

Pandemic: a new fairy condition

by Alexandre Leroux

In order to alleviate the boredom associated with the current COVID-19 pandemic, I propose the creation of a new fairy condition called "Pandemic".

Pandemic

Rule #1: Contagion

When a black piece moves, all the white pieces adjacent to its destination square become black.

Rule #2: Distancing

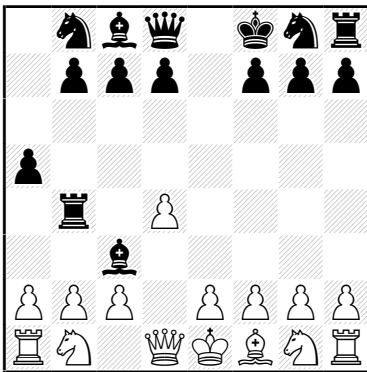
White can only move a piece if its destination square is not adjacent to any black piece.

The white King is not affected by these two rules.

The Pandemic condition is deliberately asymmetrical. It simulates the fact that COVID-19 (Black) is spreading rapidly (contagion rule), while humanity (White) is strongly restricted in its movements (distancing rule). Finally, the white King, who is immune to both pandemic rules, simulates a government trying to defeat COVID-19. The following problem illustrates the condition.

No. 1 - A. Leroux

Example



Solution of No. 1

1. d3 e5 2. ♖d2 ♙b4 3. ♙×b4 ♚f8 4. ♙c3 a5 5. ♙×e5 ♜a6 6. ♙c3 ♜b6
7. d4 ♜b4 [c3=●]#

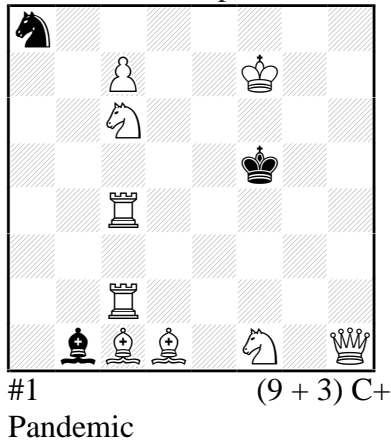
(C+ Jacobi in 20 s)

Proof Game (15 + 15) C+
in 7.0 moves
Pandemic

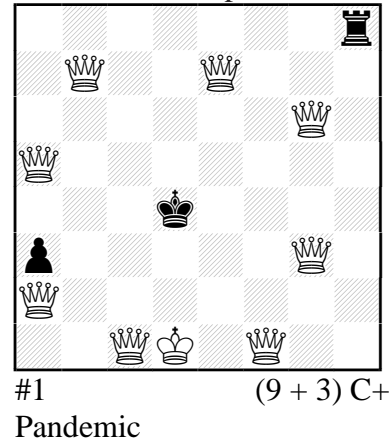
In this example, we can deduce that the Bishop on c3 was white and was "contaminated" by the black Rook on the last move, otherwise the check would be impossible. So White had to capture the missing black Pawn and Bishop, but to do so, these two pieces must first be isolated. Moreover, White must lose a tempo, because e2-e4 would prevent e5 from being played without contaminating e4. This problem illustrates the fact that checks are not orthodox with the Pandemic condition. For example, in this problem, when the black King goes to f8, he is not put in check by the white Bishop on b4. The white Bishop may not capture the black King, because the Bishop would become adjacent to a black piece, which is forbidden by the distancing rule. The first problem illustrates how easy it is for the pandemic to defeat humanity. Note that White is checkmate on the diagram: it is impossible to capture the black Bishop or to interpose a white piece without violating the distancing rule. It quickly becomes clear that COVID-19 has a serious advantage!

On the other hand, it is very difficult for humanity to defeat the pandemic, as illustrated by the following two problems. Can you find the single move by White that checkmates Black in each case?

No. 2 - A. Leroux
Example



No. 3 - A. Leroux
Example



Solution of No. 2

Note that ♔e4, ♖f4 and ♙g4 are forbidden because of the distancing rule.

1. c8=♔/♙+? is countered by ♛c7 [c6, c8=●]! which changes the color of the promoted piece by contagion.

1. ♖c5+? is countered by ♛b6 [c5, c6, c7=●]! which changes the color of the Rook by contagion.

1. ♘e7+ can't be countered but allows ♔e5.

1. ♘d4+ is even worse, because it adds an escape square for the black King: ♔e4 [d4=●], which changes the color of the Knight by contagion.

1. ♖f2+ is countered by ♙e4! which protects the King by the distancing rule.

1. ♘g3+, ♔f3+, ♔h3+ and ♔h5+ are countered by ♔g4 [g3/f3/h3/h5=●]! which changes the color of the assailant and protects the King by the distancing rule.

