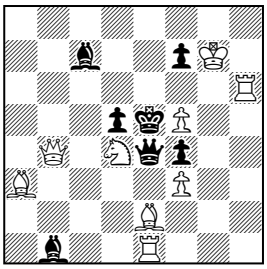
Two-mover Cycles: Why discriminate the mate?

Paz Einat

Cyclical themes, deservedly, attract a lot of attention, especially those which were nicely classified and collected by Peter Gvozdjak in his two Cyclone books. We appreciate and enjoy problems showing these themes for various reasons (which I will not discuss here), but we clearly know that they often offer complex and interesting mechanisms and matrices. Before getting into the ideas I want to discuss here, let's examine a couple of problems. Cyclone problems were schematically represented by Peter using elegant tables, such as the one below describing the Shedey cycle:

Key	Threat	Defense a	Defense b
try	A	B	C
solution	B	C	A

Ludovit Lacny
1st Pl. Sala-Zvolen 1988



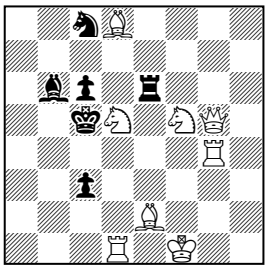
#2 9+7

1.♖h5 ? [2.♘c6 **A** #]
1...♕xd4 a 2.♕e7 **B** # 1...♕xf5 b 2.♗d3 **C** # but 1...♕c2 !
1.♗b2 ! [2.♕e7 **B** #]
1...♕xd4 a 2.♗d3 **C** # 1...♕xf5 b 2.♘c6 **A** #
1...♗d6 2.♕xd6# 1...♗d8 2.♕d6#

Lacny's problem shows the theme with clarity and elegance.
Another Cyclone theme involves the keys instead of threats – this is the Kiss cycle:

Key	Threat	Def a	Def b
A		B	C
B		C	A

Vasil Dyachuk & Peter Gvozdjak
1st Pr. The Problemist 2001



#2 8+6

1.♘f6 **A** ? [2.♘d7#] 1...♖d6 a 2.♘xd6 **B** # 1...♖xf6 b 2.♕e3 **C** #
1...♖xe2 2.♘e3 # 1...♖e7 2.♘xe7# but 1...♖e4 !
1.♘d6 **B** ! [2.♘b7#] 1...♖xd6 a 2.♕e3 **C** # 1...♖f6 + 2.♘xf6 **A** #
1...♖xe2 b 2.♘e3# 1...♔xd6 2.♘xb6# 1...cxd5 2.♕xd5#
1...♖e7 2.♘xe7# 1...♘xd6 2.♗xb6#

The masterpiece by Dyachuk and Gvozdjak is a perfect example with flight giving key and additional mate changes.
Cyclone problems involve the key, threat and mate. Looking closely at the Kiss cycle it occurred to me a couple of years ago that something general is missing. In the Dyachuk & Gvozdjak problem we have a try, which I will call here a "key-try", 1.Sf6? and a "key-solution" 1.Sd6! So if we can have a "key-try" as a thematic move in the cycle why we cannot have a "mate-try" as a thematic move?
Inclusion of "mate-tries" in the Cyclone matrix adds another layer onto it, and the fact that this can be added both to the left side (threat) and right side (mates), makes the general matrix rather complex. Let us start on the simple side.
We know "mate tries" in their common name as "dual avoidance". Cyclical themes involving dual avoidance are well known in single-phase problems. In terms of matrix this can be shown as follows (M = mate; MT = Mate Try):

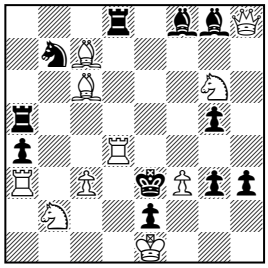
		Def a		Def b		Def c	
Key	Threat	**M**	MT	**M**	MT	**M**	MT
		A	B	**B**	C	**C**	A

Actually, a vertical representation ignoring the (insignificant here) key and threat, will make the matrix clearer:

