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Constraint and Craft in Schoenberg's Coalition Chess

Arnold Schoenberg developed his coalition chess game during the early 1920s, in the years following his stint as an infantry soldier during WWI. While serving in the military, Schoenberg had little interest in discussing music with his officers and fellow soldiers;[1] just as cryptically, his later writings on music contain few references to his personal experiences in the war. Schoenberg's coalition chess thus provides a rare opportunity to search for possible connections latent in his mind between music and warfare, regardless of whether he was conscious of such connections himself. After all, while chess evokes the language of battle on its surface, its core architecture reveals many parallels with the nature of music in its symmetry, progressions, and relationships. This paper proposes that Schoenberg's coalition chess reflects his understanding of art and music, and seeks to examine the game's intricacies in order to reveal new insights into the composer's mind.

Coalition chess differs from traditional chess in several ways. The board consists of ten by ten squares, with nine different types of pieces distributed amongst four players. The sides are unequally matched, with Yellow and Black as the "greater" powers having twelve pieces each, and Green and Red as the "lesser" powers having six pieces each. Only the greater powers have kings, which are checkmated to win the game as in traditional chess. Within the first three rounds,

[1] Willi Reich, *Schoenberg: A Critical Biography*, trans. Leo Black (New York: Da Capo Press, 1981), 95.

the players must form two opposing coalitions, each between a greater and a lesser power, either by spoken agreement or by a player's capture of another power's piece to designate that power as an opponent. The players are also free to position their pieces as they please within the respective areas enclosed by the dashed lines shown in Figure 1. Yellow does so before the start of the game; the others may do so within the first three rounds in lieu of moving a piece, after initially setting up in the configurations specified by Schoenberg.[2]

Figure 1: Setup areas for each of the four players
(from *Games, Constructions, Bricolages*, p. 80.)

The influence of Schoenberg's wartime experiences on his coalition chess game can immediately be seen in the names of the pieces themselves, with recently invented weapons and vehicles such as the Machine-Gun and Motorcyclist replacing the Pawn and Knight that had dominated the battlefield for centuries. Though Schoenberg's willingness to accept modernity in art has never been debated, his use of the imagery of modern warfare as the backdrop for a game of leisure might seem surprising in light of the horrors he surely witnessed as a defeated combatant.

[2] *Arnold Schönberg: Games, Constructions, Bricolages*, ed. Christian Meyer (Vienna: Arnold Schönberg Center, 2004), 74-75.

However, this dispassionate demeanor can perhaps be explained by his feelings of patriotism at the time, which he recalled in a 1950 essay: "When the First World War began, I was proud to be called to arms, and as a soldier I did my whole duty enthusiastically as a true believer in the house of Habsburg."[3]

Other correlations between coalition chess and WWI must have been just as apparent to Schoenberg and perhaps informed his development of the game, including the expectation for players to form diplomatic alliances, the similarity to trench warfare of the diagonal fronts that result once alliances are formed, and the asymmetric distribution of pieces among players in terms of both number and kind. (See Figure 2.) This asymmetric distribution results in an asymmetric rate of development for each player, mirroring the gradual unfolding of WWI as the early victories of the Central Powers gave way to years of stalemate, before the arrival of the Americans shifted the advantage towards the Allies.

Piece	Equivalent in chess	Distribution			
		Yellow	Black	Green	Red
(King)	♚	1	1		
(Plane)	♞ + ♞				2
(Submarine)	♛ / ♞			2	
(Tank)	♛	2	1		
(Artillery)	♜	1	2		
(Engineer)	♞	1	1		
(Motorcyclist)	♝	1	1		
(Machine-gun)	♚ / ♟	3	4	2	2
(Guard)	♟	3	2	2	2

Figure 2: Distribution of pieces for each player
(from *Games, Constructions, Bricolages*, p. 76.)

[3] Arnold Schoenberg, "My Attitude Toward Politics," in *Style and Idea: Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black (London and Boston: Faber and Faber, 1975), 471.

