

پی نوشت ها



پیشگفتار



1. Sheldrake (1973).
2. Rubery and Sheldrake (1974).
3. Sheldrake and Moir (1970)
4. Sheldrake (1974).
5. Sheldrake (1984).
6. E.g., Sheldrake (1987).

مقدمه



1. In Popper and Eccles (1977).
2. E.g., D'Espagnat (1976).

3. Hawking and Mlodinow (2010), p. 117.
4. Ibid., pp. 118–19.
5. Smolin (2006).
6. Carr (ed.) (2007); Greene (2011).
7. Ellis (2011).
8. Collins, in Carr (ed.) (2007), pp. 459–80.

سراغاز



1. Ibid., p. 50.
2. Bacon (1951), pp. 290–91.
3. Ibid., p. 298.
4. Fara (2009), p. 132.
5. Kealey (1996).
6. Dubos (1960), p. 146.
7. Kealey (1996).
8. National Science Board (2010), Chapter 4.
9. Sarton (1955), p. 12.
10. Laplace (1819), p. 4.
11. Ibid.
12. Chivers (2010).
13. Munowitz (2005), Chapter 7.
14. Chivers (2010).
15. Gould (1989).

16. Gleik (1988).
17. Malhotra et al. (2001).
18. Quoted in Horgan (1997b).
19. Horgan (1997b), p. 6.
20. Westfall (1980).
21. Burtt (1932).
22. Gould (1999).
23. Quoted in Burtt (1932), p. 9.
24. Kekreja (2009).
25. Wikipedia: The God Delusion, accessed June 16, 2011 : http://en.wikipedia.org/wiki/The_God_Delusion
26. Gray (2007), pp. 266 سـت
27. Gray (2002), p. xiii.
28. Kuhn (1970).
29. Latour (1987), pp. 184gio
30. Gervais (2010).

[۱] آیا طبیعت مکانیکی است؟



1. Quoted in Brooke (1991), p. 120.
2. Ibid., p. 119.
3. Burtt (1932), p. 45.
4. Ibid., p. 120.
5. Quoted in Collins (1965), p. 81.
6. Burtt (1932), p. 73.

7. Wallace, trans. (1911), p. 80.
8. Brooke (1991), pp. 128 گ
9. Descartes (1985), Vol. 1, p. 317.
10. Ibid., p. 139.
11. Ibid., p. 131.
12. Ibid., p. 141.
13. Dennett (1991), p. 43.
14. Kretzman and Stump (1993).
15. Gilson (1984).
16. Gilbert (1600).
17. Sheldrake (1990), Chapter 4.
18. Lightman (2007), p. 188.
19. Burtt (1932).
20. Descartes (1985), Vol. 1, p. 101.
21. Kahn (1949).
22. گریلینگ (۲۰۱۱) این سخنان را در حالی گفت که استدلال‌های مایکل اسمیرمر را در کتابی تحت عنوان مغز باورمند (The Believing Brain) بازگو می‌کرد و آن‌ها را احتمالاً «دیدگاه درست» می‌خواند.
23. E.g., Wiseman (2011), pp. 74, 77, 81, 93, 108, 128, 169.
24. E.g., Shermer (2011).
25. Brooke (1991), p. 134.
26. Ibid., p. 146.
27. Paley (1802).
28. Quoted in Lightman (2007), p. 45.
29. Dembski (1998).

30. Brown et al. (1968), p. 11.
31. Schelling (1988).
32. Richard, in Cunningham and Jardine (eds) (1990), p. 131.
33. Wroe (2007).
34. Bowler (1984), pp. 76
35. Darwin (1794), p
36. Lamarck (1914), p. 122.
37. Ibid., p. 36.
38. Bowler (1984), p. 134.
39. Darwin (1875), pp. 7
40. Darwin (1859), Chapter 3.
41. Particularly in Darwin (1875).
42. Monod (1972).
43. Partridge (1961), pp. 386–7.
44. Quoted in Driesch (1914), p. 119.
45. Huxley (1867).
46. Dawkins (1976), p. 22.
47. Ibid., p. 21.
48. Ibid., Preface.
49. Dawkins (1982), p. 15.
50. Smuts (1926).
51. Ibid., Chapter 12.
52. Ibid., p. 97.
53. Whitehead (1925), Chapter 6.

54. Koestler (1967), p. 385.
55. Banathy (1997), http://www.newciv.org/ISSS_Primer/asem04bb.html
56. Mitchell (2009).
57. Filippini and Gramaccioli (1989).
58. Hume (2008), Part VII.
59. Thomson (1852).
60. Singh (2004).
61. Long (1983).

