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Piano keys that grow your hands

The **SIRIUS 6.0 Future Initiative**, founded in 2020 in Stuttgart, Germany, aims to improve pianistic skills, prevent playing-related musculoskeletal disorders and support equal opportunities and gender justice by promoting narrower keys. **SIRIUS 6.0 keyboards** have an octave size of 152.4 mm (6.0 inches), half a key narrower than usual.

The scientific basis includes hand span data of female and male pianists, correlations between musculoskeletal disorders and small finger spans, historical fortepiano key sizes, the gender gap in elite piano competitions and research on DS6.0® keyboards (USA).

The HfM Nuremberg, the TKL Innsbruck and the HMT Munich have already joined the initiative. The German Pension Insurance has approved a SIRIUS 6.0 keyboard as a “technical aid for workplace equipment”. Systematic studies have been started in Nuremberg and Hanover.



EXPERIENCES: 20 pianists (11F/9M) – piano students and alumni of Bachelor (1/1), Master (4/4), Concert exam (3/0) and piano professors (3/4) from 21 to 59 years – described their playing feel and their practice experience directly after their first concert performance on a grand piano with SIRIUS 6.0 keyboard in free subjective statements. Their span widths 1-5 ranged from almost a ninth to almost a twelfth on 6.5 standard keyboards.

PLAYING FEEL on SIRIUS 6.0 „You have more freedom to focus on the interpretation.“ *Bachelor, f, ≤9*

„I was able to practice relatively long and very detailed. On the standard I would have taken a little break.“ *Master, m, ≤9*

„I have tried [Prokofieff] on SIRIUS. For the first time I was able to hear the chords for myself, how they sounded.“ *Master, f, ≤9*

„It was so narrow that you can't actually press the key completely down.“ *Master improvisation, m, ≤10*

„Octaves feel so much easier than on the standard keyboard.“ *Master, f, ≤9*

„Thanks to SIRIUS I am really able to play the tenths.“ *Master, m, ≤9*

„I had this feeling: this must be what it feels like to have bigger hands.“ *Concert Exam, f, ≤9*

„I feel more free on the Sirius 6.0 keyboard – it is simply less strenuous to play on it.“ *Concert Exam, f, ≤10*

„After practicing [Liszt's *Mazeppa*], I somehow had no arm fatigue at all. Usually, I'm so exhausted.“ *Alumna Concert Exam, f, ≤10*

„With the SIRIUS 6.0 keyboard, I had a better sense of how to dose the weight in the tenths and elevenths.“ *Piano lecturer, m, ≤11*

„It's about playing with the other fingers more freely while playing octaves.“ *Piano lecturer, f, ≤10*

„SIRIUS 6.0 helps us to improve the control of hand movement.“ *Professor, m, ≤11/12*

„The 6.0 keyboard gives more pianists more confidence to be able to play the things that they would like to play.“ *Professor impro, m, ≤10*

„For a woman, my hands are rather larger than average. I was really surprised that my sound had changed completely.“ *Professor, f, ≤10*

ADAPTING from 6.5 standard to SIRIUS 6.0 „After 5 minutes, my thought was literally: Now I'm home again.“ *Master, f, ≤8/9*

„It seems to happen somehow intuitively, even though you have played on the 6.5 for so many years.“ *Bachelor Jazz, m, ≤10/11*

„I was fascinated by how quickly the relaxation of the hand outweighed the unfamiliarity.“ *Master, f, ≤9*

„The more I played on SIRIUS, the less time I needed. Eventually ... maybe about five minutes.“ *Master, m, ≤9*

