

"LOGICAL" STUDIES
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Translation by John Roycroft, with assistance from Colin Russ and John Rice. This paper was read in absentia on 30.xi.79 to a joint meeting of the CESC and BCPS, in London.

Among the ideas which studies have adopted from problems are the principal values esteemed by the Bohemian School of composing, namely the ideas of purity of checkmate, purity of stalemate, and echo-effects. These values are well known. Less known in the world of studies is the "Logical School" of chess composition, which can offer just as much. I should like to give in this paper a brief account of what is most important about the Logical School, the essentials for purposes of study composition.

The "Logical" Combination in the Study.

Composing in the 'logical' manner implies two (or more) manoeuvres linked in such a way that they form a notional, or 'logical' whole. The linking of the manoeuvres can be realised in two fundamentally differing ways, giving the two distinct types of logical combination, which we shall call here the "Preparation" Type and the "Choice" Type.



P1 illustrates the "Preparation" type. The manoeuvres that comprise White's main aim (German: Hauptplan) or decisive attack run: 1. Bc6? Sc7 and 1. Sc6? Bc7. In both try-manoevres a black block occurs on the square c7 (the black bishop is blocked after 1., Sc7 and the black knight is blocked after 1., Bc7), but in neither case can White take advantage of the block, since White had created his own congestion on the square c6, the precise square whose occupation by the other white piece would win one of the black pieces. White therefore (a 'logical' therefore) executes a preparatory manoeuvre or introductory play (German: Vorplan) whereby he removes, with tempo, the potential

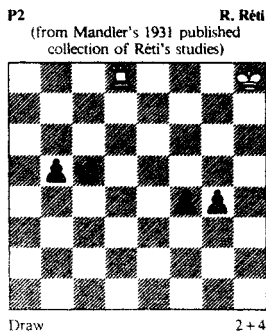
White congestion, or block, on c6: 1. Bf6+! and now 1. ..., Kg8 2. Sc6! Bc7 3. Se7+ (note the check) 3. ..., Kf8 4. Bc6 (Bd8; Sg6+, fg; Bxd8) wins, or 1. ..., Kh7 2. Bc6 Sc7 3. Be4+ Kg8 4. Sc6 wins. In other words the 'main aim' succeeds only because of the 'preparation'.

In P1 the logical combination was composed consciously. It is remarkable that in most cases of logical combination in studies the composer finds it by instinct, in the process of sharpening the conflict to its utmost and most precise. This is particularly true with the transfer of tempo in positions of reciprocal zugzwang. We frequently read that a position is disadvantageous for the side whose turn to move it is, but we search in vain for the demonstration of this claim in the printed solution itself. And yet the composer is under obligation to insert a false continuation, a try, into the solution, in such a case to show that with the move White's aim fails, and fails only because White has the move. If such a variation is indeed supplied, and if it indeed makes the required demonstration, then the composer has constructed a 'logical' combination.

"Choice" (German: Auswahl) type of logical combination. In this type two (or more) seemingly equally valid continuations offer themselves, in the form of what we may call a 'general' manoeuvre (Pachman uses the German word Leitplan, apparently in the sense of temptation or try). This general manoeuvre fails to a defence that is eliminated by the 'specific' manoeuvre (Pachman: Richtplan). An example of the general manoeuvre in P2: 1. Rf8? f3 2. Rf4 b4 3. Rxf4 b3 4. Rg1 f2 5. Rf1 b2 6. Kg7 Kd4 7. Kf6 Kd3, and as 8. ..., Ke2 is threatened, White plays 8. Rb1, but then 8. ..., Kc2 wins. This manoeuvre of White's would draw if the black pawns were one file farther apart from one another. It is therefore the f-pawn that White must capture, leaving the g-pawn. The 'specific plan runs: 1. Rg8! g3 2. Rg4 b4 3. Rxf4 b3 4. Rf1 g2 5. Rg1 (other rook moves merely prolong the solution) 5. ..., b2 6. Kg7 Kd4 7. Kf6 Ke3 8. Rb1 Kd3 9. Rg1 and drawn by repetition.

