## Main themes of the change in a study.

The fundamental article about the themes of the change in study was published in magazine «Chess composition» (№82, №83, 2008; №93, 2010). Here is a brief description of the main themes of change and examples of their implementation.

## 1. Change of the try (CT)

Theme CT. Incorrect continuation in one of two similar positions of the solution of a study is correct continuation in the second position and vice versa.
The theme CT can be expressed in two basic forms: in parallel - when two similar positions are on different branches of solution (study №1), and in sequential - when two similar positions are located in the same variant of the solution (№2).

№1. Eduard Eilazyan<br>MT «G. Kasparyan - 100», 2010, II prize


1.Bb1! Black now can choose between $1 . . . \operatorname{Be} 5$ and 1...Be3+.
A. 1...Be5 2.Bxe4+ Kxe4

Thematic try: $\underline{3 . a 5}$ ? b4! 4.c7 Bxc7! 5.Nxc7 b3 6.a6 b2 7.Nb5 Kd5 8.a7 b1Q 9.Nc3+ Kc6 10.a8Q+ Qb7 =; or 9.a8Q+ Ke5 10.Qb8+ Kf6! 11.Qf8+ Ke6 12.Qe8+ Kf6 draw. 3.axb5!
a) 3...Kd5 4.Nb6+! Kc5 5.Nd7+ Kxb5 6.Nxe5 win.
b) 3...Bf4+ 4.Kg6! Kd5 5.Kf5! Bg3 6.c7! Bxc7 7.Nxc7+ Kc5 8.Ke5(e6) Kb6 9.Kd6 and wins.

## B. 1...Be3+! 2.Kg7! Bf4 3.Bxe4+ Kxe4

Thematic try: $\underline{4 . a x b 5}$ ? Kd5 5.c7 Bxc7 6.Nxc7+ Kc5! 7.Kf6 Kb6 8.Ke6 Kxc7 draw.
4.a5!

The change of the try in variants $A-B$.
4...b4 5.c7 Bxc7 6.Nxc7 b3 7.a6 b2 8.Nb5 Kd5 9.a7 b1Q 10.a8Q+ Kc5 or $10 . . . \operatorname{Ke} 511 . \mathrm{Qb} 8+\mathrm{Kf5}(\mathrm{e} 6)$ (square f6 is unavailable!) $12 . \mathrm{Nd} 4+$ and 13.Qxb1.

## 11.Qf8+ Kb6 12.Qd8+ Ka6 13.Qa8+ Kb6 14.Qa7+ Kc6

and White wins, having a nice choice between 15.Qc7+ Kd5 16.Nc3+ and 15.Qa6+ Kc5 16.Qd6+ Kc4 17.Na3+.
№2. Eduard Eilazyan
"Chess Composition" - 2006, II prize


## 1.h8N+! Kg8 2.f7+ Kf8! 3.Kg2 Rh3 4.Kxf2

4.g6? Rxh4 5.g7+ Kxg7 6.f8Q+ Kxf8 7.Ng6+ Ke8 8.Nxh4 Kd7 9.Nf3 d5 draw.

## 4...Rh2+ 5.Ke1 Rh1+ 6.Kd2 Rh2+ 7.Kd1!

Try №1: 7.Kd3? Kg7! - the position of mutual zugzwang. №1.
White has no useful moves, and how he wins when BTM - demonstrates the solution.
If on $7 . \mathrm{Kd1}$ ! Black played $7 . . \mathrm{Kg} 7$, then after $8 . \mathrm{Ke1} \mathrm{~d} 39 . \mathrm{Kd1}$ occurs position of mutual zugzwang №2. When WTM - draw:
a) 9.Be1 Rh1 10.Ng6 Kxf7 11.Nh4 Rg1 12.g6+ Ke6 13.Kd2 Rg4 14.Kxd3 Kd7...
b) $9 . \mathrm{c} 5 \mathrm{dc} 10 . \mathrm{Bg} 3 \mathrm{Rxh} 8$ 11.Be5+ Kxf7 12.Bxh8 Kg6 13.Bf6 c4 14.Kd2 Kf5...
c) 9.Ke1 Re2+ 10.Kf1 Rh2 11.Ke1 Re2+ 12.Kd1 Rh2 13.Kc1 Rc2+ 14.Kd1 Rh2...