„You learn to adapt. It's normal this back and forth.“ *Piano lecturer, f, ≤10*

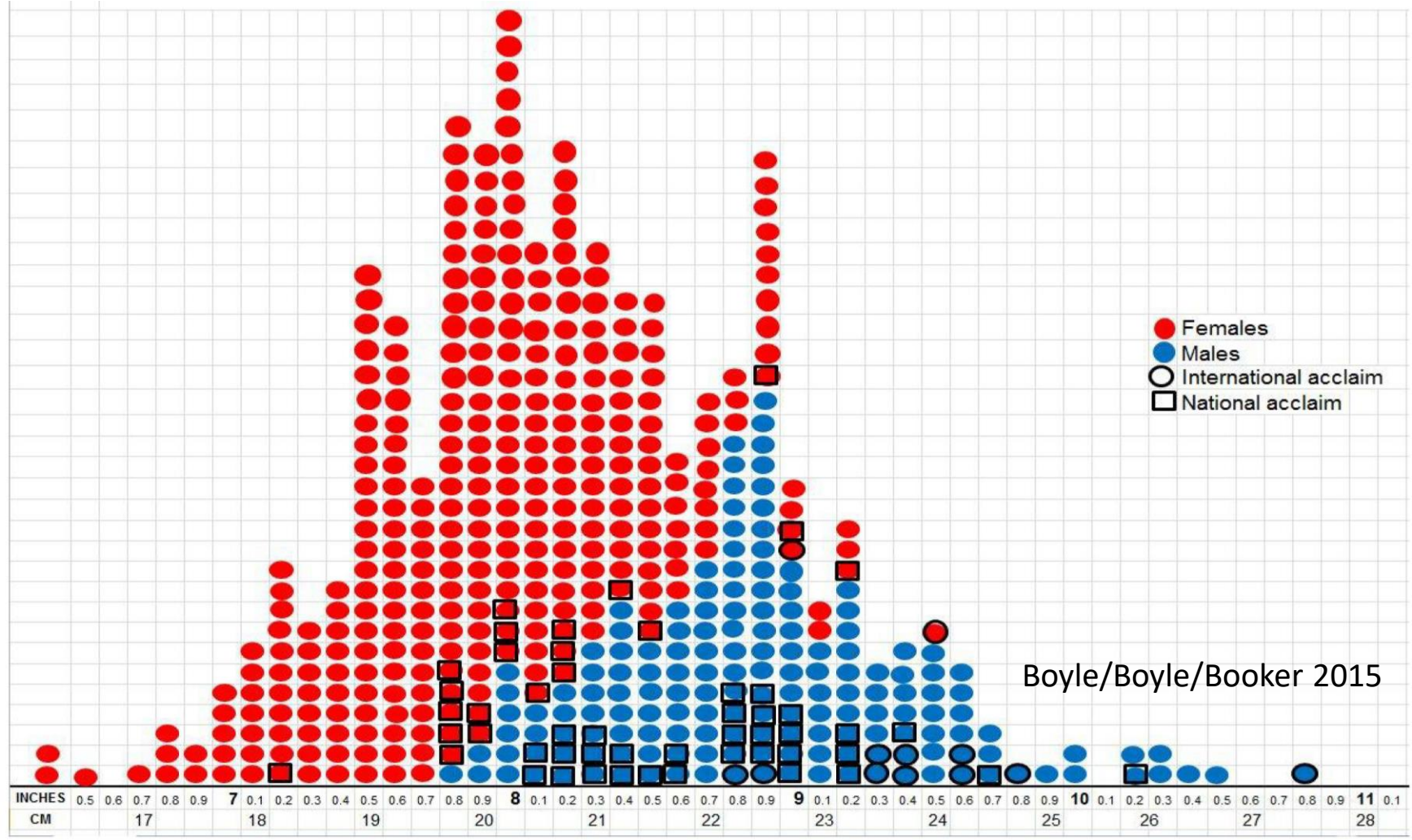
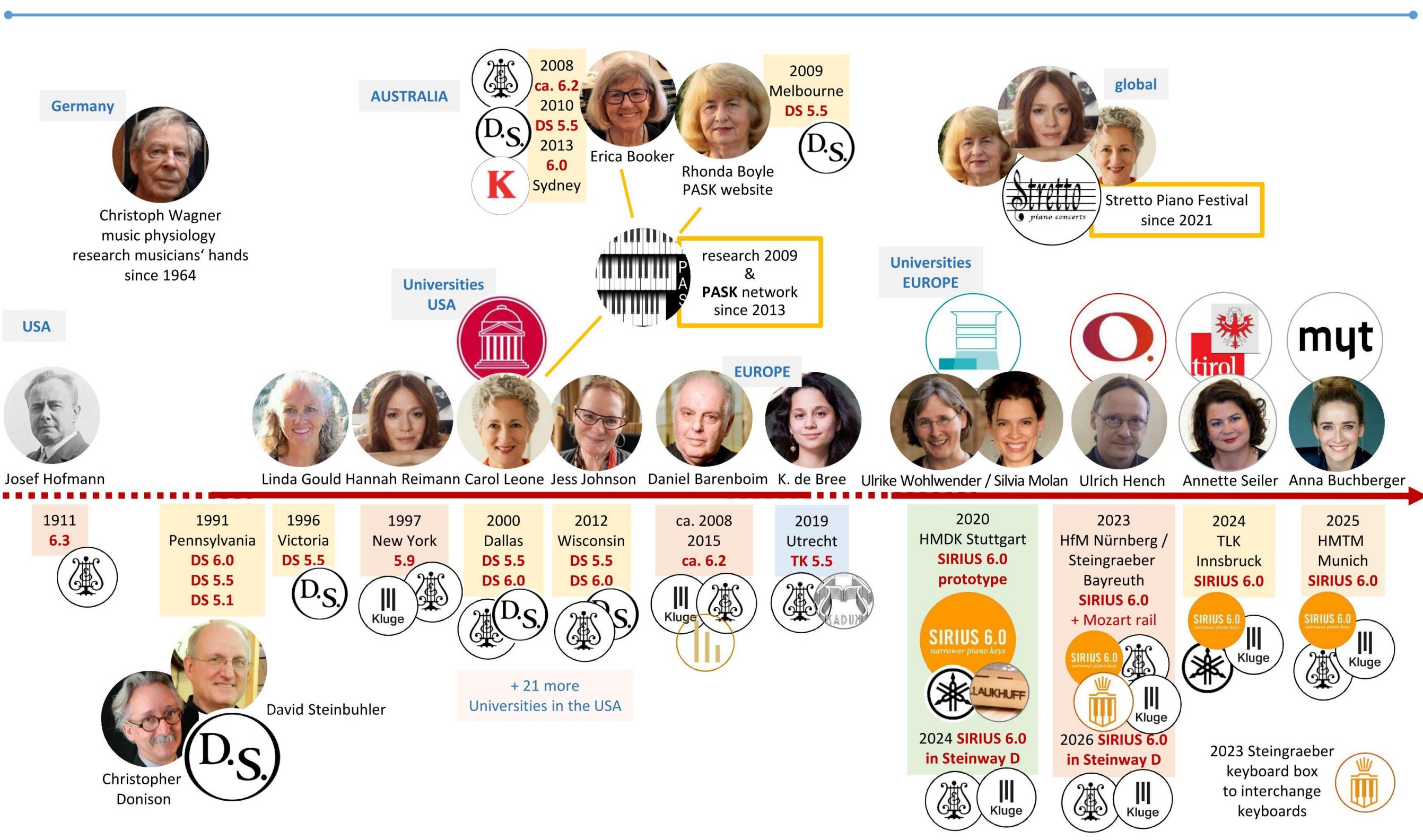
„If you have already experienced this surprise, it takes much shorter time to feel comfortable.“ *Piano professor, f, ≤10*

