A NEW GOTHIC-STYLE ORGAN:
THE VAN DER PUTTEN INSTRUMENT IN LAUFEN, SWITZERLAND

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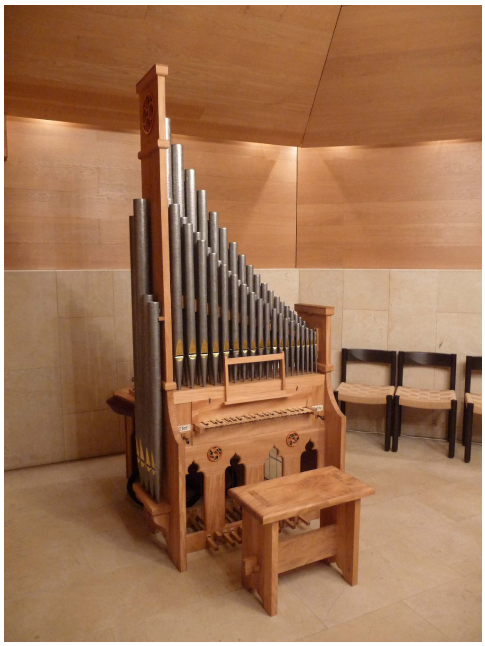
BEAUTIFUL ARTISTIC representations document the organ in the 13th and 14th centuries, and these have inspired several interesting new constructions, including a new organ recently installed in Laufen, Switzerland. In May 2010, I was privileged to perform as part of the inaugural series for this instrument, which was partially inspired by the famous illumination of King David in the Rutland Psalter (now British Library MS Add. 62925, ca. 1260). David Rumsey, organist of Herz-Jesu Kirche in Laufen, commissioned master organbuilder Winold van der Putten of Winschoten, the Netherlands, to construct a medieval/Gothic-replica organ suitable for playing both solo and ensemble 14th- to 15th-century repertoire. Already in the Robertsbridge Codex of ca. 1360, every chromatic note is needed from bass to treble, so the van der Putten organ has a fully chromatic manual compass of 40 notes, A-c3. Iconography played a role in the manual key designs, which are patterned after the surviving keyboard of the Norrlanda organ in Sweden (ca. 1380). Because of the need for pedal in some pieces of the Buxheimer Orgelbuch (ca. 1455), most notably the drone-like Redeuntes, a pull-down pedalboard from A-a was included on this instrument. The pedal keys were designed according to Michael Praetorius's reports of the Halberstadt instrument (1361/1495) in the second volume of Syntagma musicurn, De organographia (1619).



The organ's pipework is of hammered lead, as "pure" as medieval lead could be, about 95%, with traces of tin and copper. The metal was cast on sand according to known historic practices. All pipes are cut to length (a^1 = ca. 465 Hz at ca. 20°C). A major consideration was the pitch of the organ. Rumsey consulted numerous medievalists and early-music groups in nearby Basel, and they suggested four different pitches: a^1 = 440, 465, 492, and 523 Hz. The modern views seemed to reflect the varying pitch standards of late medieval history! The a^1 = 465 pitch was ultimately chosen to accommodate the largest number of potential collaborators, but the organ can also be played at a^1 = 440 Hz, with small pipe extensions that can be added to the top of each pipe, so that it sounds lower. The pitch of the constantly scaled rank prescribed for the second 8' in the second phase of the instrument will be more flexible. The pitch of that rank can be changed simply by moving the pipes up and down without

affecting timbre, although their range will naturally be less than the full available 40 notes because of the limitations of constant-scaled pipes.

The pipes are scaled, so that they halve at the octave with an addition constant that is indicated in Arnaut de Zwolle's treatise on musical instruments, written at the Burgundian court ca. 1440. The Gothic organ's temperament is also based on the version of Pythagorean tuning described by Arnaut in his treatise. As would be expected for such a historically based reconstruction, the organ has suspended action and slider chests. It also features completely "open toe" pipe voicing.

Of special interest is the stoplist of the van der Putten organ, with two stops, an 8' and 6', roughly matching the pipe lengths appearing in the iconography. The builder had previously collaborated with Jankees Braaksma to create an organ with 8' and 6' stops based on the Rutland Psalter depiction. The presence of two stops a fifth apart assists with pitch matching and is useful when playing alternatim music with singers, one of the primary functions of the early organ. This concept was taken over initially for the Laufen Gothic organ, but with the possibility of adding another 8' rank in the second phase of the instrument's construction. The alternative 8' rank would have constant scaling, so that all pipes are of the same diameter, the long pipes relatively narrow with a string-like sound, while the treble pipes would be proportionally wider, with a rich flutey timbre. Constant scaling seems to have been uniquely used until the twelfth century, thereafter used contemporaneously with variable scaling in its ascendancy, and largely abandoned after the 14th century. The constant-scaled rank is thus not intended to be used together with the other 8', the Arnaut-scaled rank, but rather as an alternative to it for the organ's 14th-century repertoire and adaptations of even earlier music. Consequently, the constant-scaled rank of pipes will be tuned in an earlier form of Pythagorean temperament rather than the one given by Arnaut. Iconographical evidence showing two rows of pipes in the 8 and 6' proportions fades fairly rapidly after the 13th century.

The van der Putten instrument is intended to cover the long period during which lead pipework was adopted (arguably before ca. 1300 to after ca. 1450). and both single- and multi-ranked organs existed during this time. The four options, the 6' and two 8' ranks of different scaling and the 8' at 440 Hz, with appropriate temperings, help to reproduce the options available to medieval organists.

One of the most striking visual features of the organ is its wind supply, two forge bellows without folds, situated behind the organ. These replicate the relative proportions seen in various early illuminations that show forge bellows manipulated by hand, such as the Peterborough Psalter (Fitzwilliam Museum, MS 12, ca. 1220). They can be hand-pumped to achieve the play of wind that characterized the performance of early organ music. The wind pressure is 42 mm or 1.65 inches, sufficient for the small organ without taxing the calcant, or bellows blower. (There is an electric blower for no-calcant situations.)

For my concert on the instrument, I played excerpts from the Faenza Codex (ca. 1430), song intabulations, a dance setting, and a Kyrie-Gloria cycle in alternatim with a soloist (Giovanni Cantorini) in the gallery at the back of the church. David Rumsey, who had performed the initial inauguration on April 23, 2010, assisted as calcant, providing subtle inflections of winding that enhanced the performance. The 8' stop has great presence with a full-bodied tone that is surprising, given the small size of the instrument in the large church. The 6' is slightly more intimate, with a nice bloom in the treble. (Brief demonstrations of these sounds can be heard on Rumsey's Web site (http://www. davidrumsey.ch). Because of the large range of the organ, it was possible to play individual pieces up and down octaves, creating more possibilities for registration.

The organ in Laufen is a wonderful example of collaboration between an organist and organbuilder to recreate in our time the past glories of the instrument. With historical illuminations, treatises, and scores as their inspiration, David Rumsey and Winold van der Putten have created a valuable resource for the performance of our earliest music.

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