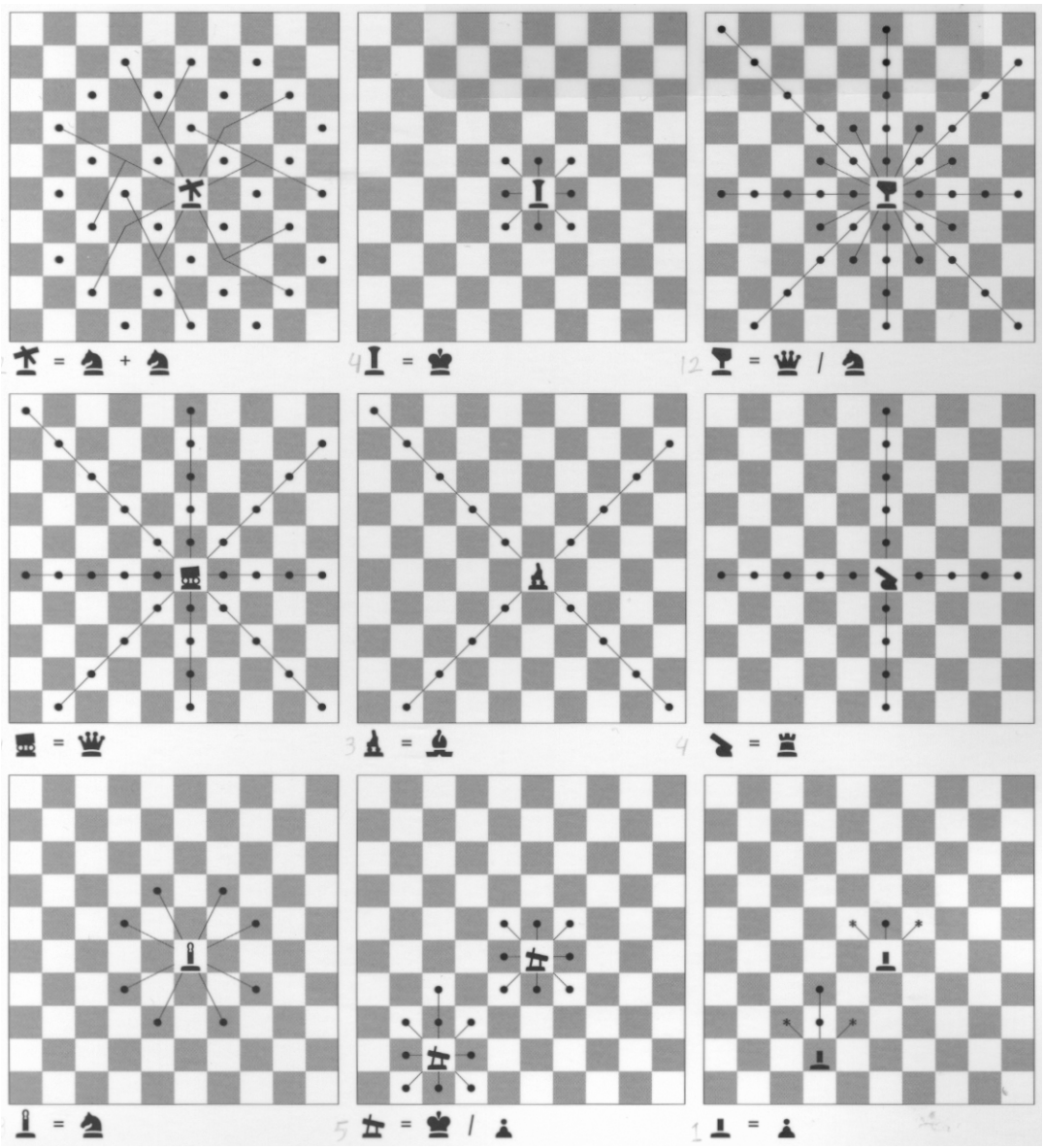

Figure 3: Legal moves for each piece
(from *Games, Constructions, Bricolages*, inside back cover.)

In traditional chess, for example, the Knight has an early advantage as it may reach its destination by jumping over occupied squares, while the Queen cannot realize its full potential until later in the game, when fewer pieces remain on the board to impede its movement. This potential for unbalanced rate of development is maximized between the lesser powers in coalition chess, where Red is given two

Planes, which can occupy any square that results from two successive Knight moves in a single turn, and Green is given two Submarines, which can move like either a Queen or a Knight.[4] (Figure 3 shows the legal moves for each of the nine pieces found in coalition chess.) Indeed, because the Plane has such unrestricted range of motion, Red may capture a piece belonging to one of the greater powers within the very first round.

