THE MICROSCOPE OF A SHOELESS DOCTOR

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INTRODUCTION

The political and social phenomenon known as the "Cultural Revolution" (officially: "The Great Proletarian Cultural Revolution," a creature of Mao Zedong), took place in China from 1966 to 1976. Today, the Cultural Revolution is considered both in China and abroad as a vastly destructive, tragic, and unnecessary event.

The tremendous social upheaval produced by the Cultural Revolution affected all sectors of the society (1-4). Physicians, particularly those with academic affiliations, were among the most prominent victims. Thousands of them were sent to practice in the countryside under dismal conditions. The guiding idea was they needed to be "reeducated" by the peasantry (3). In practice, they became the "Shoeless Doctors."

One of us had the privilege of meeting a survivor of that ordeal, and the honor of being presented with the microscope used by him during that time. Here is the story of the microscope of a Shoeless Doctor.

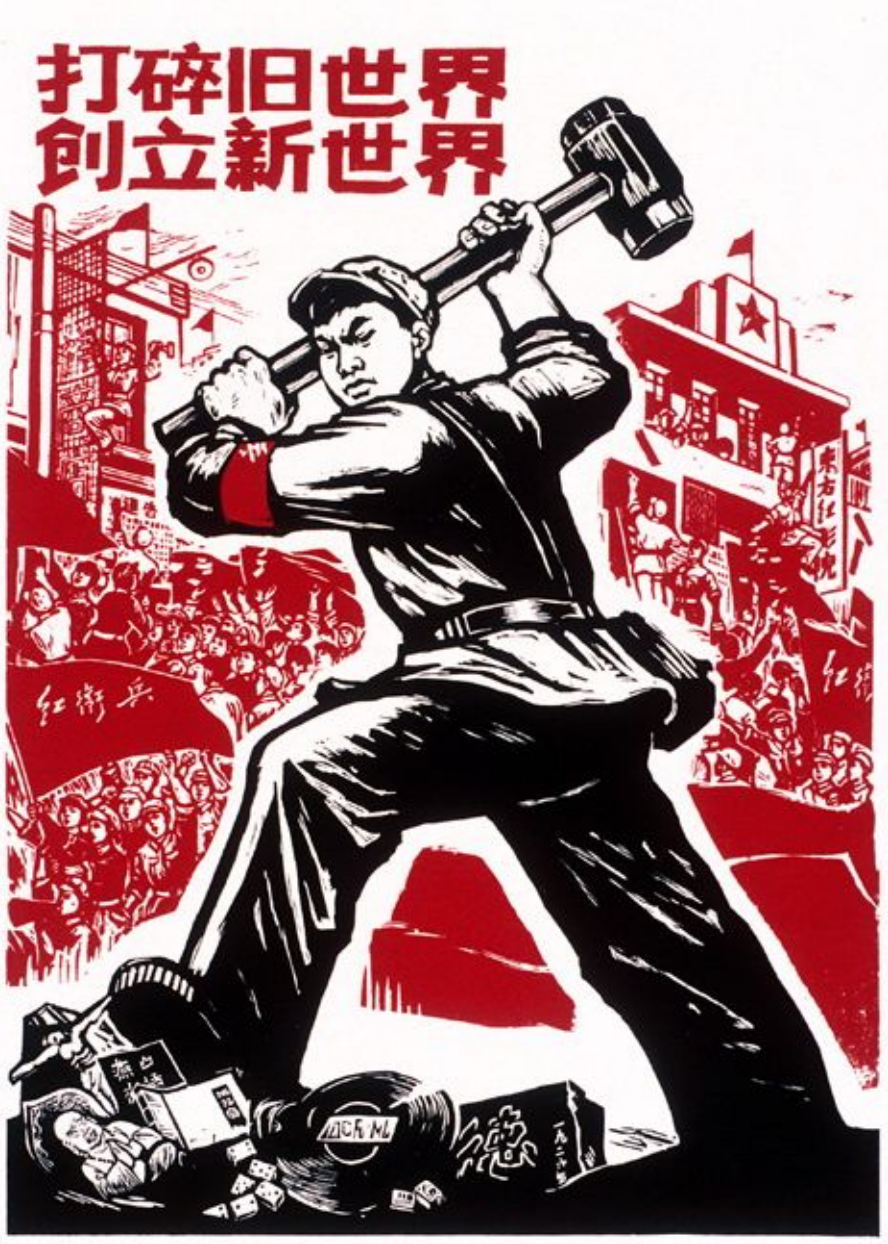

Figure 1. Fanaticized youngsters, the "Red Guard," were the enforcers of the Cultural Revolution. Here a Red Guard is about to smash a crucifix, a statuette of Buddha, books, a set of dice, and other objects. In the upper right a man is being thrown down from the upper floor of a building. (Courtesy University of Westminster Chinese Poster Collection).