Genuine and False Logic

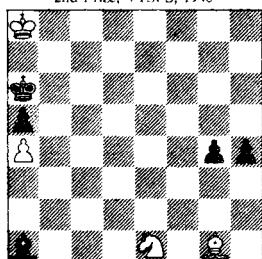
A logical combination is worthless unless it is pure in aim (German: zweckrein), sometimes called economical in aim (German: zweckökonomisch). This requirement means the application of the principle of economy to motives. There is a classic definition, due to Stefan Schneider: economy of aim is present when a manoeuvre carries out *n* aims, each one of which is necessary to the determination of that manoeuvre. ('Die Zweckökonomie liegt dann vor, wenn ein Manöver *n* Zwecke erfüllt, von denen jeder einzelne zur Bestimmung des Manövers nötig ist.') The test of a combination and of its purity of aim hinges on the test variation (German: Probespiel). Play through the main aim or general continuation and compare it with the



There are quite simple endgame positions that are susceptible to 'logical' treatment. P2 shows the

actual solution. In this way the 'aims' of the manoeuvre(s) are clarified. For example, in **P1**, after 1. **Sc6? Bc7 2. Bf6+ Kh7!**, and after 1. **Bc6? Sc7 2. Bf6+ Kg8!** White lacks just one thing -- a single tempo. In **P2** the difference between 1. **Rf8?** and 1. **Rg8!** lies just in the distance between the two remaining black pawns at the finish.

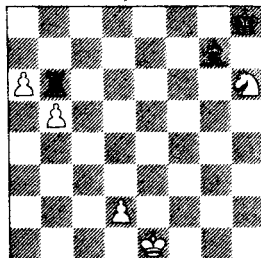
P3 T.B. Gorgiev
2nd Prize, VTSPS, 1940



Win 4 + 5

Now let us submit the 'logical' **P3** to the test. In the notes (to No. 278 in the Soviet '650' anthology published in 1955) we read that the study illustrates the "Indian" theme. After the introductory moves (inappropriate in problems, but desirable in studies) 1. **Sd3 h3 2. Ba7 Bd4 3. Bxd4 h2 4. Sc5+ Kb6 5. Se4+ Ka6 6. Sg3 h1Q 7. Sxh1 g3**, there follows 8. **Bg1** and the annotation "The critical move, an introduction to the famous Indian theme...". The next moves are 8. ..., **g2 9. Sf2** when we read, "The knight occupies the critical square." And so on. What is this 'Indian' theme? A temporary obstruction after the critical move: that is, here, after 9. ..., **Kb6** the knight's move alone ought to win, but in fact any move wins! And as for 'critical', the test 8. **Be3? g2 9. Sf2 g1Q** shows that the bishop on the square g1 has performed no critical manoeuvre but has served merely to stop the pawn. Therefore: not an 'Indian'.

P4 H. Mattison
1st Prize,
Shakhrmatny Listok, 1927



Win 5 + 3

Now let us turn our attention to the famous 'Roman' theme. **P4** is a veritable show-stopper from the workshop of the father of the modern study. After the moves 1. **Sf7+ Kg8 2. a7 Re6+ 3. Kd1! Re8 4. Sd6 Rd8**, we see from the try-play, the test variation, 5. **b6? Bd4 6. Sc8 Rxc8 7. b7 Rc1+! 8. Kxc1 Bxa7**, that the c-line must be obstructed, this determining the Roman decoy theme, which is an inverse of the remote decoy (Pachman describes the Roman theme as the peri-form* of the remote decoy). The main line proceeds: 5. **Sf5! Bf8 6. b6 Bc5**, and after the brief intermezzo 7. **Se7+ K-**, the breakthrough comes by 8. **Sc8 Rxc8 9. b7**.

Now let the EG-reader consider the 'Roman' group in EG27 (1972), Nos. 1439-1447. There are some interesting productions in this group, such as a Roman queen in No. 1440, and, in No. 1441 a. preparatory manoeuvre showing two aims, the test variations 4. **Ka4?** and 4. **Kxb4?** demonstrating that both aims are necessary to justify 4. **Kc2!** In no. 1442 we see a complete 'peri-decoy' of a black rook: 4. **Ka6? Sb4+**, and if the white knight could leap to the square b4 then the simple decoy 4. **Sb4 Rxb4+** 5. **Ka6** would suffice. Therefore the decoy has to take place on the g-line. On the other hand, No. 1447 is not a Roman at all: there is

no trace of logic. And where is the Roman in No. 1444? The attempt 5. **f6?** **Be6** 6. **a6** fails not only to 6. ..., **Sc4**, but also to 6. ..., **Sxe4** 7. **a7** **Sxf6+**. The preparation 5. **Kh4** **Bf1** conceals two aims (the aims (the decoy of the bishop and the removal of the white king from checks) and is therefore without value. Where is the Roman even in the victorious No. 1439? Is 3. ..., **Rg1+**? supposed to be the test variation for the white Roman? In that case, not the black rook, but some white man, should have been decoyed onto the square f1. Therefore, no Roman. At best, a black Sackmann**: by reason of the capture of the white knight by the black rook that clears the f-file, the aim is obscured and valueless. The moral of all this is that we must put our faith in our faithful minstrel Blondel, our true guide and liberator from adulterated aims and themes -- the test variation.