۲] آیا مقدار کلی ماده و انرژی همیشه یکسان است؟



1. Burnet (1930).
2. Dijksterhuis (1961), p. 9.
3. Tarnas (1991).
4. Ibid., p. 437.
5. Newton (1730, reprinted 1952), Query 31, p. 400.
6. Popper and Eccles (1977), p. 5.
7. Ibid., p. 7.
8. Davies (1984), p. 5.
9. Munowitz (2005).
10. Coopersmith (2010), p. 23.
11. Ibid., p. 255.
12. Ibid., p. 265.
13. Kuhn (1959).

۱۴. برای خواندن تاریخچه فرق العاده‌ای از مفاهیم انرژی، بنگرید به:

Coopersmith (2010)

15. Harman (1982), p. 58.

16. Feynman (1964).

17. Sheldrake, McKenna and Abraham (2005).

18. Singh (2004), p. 360.

19. William Bonner, quoted by Singh (2004), p. 361.

20. Singh (2004).

21. Quoted by Singh (2004), p. 418.

22. Singh (2004).

23. Ibid., p. 133.

24. E.g., Bekenstein (2004).

25. Singh (2004), p. 139.

26. Belokov and Hooper (2010).

27. Coopersmith (2010), p. 20.

28. Ibid., p. 292.

29. Thomson (1852).

30. Quoted in Burtt (1932), p. 9.

31. Davies (2006), Chapter 6.

32. Ostriker and Steinhardt (2001).

33. Sobel (1998).

34. <http://www.xprize.org/>

35. Coopersmith (2010), pp. 270

36. Quoted by Coopersmith (2010), p. 329.

37. Frankenfield (2010).
38. Webb (1991).
39. Ibid.
40. Webb (1980).
41. Webb (1991).
42. Webb (1980).
43. Frankenfield (2010), p. 947.
44. Ibid., p. 1300.
45. Webb (1991).
46. Dasgupta (2010).
47. Thurston (1952).
48. Ibid., p. 377.
49. Ibid., p. 366.
50. Ibid., p. 384.

[۳] آیا قوانین طبیعت ثابت‌اند؟



1. Tarnas (1991), p. 46.
2. Plato, *The Republic*, Book 7.
3. Tarnas (1991), p. 47.
4. Burtt (1932), p. 64.
5. Quoted in Pagels (1983), p. 336.
6. Wilber (ed.) (1984), p. 185.
7. Ibid., p. 137.

8. Ibid., p. 51.
 9. For data, see Sheldrake (1994), Chapter 6.
 10. Mohr and Taylor (2001).
 11. Schwarz et al. (1998).
۱۲. مرجع اندازهگیری‌های تاریخ‌های مختلف:
- 1973: Cohen and Taylor (1973); 1986: Holding et al. (1986); 1988: Cohen and Taylor (1988);
1995: Kiernan (1995); 1998: Schwarz et al. (1998); 2000: Grundlach and Merkowitz (2000);
2010: Reich (2010)
13. Schwarz et al (1998).
 14. Stephenson (1967).
۱۵. برای مطالعه بحثی در این باره، نگاه کنید به:
- Sheldrake (1994), Chapter 6.
16. Brooks (2009), Chapter 3.
 17. Adam (2002).
 18. Brooks (2010).
 19. Barrow and Webb (2005).
 20. Birge (1929), p. 68.
۲۱. برای مشاهده داده‌ها و مرجع‌ها، نگاه کنید به:
- Sheldrake (1994), Chapter 6.
22. De Bray (1934).
 23. Petley (1985), p. 294.
 24. Davies (2006).
 25. Ibid.
 26. Hawking and Mlodinow (2010), p. 118.

27. Tegmark (2007), p. 118.
28. Rees (1997), p. 3.
29. Ibid., p. 262.
30. Woit (2007).
31. Smolin (2006).
32. Ibid.
33. Bojowald (2008).
34. Smolin (2010).
35. Robertson et al. (2010).
36. Quoted in Potters (1967), p. 190.
37. Ibid.
38. Nietzsche (1911).
39. In Murphy and Ballou (1961).
40. Whitehead (1954), p. 363.
41. Sheldrake (1981, new edition 2009).
42. In Sheldrake (2009), Appendix B.
43. Bohm (1980), p. 177.
44. Cf. Laszlo (2007).
45. Cf. Carr (2008).
46. Woodard and McCrone (1975).
47. Ibid.
48. Holden and Singer (1961), pp. 80–81.
49. Ibid., p. 81.
50. Woodard and McCrone (1975).

