on d1. I did not even consider a second candidate move.

## 24.fxe4 0 xe4 25. 蹓c1

If 25. Mige1, then 25...c3! 26.bxc3 0xc3
 wins easily.

[^0]This was the main line that I calculated before playing 23... Vfxe $^{\text {f }}$


White resigned.

## 0-1

Not a remarkably interesting game, except for what happened afterwards. On our way to the commentary room, Daniel and I discussed the game a bit and basically agreed about most of its aspects. He only expressed his doubts about one of my moves: "Did you really have to take on e4?" I was quite puzzled. If there was one move in the game that I was completely sure was the strongest one, it was taking on e4. Looking in the rear-view mirror, I can understand that Daniel felt desperate about his position and sensed that almost anything would win for me. From that perspective, giving up material might seem to offer White some chances - but in reality, it won cleanly and much more efficiently than anything else.

Well, behold my surprise when I arrived at the commentary room and they immediately exclaimed, "Nice game, but you didn't really have to take on e4." This shocked me! Again, I had to explain that I was absolutely sure that it was the best move. Still, as soon as I got home, I switched the engine on to check whether I
had missed something. Clearly, I had not. The position is so simple that it is virtually impossible to miss anything.

Thinking more about what happened, I realized that this is something I encounter quite a lot: players who ask "was that really necessary?" or "couldn't that have been avoided?" when I give up material for - to me - obvious reasons. Evaluating whether $23 . . .0$ xe 4 should be high on the list of candidate moves is exactly the kind of decision that good intuition will help you with.

## What's so great about material?

The example above illustrates how many chess players, even strong ones, have an intuitive bias towards not giving up material, even when it is obviously the best option. This is partly why my playing style is seen as "creative". When I started to play chess more seriously, I had few inhibitions towards sacrificing material for other advantages such as time, structure or piece efficiency. Often, I went too far and found patterns which were better ignored: dead and buried ghosts which called out to me. And they keep calling out to me, loud and clear. Sometimes I spot long combinations in a split second because I see the themes weaved together, long before I start calculating. I guess other strong players can do this too, but I would still say that my ability to discover patterns is my strongest trait, compared to others. So, this book will focus mainly on patterns and only a little about calculation.

Over the last twenty years or so, I have slowly drifted towards an attitude where I weigh material relatively higher than before, but I remain convinced that "what are my pieces doing?" is a more important question than "what is the numerical value of my pieces?" What is so great about material anyway?

Obviously, a rook will outperform a knight in most endgames - but if the endgame is far away, of what significance is the material disparity in the meantime? It took me a while to stumble over an explanation that chimed with how I view chess. It goes something like: "The side with less material has fewer options to choose from in any given situation, since exchanges generally have to be avoided." (Freely quoted from my own memory). The side with a material advantage has more freedom in that it can choose the roads which lead to exchanges. A material deficit is a slippery slope, and if you start sliding it is not within your own power to stop. You end up in a situation where you "gotta do or die". In this book we will examine some extreme cases where material is not the most important aspect of the position. Or perhaps it is? It is for you to decide.

## Chapter 4

## When 5+5>10


"'The rook is my favourite piece,' she said. 'It's the one that you think you don't have to watch out for. It is straightforward. You keep your eye on the queen, and the knights, and the bishop, because they are the sneaky ones. But it's the rook that often gets you. The straightforward is never quite what it seems.'" - Matt Haig, The Midnight Library

A rook is a piece that gets stronger as the game goes on．It excels when the clutter of the middlegame leaves the board to reveal a scenic endgame，with open pathways stretching as far as the eye can see．Then there are those extreme situations when two rooks join forces along a file or rank，where their combined strength turns them from mere turrets into creatures of myth．Along open files，they rule． But it is when they reach the last ranks of the opponent＇s position that they gain an almost Hegelian the－whole－is－greater－than－the－parts strength that is hard to oppose．How do we go about evaluating such situations more precisely？

> Vasily Smyslov - Mikhail Tal

Moscow 1964


思b7 13．cxd5 exd5 14．d3 蹓f6 15．蹓d2 品ad8


監x2

Without stopping to calculate in any detail， how would you intuitively evaluate this position？


Regarding positions such as this one，I have many a time said something like，＂You feel that Black must have full compensation．＂With the passage of time，however，I have come to think that＂It is quite possible that Black has full compensation，and more＂is a better intuitive evaluation．It is a subtle distinction，but it is better to keep as open a mind as possible before you start working on the minutiae． If your initial reaction to the above position was to think，＂I cannot believe Black can have enough for the queen＂，it means that you have to work on your intuition．As we will see，in the event that White insists on holding on to the queen，Black can usually force a draw at the minimum．