Defense	**M**	MT
a	**A**	B
b	**B**	C
c	**C**	A

1.♘h4 ! [2.♖e4#]
1...♘d6 2.c4 **A** # (2.♖d3 **B** ?)
1...♗d5 2.♖d3 **B** # (2.♘f5 **C** ?)
1...♘c5 2.♘f5 **C** # (2.c4 **A** ?)
1...♖e5/gxh4/♖xd4/♖e8/♗h7 2.♕xe5/♗f4/♕xd4/♖d3/♘c4#

Alex Casa
1st Pr. T.T. Probleemblad 1952



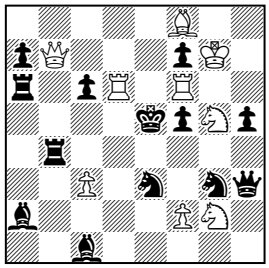
#2 10+11

The problem by Casa shows three unified defenses each with two potential interferences of which only one can be, cyclically, exploited.
Myllyniemi's problem goes one further and reveals a four-fold cycle (adding a fourth defense to the matrix).

Defense	**M**	MT
a	**A**	B
b	**B**	C
c	**C**	D
d	**D**	A

1.♖d8 ! [2.♕c7#]
1...♘e4 2.f4 **A** # (2.♘f3 **B** ?)
1...c5 2.♘f3 **B** # (2.♗d6 **C** ?)
1...♘d5 2.♗d6 **C** # (2.♕e7 **D** ?)
1...♘c4 2.♕e7 **D** # (2.f4 **A** ?)
1...♖xb7 2.f4# 1...♖d4 2.cxd4#

Matti Myllyniemi
1st HM Deutsche Schachz. 1974



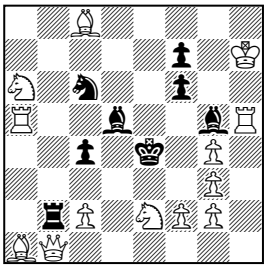
#2 9+13

The problem by Ojanen completes the single phase cycle with the matrix becoming:

Defense	**M**	MT	MT
a	**A**	B	C
b	**B**	C	A
c	**C**	A	C

1.♕d1 ! [2.♕xd5#]
1...♖b5 2.♗f5 **A** # (2.♘c3 **B**? ♘c5 **C**?)
1...♗e6 2.♘c3 **B** # (2.♘c5 **C**? ♗f5 **A**?)
1...♗d2 2.♘c5 **C** # (2.♗f5 **A**? ♘c3 **B**?)
1...♘xa5,♘b4,♘d4,♘e7 2.♕(×)d4#

Antti Ojanen
2nd Pr. Suomen Tehtavaniekat 1945



#2 13+8

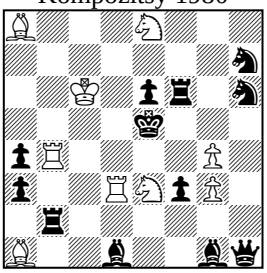
Here we have three white lines which are opened to guard the flight on e5. One of the potential three mates is prevented since it will close the just opened line and the other by direct guard (or interference, 1…Be6).

We Move now into multiphase problems, and we'll start on the simple side and see cycles involving only threats. The basic matrix is on the left and on the right is the complete cycle:

	Threat	
Key	**M**	MT
x	**A**	B
y	**B**	C
z	**C**	A

	Threat		
Key	**M**	MT	MT
x	**A**	B	C
y	**B**	C	A
z	**C**	A	B

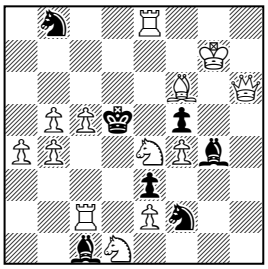
Alfreds Dombrovskis
Lev I. Loshinsky
Grossmeister
Shakhmatnoi
Kompozitsy 1980



#2 9+12

1.♔c5 ? [2.♖e4 **A** #]
[2.♘c4 **B**? ♖b5 **C**?]
1...f2 2.♘c4#
but 1...♘g5 !
1.♔b5 ? [2.♘c4 **B** #]
[2.♖b5 **C**? ♖e4 **A**?]
1...♗b3 2.♖e4#
but 1...♘xg4 !
1.♔b6 ! [2.♖b5 **C** #]
[2.♖e4 **A**? ♘c4 **B** ?]
1...♗b3 2.♖e4#
1...♗xe3 + 2.♖xe3#
1...f2 2.♘c4#