* German: Perilenkung, decoy **round** a critical square or line.

Sackmann: decoy **onto a line such that the correct approach path is determined by choice from several squares on this line. (Speckmann, in "Strategie des Schachproblems".)

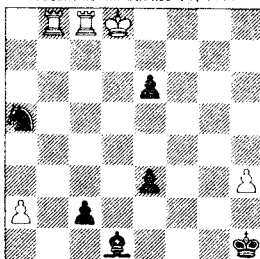
The Potential of the Logical Study.

As we have seen, the study can make much from logical combinations, and in return can give much also. In the study form a range of new adaptations of even the most familiar themes can be realised.

P5 shows us a Choice type of logical combination in a white Plachutta. Let us try 1. **Rb4?** **Sc4!** 2. **bRxc4** **c1Q** 3. **Rxc1** **e2**, or, the alternative, 2. **c1Rxc4** **e2** 3. **Re4** **c1Q**, while 1. **Rb6?** is met by 1. ..., **Sc6+**! But if we play 1. **Rb5!** the analogous continuation

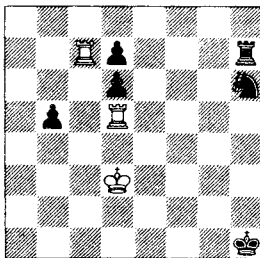
runs 1. ..., **Sb7+** 2. **Ke7!** **Sc5** 3. **bRxc5** **c1Q** 4. **Rxc1** **e2**, when White wins by virtue of the vacated square d8.

P5 A.O. Herbstman
1st Prize,
Czechoslovak Jubilee Tc, 1948



Win 5 + 6

P6 A.O. Herbstman
3rd Prize, Pravda, 1928



Win 3 + 6

P6 is highly instructive, notably with respect to the question of purity of aim. 1. **Rh5** + **Kg2** 2. **Rc2** + **Kg3**, and now, not 3. **cRh2?** **Sg4** 4. **Rxh7** **Sxh2**, or, in this line, 4. **Rh3** + **Kg2** 5. **Rxh7** **Sf2+** and 6. ..., **Sxh3**. Therefore we have the Brunner-Turton* doubling: 3. **Rh1!** **Kg4**, and now, not the immediate 4. **cRh2?** **Kg5**, but instead, 4. **Rg2+**! **Kf5** 5. **Rf1** + **K**- 6. **Rh2** and 7. **hRf1**. As the test play shows there is no loss of clarity in the aim -- moves 4 and 5 achieve solely the necessary compensation for the lost control of the 5th rank.

Beyond question logical combinations offer to study composers as to problem composers great possibilities, but for studies there is a fundamental limitation. In the problem the theme and its logical presentation can form the real point of the composition, but **in the study the logical combination in never of value by itself, but always an instrument for the convincing-presentation of other values!**

From the foregoing we derive the following requirements for a **good** logical study:

1. The study must never lose its essential study (game-like) character. It must never turn into "a problem with indeterminate conclusions".
2. The logical event must be made so clearly that it is to be understood by anyone unfamiliar with the theory.
3. The logically contrived manoeuvres must be interesting in themselves.

With these three requirements fulfilled, then and only then will the logical combination confer new impetus, and new delights, on the endgame study.

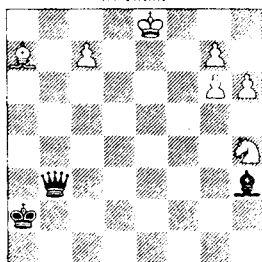
Prague, iii.79

*Brunner-Turton: a clearance move by a white line-piece over a critical square, played so that a second white piece of the same type can move onto the same line, on the critical square, and subsequently down that line (usually to give checkmate, with the clearing piece lending guard support). (Paraphrased by John Rice from his "An ABC of Chess Problems").