51. Goho (2004).
52. Bernstein (2002), p. 90.
53. Quoted in Woodard and McCrone (1975).
54. Danckwerts (1982).
55. Sheldrake (2009).
56. Bergson (1946), p. 101.
57. Ibid., pp. 104.bi
58. Bergson (1911), p. 110.

[۴] آیا ماده ناآگاه است؟



1. Dennett (1991), p. 37.
 2. Crick (1994), p. 3.
 3. Griffin (1998).
 4. Huxley (1893), p. 240.
 5. Ibid., p. 244.
۶. خلاقانه‌ترین استدلال‌های تکاملی درباره پیدایش آگاهی موهوم از هامفری (Humphrey) (۲۰۱۱) هستند.
7. Searle (1992), p. 30.
 8. Strawson (2006), p. 5.
 9. Crick (1994), pp. 262–3.
 10. Strawson (2006).
 11. Ibid.
 12. Ibid., p. 27.

13. Searle (1997), pp. 43–ear.
14. Spinoza (2004), Part III, propositions 6–pi
15. Hampshire (1951), p. 127.
16. Skrbina (2003).
17. Ibid., p. 20.
18. Ibid., p. 21.
19. Ibid., p. 21.
20. Ibid., p. 22.
21. Ibid., p. 25.
22. Ibid., p. 27.
23. Ibid., p. 28.
24. Ibid., p. 31.
25. Ibid., p. 32.
26. Ibid., p. 33.
27. Dennett (1991), pp. 173–en
28. Griffin (1998), p. 49 note.
29. Ibid.
30. Ibid., p. 113.
31. De Quincey (2008).
32. Ibid.
33. Ibid., p. 99.
34. Libet et al. (1979), p. 202.
35. Libet (1999).

36. Wegner (2002).
37. Libet (2006).
38. Libet (2003), p. 27.
39. Feynman (1962).
40. Quoted by Dossey (1991), p. 12.
41. Dyson (1979), p. 249.

[۵] آیا طبیعت بی مقصود است؟



1. Dawkins (1976).
2. Haemmerling (1963).
3. Goodwin (1994), Chapter 4.
4. Hinde (1982).
5. Smith (1978).
6. Thom (1975, 1983).

عنایت داشته باشید که توم کلمه «کرئو» را به صورت «chread» می‌نویسد، یعنی بدون همایانی املای (chreode) را اولین بار وادینگتون به کار گرفت.

7. Thom (1975).
8. Cramer (1986).
9. Aharonov et al. (2010).
10. Anfinsen and Scheraga (1975).

۱۱. در مجموعه‌ای از کارگاه‌های ادامه‌دار با موضوع پیش‌بینی ساختار پروتئین، که تحت نظرارت آزمایشگاه ملی لارنس لیورمور در کالیفرنیا برگزار می‌شود، تیم‌هایی از سرتاسر دنیا می‌کوشند ساختار سه‌بعدی پروتئین‌ها را پیش‌بینی کنند، بی‌آنکه پاسخ را بدانند. این ارزیابی‌ها را «بررسی انقادی تکنیک‌های پیش‌بینی ساختار پروتئین» (CASP) می‌نامند. موفق ترین پیش‌بینی‌ها مبتنی بر دانش دقیق از پروتئین‌های مشابه هستند که مدل‌سازی تطبیقی نام دارد. رقابت‌های CASP قبلی دستهٔ

اصول پایه داشت، بدین معنا که پیش‌بینی‌ها از اصول پایه آغاز می‌شود، اما برای CASP6 در سال ۲۰۰۴ نام این دسته تغییر کرد: «این نام چنین القامی کند که هیچ انکایی به ساختارهای شناخته شده در مدل‌سازی نیست. در عمل، بیشتر روش‌های مورد استفاده برای چنین هدف‌هایی استفاده زیادی از اطلاعات ساختاری موجود می‌کنند، هم در طراحی تابع‌های امتیازدهی برای ایجاد تمایز میان پیش‌بینی‌های صحیح و غلط و هم در انتخاب قطعه‌هایی برای به کارگیری مدل. به این دلیل، این دسته به تاشدگی‌های جدید تغییر نام داد».

www.predictioncenter.org/casp6/doc/categories.html

۱۲. برای مطالعه یک مرور نگاه کنید به:

Nemethy and Scheraga (1977).