The Machine-Gun is the third piece whose movement is a hybrid of those found in traditional chess; it moves like either a King or a Pawn. The remaining six pieces are equivalent to those found in traditional chess. They are the King; the Tank, which moves like a Queen; the Artillery, like a Rook; the Engineer, like a Knight; the Motorcyclist, like a Bishop; and the Guard, like a Pawn. As with the Pawn's right of conversion in traditional chess, both the Machine-Gun and the Guard may be converted into any other piece upon reaching the end of the board opposite to its origin.[5]

An interesting tangent to ponder is Schoenberg's choice of colors for the four players. Given that White and Black were the most obvious choices for the greater powers, why did Schoenberg elect to use the three colors of the flag of the Weimar Republic (black, red, yellow) that was established after WWI, rather than the three colors of the monarchist German Empire (black, white, red) for which he had presumably fought with loyalty and zeal? In the previously mentioned 1950 essay, for example, he professes his earlier belief in the "wisdom of 800 years in the art of government and in the consistency of a monarch's lifetime, as compared with the

[4] *Games, Constructions, Bricolages*, 76.
[5] Ibid., 76-77.

short lifetime of every republic."[6] Was Schoenberg's coalition chess intended as commentary on the fractious nature of republican government? (If so, his decision to illustrate this point using the Weimar's tricolor proved disastrously prescient.) And could his choice of Green for the player given the Submarines, whose power can only be fully unleashed towards the end of the game, have been inspired by the uniforms of the American forces, whose late arrival drastically changed the fortunes of that war? While fascinating to ask, such questions will probably never yield conclusive answers.

In 2004, a demonstration game was held at the Arnold Schönberg Center in Vienna to evaluate and formalize the rules of coalition chess based on what was written in Schoenberg's notes. In particular, the demonstration was helpful for determining the point values of each piece. In traditional chess, pieces are assigned point values based on the maximum number of squares each can occupy on any given turn. While opinions may vary, the point value of the Pawn is typically 1, the Bishop and the Knight are both 3, the Rook is 4, and the Queen is 9. Because of the asymmetric distribution of pieces in coalition chess, determining their point values was especially important for measuring the fairness of the game. As it turns out, the players are evenly matched, with the greater powers totaling about 50 points each, and the lesser powers 36 points each. The Plane and the Submarine are the most powerful pieces in the game, each valued at around 12 points.[7]

As stipulated by Schoenberg, the order of play is always as follows: Yellow, Black, Green, Red. Because of this rotation, the gameplay substantially changes

[6] Schoenberg, "My Attitude Toward Politics," in *Style and Idea*, 505.
[7] Ibid., 79.

depending on which coalitions are formed. If Yellow allies with Green and Black with Red, as was the case in the demonstration game, then each coalition will always get to play two turns in a row. Because this is not a feature of traditional chess, the players at the time did not think to employ tactics taking advantage of it. For example, it is typically difficult to capture a piece without inviting a counterattack; however, if each coalition is allowed two turns in a row, the possibility exists for one partner to attack, and the other to block or capture an enemy piece that might otherwise be used to counterattack. It is likely that seasoned players will learn to coordinate such tactics naturally.

There are many parallels that can be drawn between chess and music. For example, each game of chess typically involves an opening, a middlegame, and an endgame, which conforms to the progression of many musical forms such as sonata form's exposition, development and coda. The progression of each chess game also follows Schoenberg's notion of liquidation in music. As pieces are captured, more room is freed on the board while the remaining pieces are used more frequently, similar to the end of a musical sentence where motifs are reduced and sped up in their rate of progression. Each piece's legal move can be regarded as a motif that can be transposed, retrograded and inverted, augmented or diminished. And finally, pieces are spaced on the board so as to remain useful for attack while avoiding capture, much like notes in counterpoint are kept within a certain distance from each other on the staff in order to create functional harmonies.