## 

We will focus on this critical but risky continuation，where Black must prove the value of a rook versus a queen．

In the game，Smyslov bailed out from the complications with 26．䠦xe2 恩xe2 27．0b2 gxf5，but the endgame proved to be tricky．



31．迷f2 品xe1 32．超xe1？（White could have held relatively easily with $32.0 x$ xel intending
 $35 . a 4$ ？a5 Tal went on to win．

A curious defence is：26．${ }^{\text {mige }} \mathrm{e}$ ！


White will be doing fine if the queen reaches
 28．fxg6 hxg6 is the best continuation．After something like 29．0g2 b5 Black has full compensation for the pawn，but nothing more．

26．．．gg2† 27．．．


## 27．．．留xh2

Black must not hurry to cash in with 27．．． $0 x f 5$ ？as after 28．0 e1 品xh2 29．0xf3
 Black is still short on cash．

## 28．${ }^{0} 1$

If it was not for this possibility，Black would be winning．The knight takes the sting out of ．．．${ }^{\text {un }} \mathrm{h} 1 \dagger$ ，while also winning a tempo by attacking the bishop．

White cannot afford to lose time with：

28．fxg6？（A） 5 29．
29．gxh7 $\dagger$ ？${ }^{\text {ta }} \mathrm{xh} 7$ would be even worse for White，as the black king escapes further out of checking range．
29．．．hxg6 30．Me m
Another nice line continues $30 . \mathrm{b} 4$ 古f $731 . \mathrm{g} 4$

 de grâce with 35 ．．．惫d1！．
30．．．趋h7


31． V $^{x d x} 4!\operatorname{cxd} 4$
31．．．${ }^{m} x d 4$ also wins．
 35．0 b 2 b 5

Threatening ．．．${ }^{\text {ma }} \mathrm{c} 8$ with a mating net． 36．唯2 恩xe2 $\dagger$ 37．高xe2

Giving up the exchange was White＇s only way to prolong the game，but the position is hopeless after：


The a2－pawn falls and the rook will have no trouble mopping up the rest of White＇s pawns．


28．．．思a8！
Why this square？The reason becomes clear when we check the alternative：

28．．．思d5
This appears a more active square，and it has the advantage of keeping White＇s queen out of c4 once the knight moves from d6． However，the downside is that White can sacrifice the knight on c5 and，if Black captures it，the queen will land on c5 and hit the bishop．
29．g4！
Stopping the knight from coming to f5， while simultaneously freeing the g3－square for the king．
The immediate $29.0 \times \mathrm{Oc} 5$ bxc5 $30 . \mathrm{g} 4$ leaves Black with more options．For instance， $30 \ldots$ ．．． b 7 ！？is possible，although this should also lead to eventual equality．
29．．．gxf5
29．．．品e8？！invites 30.0 xc 5 when Black will have to play accurately to draw．
 is safe enough for White．


31．b4？fxg4 is no good．
31．$) \mathrm{d} 7$ ！？is a reasonable alternative though．

## 31．．． 0 b5

$31 . . .{ }^{\text {g }} \mathrm{xc} 5$ and $31 \ldots$ bxc 5 should also result in equality after accurate play．
32．쑘a6 品xc5 33．gxf5
Black has numerous ways to keep the balance，but there is no route to an advantage．

## 29．g4！

As on the previous move，giving away a tempo with 29．fxg6？ends in misery after 29．．． 0 f5！．Interestingly，there is a slight change in the details，as this time $30 . g x h 7 \dagger$ should be met by 30 ．．．${ }^{\text {maxh }} \mathrm{xh} 7$ ！，all because of a tactical detail several moves further into one particular line，where a potential knight check on g 5 saves White from disaster when the king is on h7．

29．0xc5？bxc5 30．g4 h5 transposes to $30.0 \times c 5$ ？bxc5 in the notes below．

What should Black play now？


29．．．h5！
Aiming to undermine the light squares so that the knight can get to $f 5$ ．

 time to create counterplay． 33 ．．．fxg 4 is the only decent option，when 34 ．ing $5 \dagger$ tab h 835 ．解 $\mathrm{f} 6 \dagger$ is a simple perpetual if White wants it．

After the text move，there is a simple threat of ．．．hxg 4 followed by ．．．$\searrow$ f5，when White＇s position collapses．It is time to put some skin in the game．

## 30．${ }^{2}$ c3！

White＇s only saving move is anything but easy to find．It is worthwhile to compare it to some of the lines from the Kislinsky－ Pieniazek game in the book＇s introduction． When the queen reaches f 6 ，it won＇t matter if Black picks up the rest of White＇s pieces．