1. ♘e3+ gives three escape squares to the black King: ♔g5, naturally, but also ♔e4 [e3=●] and ♔f4 [e3=●], which change the color of the Knight by contagion and prevents any check by the distancing rule.

The only possible checkmate is thus: **1. ♔h7#!** because the white King blocks the black King from going to g6 to contaminate the Queen. (C+ Jacobi in 0.01 sec)

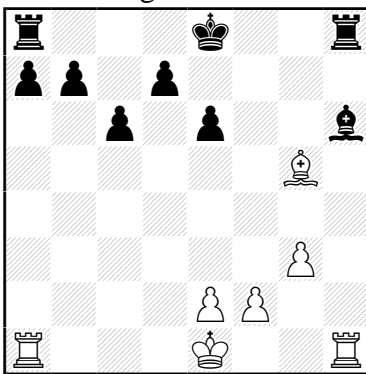
Solution of No. 3

It is impossible to checkmate by placing a Queen adjacent to the black King, because of the distancing rule. Placing a Queen two squares away from the black King also fails, because the King would only have to move one square closer to contaminate the Queen and protect himself with the distancing rule. Therefore, a Queen must be placed three or more squares away from the black King. However, any check from ranks 7 and 8 or from the g and h files fails, because the black Rook may then move to a square adjacent to the Queen to contaminate it and remove the check. Since e1 is occupied by the white King and a4 is inaccessible because of the a3 Pawn (distancing rule), the only square left is a1. However, 1. ♔aa1+? fails against 1... a2! which transforms the Queen by contagion. The solution is thus: **1. ♔ca1#!** (C+ Jacobi in 0.01 sec)

Clarifications

In the definition of the Pandemic condition, the term "adjacent" includes orthogonal and diagonal squares, so up to 8 squares can be contaminated by a single black move! The white King (or any other Royal white piece) cannot be transformed and acts like an orthodox King. Castling is considered a King move, so the Rook is not affected by the distancing rule when White castles. In the case of Black, the King cannot castle out of check or if the King would be in check on the Rook's end square. However, the King is never in check on the castling end square, because the Rook protects him by the distancing rule (see No. 7). Finally, it is allowed to castle with a white Rook transformed into black on a8 or h8, if the newly transformed Rook has never moved. The following problem illustrates some of the subtleties of the condition.

No. 4 - A. Leroux Original 1503.1



Which castlings
are possible?
Pandemic

(7+9)

No. 4 : Alexandre Leroux (Original 1503.1)

In orthodox chess, all castlings would be possible, except the Black queenside castling, which would be blocked by the white Bishop. But in Pandemic, Black would be allowed to play 0-0-0, because the King would not be in check on d8: the distancing rule prevents any check from the bishop, because the d7 pawn protects the King while crossing d8. However, the analysis does not stop there.

How was the black Bishop initially on c8 captured?

It seems impossible for the Bishop to escape its original square, and no piece can approach it because of the distancing rule... except the white King! If the white King has captured the Bishop on c8, then White can't castle.

But wait a minute! One must also consider the fact that the b7 and d7 Pawns could be white Pawns transformed into black by contagion, so the black Bishop could have easily come out of its cage.

However, if this is true, the five black Pawns present in the diagram must all be of white origin, otherwise they could not have approached

the original black Pawns (note: exactly 5 white Pawns are missing).

In addition, in this scenario, the black Rook on a8 and the black King must have moved, which would invalidate black castling. However, it is necessary to reject this hypothesis, because a white Pawn would be missing: indeed, White has necessarily made a promotion in this problem!

Consider the white Bishop on g5. How can it be adjacent to a black piece?

White cannot approach Black because of the distancing rule, and if Black approaches White, the latter is contaminated. So the only possible option is that the Bishop on h6 was white and was contaminated while it was already adjacent to the Bishop on g5. Before this contagion, there were two white Bishops on black squares, which implies a promotion. The promotion had to take place on f8 or h8 to respect the distancing rule, which proves that either the black King or the black Rook on h8 has moved. One could conclude that kingside castling is therefore impossible for Black, but not so fast!

Assuming the black h8 Rook has moved, it is still possible that White has promoted a Rook on h8, and then that this Rook has become contaminated. Since the new black Rook on h8 would never have moved, kingside castling would still be possible.

But how could a second white pawn have been promoted on h8? It must come from d2 and make four captures, but how can it capture a black piece, considering the distancing and contagion rules?

It's simple, the Pawn must have captured four white pieces transformed into black directly next to it. So the white d2 Pawn had to capture the two white Knights, the white Queen and the missing white Bishop after their contamination!

We conclude that Black can castle on both sides, but White can't castle.

Variants

I propose three variants to the Pandemic condition that could make the job easier for White.