BACK to 6.5 standard „Switching from SIRIUS 6.0 to the standard size, the greater ease even transfers a bit.“ *Concert Exam, f, ≤10*

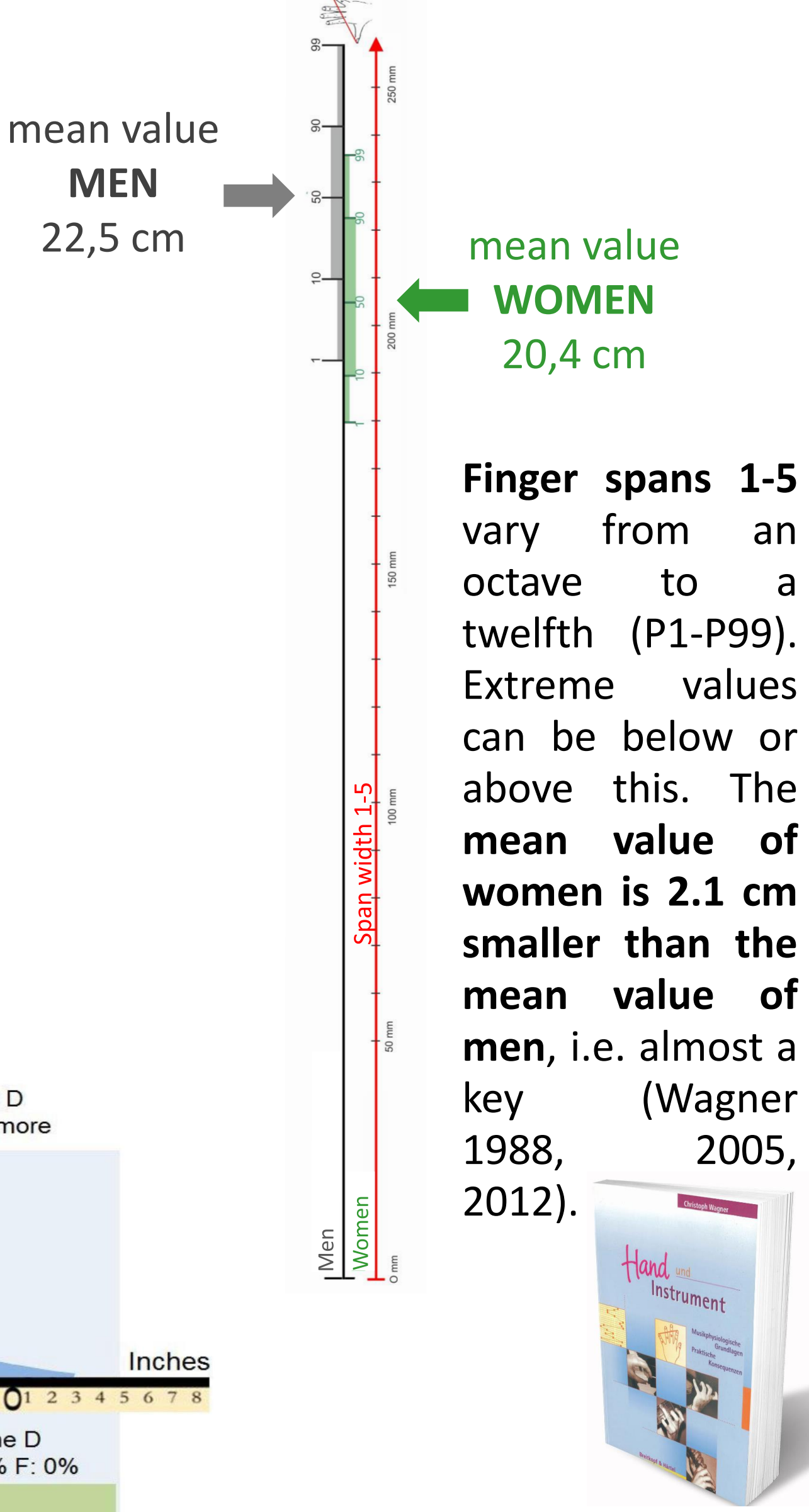
„Also a positive effect when returning to the standard keyboard.“ *Jazz piano professor, m, ≤11*

„At my grand piano, I really benefited from practicing on the SIRIUS!“ ...

