Background

In the branch of philosophy which is called "Social Epistemology" there is a debate about disagreement (especially disagreement between so called "Epistemic Peers"). A major question in the disagreement debate: What influence does disagreement have on one's own beliefs? Is it rational to hold on to one's own belief if someone else disagrees? In the literature inquiry is done by means of artificial examples, but real-world cases are rare. So, a real case might shed some new light on the issues of the disagreement debate.

Furthermore, in the disagreement debate the focus is primarily on disagreeing individuals which are competent, i. e. if they evaluate the truth value of a belief they are likely to be right. A high degree of competence is ascribed to scientists. What is stated in a scientific article is claimed to express knowledge. So, what epistemic impact has a scientist on another with which she disagrees? Disagreement among scientists could be of much interest for the debate about disagreement.

The real world case I want to consider is the research on Chloroquine (CQ)or its derivate Hydroxychloroquine (HCQ) as a possible treatment of COVID-19. The research is going on and there has been a somewhat controversial debate about the effects on people who suffer from COVID-19.

Research objects

research objects: 18 scientific publications from 2020 about Chloroquine/Hydroxychloroquine as a possible treatment for COVID-19.

empirical sources:

1. Mayla Gabriela Silva Borba *et al.* (2020): "Chloroquine diphosphate in two different dosages as adjunctive therapy of hospitalized patients with severe respiratory syndrome in the context of coronavirus (SARS-CoV-2) infection: Preliminary safety results of a randomized, double-blinded, phase IIb clinical trial (*CloroCovid-19 Study*)", in: *medRxiv*. [preprint]
   DOI: https://doi.org/10.1101/2020.04.07.20056424
2. Zhaowei Chen *et al.* (2020): "Efficacy of hydroxychloroquine in patients with COVID-19: results of a randomized clinical trial", in: *medRxiv*>. [preprint]
   DOI: https://doi.org/10.1101/2020.03.22.20040758
3. Silvano Esposito, Silvana Noviello, Pasquale Pagliano (2020): "Update on treatment of COVID-19: ongoing studies between promising and disappointing results", in: *Le Infezioni in Medicina* 2, 198-211. [Reviews]
   URL: https://www.infezmed.it/media/journal/Vol_28_2_2020_10.pdf
4. Robin E. Ferner/Jeffrey K. Aronson (2020): "Chloroquine and hydroxychloroquine in covid-19. Use of these drugs is premature and potentially harmful", in: *BMJ* 369. [Editorial]
   DOI: https://doi.org/10.1136/bmj.m1432
5. Jianjun Gao/Zhenxue Tian/Xu Yang (2020): "Breakthrough: Chloroquine phosphate has shown apparent efficacy in treatment of COVID-19 associated pneumonia in clinical studies", in: *BioScience Trends* 14:1, 72-73. [Letter]
   DOI: https://doi.org/10.5582/bst.2020.01047
6. Philippe Gautret *et al.* (2020): "Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial", in: *International Journal of Antimicrobial Agents*. [In Press, Journal Pre-proof]
   DOI: https://doi.org/10.1016/j.ijantimicag.2020.105949

7. Tony Y. Hu/Matthew Frieman/Joy Wolfram (2020): "Insights from nanomedicine into chloroquine efficacy against COVID-19", in: *Nature Nanotechnology* 15, 247-249. [Comment]
DOI: https://doi.org/10.1038/s41565-020-0674-9
8. Nicholas E. Ingraham *et al.* (2020): "Shining a light on the evidence for hydroxychloroquine in SARS-CoV-2", in: *Critical Care* 24:182. [Commentary]
DOI: https://doi.org/10.1186/s13054-020-02894-7
9. Katheron Intson *et al.* (2020): "An independent appraisal and re-analysis of hydroxychloroquine treatment trial for COVID-19", in: *Swiss Medical Weekly*. [Viewpoint]
DOI: https://doi.org/10.4414/smw.2020.20262
10. Francesco Licciardi *et al.* (2020): "COVID-19 and what pediatric rheumatologists should know: a review from a highly affected country", in: *Pediatric Rheumatology* 18:35. [Review]
DOI: https://doi.org/10.1186/s12969-020-00422-z
11. Matthieu Mahevas *et al.* (2020): "No evidence of clinical efficacy of hydroxychloroquine in patients hospitalized for COVID-19 infection with oxygen requirement: results of a study using routinely collected data to emulate a target trial", in: *medRxiv*. [preprint]
DOI: https://doi.org/10.1101/2020.04.10.20060699
12. S.A. Meo/D.C. Klonoff/J. Akram (2020): "Efficacy of chloroquine and hydroxychloroquine in the treatment of COVID-19", in: *European Review for Medical and Pharmacological Sciences* 24:8, 4539-4547.
DOI: https://doi.org/10.26355/eurrev_202004_21038
13. Durga Prasanna Misra *et al.* (2020): "Rheumatologists' perspective on coronavirus disease 19 (COVID-19) and potential therapeutic targets", in: *Clinical Rheumatology*
DOI: https://doi.org/10.1007/s10067-020-05073-9
14. J. M. Molina *et al.* (2020): "No evidence of rapid antiviral clearance or clinical benefit with the combination of hydroxychloroquine and azithromycin in patients with severe COVID-19 infection", in: *Médecine et Maladies Infectieuses* 50:4, 384. [Letter to the editor]
DOI: https://doi.org/10.1016/j.medmal.2020.03.006
15. Amir Shamshirian *et al.* (2020): "Hydroxychloroquine Versus COVID-19: A Periodic Systematic Review and Meta-Analysis", in: *medRxiv*. [preprint]
DOI: https://doi.org/10.1101/2020.04.14.20065276
16. Xiaoxuan Sun/Yicheng Ni/Miaojia Zhang (2020): "Rheumotologists' view on the use of hydroxychloroquine to treat COVID-19", in: *Emerging Microbes & Infections* 9:1, 830-832. [Letter]
DOI: https://doi.org/10.1080/22221751.2020.1760145
17. Wei Tang *et al.* (2020): "Hydroxychloroquine in patients mainly with mild to moderate COVID-19: an open-label, randomized, controlled trial", in: *medRxiv*. [preprint]
DOI: https://doi.org/10.1101/2020.04.10.20060558
18. Franck Touret/Xavier de Lamballerie (2020): "Of chloroquine and COVID-19", in: *Antiviral Research* 177: 104762.[Commentary]
DOI: https://doi.org/10.1016/j.antiviral.2020.104762

research question: How is disagreement marked in a scientific debate?