## The Most Important Aids to Expression: Public Communication through Gestures in Ancient Rome

In the famous 2000 blockbuster "Gladiator," there's a pivotal Colosseum scene where Maximus, a revered Gladiator, emerges victorious against his opponent. Emperor Commodus, having discovered his true identity, initially intends to execute him, but eventually relents under pressure from the crowd. The people gathered in the amphitheatre clearly demand mercy, chanting loudly and raising a clenched fist with the thumb pointing upwards. This gesture, along with a similar one where the thumb points downwards, is among the most widely used Roman signs of this type in modern culture. However, the laconic references in written sources mean that scholars still debate today how these gestures actually looked and what they meant. Some believe that the thumb pointing upwards (actually towards the chest) signified death, while the one pointing downwards – symbolising the throwing of the weapon – signified grace. Be that as it may, these were not the only hand gestures used by the ancient Romans. A careful reading of the treatise "Institutio Oratoria" by Quintilian reveals that ancient speakers used an elaborate system of hand gestures with specific meanings. Moreover, numerous anecdotes scattered throughout various ancient works clearly indicate that the Romans were fascinated by gestures and body language as an integral part of the process of communication, especially public one (cf. Macr. Sat. 3.14.11-12; Ath. 1.20C-D; Apul. Met. 2.21; Luc. Salt. 64; Plin. Ep. 9.34.1-2; Plut. Vit. Pomp. 25.6). Some intellectuals even believed that before humans learned to use speech, they communicated through gestures and grunts, and that gestures alone could effectively cross language barriers (Lucr. 5.1028-1034; Cic. De orat. 3.223; Ovid Trist. 5.10.35-37).

Ancient experts in rhetoric knew better than anyone how to manipulate and influence crowds through a complex system of gestures. Although, according to Pliny the Younger, they were 'the most important aids to expression' (*Ep.* 2.19.4), it has not yet been possible to develop a coherent picture of how communication using hand gestures took place between orators (or political leaders) and the audience. Meanwhile, an understanding of this issue is indispensable for understanding the masses, seemingly invisible but always present in Roman public life.

The starting point for the research is the results obtained from the project 'One, two, three! Can everyone hear me? Can everyone see me? – The acoustics and proxemics of Roman contiones', during which we created the simplest possible model of the visibility of hand gestures. The experiment we conducted revealed the distance at which various gestures from the Roman repertoire remain visible. Our aim now is to extend this model by adding other variables that affect the visibility of objects: light intensity, realistic polychrome and a simulation of the sun's movement across the sky. In order to precisely control these variables, we have decided to use virtual reality as the environment in which we will conduct the relevant experiments. We will further investigate communication through gestures in Roman public life not only in general, but using a series of case studies, covering assemblies in the Forum Romanum during the late Republican and early Imperial periods, as well as in the Colosseum and Circus Maximus during gladiatorial games and other events organized to please the crowd.

In turn, our ultimate goal is to better understand the role of non-verbal communication in Roman public life. At the same time, we intend to introduce the approaches and procedures of experimental psychology to the historical sciences, including experimental research on large groups of participants.