- everywhere positional draw.

If BTM, then Black loses: 9...Rh1+ 10.Kd2 Rh3 11.Kc3 Kf8 12.g6 Rxh4 13.g7+ Kxg7 14.f8Q+ Kxf8 15.Ng6+ K~ 16.Nxh4 wins.

Try: 7.Kc1? Kg7! 8.Kd1 d3 - position of mutual zugzwang №2.

## 7...Rh1+ 8.Kc2 Rh2+ 9.Kb3

Black is in zugzwang. 9...Rh3+ 10.Kb4 Kg7 11.Bf2 ... , or 10...Rh2 $11 . \mathrm{Bg} 3 \ldots$ wins; 9...Rh1 10.g6 Rxh4 11.g7+ Kxg7 12.f8Q+ Kxf8 13.Ng6+ and 14.Nxh4 ... wins.
9...Kg7 10.Ka3 Rh3+ 11.Kb2 Rh1 12.Kc2 Rh2+ 13.Kd3! - mutual zugzwang №1.

Try №2: 13.Kd1? d3! - position of mutual zugzwang №2 in favor of Black.
Change of the try in the sequential form.
13...Rh3+ 14.Ke2 Rh2+ 15.Ke1! Rh1+ 16.Kf2 Rh3 17.Kg2 d3 18.Kxh3 d2 19.g6 d1Q 20.Bf6+ Kf8 21.g7\#. Model mate.

## 2. Change of solution (CS)

Theme CS. Correct continuation in one of two similar positions of the solution of a study is a try in other position.

The equivalent formulation is: Black's counterplay against the White's initial plan leads to change of solution, thus the initial plan becomes a try.

As can be seen from this definition, in contrast to studies on the changes of the try, here there is only one thematic try.

## №3. Eduard Eilazyan «Magyar Sakkvilág» - 2009, III prize


1.Nde6! Qa1! This is the only protection from the two threats.
2.Rb8+! Bd8+ 3.Kb7

Black now has to choose between 3...Qb2+ and 3...Qb1+. Two main lines:
A. 3...Qb2+ 4.Kc8 Qh2!
5.Bf7+! But not 5.Rb7? Bxg5 6.Rg7+ Kh8 7.Rxg5 Qd6, no win for White.
5...Kh8 6.Nxd8 Qc2+ 7.Kd7 Qd2+ 8.Ke8 Qxg5

Black has restored material equality, but final attack now follows.
9.Ne6! Qa5 10.Ke7+! Kh7 11.Rb3!, threatening 12.Rh3+.
11...Qa7+ 12.Kf8! Qa8+ 13.Be8! and winning, because from the threat 14.Rh3+ Black does not have satisfactory defense. The mating threat leads to win of queen:
13...Qg2 14.Rh3+ Qxh3 15.Ng5+ Kh6 16.Nxh3 and wins.
B. 3...Qb1+ 4.Kc8 Qd3

On a chessboard almost the same position, as in a variant A after 4-th Black's move difference only in position of queen. This difference is significant, because here continuation 5.Bf7+? Kh8 6.Nxd8 Qc2+ (?) 7.Kd7 Qd2+ 8.Ke8 Qxg5 9.Ne6! ... (and wins as in the main line of variant $\mathbf{A}$ ) - is the thematic try.
Refutation: 6...Qc3+! 7.Kd7 Qd4+! 8.Ke8 Qe5+! 9.Nge6 Qxb8 draw.
But thanks to this difference White has received a new possibility!
5.Bg6! The change of solution in variants $\mathbf{A}-\mathbf{B}$.

