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- 2 Friedrich Nietzsche, "Rhythmische Untersuchungen," u *Friedrich Nietzsche, Werke, Kristische Gesamstaube*, vol. 2.3, ed. Fritz Bornmann and Mario Carpitella (Vorlesungsaufzeichnungen [SS 1870-SS 1871]; Berlin: de Gruyter, 1993), 322.

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- 3 Švanova sećanja na ovu večeru zabeležena su u govoru koji je održao 1878, a pre toga i u njegovom radu *Mikroskopische Untersuchungen über die Uebereinstimmung in der Struktur und dem Wachsthum der Thiere und Pflanzen*. (Sander, Berlin 1839), kao i u Laura Otis, *Müller's Lab* (New York: Oxford University Press, 2007), 62–64; i Marcel Florkin, *Naissance et déviation de la théorie cellulaire dans l'oeuvre de Théodore Schwann* (Paris: Hermann, 1960), 62.
- 4 Ulrich Charpa, "Matthias Jakob Schleiden (1804–1881): The History of Jewish Interest in Science and the Methodology of Microscopic Botany," u *Aleph: Historical Studies in Science and Judaism*, vol. 3 (Bloomington: Indiana University Press, 2003), 213–45.
- 5 Pojediniosti o njegovoj zbirci mogu se naći u: Matthias Jakob Schleiden, "Beitrage zur Phytogenesis," *Archiv für Anatomie, Physiologie und Wissenschaftliche Medicin* (1838): 137–76.

6 Matthias Jakob Schleiden, "Contributions to Our Knowledge of Phytogenesis," ("Beiträge zur Phytogenesis"), u *Scientific Memoirs, Selected from the Transactions of Foreign Academies of Science and Learned Societies and from Foreign Journals*, vol. 2, (London: Richard and John E. Taylor, 1841), 281.

7 Švanovo interesovanje za jedinstvo ćelija kao gradivnih blokova životinja i biljaka bilo je vođeno i idejom da, ako su biljke i životinje izgrađene od autonomnih, nezavisnih živih jedinica, tada nema potrebe za pozivanjem na specijalnu „životnu“ tečnost odgovornu za život ili rođenje ćelija – ideja koje se tvrdoglavo držao Johanes Miler. Šlajden, koji je bio njegov student, verovao je u životne tečnosti ali je gajio sopstvenu teoriju o nastanku ćelija – procesu za koji je verovao da je analogan formiranju kristala – za kasnije se ispostavilo da je teorija potpuno pogrešna. Ironično, međutim, rođenje ćelijske teorije nije priča o grešci nego o zabludi. Sličnosti koje su Šlajden i Švan uočili između biljnih i životinjskih tkiva – poput one da su sva živa bića sazdana od ćelija – bile su potpuno stvarne, ali kao što ćemo uskoro videti, Šlajdenova teorija o tome kako se rađaju ćelije (koju je Švan prihvatio, mada sa narastajućom sumnjom), ispostavila se ubrzo kao pogrešna, pre svega zahvaljujući radu Rudolfa Virhova. Teško je reći da li je Šlajden još pre razgovora sa Švanom bio došao do zaključka da su sva biljna tkiva sagrađena od ćelijskih jedinica ili ga je njihov razgovor podstakao da ispita (ili preispita) svoje uzorke i sagleda univerzalnost njihove ćelijske strukture u novom svetlu. Stoga sam sklon da oprezno kažem kako se „vratio svojim uzorcima“, budući da ne znamo pouzdano koliko je Šlajden napredovao u svojim zaključcima pre razgovora sa Švanom, a u kojoj meri ih je oblikovao neposredno posle tog razgovora. Međutim, datum pomenute večere (1837.), objavljivanje Šlajdenovog članka koje je usledilo za relativno kratko vreme (1838.) i dobro dokumentovana Švanova poseta laboratoriji tokom koje je uočio sličnosti između životinjskih i biljnih ćelija nagoveštavaju da je interakcija sa Švanom bila važan katalizator u Šlajdenovom razmišljanju o fundamentalnim postavkama i univerzalnosti ćelijske teorije. Takođe, činjenica da su Šlajden i Švan spremno prihvatili jedan drugog kao ravnopravne rodonačelnike moderne ćelijske teorije, a ne kao suparnike, nagoveštava i da su njihove interakcije – razgovori uz večeru, recimo – po svoj prilici odigrali bar neku ulogu u učvršćivanju Šlajdenovog ubeđenja da su sva biljna tkiva sagrađena od ćelija. Švan je, za razliku od Šlajdena, jasniji u vezi s važnošću pomenutog

- večernjeg razgovora iz 1837: kaže, naime, da je on promenio fundamentalni pravac njegovog istraživanja. U svom pomenutom govoru iz 1878. godine, spremno priznaje da su Šlajdenova opažanja bila od krucijalnog značaja za njegovo kasnije otkriće da su životinjska tkiva takođe sazdana od ćelija.
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- 21 Da budemo načisto, ove „proizlazeće“ osobine nisu definišuće karakteristike života. Radije, to su sobine koje su višećelijska stvorenja razvila iz sistema živih ćelija.
- 22 Nemaju sve ćelije sve ove osobine. Na primer, specijalizacija ćelija u kompleksnim organizmima omogućava, recimo, skladištenje hranljivih materija u određenim ćelijama, dok se neke druge ćelije bave odbacivanjem otpada. Jednoćelijski organizmi poput gljivica i bakterija mogu imati specijalizovane subćelijske strukture koje obavljaju pomenute funkcije, ali višećelijski organizmi, poput ljudskih bića, razvili su evolucijom specijalizovane organe sa specijalizovanim ćelijama za obavljanje tih funkcija.
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68 Ovo nije bio i prvi sukob između Huka i Njutna. Njutn je 1670-ih prezentovao Kraljevskom društvu svoj eksperiment u kom se bela svetlost prolaskom kroz prizmu razbila u kontinuirani spektar pojedinačnih boja duge. U rekombinaciji sa još jednom prizmom dolazilo je do rekonstituisanja bele svetlosti. Huk, koji je tada bio kurator Društva, nije se slagao s Njutnom i napisao je oštru kritiku ove Njutnove rasprave, što je kod Njutna, ionako paranoičnog kada je bila reč o obelodanjivanju njegovog rada, dovelo do napada pravedničkog besa. Ova dvojica engleskih genija iz sedamnaestog veka, obojica sa egom veličine planete, ostala su i u narednim decenijama u lošim odnosima – koji su kulminirali kada je Huk zahtevao da mu se pripišu zasluge za univerzalni zakon gravitacije.

69 Godine 2019. doktor Lari Grifing, profesor biologije u Teksasu, ispitao je sliku neidentifikovanog naučnika (zvanu „Portret matematičara“) koju je 1680-ih naslikala Meri Bil. Grifing veruje da je ta slika portret Roberta Huka: "Portraits," www.RobertHooke.org, pristupljeno decembra 2021, http://roberthooke.org.uk/?page_id=227.

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