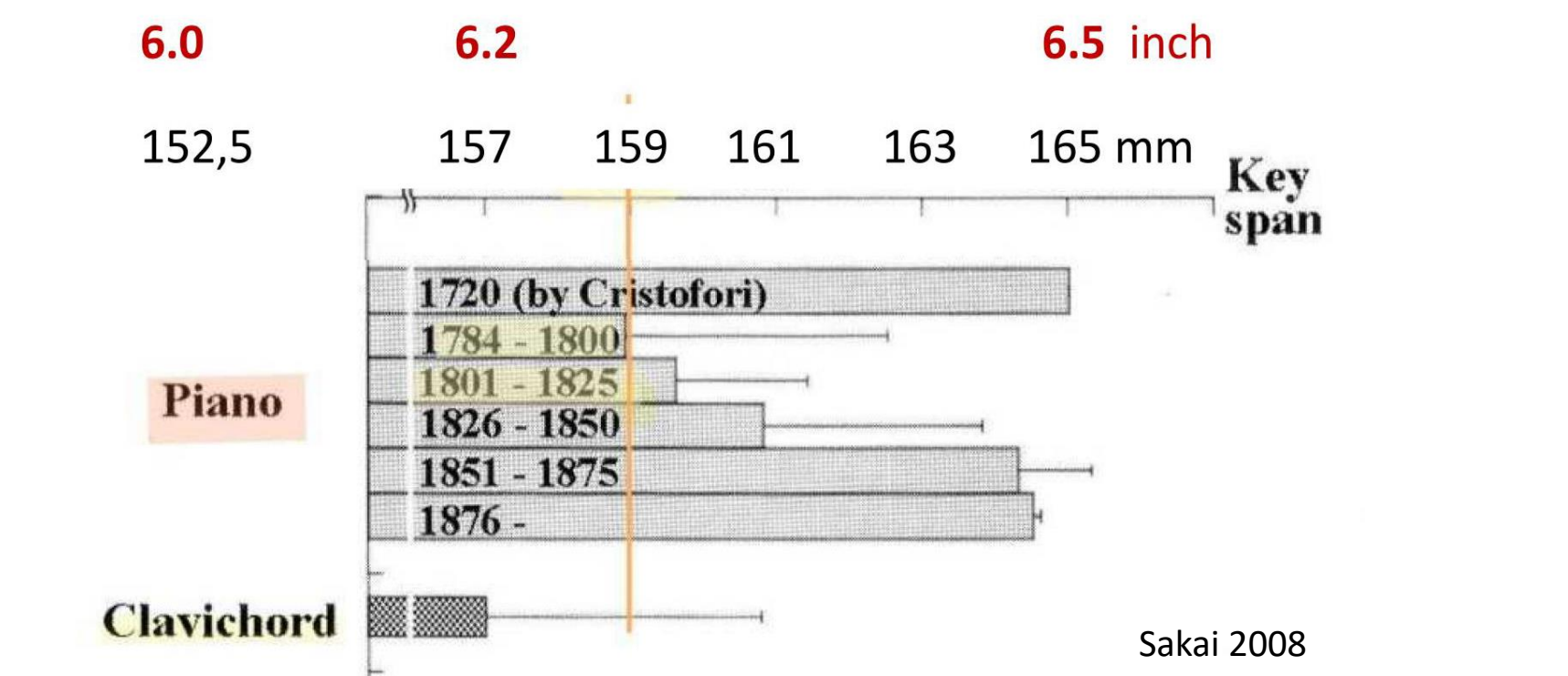
„I never thought it would have such a lasting effect!“ *Piano professor, f, ≤9*



The 10 prizewinners (blue circles) and 2 female prizewinners (red circles) of international competitions have at least a span 1-5 in the range of the mean value for men, i.e. over 22 cm.