A mistake is $5 . \mathrm{Bf} 7+$ ? Kh8 6.Bg6 because of 6...Qxg6 7.Kxd8 Qg8+ 8.Kc7 Qxb8+ 9.Kxb8 and draw.
5...Qa6+! Of course not 5...Qxg6? 6.Kxd8 with an inevitable mate.
6.Kxd8 Qd6+ 7.Kc8 Qc6+ 8.Nc7 Qxg6

Black won back material, but now final combination follows with winning of queen.
9.Kd7+ Kg7 10.Nce6+ Kf6 11.Rf8+ Ke5 12.Nf3+ Ke4 3.Nd2+ Ke3(e5) 14.Nc4+ Ke4
15.Rf4+ Kd3. Or 15...Kd5 16.Rd4 mate.
16.Ne5+ Ke3 17.Nxg6 and wins. And here Black avoided a mate by loss of the queen. (One more example on a theme of change of solution - study №7).

## 3. Change of the refutation (CR)

Theme CR. The valid refutation of a try in one of two similar positions is a incorrect refutation in the second position of same or other try and vice versa.

It is obvious that theme CR can be expressed both in the sequential form, and in the parallel one.
№4. Eduard Eilazyan
JТ «ВОЛШЗЭ - 80», 2006, I prize


The first thematic try: $1 . \mathrm{Na} 6+$ ? in anticipation of $1 \ldots \mathrm{~Kb} 7$ (?) $2 . \mathrm{Nc} 5+\mathrm{Kc} 7$ 3.Bd6+ Rxd6 4.Na6+ Kc6 5.g8Q! Bxg8 6.Nb4+! Kd7 7.Rg7+ Ke6 8.Rg6+ Ke5 (8...Ke7 9.Nc6+) 9.Nc6+ Kd5 10.Nb4+ Kc5 11.Na6+ Kc6 12.Nb4+ Kc7 13.Na6+ Kd7 14.Nb8+ Ke7 15.Nc6+ ... - thematic positional draw.

Refutation: 1 ...Ka7! 2.Bc5+ Kb7 3.Rb6+ Kc8 4.Rc6+ Kd7 5.Nb8+ Ke8 6.Rc8+ Kf7 7.Rf8+ Kxg7 8.Rf2 Rh1+ 9.Kg2 Be4+ 10.Kg3 Rd3+ 11.Kf4 Ba8! 12.Bb6 Kg6! White did not escape, for example, 13.Kg4 Bd5 14.Rb2 Bf3+ 15.Kg3 Be4+ 16.Kg4 Bf5+ 17.Kf4 Rh4+ 18.Ke5 Re4\#.
1.Kg1! Rhe2.

The second thematic try: $2 . \mathrm{Na} 6+$ ? in anticipation of $2 \ldots \mathrm{Ka} 7(?) .3 . \mathrm{Bc} 5+\mathrm{Kb} 74 . \mathrm{Bf} 2$ ! Rxf2 5.Nc5+ Ka7 6.Ne4! Bxg6 7.Nxd2! draw.

Refutation: $2 \ldots \mathrm{~Kb} 7!3 . \mathrm{Nc} 5+\mathrm{Kc} 7$ 4.Bd6+ Rxd6 5.Na6+ Kc6 6.Nb8+ (6.g8Q? Rxg6+!; 6.Nb4+ Kd7!) Kd5 7.g8Q+! Bxg8 8.Rxg8 Rb2 9.a6 Ke4 10.Re8+ Kf4 11.Rf8+ Kg3 12.Rg8+ Kh4 13.Rg2 Rxb8 -+.

Thus, the second thematic try $2 . \mathrm{Na} 6+$ ? refuted by the move $2 \ldots \mathrm{~Kb} 7$ !, while the first one (1.Na6+?...) refuted by the move $1 \ldots \mathrm{Ka} 7$ !