13. Anfinsen and Scheraga (1975).

14. Cf. Elsasser's (1975) "principle of finite classes."

15. Hawking (1988), p. 60.

16. Smolin (2006).

17. Thom (1975), pp. 113–14, 141.

18. Ibid., Chapter 9.

۱۹. برای مطالعه درآمدی کلی بنگرید به:

Capra (1996).

20. Thom (1983), p. 141.

21. Penrose (2010).

22. Bergson (1911), p. 262.

23. Cohn (1957).

24. Bacon (1951).

25. Midgley (2002), Chapter 7.

26. Satprem (2000).

[۶] آیا وراثت زیستی تماماً مادی است؟



1. Cole (1930).
2. Needham (1959), p. 205.
3. Holder (1981).
4. Dawkins (1976).
5. Ibid., p. 23.
6. Ibid., p. 24.
7. Hodges (1983).
- 8 .E.g., Carroll (2005), p. 106.
9. برای مطالعه مجادله‌های ویتالیست‌ها و مکانیست‌ها، بنگرید به: Nordenskiold (1928); Coleman (1977).
10. Venter (2007), p. 299.
11. Ibid., p. 300.
12. Ibid.
13. Quoted in Nature (2011).
14. Ibid.
15. Culotta (2005).
16. Manolio et al. (2009).
17. Khoury et al. (2010).
18. Green and Guyer (2011).
19. Latham (2011).
20. Wall Street Journal, 2 May 2004.
21. Pisano (2006), p. 184.

22. Ibid., p. 198.
23. Howe and Rhee (2008).
24. Carroll et al. (2001).
25. Gerhart and Kirschner (1997).
26. Wolpert (2009). The Edge Question Center, 2009 http://www.edge.org/q2009/q09_6.html#wolpert
27. <http://www.sheldrake.org/D&C/controversies/genomewager.html>
28. Wolpert and Sheldrake (2009). See also Schnabel (2009).
29. Darwin (1859; 1875).
30. Mayr (1982), p. 356.
31. Ibid., Chapter 5.
32. Huxley (1959), p. 8.
33. Ibid., p. 489.
34. Medvedev (1969).
35. Anway et al. (2005).
36. Young (2008).
37. Petronis (2010).
38. Qiu (2006).
39. Galton (1875).
40. Quoted in Wright (1997), p. 17.
41. Ibid., p. 21.
42. Wright (1997), Chapter 2.
43. Iacono and McGue (2002).
44. Watson (1981).

45. Wright (1997), p. 42.
46. Dawkins (1976), p. 206.
47. E.g., Blackmore (1999).
48. Dawkins, in Blackmore (1999), p. ix.
49. Ibid.
50. E.g., Blackmore (1999), Dennett (2006).
51. Sheldrake (2011b).
52. این گفت‌وگو در تابستان ۱۹۹۵ یا ۱۹۹۶ در آشتون ۹۰۲، منزل بانو میریام روتسلیلد، انگام شد.
53. Conniff (2006).
54. داوکینز (2006) می‌نویسد وقتی فهمیده ژن خودخواه منبع الهام جفری اسکیلینگ و دیگر مدیران انرون قرار گرفته دچار «شرم‌سازی» شده و معتقد است پیامش را درست نفهمیده‌اند.

[۷] آیا خاطرات به صورت ردهای مادی ذخیره می‌شوند؟



1. Rose (1986), p. 40.
2. Plotinus (1956), Ennead 4, Tractate 6; Inge (1929), Vol. 1, pp. 226–lo
۳. راسل (۱۹۲۱)؛ ویتگنشتاین (۱۹۶۷)، یادداشت ۶۱۰: «چرا باید علتی برای ... به یادآوردن در دستگاه عصبی ام وجود داشته باشد؟ چرا باید چیزی، هرچه باشد، به هر شکلی آنجا ذخیره شود؟ چرا باید ردی به جا بماند؟ چرا ترتیبی ذهنی وجود نداشته باشد که هیچ مابه‌ازی فیزیولوژیکی ندارد؟ اگر این تصویراتِ ما را از علیت می‌شوراند، پس وقتیش رسیده شورانده شویم».
4. Bursten (1978).
5. Crick (1984).
6. Boakes (1984).
7. Lashley (1929), p. 14.
8. Lashley (1950), p. 479.

9. Pribram (1971); Wilber, ed. (1982).

10. Boycott (1965), p. 48.

11. Rose and Harding (1984); Rose and Csillag (1985); Horn (1986); Rose (1986).

مطالعات مفصلی هم، با آزمایش‌هایی مشابه بر روی جوجه‌ها، نشان داده‌اند که، پس از یادگیری، تغییراتی در تعدادی از وزیکول‌های سیناپس‌ها رخ می‌دهد (Rose, 1986).

