Kuhn’s Postscript attempt to clarify what is a Paradigm (Masterman’s 21 meanings are too many!):

1. as defining a community (the community: defines what the paradigm is! Yes, circular.)

“the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community” (174)

In other words, Kuhn is arguing for a **sociological**, rather than an ideological, logical, rational, or philosophical, **premise for understanding science**: study the actual community of scientists in their actual practice. (And, by implication, he is arguing for a **historical premise**, as communities are dynamic and change over time.) In doing so he breaks dramatically from “traditional”, that is positivist, philosophy of science, which argued that scientific knowledge is essentially theoretical and ultimately the theory can be reduced to logic, or even better, mathematics.

2. as “one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science” (174). After this somewhat specific definition, Kuhn then expands it (!): Paradigms as “constellations of group commitments”: 4 “main sorts of components” of the “disciplinary matrix” (181):

a) symbolic generalizations (e.g., F=ma)

b) beliefs in certain models, particularly for heuristic purposes (“gas molecules act like elastic billiard balls in random motion”)

c) values (e.g., most deeply held are about prediction: prediction should be accurate, quantitative, etc.)

d) exemplars: “Paradigms as shared example is the central element of what I now take to be the most novel and least understood aspect of the book.” (186)

Kuhn claims this last component is the “philosophically deeper” aspect to paradigm (174). Here his main opponent is, again, the “traditional”, that is positivist, philosophy of science, which argued that scientific activity is essentially methodological and ultimately the method can be reduced to rules (which in turn can be reduced to logic, or even better, mathematics). Further, the only part within the method that cannot be reduced to rules is the scientist’s “contact with nature” (i.e., the scientist’s observation is the report of a certain “sensation” (subjective) that is a response (R) to a particular “stimuli” (S) (objective)). Over against this Kuhn utilizes Michael Polanyi’s notion of “tacit knowledge”, which also built on Gestalt psychology (Gestalt studies “falsified” the S-R sensation-based conception of perception), as the key active component within paradigms-as-exemplars, which Kuhn argues (1) is irreducible to rules, and (2) invokes “neuro-cerebral mechanism” (191) , and “physiochemical laws” (194), i.e. an entirely different kind of complexity than the empiricist S-R scheme (“this localization of the cognitive content of science is wrong” (187)). In doing so Kuhn pushes the “philosophy of science” **into cognitive psychology and neuropsychology** (“I am currently experimenting with a computer program…” (191, also p. 196))

\*Note: Kuhn bypasses all kinds of other possible psychological approaches – social, cultural, discursive, phenomenological, psychodynamic, developmental, etc. – which analyze either the individual, or the individual-within-the-social. He is presumably not interested in that – too subjective? – but wants to jump from sociology directly to neurology.