Here the theme change of refutations of two thematic tries is realized.
2.g8Q+! Bxg8 3.Na6+ Kb7

Continuation 3...Ka7 also conducts to the draw.
4.Nc5+ Kc7 5.Cd6+ Rxd6 6.Na6+ Kc6 7.Nb4+! Kd7 8.Rg7+ Ke6
8...Kd8 9.Rxg8+ Kd7 10.Rg7+! Ke8 11.Rg2 draw.
9.Rg6+ Ke5 (9...Ke7 10.Nc6+ ...) 10.Nc6+ Kd5 11.Nb4+ Kc5 12.Na6+ Kc6 13.Nb4+

Kc7 14.Na6+ Kd7 15.Nb8+ Ke7 16.Nc6+ ... - thematic positional draw.
№5. Eduard Eilazyan
"Chess Composition" - 2008, Sp. prize


Black threatens Rb1+ winning the Bishop, so wN must check, but on which square? Try №1: 1.Ng5+? Kd6! 2.Bxc6 Kxc6 and the position of wK is fatal. But not 1 …Kc5? 2.Ne6+ Kd6 3.Bxc6 Kxc6 4.Nd8+ forking K and R. Similarly

Try №2: 1.Nd2+? Kc5! 2.Bxc6 Kxc6 winning.
But not 1 1...Kd6? 2.Nc4+ Kc5 3.Bxc6 Kxc6 4.Na5+ again drawing.
The change of the refutations of the tries in symmetric form.
There is a thematic try symmetrical to the key by 1.Nd4+? Kxd4 2.Bxc6 Rc7 3.Ba4 Kc5 4.Kb8 Kb6 5.h4 when 5...Ra7! (not 5...Rc4? 6.Be8 Re4 7.Bg6 Rg4 8.h5 draws) 6.Be8 Re7 7.Bg6 Rg7! 8.Be8 Rg8 wins. White must choose

## 1.Ne5+! Kxe5 2.Bxc6 Rb6 3.Bb7! Kd6 4.Kb8 Kd7 5.h4!

This is a position of reciprocal zugzwang, where White to move would lose: 6.h5 Kd8! 7.Ka7 Kc7! 8.Be4 Rb4! 9.Bc2 Rb2.

But after

## 5...Kd8 6.h5 Kd7 7.h6 Rxh6 8.Bc8+ Kc6 9.Bg4! Rf6 10.Bd1! Rf4 11.Ka7 ... draw. 4. Change of the threat (CT)

Theme CT. The direct threat in one of two similar positions of the solution of a study is realized, but doesn't pass alternative one, and in other position - on the contrary, the alternative threat is realized only.

The theme CT can be carry out both in White's game, and in Black's game. Here the elementary scenario of realization of this theme in White's game. In the first variant of the study there passes the main White's threat, but there does not pass the alternative one. At Black's attempt to be protected from the main threat formed the second variant in which White carries out logic manoeuvre and creates irresistible alternative threat.

In the try events can develop under the same scenario, but with theme CT in Black's game. Moreover, this theme can be realized in the Black's game also in the actual solution. For this purpose it is necessary to give to White possibility to compensate all consequences of realization of his opponent's threat.

So, in the actual solution of the study №6 Black realizes his threats - winning the queen and winning a bishop, but White rescues by the phoenix-effect and effect of the last pawn.
№6. Eduard Eilazyan R.Khatyamov MT, 2010, II - III prize


## 1.Bg8! Qg1+ 2.Ka2 Qxa7 3.Bxh7 Qa4!

The main threat - a capture of the queen. At attempt of protection by $4 . \mathrm{Bg} 8$ ? the second threat - a capture of the bishop - is carried out!
Natural and strong in appearance move $4 . B x g 6+!?$-is the thematic try! After
$4 . . . K h 6!5 . h 5$ occurs the first similar position where Black can realize at once his main threat - a combinational winning of the queen: 5...Bc5+! 6.Kb1 Qd1+7.Ka2 Qc2+8.Qb2 $\mathrm{Qa} 4+9 . \mathrm{Kb} 1 \mathrm{Bd} 4!$ 10.Qd2 Qb3+ 11.Kc1 Be3 with a victory. Let's notice that in the first similar position Black could create the alternative threat by transformation of the battery $5 \ldots \mathrm{Bc} 1+6 . \mathrm{Kb} 1 \mathrm{Qd} 1$, but this threat didn't achieve the goal. At the disposal of White there is unique, but a sufficient protection-7.f6!, and the bishop picks up the square c2! It is important to notice that possibility of creation an alternative threat is necessary condition of realization of this theme!
4.fxg! Parrying the main threat. After 4...Bc5+5.Kb1 Qd1+6.Ka2 Qc2+7.Qb2 Qa4+ 8.Kb1 Bd4 White is rescued by the check 9.Qe2+ .