Footnote by AJR: discussion with Hans-Peter Rehm and Stephan Eisert after the paper had been read elicited the tenable view that manoeuvres

with **mixed** motives are not incompatible with use of 'Indian' and other terminology. (The meeting was one of the regular month-end series of the British Chess Problem Society, and was particularly well attended because it coincided with T.R. Dawson centenary celebrations organised by the indefatigable Anthony Dickins)

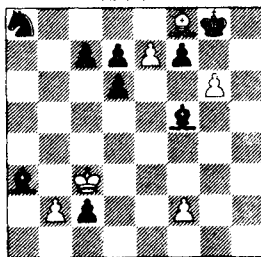
L. Katsnelson
(No. 1440 in EG27)
2nd Place, VI USSR Team Champ.
1968-9
1st Theme



Win 7-3

No. 1440: L. Katsnelson. 1. Kf8 Qb4+ 2. Kg8 Qxh4 3. Kh7 Qe7 4. Kh8 Qe5 5. Bd4 Qxd4 6. Kh7 Qd7 7. c8Q Qxc8 8. g8Q+ wins.

G. Shmulenson
(No. 1441 in EG27)
3rd Place,
VI USSR Team
Champ., 1968-9
1st Theme

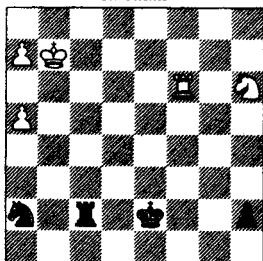


Win 6-9

No. 1441: G. Shmulenson. 1. Bh6 Bb4+ 2. Kb3 c1S+ 3. Bxc1 Be6+ 4. Kc2/i Bf5+ 5. Kd1 Bg4+ 6. f3 Bxf3+ 7. Kc2 Be4+ 8. Kb3 Bd5+ 9. Ka4 Sb6+ (or Bc6+) 10. Kxb4 wins.

i) 4. Ka4? Sb6+ 5. Kxb4 Sd5+.
4. Kxb4? c5+ and 5. ..., Sc7.

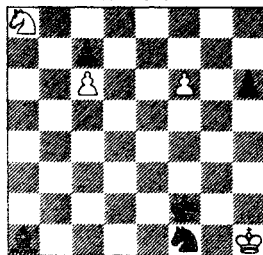
V. Kalandadze
(No. 1442 in EG27)
4th Place, VI USSR Team
Champ., 1968-9
1st Theme



Win 5+4

No. 1442: V. Kalandadze. 1. Rf2+ Kxf2 2. Sg4+ Ke1 3. Sxh2 Rb2+ 4. Kc7 Rc2+ 5. Kd7 Rd2+ 6. Ke7 Re2+ 7. Kf7 Rf2+ 8. Kg7 Rg2+ 9. Sg4 Rxc4+ 10. Kf7 Rf4+ 11. Ke7 Re4+ 12. Kd7 Rd4+ 13. Kc7 Rc4+ 14. Kb7 Rb4+ 15. Ka6 wins.

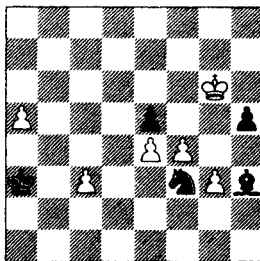
F.S. Bondarenko
(No. 1447 in EG27)
9th Place, VI USSR Team
Champ., 1968-9
1st Theme



Win 4+5

No. 1447: F.S. Bondarenko. 1. f7 Bg7 2. Sxc7 Sg3+ 3. Kh2 Sf5 4. Se6 Be5+ 5. Kh3 Bd6 6. c7 wins.

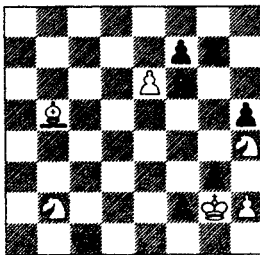
E. Fuzdilov
(No. 1444 in EG27)
6th Place, VI USSR Team
Champ., 1968-9
1st Theme



Win 6+5

No. 1444: E. Fuzdilov. 1. f5/i h4 2. gh Sxh4+ 3. Kg5 Sf3+ 4. Kh5 Sd2 5. Kh4 Bf1 6. f6 Bc4 7. a6 wins.
i) 1. a6? Bc8.

D. Petrov
(No. 1439 in EG27)
1st Place, VI USSR Team
Champ., 1968-9
1st Theme



Draw 6+7

No. 1439: D. Petrov. 1. Sf5 Rg5 2. ef gh+ 3. Kh1 Rxf5 4. f8Q f1Q+ 5. Bxf1 Rxf1+ 6. Kxh2 Be5+ 7. Qf4+ Rxf4 8. Sd3+.