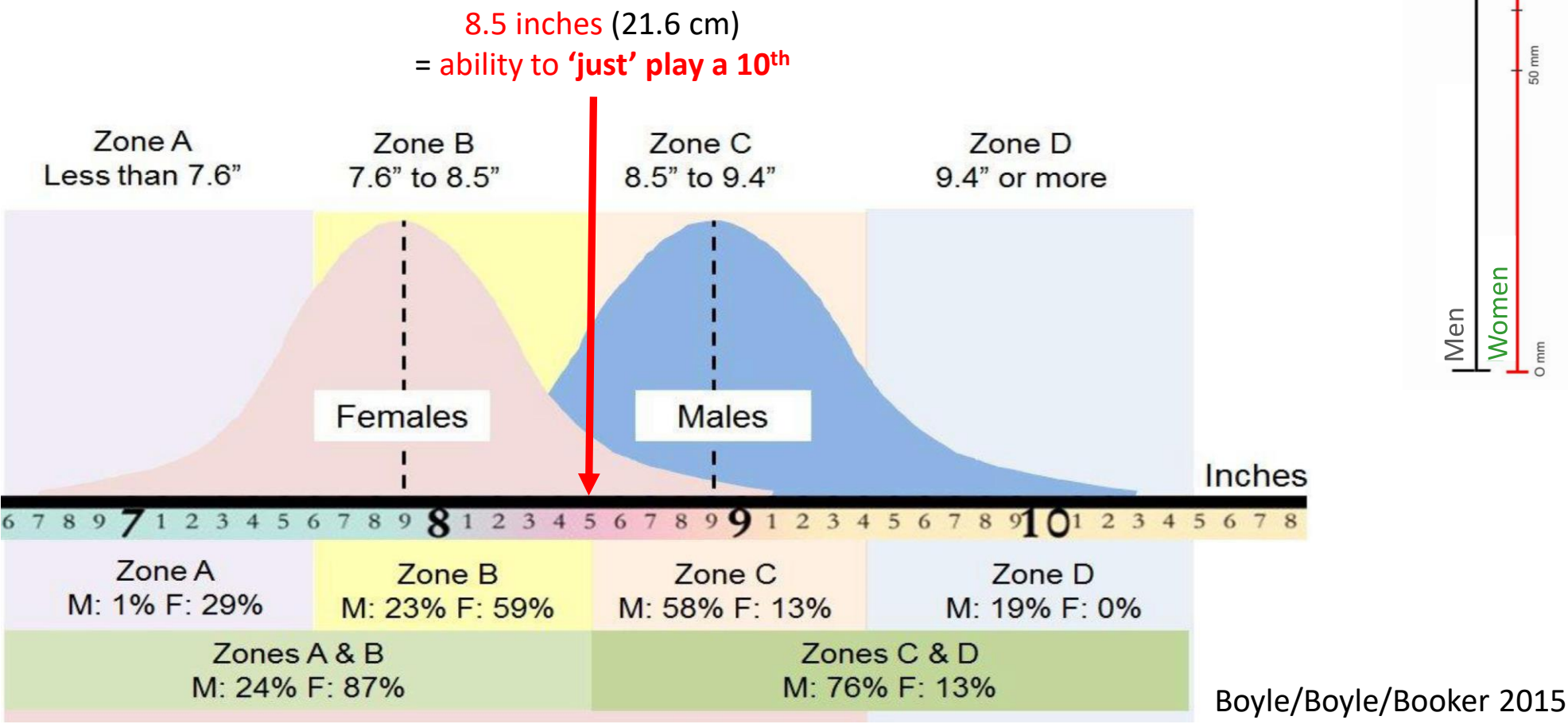


Finger spans 1-5 vary from an octave to a twelfth (P1-P99). Extreme values can be below or above this. The mean value of women is 2.1 cm smaller than the mean value of men, i.e. almost a key (Wagner 1988, 2005, 2012).