## 4...Kh6! 5.f5!

Again creating possibility of protection by the check, but now from the square d2!
On a board there is a second similar position. Direct realization of the main threat is impossible. Therefore Black carries out the logic manoeuvre - transformation of the battery. Thus there is a symmetric change of the threat.

## 5...Bc1+! 6.Kb1 Qd1

Loss of the queen is inevitable. White uses a new resource of protection - phoenix-effect!
7.f6! And now branching.
A. 7...Be3+, attempt to win the queen.
8.Ka2 Qa4+ 9.Kb1 Qb3+ 10.Qb2 Qd1+ 11.Ka2 Bd4 12.f7 (fg) Bxb2

The queen perishes (Black has carried out the main threat!),
13.f8Q - and then revives! Phoenix. Draw.

But Black can eliminate and this, already the third, protection.

## B. 7...gxf! 8.Bg8!

Yes, now Black can capture the bishop:
B1. 8...Bd2+ 9.Ka2 Qa4+ 10.Kb1 Qe4+ 11.Ka2 Qa8+ 12.Kb1 Qxg8,
And the second Black's threat is realized (!), but the last pawn is thus lost
13.Qxf6 Qb3+ 14.Qb2 with a draw.

But for Black there is last attempt to play on a win.

## B2. 8...Kxg6! 9.h5+!

Bypassing the trap 9.Bb3? Qxb3+ 10.Kxc1 Qe3+ 11.Kc2 Qe2+ 12.Kb3 Qd3+ 13.Kb4 Qe4+ 14.Kb3 Qxh4... and Black won in this endgame.
9...Kg7 10.Bb3! Qxb3+ 11.Kxc1 Qe3+ 12.Kc2 Qe2+ 13.Kb3 Qxh5 14.Qd4!

And this endgame is draw.

## 5. Change of the motivation of logical manoeuvre (CMLM)

Theme CMLM. In two (or more) similar positions the same logical manoeuvre performed to remove different obstacles, i.e. with different motivations.

Depending on the disposition of similar positions on the branches of solution theme CMLM can be implemented in parallel form and in sequence.
In the example below № 7 theme CMLM is carried out in the Black's game in parallel form - in the try and in the actual solution.

> №7. Eduard Eilazyan MT "V.Bron - 100", 2009, I prize


## 1.b7 Qg2+

Black's general plan is to exchange his Queen for wPb6 and then to promote a dP. There is a thematic try at this point: $2 . \mathrm{Kb}$ ? anticipates $2 . . . \mathrm{Qxb} 7+$ ? $3 . \mathrm{Kxb} 7 \mathrm{~d} 24 . \mathrm{Bxd} 4+$ Kh7 5.Rh5+ Kg6 6.Rh1 Ne1 7.Rg1+ Kf5 8.Bc3 d1Q 9.Bxe1 Qa4 10.Kb6! when White has built a fortress - so, a positional draw.

Refutation lies in a logical manoeuvre on the part of Black, that calls for wK to be on b 8 , which allows the demolition of the aforesaid fortress: $2 . . . \mathrm{Qg} 6+!3 . \mathrm{Kc7} \mathrm{Qf7}+4 . \mathrm{Kb} 6$ Qe6+5.Ka7 Qe8 6.b8Q Qxb8+ 7.Kxb8 - the manoeuvre's aim is achieved, so Black's main plan will work: 7...d2 8.Bxd4+ Kh7 9.Ra7+ Kg6 10.Rg7+ Kf5 11.Rg1 (11.Rf7+? Ke6! wins, because ' 12 Rfl??' fails due to the unremoved block on the f-file) 11 ...Ne 1 12.Bc3 d1Q 13.Bxe1, when we see that decoy of wK onto b8 brings about White's downfall! 13...Qd7! 14.Ka8 Qc7, and the zugzwang prises apart the fortress, with domination: the white pieces are easy prey to bQ!