The first: "**Pandemic with orthodox checks**", prevents the black King from protecting himself from check by being adjacent to a black piece. Normal checking rules apply to both sides.

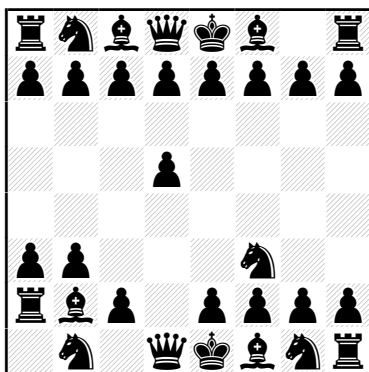
The second: "**Pandemic without distancing**", applies only the rule of contagion, which allows White more freedom of movement.

Finally: "**Pandemic Rex Inclusiv**" removes all exceptions for the white King (or any other Royal white piece). Since this can result in a position with two black Kings, the author should specify if Siamese Kings, Royal Dynasty, Rex Multiplex (or other) rules are applied.

The Pandemic condition could also be combined with many other fairy conditions for interesting effects, such as "Non Royal Kings". With this fairy condition, the King becomes a normal piece as in "Losing Chess". Checks and castling disappear, and it becomes possible to make a promotion to King. The following problem illustrates how the pandemic can spread to the whole chessboard by adding this condition.

No. 5 - A. Leroux

Original 1503.2



Solution of No. 5 : Alexandre Leroux (Original 1503.2)

1.d4 ♘f6 2.d5 ♞e4 [d5=●] 3.b3 ♞d2 [c1, d1, e1, c2, e2=●] 4.g3 ♞f3 [f2, g3=●] 5.a3 g2 [f1, g1, h1, h2=●] 6. ♖a2 ♜b2 [b1, a2, a3, b3=●]=

(C+ Jacobi in 0.5 s)

Note : Since White has no piece left, this stalemate results in a victory for Black.

Proof Game (0 + 32) C+

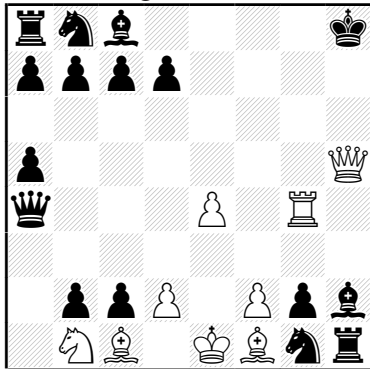
in 6.0 moves

Pandemic

Non Royal Kings

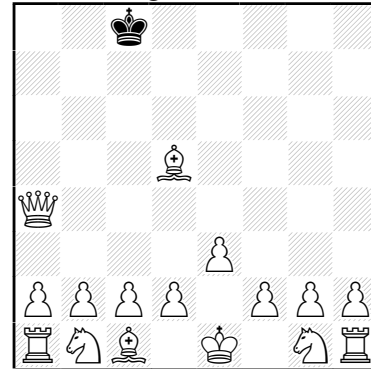
In conclusion, I hope that this condition will inspire composers and allow solvers to take their mind off daily concerns. I thank François Labelle, the creator of the fairy chess helpgame solver Jacobi, who has been kind enough to add this condition in his program. To finish on a note of hope, the two following problems show that it is possible to checkmate COVID-19 in only 13.5 moves, and to completely wipe it out in 15.5 moves!

No. 6 - A. Leroux
Original 1503.3



Proof Game (9 + 16) C?
in 13.5 moves
Pandemic

No. 7 - F. Labelle
Original 1503.4



Proof Game (16 + 1) C+
in 15.5 moves
Pandemic

N° 6 : Alexandre Leroux (original 1503.3)

1.e3 h5 2.♙xh5 f5 3.♙xf5 ♖h5 4.♙xh5 e5 5.♙xe5 g5 6.♙xg5 ♘d6 7.♙xg8 ♙xh2 [g1, h1, g2=●] 8.♙g5 ♚f7 9.a4 ♙g8 10.a5 ♚g7 11.♖a4 ♚h8 12.♖g4 ♙b3 [b2, c2=●] 13.e4 ♙a4 [a5=●] 14.♙h5#

N° 7 : François Labelle (original 1503.4)

1.e3 h5 2.♙xh5 b5 3.♙xb5 g5 4.♙xg5 e5 5.♙xe5 ♞h6 6.♙xh8 c5 7.♙xh6 c4 8.♙xc4 d6 9.♙xd6 ♙h6 10.♙xh6 ♞c6 11.♙xc6 ♙h4 12.♙xc8 a6 13.♙xa6 0-0-0 14.♙xf7 ♙a4 15.♙xa4 ♖d5 16.♙xd5

(C+ Jacobi in 2 min 32 s)

Alexandre Leroux, May 2020