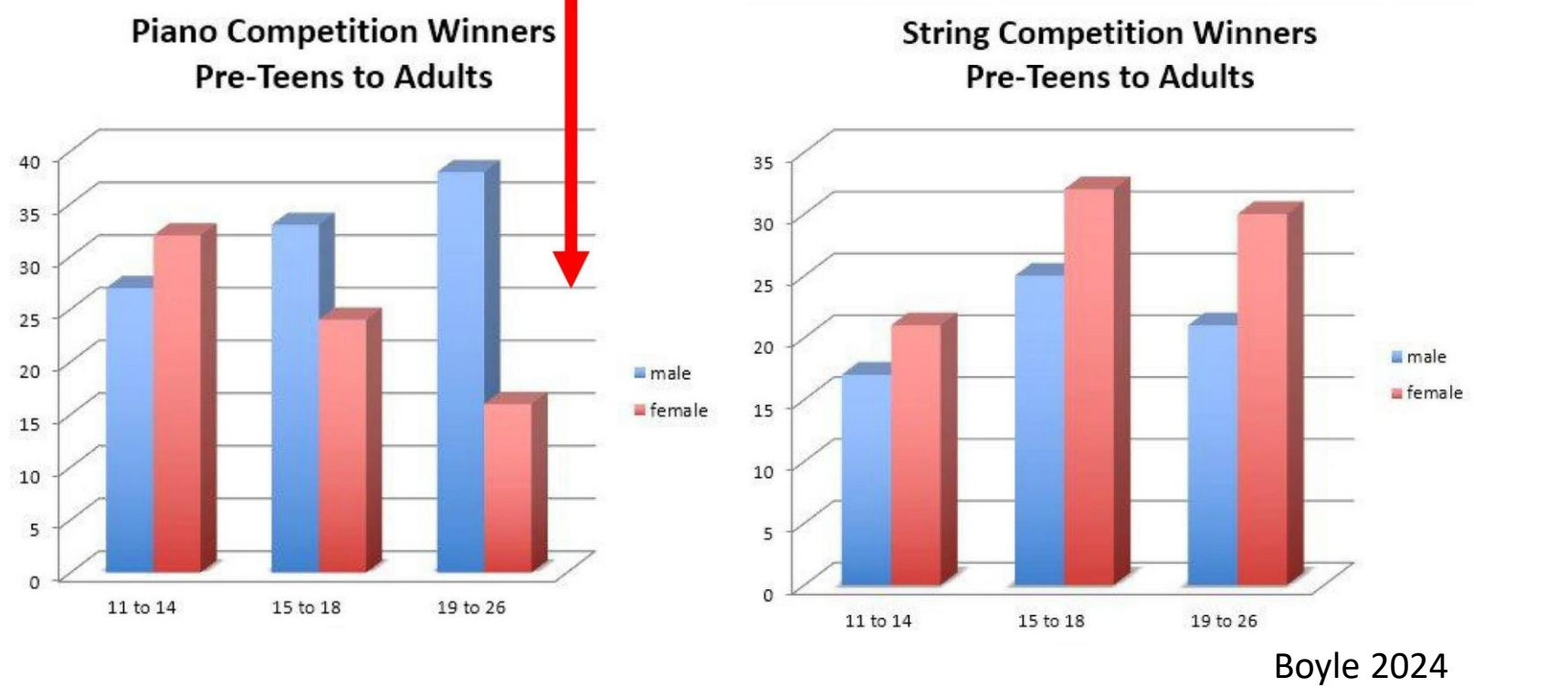
A study from the USA/Australia concludes that the **standard keyboard is too large for 87% of women and 24% of men**, considering repertoire with wide-ranging chords.

Benchmarks: 1-5 span – 8.5 inches (21.6 cm); 2-5 span – 6.0 inches (15.2 cm), based on: Eliminating tension in octave playing, ability to ‘just’ play a 10th (1-5) and 7th (2-5), considerable anecdotal evidence from pianists who have experienced reduced-sized keyboards. ZONE A: Very Small – ZONE B: Small – ZONE C: Large – ZONE D: Very large



Until 1800, the **octave scale of fortepianos was on average 6 mm narrower** than today's standard keyboards. Until 1850, with Mendelssohn, Chopin and Schumann, it was still 4 mm narrower in Ø than today.

As they get older, female pianists win fewer competitions, unlike female string players.