12. Cipolla-Neto et al. (1982).

13. Kandel (2003).

14. Lu et al. (2009).

15. Lewin (1980).

16. Fröhlich and McCormick (2010).

17. Blackiston et al. (2008).

18. Lashley (1950), p. 472.

19. Hunter (1964).

۲۰. مثلاً Squire (۱۹۸۶). برای توصیفات دقیقی از بعضی موارد بالینی نگاه کنید به:

Sacks (1985).

21. Luria (1970; 1973); Gardner (1974).

22. Penfield and Roberts (1959).

23. Quoted in Wolf (1984), p. 175.

24. Pribram (1979).

25. Bohm (1980).

26. Bohm in Weber (1986), p. 26.

27. Bohm in Sheldrake (2009), p. 302.

۲۸. رزونانس ریختی و شواهد مربوط به آن را در کتاب علم جدید حیات (ویراست جدید، ۲۰۰۹) توضیح داده‌ام. پیشینهٔ تاریخی و دلالت‌های گستردگی‌اش را نیز در کتاب حضور گذشته؛ رزونانس ریخته و عادات طبیعت (ویراست جدید، ۲۰۱۱) آورده‌ام.

29. Jennings (1906).
30. Wood (1982).
31. Wood (1988).
32. Klein and Kandel (1978).
33. Jennings (1906).
34. Watkins et al. (2010).
35. Rizzolatti et al. (1999).
36. Agnew et al. (2007).
37. Ibid., p. 211.
38. Yates (1969).
39. E.g., Lorayne (1950).
٤٠. جزئیات این آزمایش‌ها را با ارجاع به مقاله‌های مجلات علمی در کتاب علم جدید حیات (ویراست جدید، ۲۰۰۹) آورده‌ام.
41. Flynn (2007).
42. Data from Horgan (1997a).
43. Flynn (2007), p. 176.
44. Summarized in Sheldrake (2009).

[۸] آیا ذهن در حصار مغزاست؟



1. Piaget (1973), p. 280.
2. Wallace (2000), pp. 28–al
3. Ibid., p. 49.
4. Crick (1994), p. 3.
5. Greenfield (2000), pp. 12–ree

۶. ویلدر پنفیلد عصب شناس دریافت که هنگام عمل مغز می تواند، با تحریک قشر مغز بیماران، خاطرات آنی روشی را برانگیزد، اما هرچند تحریک باعث برانگیزش خاطرات می شد، خودش هم اعتقاد نداشت خاطرات در بخش تحریک شده نهفته باشند. او همچنین نتیجه گرفت که حافظه «در قشر مغز نیست» (Penfield, 1975).

7. Duncan and Kennett (2001), p. 8.
8. Lindberg (1981).
9. Ibid., p. 202.
10. Kandel et al. (1995) p. 368.
11. Gray (2004), pp. 10, 25.
12. Lehar (2004).
13. Lehar (1999).
14. Winer et al. (2002).
15. Winer et al. (1996).
16. Winer and Cottrell (1996).
17. Ibid. (1996).
18. E.g., Bergson (1911); Burtt (1932).
19. James (1904), quoted in Velmans (2000).
20. Whitehead (1925), p. 54.
21. Velmans (2000), p. 109.
22. Ibid., pp. 113, p.
23. Gibson (1986).
24. Thompson et al. (1992).
25. Noëo (2009), p. 183.
26. In Blackmore (2005), p. 164.
27. Bergson (1911), p. 7.

28. Ibid., pp. 37–8.
29. Sheldrake (2005b).
30. Braud et al. (1990); Sheldrake (1994); Cottrell et al. (1996).
31. Sheldrake (2003a).
32. Ibid.
33. Ibid.
34. Ibid.
35. Ibid.
36. Corbett (1986); Sheldrake (2003a).
37. Long (1919).
38. Cottrell et al. (1996).
39. Sheldrake (2003a).
40. Ibid.
41. Sheldrake (2005a).

۴۲. معناداری آماری $P = 10^{-376}$ بود (Sheldrake, 2005a).

43. Ibid.
44. Sheldrake (2003a).
45. طبق فراتحلیلی از پانزده مطالعه نگاه خیره از طریق دوربین مداریسته، اکثرشان نتایج مثبتی نشان می‌دادند و نتیجهٔ مثبت کلی به لحاظ آماری معنادار بود (Schmidt et al., 2004).
46. Dyson (1979).
47. Ibid., p. 171.

