



The correct maintenance and positioning of the pianoforte

The correct positioning of a pianoforte inside modern houses is not so obvious. It is not enough to have sufficient space, or light, or for the pianoforte to fit in with the furnishings. The pianoforte, even if in appearance cumbersome and of remarkable weight, is very delicate. It is a musical instrument with very precise mechanisms and the chords do not tolerate great temperature or excessive humidity changes. Such occurrences can compromise the tuning or the function of the mechanisms because this instrument is made mostly from wood; the wood is loaded with tons of tension, which in connection with humidity behave like a sponge, i.e. the wood absorbs and yields humidity in relation to the environmental factors to which it is exposed.

To find the correct position for a pianoforte inside a house, it is advisable to use a hygrometer in order to measure the humidity. With this aid, we can establish where the humidity is most stable and therefore choose a suitable position to maintain the functionality and sonority of the instrument. The parameters of tolerance of the minimal and maximum humidity limits and of the temperatures sustained by the pianoforte are those that are commonly indicated in the electronic and mechanical equipment of a hygrometer. If the humidity is below 40%, it is considered a dry environment. Above 80% is considered a humid environment. The best piano manufacturers guarantee the instrument if it is constantly maintained at 60% humidity and 18°C. The ideal measuring equipment is an electronic one (with external alarm and inner probe) with which it is possible to save data, such as the minimum and maximum peaks over a day, during the winter period when the central heating is on, or during the summer period when the air conditioning may be on. Both these conditions can cause a remarkable lowering of the environmental humidity and in turn damage the instrument. Dehydration of the wood will produce a scordatura of the instrument, a slackening of all the tuning pins, thereby creating mechanical noises. In serious cases of extended deficiency of humidity, the cracking of the harmonic table, and the slackening of the mechanisms that support the tension of the chords can arise. In the first case this will affect the original sonority, with noises of the harmonic table that render the sound ugly. In the second case, the tuning mechanisms can



suffer to the extent that it is then impossible to tune the instrument. Both scenarios bring about meticulous and difficult repairs in the workshop.

Various but equally annoying conditions are those provoked from the persistence of excessive humidity. Beyond the provocation of scordatura of the instrument, other damage includes: oxidation of the metals and cracking of the polished wood surface – two conditions which will lead to an abrasive effect on the exposed parts of the instrument. Moreover, an excessive humidity will damage the wool felts, which are an important part of the mechanics. Damp felts do not allow the free sliding of the mechanical parts to the blocking of the mobile parts, which will lead to a jamming of the mechanism.

In order not to produce such damage, it is advisable to place the instrument far away from heaters or warm areas on walls or floors and as far away as possible from windows and doors where drafts could cause further changes in humidity and temperature (especially in winter). Excessive temperature changes can cause ungluing of glued parts due to dilation, as well as the breakage of the chords while tuning the instrument. It is therefore advisable not to expose the pianoforte to direct sun.

Ideally it is therefore necessary to take the following precautions if we want to preserve the musical instrument in its optimal state:

- gradually air the premises in which the instrument is found by controlling the variations of humidity and temperature on the hygrometer. Avoid opening doors and windows abruptly. In the case of excessive variation of temperature and/or humidity, it is better to keep the premises closed.
- In the case of deficiency of winter humidity, it is necessary to humidify the air by adding water trays near the radiators or by having aquatic plants or aquariums in the room. Drying the washing (away from the instrument) can also increase the environmental humidity.



- only use a humidifier for emergencies and only for a short time. In the case of repeated changes in humidity, it is better to use a dehumidifier/humidifier which can control and stabilise the humidity.
- tune the instrument once a year to restore the tension of the chords and to control the correct functioning of the mechanics in order to avoid damage to the instrument and the hands.