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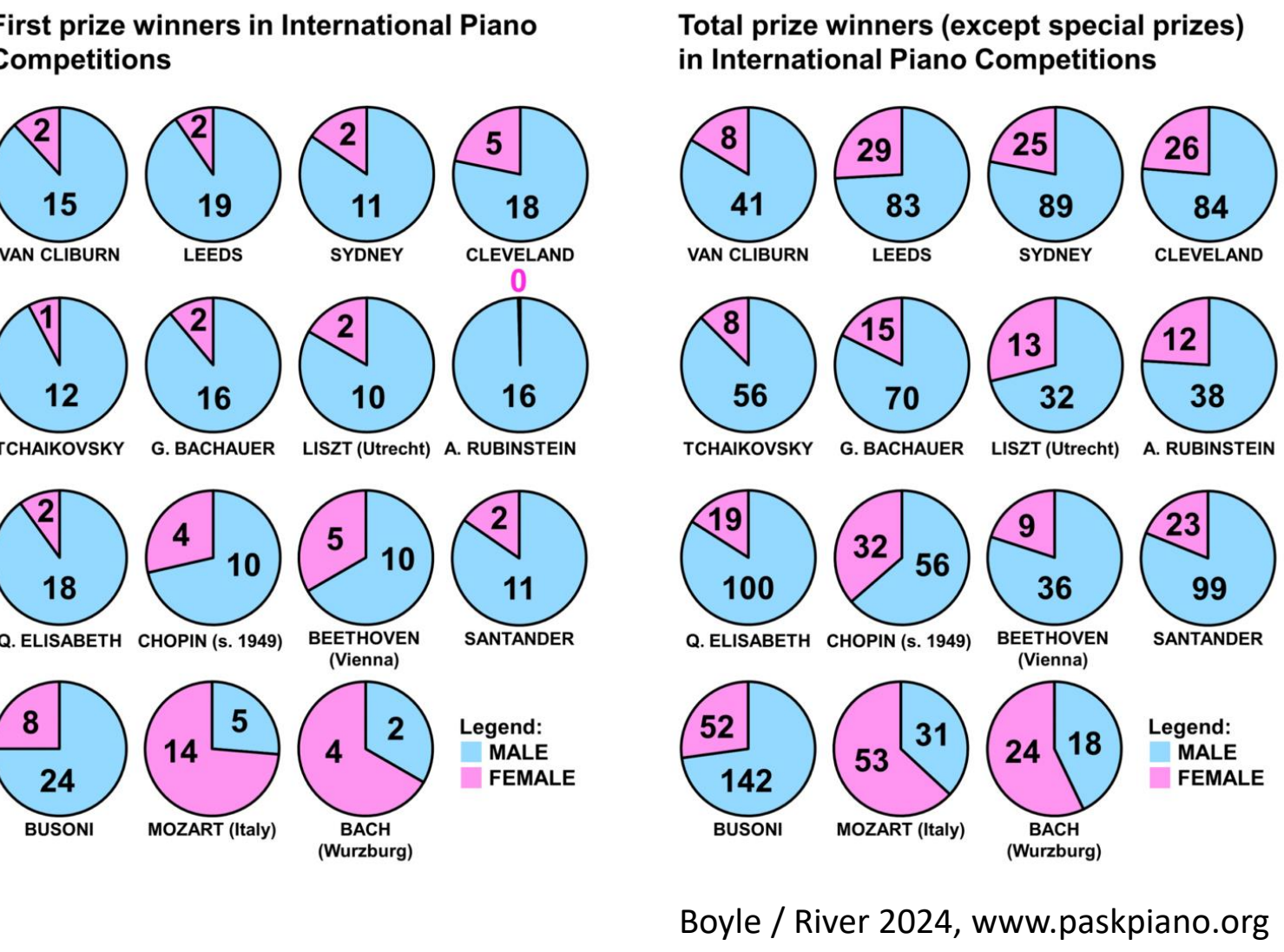
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Zürich Centre for Musicians' Hands – Pianists for Alternatively Sized Keyboards – DS Standard Foundation

Men win International Piano Competitions four times more often than women (since 1960, except Bach/Mozart).



The first **interchangeable hammer actions** with SIRIUS 6.0 keyboard resp. with original 6.5 standard keyboard **for a Steinway D concert grand** in Europe – since February 2024 in the HMDK Stuttgart, also as a model project for concert halls.