Yosi Retter
1st HM Casa JT 2001



#2
13+7

1.♗c3 ?[2.♕e6 **A** #]
[2.♕d6 **B**? ♘f6 **C**?]
but 1...fxe4 !
1.♗d4 ?[2.♕d6 **B** #]
[2.♘f6 **C**? ♕e6 **A**?]
but 1...♘xe4 !
1.♗e5 ! [2.♘f6 **C** #]
[2.♕e6 **A**? ♕d6 **B**?]
1...♘xe4 2.♕e6#
1...fxe4 2.♕d6#
1...♔xe4 2.♘c3#
1...♘d7 2.♕c6#

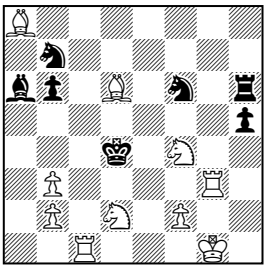
The problem by the great Dombrovskis & Loshinsky show elegant keys by the King, with self-pin avoidances. In Retter's rendition threats are prevented by the flights given in all three phases.

So far we have seen known, and mostly well-explored, ideas. We will move now into less explored areas and see what happens when defenses are mixed into the cycle. The most basic matrix is:

Key	Threat		Def a
	M	MT	**M**
x	**A**	B	**C**
y	**B**	C	**A**

The first realization (to my knowledge) of this matrix was by Daniel Papack some 14 years ago. This problem was shown to me by Peter Gvozdjak, when we discussed the ideas presented in this article, and exists in Cyclone 2 as a cycle outside the scope of his book. Peter argues in his book that "cyclone is a cycle of real moves" and Papack's problem is given as an example of a cycle that uses moves that don't work since they are dual avoidance. My argument here is that one can make a parallel between the key moves that do not work (tries) and mate moves that do not work. Both are "real" moves that do not work, but if one is of interest why not the other?

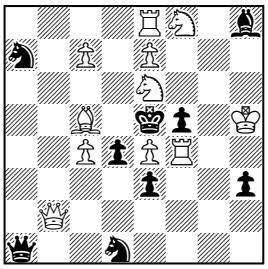
Daniel Papack
Die Schwalbe 1997



#2
10+7

1.♖e1 ? [2.♘f3 **A** #]
[2.♗e5 **B** ?]
1...♘xd6 a 2.♘e6 **C** #
but 1...♗e2 !
1.♖g5 ! [2.♗e5 **B** #]
[2.♘e6 **C** ?]
1...♘xd6 a 2.♘f3 **A** #
1...♗c4 2.♖xc4#
1...♘g4 2.♖d5#
1...♘d7 2.♖d5#

Paz Einat
Variantim 2011



#2
11+9

1.♕b6 ? [2.♗xd4 **A**?]
[2.♘d7 **B** #]
1...♔f6 a 2.♖xf5 **C** #
1...♕a4 2.♗xd4 B #
but 1...♘c6 !
1.♘g5 ! [2.♘d7 **B** ?]
[2.♖xf5 **C** #]
1...♔f6 a 2.♗xd4 **A** #
1...♔xf4 2.♕h2#
1...fxe4 2.♘g6#

Papack's problem shows the idea with clarity and elegance. The mechanism is unified by the keys by the rooks with guard/unguard functions. My own realization is somewhat more mechanical and involves the "safe" use of a black king flight move with a flight giving key.

Many additional theoretical matrices exist which involve all three Cyclone elements. Of interest might be those that involve only the variation mates in two or more phases. The vertical one is the simplest and involves changing mates on one defense:

Key	Threat	Def a	
	M	**M**	MT
x		A	**B**
y		B	**C**
z		C	**A**

When more than one defense is involved we have several options to realize a cycle, two of which are given below:

Key	Threat	Def a		Def b	
	M	**M**	MT	**M**	MT
x		**A**	B	**B**	C
y		**B**	C	**C**	A

Key	Threat	Def a		Def b	
	M	**M**	MT	**M**	MT
x		**A**	B	**C**	D
y		**B**	C	**D**	A

There are certainly many possibilities to compose interesting cycles and the matrices given here cover just the more obvious ones. A very important thing, no matter which matrix is used, is that the dual avoidance will be convincing. Just as we expect convincing tries so does the dual avoidance should be.