Now we realise why White takes preventative measures - his own preliminary plan which is to abandon his fP so as to leave the f -file open. This logical manoeuvre is 14 moves deep, the 'foresight' or 'look-ahead' theme!

## 2.f3!! Qxf3+ 3.Kb6

Now, with fP missing, there will be no fortress. So why not capture the bP?
a) 3...Qxb7+ 4.Kxb7 d2 5.Bxd4+ Kh7 6.Rh5+ Kg6 7.Rh1 Ne1 8.Rh6+! Kf7 9.Rh7+ Ke6 10.Rh6+ Kf5 11.Rf6+ Ke4 12.Bc3! d1Q 13.Bxe1 Qd7+ 14.Ka6! Qd3+ 15.Ka7! (15.Kb7? Ke5! 16.Rb6 Qe4+; 16.Rc6 Qb1+)
15...Qd7+ 16.Ka6 - positional draw!

Had wK been on b8 there would have been 13...Qd8+ to win wR. But Black, seeing all of this, carries out a second Vorplan (ie, a 'logical manoeuvre') with the same purpose and in the same way as the first, but with other motivation - change the motivation of logical manoeuvre!

## b) 3...Qf6+! 4.Ka7! Qf7 5.Kb6 Qe6+ 6.Ka7 Qe8 7.b8Q Qxb8+ 8.Kxb8

Now, with the intermediate goal reached Black resumes his main plan:
8...d2 9.Bxd4+ Kh7.

At this point White can head for the positional draw of line (a) above, but here it is 'only' a thematic try: $\underline{10 . R h 5+? ~ K g 6 ~ 11 . R h 1 ~ N e 1 ~ 12 . R h 6+~ K f 5 ~ 13 . R f 6+~ K e 4 ~ 14 . B c 3 ~ d 1 Q ~}$ 15.Bxe1 Qd8+! winning wR.

However, with WKb8 we find that there is the possibility to 'change the solution'!
There is irony in White's manipulation of a side-effect of Black's manoeuvre!
10.Ra7+! (The 7th rank is open!).
10...Kg6 11.Rg7+ Kf5 12.Rf7+! Ke6 13.Rf1! (The f-file is open!)
13...Ne1 14.Bc3(f2) d1Q 15.Rxe1+ draw.

Approximately a quarter of a century ago began the systematic development of logical ideas in a study. And it should be noted - in this regard significant progress both in terms of accumulation of very valuable experience in developing of technology of composition, and in terms of creating a large number of highly artistic studies. At the present stage of development of study composition the themes of change are a natural generalization and deepening of the logical direction.

Any of themes of change in the basis is synthetic and already therefore bears in itself the certain esthetic charge having emotional influence on a connoisseur. Motives of change attached to a study exceptional depth and polyphonic tones. But only one fact of realization of the theme of change, whatever difficult technically it was, cannot provide a guarantee of high quality of the study. Artistic merit of the study on the theme of change, as well as any study, is defined by clearness and expressiveness of realization of a plan, a harmonious combination of the main theme with other themes and ideas.

At the same time we must not forget that the beauty of chess studies is not only in remarkable moves, spectacular final positions and striking combinations with bravura victims. The depth of concept, originality of motivations of moves, strategic saturation and subtle game of both warring parties have in chess art not smaller esthetic value, and at an estimation of studies on the themes of changes it is necessary to consider these factors first of all.

The multiple possibilities of synthesis of the themes of change, in mainly determining the logical structure and form of the study, with the traditional classical themes such as mate, stalemate, domination, mutual zugzwang, systematic movement, positional draw, determining its specifically chess content, open a new perspectives in the development of the artistic chess study.

Eduard Eilazyan