[۹] آیا پدیده‌های فراروان‌شناختی توهمند؟



1. Quoted in Barrett (1904).
2. In Krippner and Friedman (eds) (2010).

3. Quoted in Auden (2009).

4. New Penguin English Dictionary, 1986.

5. برای مطالعه بحث‌های مربوطه، نگاه کنید به:

Sheldrake (2003a, 2011) and Radin (1997, 2007).

6. Recordon et al. (1968).

7. چنان‌که پیترز خاطرنشان می‌کند، تنها تبیین «نرمال» ممکن این است که مادر به هر نحوی شده نوعی کد شنیداری مخفی یا ناخودآگاه از طریق تلفن برای پسر می‌فرستاده، اما هیچ مدرکی دال بر این امر وجود نداشت. به هر حال، پیترز نوارهای ضبط شده را برای همه علاقمندان می‌فرستاد تا خودشان تلاش کنند این سرنخ‌ها را شناسایی کنند. من هم به نوارها گوش دادم و ردی از هیچ‌گونه کدی پیدا نکردم. حتی یک شعبده باز حرفه‌ای هم نتوانست هیچ‌گونه تقلیبی را شناسایی کند.

8. Sheldrake (2003a).

9. Radin (1997).

10. Ibid.

11. Ibid.

12. Ullman, Krippner and Vaughan (1973).

13. احتمال اینکه این آمار شانسی باشند یک در ۷۵ میلیون بود (Radin, 1997).

14. Carter, in Krippner and Friedman (eds) (2010), Chapter 6.

15. همان، فصل ۱۲. چندین فراتحلیل نشان داده‌اند که اثر کاملاً معناداری وجود داشته است، به استثنای مقاله شکاکانه میلتون و وایزمن (1999) که مجموعه‌ای از نتایج مثبت را حذف کرد و تعادل کلی را به اثر مثبت معنادار تغییر داد (Milton, 1999). ضمناً میلتون و وایزمن از روش تحلیلی نقص‌داری استفاده کردند که اندازه نمونه هر مطالعه را لحاظ نمی‌کرد. وقتی داده‌هایشان با اصلاح این نقص مورد تحلیل مجدد قرار گرفتند، اثر کلی مثبت و به لحاظ آماری معنادار بود (Radin, in Krippner and Friedman (eds) (2010) Chapter 7).

16. Dalton (1997); Broughton and Alexander (1997).

17. همسرم این کتاب را در یک کتاب دست دوم فروشی پیدا کرد، فوراً فهمید موضوعش برای من جالب است (که قطعاً هم همین طور بود) و برایم خرید. این کتاب حالا تجدید چاپ شده و دوباره در دسترس است. نگاه کنید به:

Long (2005).

18. Sheldrake (1999a), Chapter 3.
19. Sheldrake and Smart (1998).
20. Sheldrake and Smart (2000a).
21. پس از آنکه آزمایشی با جیتی در تلویزیون بریتانیا نشان داده شد، چندین فرد شکاک توانایی جیتی را برای پیش‌بینی به خانه‌آمدن پم به چالش کشیدند و کوشیدند، با تبیین، صورت مسئله را پاک کنند. یکی از آن‌ها به نام ریچارد وایزمن را، که احضارگر، روان‌شناس و عضو کمیته بررسی علمی ادعاهای پارازیمال (CSCICOP) بود، دعوت کردم تا خودش آزمایش‌هایی با جیتی انجام دهد. وایزمن دعوت را قبول کرد و پم و خانواده‌اش با نهایت بزرگواری با او همکاری کردند. در این آزمایش‌ها، هر وقت پم از خانه خارج می‌شد، دستیار وایزمن همراه او بود و در وقت‌هایی که به صورت تصادفی انتخاب می‌شد به او می‌گفت به خانه برگردد. وایزمن هم پیش جیتی می‌ماند و از او فیلم می‌گرفت. نتایج کاملاً شبیه آزمون‌های خودم بودند؛ درواقع حتی اثر بزرگ‌تری مشاهده شد. در آزمایش‌های وایزمن، جیتی چهار درصد هنگام غیبت پم و ۷۸ درصد هنگام برگشتش به خانه پایی پنجه ره می‌بود (Sheldrake and Smart, 2000a). اما وایزمن و همکارش متیو اسمیت ادعا کردند جیتی در آزمون رد شده، چراکه قبل از راه‌افتدان پم پای پنجه ره می‌رفته است. آن‌ها توجهی به داده‌های خودشان هم نکردند که رفتار انتظار جیتی را خیلی شبیه به زمان آزمایش‌های خودم نشان می‌داد (Wiseman et al., 1998). به ادعاهایشان پاسخ دادم (Sheldrake, 1999b) و دو دور دیگر پاسخ شکل‌گرفت (Wiseman et al., 2000 and Sheldrake, 2000).
- Carter (2010) and Sheldrake (2011a).
- وایزمن حالا پذیرفته که نتایجش تکرار یافته‌های من بوده است: «الگوی مطالعات شبیه الگوی مطالعات روپرت است».
- (<http://www.skeptiko.com/11-dr-richard-wiseman-on-rupertsheldrakes-dogsthat-know/>)
22. Sheldrake and Smart (2000b).
23. Sheldrake (2011a).
24. Sheldrake and Morgana (2003).
25. Van der Post (1962), pp. 236.
26. تعداد پاسخ‌دهندگان زن بیشتر از مردها بود، برای همین است که متوسط، یعنی ۹۲ درصد، میانگین معمولی ۹۶ و ۸۵ بود (Sheldrake, 2003a).

