**Small Group Discussion Questions FYS 178**

10, 12 Nov 2020 (Wk#14) Society, Technology & Weather

Questions for **Chapter 11 & Conclusions** of “Appropriating the Weather…”

[1] What does the author mean “to rationalize ‘fair-weather’ ” (p. 223)? “The Bergen school tried to establish \_\_\_\_\_\_\_\_ concept and a method of \_\_\_\_\_\_\_\_ analysis in connection with their attempt to rationalize so-called fair-weather meteorology” {fill in the blanks.} What is meant by “fair-weather meteorology”? Why was being able to predict “fair-weather” so important in Norway?

[2] Why did meteorologists generally avoid studying or predicting the local showers associated with “fair-weather” meteorology? Other than aviation, what other specific agricultural endeavor was sensitive to the development of local rain showers? Why did the Bergen meteorologists (BMs) and Norwegian government suddenly become interested in supporting haymaking?

[3] How does weather impact the haymaking process? Be specific in terms of labor and of what happens to the hay under wet or dry conditions. Which type of erroneous weather forecast (saying it will be dry when, in fact, it rains -OR- saying it will be wet when, in fact, it is dry) causes more problems for farmers? When during the year was this type of erroneous forecast likely to occur?

[4] How was air mass analysis going to assist the BMs to improve their forecasts of fair-weather showers? What measurements of the atmosphere seemed promising to help in these forecasts? What measurements proved NOT helpful in making these forecasts? What technological limits in the 1920s made the forecasting of local showers difficult?

[5] Calwagen’s focus on air mass analysis was intended to help what industry? What instrument did he use to help make direct measurements of the vertical properties of the atmosphere? What did Calwagen attempt to predict in addition to local showers? What university in the U.S. took on air mass studies and research in the 1920s & 1930s based on the work of Calwagen and the BMs?

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Questions for **Chapter 11 & Conclusions** of “Appropriating the Weather…” (cont.)

[6] What happened in 1924 that threatened the existence of the Bergen school? How was the issue resolved? Who were the users that argued in favor of keeping the weather center associated with the Bergen school open? What did these users increasingly abandon in favor of BM forecasts?

[7] What happened in the 1930s in Norway that “quashed the opportunity for combining practical service roles with academically satisfying work?” How did the weather needs of aviation actually hinder progress in the science of meteorology? “…a new division between \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ grew as university degree programs of meteorology began to flourish…” {fill in the blanks.} To which of these two endeavors did Vilhelm devote himself in 1926?

[8] What is the “price” a scientist pays for being funded by society to conduct research (p. 242, 243)?

[9] “…discovery as a \_\_\_\_\_\_\_\_” illustrates new knowledge “arising from changes in \_\_\_\_\_\_\_\_” {fill in the blanks.} How did Bergeron’s re-analysis of J. Bjerknes’s weather maps from 14 and 15 August 1918 reflect changes in their updated cyclone model? How is this an illustration of the quote at the start of this question?

[10] How influential was the Bergen school’s version of meteorology at the close of World War II? What meteorological schools of thought have most in common with today’s conceptions of atmospheric dynamics (p. 245)? Does this mean that Vilhelm’s efforts were a failure? Why or why not?