30． 0 xc5？bxc5
This familiar idea does not work as well here． 31．$\frac{\mu}{4} \mathrm{xc} 5$

If White instead tries 31．gxh5，there
管f8 34．蹓xg6 $\dagger$ 罗h8 when White＇s lack of additional checks will lead to the loss of the queen．For example：


 winning for Black．
31．．．hxg4 32．品c7 踾h1 $\dagger$ 33．．


This is the kind of position Black should aim for．Everything is protected，and the queen can no longer make any serious threats．



## 38．．．⿷匚 m 4 ！

Black＇s attack is devastating．A sample line is：

 45．씀xf5 gxf5 46．高xh4 品xe1

With a winning endgame for Black．

## 30．．．dxc3

$30 \ldots$ ．．gxf5！？could also be considered．A possible continuation is 31.95 ！？罟e8 when the only move to hold the balance is：


32．©b5！Intending 32．．． $\mathrm{O} \times 5$ 33．${ }^{4} \mathrm{c} \mathrm{c} 4 \dagger$ ，with some sort of perpetual the likely outcome．

## 31．噛 xc 3

The queen will soon reach the vicinity of Black＇s king．This theme is recurring again and again．


## 31．．．hxg4 32．䟹f6

Now Black has to force matters with：

##  



## 38．${ }^{\text {Mi }} \mathrm{f} 6 \dagger$

White may as well take the perpetual now，as 38．${ }^{[\mathrm{m} x \mathrm{x}} \mathrm{x} 6 \mathrm{f} 2$ gives White no chance of playing for a win．

The main thing I took away from the above game and analysis is the sorry state of White＇s queen and rook，as well as the knight on a4． Only the knight on el was participating and fulfilling an important chore．Some situations are more dangerous than they seem；and when doubled rooks are involved，it is dangerous to place too much emphasis on the material balance（or imbalance）．

Why did I attach differing punctuation to 26．${ }^{[\mathrm{Minc}} \mathrm{c} 1$ ？！and 26 ．$\frac{\mathrm{m}}{\mathrm{M}} \mathrm{e}$ e 1 ！when both moves ended in equality？The point is that it was practically impossible to foresee the details of the former line，in which White had to find many difficult moves to avoid defeat，whereas 26．${ }^{[\mu \mathrm{M}} \mathrm{e}$ 1！was easy to handle and even easier to evaluate． The only difficult thing about the latter move was spotting the idea in the first place，as it is extremely rare to move an attacked queen to another unsafe square．

At a time when computers can point out the best moves almost instantly，it is vital to remember that we are all fallible when making decisions over the board．Naoki Hane，a famous Japanese Go player with a rank of 9th dan，has written a book on the game of Go，in which he recommends striving to make the＂ $80 \%$＂ move．His reasons are a bit hard to explain for someone who does not play Go，but part of it has to do with acknowledging the fact that it is beyond human reach to play Go with perfect accuracy．In chess，the strongest players have the ability to play close to perfectly，at least some of the time．Nevertheless，I think it is wise for us to strive for the best human level possible， rather than the best non－human level possible．

In the next example，Black missed a spectacular opportunity to harness the power of the rooks．

## Alexander Ipatov－Sabino Brunello

Warsaw 2013



骂ad8 17．dxc6 bxc6 18．思e1 聯b7 $19 . b 3$






## 31．．．堅c3！？

An ambitious move．

 $32 . . . \mathrm{B}$ a3 the queenside pawns have been liquidated，and there is little more to play for．

##  35．䜿b8

 position as in the game．


## 35．．．！${ }^{1} \times x 2!$ ？

 to approximate equality．

The game continuation could have been a tricky move，if Black had followed it up correctly．As it happened，he soon went down． The remaining moves were：





 Black resigned．

## 1－0

When I first saw this game，I immediately wondered what would have happened if Black， instead of $36 \ldots$ ．．．åh 6 ？，had played：


## 36．．．欮 $x b 8$ ！37．蹓 $x b 8$ 骂 cc 2

Considering that this was just before the time control，I am guessing that Black had little time left to evaluate the consequences of this crazy position．White＇s next move is forced．

## 38．欮 h 2

This is a moment where many would stop calculating，even with plenty of time on the clock．However，if we take into account the passivity of the queen and the weakness of White＇s back rank，it should be well worth continuing at least one move deeper．


## 38．．．覧fe2！

It shouldn＇t be too difficult to calculate this far．

38．．． O g5？looks tempting：Black threatens $\ldots 0 \mathrm{f} 3 \dagger$ ，and if the queen goes to g 3 ，then Black can repeat moves．However，White has an awesome defence：39．欮h1！！