27. Lobach and Bierman (2004); Schmidt et al. (2009).
28. Sheldrake and Smart (2000a,b).
- 29 .Sheldrake (2003a).
30. Radin (2007).
- 31 .Einstein, in Einstein and Born (1971).
32. Sheldrake and Smart (2005), Sheldrake and Avraamides (2009); Sheldrake, Avraamides and Novak (2009).
33. Sheldrake and Lambert (2007); Sheldrake and Beeharee (2009).
34. See the online experiments portal at www.sheldrake.org
- 35 .Sheldrake (2003a,2011a).
36. Grant and Halliday (2010).
37. Sheldrake (2005c).
38. Sheldrake (2003a).
39. Sheldrake (2011a).
40. Sheldrake (2003a,2011a).
- 41 .Saltmarsh (1938).
42. Ibid.
43. Dunne (1927).
44. Radin (1997).
45. Radin (1997), Chapter 7.
46. Bierman and Scholte (2002); Bierman and Ditzhuijzen (2006); Bem (2011).
- ۴۷ .مثلاً ریچارد والزمن، شکاک مشهور بریتانیایی، پذیرفت که داده‌های آزمایش‌های مربوط به ادراک فراحسی «از استانداردهای معمول برای یک ادعای عادی برخوردارند، اما برای یک ادعای خارق العاده کافی نیستند».

<http://subversive-thinking.blogspot.com/2010/04/richard-wiseman-evidence-for-esp-meets.html>

۴۸. برای ملاحظه بحث‌های مستدل درباره نگرش‌های شکاکان، نگاه کنید به:

Griffin (2000), Chapter 7; also Carter (2007) and McLuhan (2010).

49. French, in Henry (ed.) (2005), Chapter 5.

۵۰. برای ملاحظه بحث شکاکانه درباره ادعاهای شکاکانه منبع زیر را بینید:

www.skepticalinvestigations.org

51. See the Appendix to Sheldrake (2011a) and the Controversies section of my website, www.sheldrake.org

52. Whitfield (2004).

53. <http://www.skepticalinvestigations.org/New/Audio/telepathy.html>

54. http://www.skepticalinvestigations.org/controversies/Euroskep_2005.htm

[۱۰] آیا فقط پژوهشی مکانیستی واقعاً مؤثر است؟



1. Sheldrake (2009), Chapter 1.

2. Jones and Dangl (2006).

3. Elgert (2009).

4. Ibid.

5. Le Fanu (2000).

6. Ibid.

7. Ibid., pp. 177–bi

8. Weil (2004).

9. Ibid.

10. Le Fanu (2000)..

11. Boseley (2002).

12. Goldacre (2010).

13. Ibid.

۱۴. به این مدخل ویکی‌پدیا مراجعه کنید:

