

Notes for a performance of Stockhausen's *Kreuzspiel* at the Eastman School of Music, February 2008.

In spring 1951, the 22-year-old Karlheinz Stockhausen probably seemed headed towards a fairly conventional compositional career. His training at the Cologne Hochschule with Hermann Schroeder informed an early choral work, *Chöre für Doris*, in which he blended Hindemithian harmonies with a certain expressionist flair, tying them both together with a bow made of American jazz. In his Violin *Sonatine*, Stockhausen showed off his growing understanding of Schoenberg, Webern and Bartok (his graduation thesis was on Bartok's *Sonata for Two Pianos and Percussion*). But these early works are nothing as radical as what would shortly follow.

At this time, Herbert Eimert was the director of the West German Radio, headquartered in Cologne. His broadcasts aimed to reintroduce the music of Hindemith, Bartok, Berg, Stravinsky and Schoenberg to a German audience that was unfamiliar with these names because they had been blacklisted by the Nazis. Impressed by Stockhausen's early works – including the *Sonatine* – Eimert suggested that the young composer enroll in the Darmstadt Vacation Courses for New Music that summer. The experience changed Stockhausen's compositional direction forever.

While in Darmstadt, Stockhausen heard Messiaen's experimental piano piece *Mode de valeurs et d'intensities*. In this short work, Messiaen treated the elements of pitch, rhythm, dynamic and attack separately, but did not order them according to any row or series. Messiaen's students Goeyvaerts and Fano did – and Boulez was not far behind. After hearing Messiaen, Goeyvaerts and Fano, Stockhausen immediately began work on *Kreuzspiel*, which would be the first of his many contributions to a style that Eimert described as "pointillistic music".

Kreuzspiel is made of three distinct sections. The first, which has been the most thoroughly analyzed, employs a novel serial technique. In a six-step process, pitches from the beginning and end of the twelve-element row "migrate" to the center of the next row, pushing the remaining elements outwards. By the time we hear the sixth row, the original order has been permuted so thoroughly that it is hard to hear any connection with the beginning. But then the process happens in reverse, and in a second six-step process, order is recreated out of seeming chaos. The result of the entire twelve-step "crossplay" is that the first and last hexachords of the original row are swapped. At the same time this is happening, the durations assigned to each pitch are permuted in a similar way, as is the rhythmic structure of the percussion.

In addition to controlling pitch and rhythm, Stockhausen also ordered the register of the pitches in his rows. Towards the beginning of the first section, he employed the extremes of high and low, which are only playable by the piano. But as the crossplay continues, the registral disposition moves towards the middle range. More notes fall into the range of the oboe and bass clarinet, and so the timbral profile shifts towards these instruments. As the first section winds down, pitches migrate back towards registral extremes, and the sound of the piano again dominates.

The second and third parts of *Kreuzspiel* are essentially variations. In the second section, the process works much like the first, except the oboe and bass clarinet begin and end in the central register and the piano reaches its extremes of high and low in the middle. The piano interjects widely-spaced chords that create a new timbral effect. To help set the second section apart from the first, the percussionists shift from tom-toms and tubas to cymbals. The third section is the most complex of the three. Here, the process from the first section happens backwards, but elements from the second section are superimposed around a central inversional axis. By combining tom-toms and cymbals, the percussionists literally blend sounds from the two earlier sections.

Stockhausen's attention to the spatial location of the instruments in *Kreuzspiel* is noteworthy. By placing the oboe near the piano's bass strings and the bass clarinet close to the treble, Stockhausen set up a registral "checkerboard". From the audience's perspective, the registral disposition is approximately (from left to right) high, low, high, low. The percussion instruments, located near the piano, are meant to create sympathetic resonance with it. Careful attention to the physical location of instruments within the performing space continued to be a major factor in Stockhausen's compositional trajectory.

It can be argued that *Kreuzspiel* was the first piece in Stockhausen's oeuvre where he defined his mature style. Through the decades that followed, Stockhausen's "pointillism" went through several radical transformations, resulting in a series of eclectic but often visionary works. Stockhausen's spirit of experimentation continued even through his massive, but sometimes uneven seven-opera project called *Licht*, and its unfinished sequel, *Klang*. One recent critic has described his later works as "bordering on the hippie-dippy". But when Stockhausen passed into the next world (where we may speculate that he quite possibly plays a leading role in the atonal angelic choir), he left behind an extraordinary body of music which pushes the limits of human understanding while seductively inviting us to transcend our bodily existence.

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