While it is unclear to what extent Schoenberg was conscious of any such specific examples of parallels between chess and music, there can be no doubt that

he was aware of a general similarity. Based on his tendency to defend arguments by means of analogy, Schoenberg has compared chess to music in his writings. In his 1947 essay "Brahms the Progressive," for example, he argues that "it does not matter whether an artist attains his highest achievements consciously, according to a preconceived plan, or subconsciously, by stepping blindfolded from one feature to the next," before noting that "our Lord is an extremely good chess player. He usually plans billions of moves ahead."[8] In other words, much as every winning strategy in chess already exists as a latent possibility, regardless of any player's purposeful use of them, so too can artistic excellence be attained without the artist's conscious awareness of it.

Despite the inflexibility of its rules, chess is often compared to an art form in which underlying artistry and beauty can only be made apparent once craft, and knowledge of that craft, has been mastered. In this view, creative expression is given meaning precisely because it is not limitless, but instead constrained by an overall framework of discipline, order, and symmetry. Schoenberg certainly would have agreed with this sentiment. In his 1930 (revised 1933) essay "New and Outmoded Music, or Style and Idea," for example, he rails against the preference of some contemporaries for superficial features at the expense of underlying craft by writing, "I come from a time when […] musicians could listen to a canon and know how many voices it had, about its structure, plan, and other such facts. […] But I

[8] Schoenberg, "Brahms the Progressive," in *Style and Idea*, 428-429.

don't recall our talking much then about style, so this must be a more recent achievement."[9]

Elsewhere, Schoenberg discusses how art is not simply a manifestation of raw material allowed to follow its natural inclination, but is in fact constrained by the artist to conform to the intellect of a discerning audience. The words "art" and "artifice" derive from the same root, after all, and Schoenberg has no qualms with the negative connotations of the latter. On the contrary, he insists in a 1924 essay, "One has to *force* nature […] to work naturally according to *our* nature; otherwise […] it remains a children's game, like electrical experiments with elderberries or tobogganing or the like. Every more developed game comes about because the course of nature is modified by a *force* from outside."[10] (Italics mine.) Schoenberg would obviously place chess in this latter category of more developed games, and the chessboard provides an ideal analogy for demonstrating the constraints that artists impose upon themselves for the sake of creating meaningful art. A Pawn cannot move anywhere but the squares allowed to it on any given turn, for a chess game would be meaningless to follow otherwise. Even so, there are countless ways a game might unfold after White opens with e4, from the King's Gambit to the Sicilian Defense, and entire lifetimes have been devoted to studying these possibilities.

It's questionable whether Schoenberg was aware of how the constraints imposed by the rules of coalition chess would play out in detail. For example, if he had ever considered that a strict order of rotation would allow for some games to be

[9] Arnold Schoenberg, "New and Outmoded Music, or Style and Idea," in *Composers on Modern Musical Culture: An Anthology of Readings on Twentieth-Century Music*, ed. Bryan R. Simms (New York: Schirmer Books, 1999), 103.
[10] Schoenberg, "Theory of Form," in *Style and Idea*, 253.

played in which each coalition gets two turns in a row, he does not seem to have mentioned this in his writings. However, this would have been no cause for concern, for as he pointed out in "Brahms the Progressive," only the Lord can see every move in advance. Thus, it is enough for mortals simply to impose sensible constraints upon themselves, without necessarily understanding how such constraints will influence the development of their works. As Schoenberg understood this to apply to his compositions, he certainly would have believed the same about his development of coalition chess.

On a deeper level, the conflict between opposing forces found in chess is surely related to the notion of conflict found throughout Schoenberg's writings on music. In his textbook *Theory of Harmony* first published in 1911, Schoenberg evokes the language of war and rebellion to explain modulation from one key to another, comparing the tonic to a tyrant, and the dominant and subdominant to mutineers ready to rise up and take over.[11] It is possible that Schoenberg was relying on this same understanding of conflict when he designed the rules for coalition chess. Yellow is clearly the tyrant of the game, given its overall power and the freedom to position its pieces in any way before the game begins. Like the tonic, Yellow sets the direction and the terms for all that is to follow. The other players must react to Yellow, either to partner with it or else to fight it, much as every modulated key can only be heard in the context of the original tonic.

Schoenberg's coalition chess game provides a unique opportunity to understand the mind of the composer as he was consolidating his theories on art

[11] Arnold Schoenberg, *Theory of Harmony*, trans. Roy E. Carter (Berkeley: University of California Press, 1983), 150-152.

and music. It is possible, however, that further insights will remain hidden until enough players have played enough games to reveal them.

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