Removing Black＇s threat and giving White the tempos needed to pick up the c－pawn and get back with the knight，thus achieving a winning position．

## 39．${ }^{\text {² }}$ f1



If the white rook goes anywhere else，the c2－rook will chase it：for instance，39．．ूa1 品2 40．品b1 品ab2 and so on．Therefore，if White wants to play for a win，the only option is to place the rook on fl at some point．White may as well do so immediately，so that the upcoming 4 will gain a tempo against the rook on c2．

## 39．．．${ }^{[10} x=3$

It may seem as if Black is capturing a meaningless pawn，but in reality this is an essential step towards strengthening Black＇s kingside bind．The white knight will soon be heading back towards the kingside，so Black has no time to lose．

## 40． 0 b4 骂b2

It feels most natural to hit the knight．
40．．． B d 2 ？？is also satisfactory though．Play could continue 41 ．踾f when White must either accept a repetition or give back the queen：

 making something out of the outside passed pawn，but Black is active enough to stay out of danger．For example：
 leads to a draw．

 thing．

41．0xc6


41．．． V $^{2} 3$ ！
Five moves have been played since the queen sacrifice on move 36 ．None of them have been especially difficult，and when you get this far it should be possible to make a decent evaluation． Black has given up a queen for a rook，but just look at that queen．How do you suggest White should proceed to get it out of the corner？It cannot be done．So，the next question is：can White use the a－pawn to deflect Black＇s rooks？ What do you think？

## 42．${ }^{(2)}$ al？

White should get his stuff together before things get out of hand．One way to reach
 44．${ }^{[\mathrm{ch} h} 4 \dagger$ is also equal．） $43 . \mathrm{h} 4 \mathrm{xf1} 44$ ．${ }^{[\mathrm{c}} \mathrm{xf} 4$䠉1

 With a draw.

The move in the main line looks reasonable, doesn't it?


## 42...f4!

 followed by a check on el and mate on f1. Believe it or not, White's position is already beyond saving.

## 43. 0 d 4

White must avoid $43 . a 5$ 茈be2 (43...geb3 also works) 44 . ${ }^{\text {gifl}}$ gel with a mating net. The text move stops the enemy rooks from moving to either e2 or b3, but Black has more strings on his lute.

## 

The rook was untouchable because of mate in two.


## 44...!ea3!

Continuing to hunt for mate along the first rank.

Black does not have time for 44...தxa4? because of 45.0 f3 ${ }^{\circ} \mathrm{ga} 246 . \mathrm{h} 4$ ! when White obtains enough counterplay with checks on g 5 and $f 7$, or with the queen coming to h 3 . Black has a few ways to force a draw, but the win has gone. (By the way, it should be no surprise that passive defence fails for White. For instance, after something like 46.0el? g5 47. 9 f 3 tad t 6
 White with no good defence against ....घal.)

### 45.03

Most random knight moves fail to .... al, while 45 . ${ }^{\text {men }}$ e allows a lovely finish:
 White escapes.) $46 . \mathrm{h} 4 \mathrm{~g} 447.0 \mathrm{f} 5 \mathrm{~g} 648.0 \mathrm{xg} 3$ fxg3


49．ariml It＇s hard to imagine a worse－placed queen．49．．．嵒a1 Black will win the queen for nothing．

The text move is White＇s best defence，but it is not enough to save the game after：

45．．．品a1 46．骂e1


46．．．g5！！
This curious sacrifice gains time for the black king to advance，thus enabling the second g－pawn to safely reach $g 5$ ．

## 

 is another cute variation，when 51 ．高f f 品 f 1 \＃is mate，and $51 .{ }^{\text {a }} \mathrm{d} 2 \mathrm{f} 1 \dagger$ picks up the queen．

48．．．g5！
White has ended up in a terrible bind．


49．${ }^{\text {d }}$ f2
49．h4 g4 only hastens the end．

## 

Only now does Black have time to remove the a－pawn without spoiling the win．

## 



## 52．．．䓢h5！

The zugzwang is complete，so Black wins．

## Conclusion

Again, I offer no grand theory of anything. The answer to the question at the start of the chapter - "How do we go about evaluating such situations more precisely?" - can only be answered in the most roundabout of manners. The apple falls. It hits you on the head. At least you've learned not to fall asleep under apple trees when they are full of fruit. Also, do not underestimate the force of a rook or two as they become cosy on the back ranks.

If Plato had read my conclusions to all this, he would have turned me into one of those poor guys that Socrates pokes fun at, most philosophically. And I am fine with that.


[^0]:     0xc3 29.0xc3 b2