THE MICROSCOPE

DESCRIPTION. Microscope #095 MdC Collection - "Cultural Revolution" Chinese-made monocular microscope (figure 2). A 12.5 x 8 cm horseshoe base is continuous with a triangularly shaped metal pillar; the pillar is connected to the arm at the inclination joint. The pillar and the limb are made of flat metal pieces. There is a fork-mounted, concave mirror with a diameter of 3 cm. A wheel of diaphragms with five openings is located underneath the stage. The 7 x 7 cm stage has two stage clips. There is no fine focus; coarse focus is by rack and pinion controlled by a knob located on the right side. The tube moves up and down along two thin flanges that hold it on axis. The tube itself is made of plastic. The ocular screws at the top of the body tube; it is made of wood with a metal ring holding the field lens in place. The single, divisible objective has a non-standard screw thread (figure 3); it is 21 mm long with a barrel diameter of 12 mm. Two components form the objective; the upper one has an internal fix diaphragm with an unusually small opening. There are no visible inscriptions on the microscope. A sticker attached to the underneath the base reads in Chinese characters: “Qualification for production made by equipment manufactory of the National Science Association. Examiner: [difficult to read], 2 (?). Year 1961, month... day...” When set in the vertical position and focused using element 1 of the objective, the instrument stands 22.5 cm tall. OPTICAL PERFORMANCE: Using element 1 of the objective the magnification is about 100x; the image is dim and uneven across the field. The field of view is 1,400 µm across. When both elements of the objective are used together the magnification is about 250x; the image is dimmer, as expected, but not worst. It is possible that the second element compensates in part for the severe flaws of element 1. The field of view is 400 µm across. This is an instrument resembling a toy microscope, but it is sturdier than a toy (it weights 1,042 gm). The instrument however is usable only for rudimentary medical work.

Figure 2. The Cultural Revolution microscope.

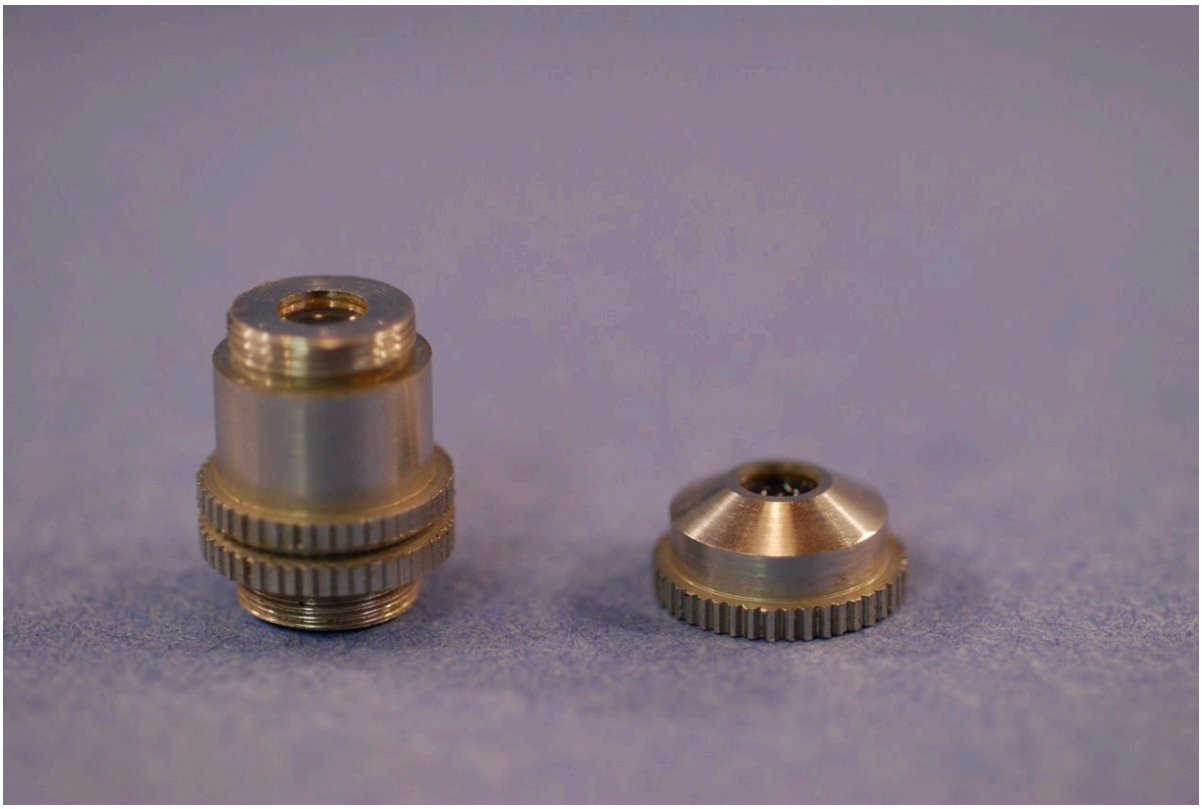

Figure 3. The two components of the divisible objective; the one to the left attaches to the microscope body.

PROVENANCE. This instrument was used by Hui-min Zhou, M.D., while practicing in the Chinese countryside during the times of the "Cultural Revolution." The microscope came to the Collection in January 1987 as a gift to to Manuel del Cerro, M.D. from Dr. Zhou. Dr. Zhou had become Professor and Director of the Center for Ultrastructure Research, Quingdao Medical College, Quingdao, China, and was internationally recognized for his work on the effects of leprosy on the eye.

COMMENTS

It is ironic that the Cultural Revolution that tried with so much ardor to destroy as much of the Chinese cultural heritage as possible, including priceless books and works of art, has left mementoes of its own. This rare example of a microscope of a Shoeless Doctor is one of them. Looking at it we honor the victims of that ordeal.

ACKNOWLEDGEMENTS

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SOURCES

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