http://en.wikipedia.org/wiki/Pharmaceutical_lobby

15. Goldacre (2009).

16. Stier (2010).

17. Ibid.

18. Mussachia (1995).

19. Rosenthal (1976).

20. Roberts et al. (1993).

21. Evans (2003).

22. Kirsch (2010).

23. Kirsch (2009).

24. Ibid.

25. Kapchuck (1998).

26. Evans (2003).

27. Weil (2004).

28. Dossey (1991).

29. Moerman (2002).

30. Ibid.

31. Singh and Ernst (2009), p. 300

32. Silverman (2009).

33. Reiche et al. (2005).

34. E. G., Pattie (1941); Stevenson (1997), p. 16.
35. Weil (2004), Chapter 21.
36. Freedman (1991).
37. Time (1952).
38. Mason (1955).
39. Weil (2004), Chapter 21.
40. Burns (1992).
41. Le Fanu (2000).
42. Source: US Centers for Disease Control and Prevention: <http://www.cdc.gov/obesity/childhood/index.html>
43. Kreitzer and Riff (2011).
44. Sheldrake (1999), Chapter 5.
45. Koenig (2008).
46. Ibid., Chapter 9.
47. Ibid., p. 143.
48. Crow (2011), p. 571.
49. Ibid.
50. Ibid.
51. UK Government (2010).
52. Le Fanu (2000), p. 400.
53. E.g., Singh and Ernst (2005).
54. World Health Organization (2003).
55. Singh and Ernst (2005).
56. Ibid.

57. Moncrieff (2009).
58. Kirsch (2009), p. 158.
59. Gray (2011), Chapter 2.
60. Ibid.
61. <http://outthere.whatitcosts.com/cryogen-frozen.htm>
62. Quoted by Willis (2009).
63. Hamilton (2005).
64. Source: American Medical Association: <http://www.ama-assn.org/amednews/2009/08/24/prsa0824.htm>
65. Zhang et al. (2009).
66. Temel et al. (2010).

[۱۱] توهם عینیت



1. Lear (1965), p. 89.
2. Ibid., p. 114.
3. Meri (2005), pp. 138omi
4. Lear (1965), pp. 103omi
5. Ibid., Introduction.
6. Descartes (translation, 1985), Vol. 1, p. 127.
7. Zajonc (1993).
8. D'Espagnat (1976), p. 286.
9. Latour (2009), pp. 10–ato
10. Latour (1987); Collins and Pinch (1998).
11. Collins and Pinch (1998), p. 111.

12. Ibid., p. 42.
13. بحث رادر فصل چهارم بخوانید.
14. Sheldrake (2001).
15. Sheldrake (2004a).
16. Sheldrake (2001).
17. آلیستر کاتبرتسون (ارتباط شخصی، ۱۳ نوامبر، ۲۰۱۰) این پیمایش سی و سه معلم علوم مدارس دولتی را در نوامبر ۲۰۱۰ در مؤسسه تربیت معلمان علوم شاهزاده ولز انجام داد.
18. Sheldrake (2004a).
19. Sheldrake (2004a).
20. Rosenthal (1976).
21. Rosenthal (1976), Chapter 10.
22. Sheldrake (1999c).
23. Watt and Nagtegaal (2004).
24. Sheldrake (1998b).
25. Sheldrake (1999c).
26. Sheldrake (1994), Chapter 7.
27. Sheldrake (1998b).
28. Sheldrake (1998c).
29. Sheldrake (1999d).
30. Wiseman and Watt (1999).
31. Enz (2009).
32. مثلاً رادین (۲۰۰۷) در فراتحلیل‌های خود برآورد کرد که چه تعداد مجموعه‌داده‌های منفی منتشرنده نیاز است تا نتایج مثبت منتشرشده را جبران کند. او دریافت که اثر کشوی میزانمی‌تواند نتایج مثبت کلی را در پژوهش‌های فاروان‌شناسی تبیین کند.
33. Goldacre (2011).

34. Wicherts et al. (2006).
35. Broad and Wade (1985).
36. Ibid.
37. Dennett (2006).
38. Wikipedia entry on “ikiön scandal en
39. Nature (2010).
40. Daily Telegraph (2010).
41. Broad and Wade (1985), pp. 141ht
42. Hettinger (2010).
43. Oreskes and Conway (2010), Chapter 1.
44. Michaels (2005).
45. Ibid.
46. Oreskes and Conway (2010).

۴۷. برای بحثی جالب از این موضوعات منبع زیر را ببینید:

Latour (2009), Chapter 3.

[۱۲] آینده علوم



1. Royal Society (2011).
2. Ibid.
3. US Census data, accessed June 2011: <http://www.census.gov/compendia/statab/2011/tables/11s0807.pdf>
4. Data for 2005: Royal Society (2005).
5. National Science Foundation: <http://www.nsf.gov/statistics/infbrief/nsf09314/>
6. Smolin (2006).

7. Ziman (2003).
8. Feyerabend (2010).
9. <http://www.cam.ac.uk/admissions/undergraduate/courses/natsci/part1b.html>, accessed June 2011.
10. Fara (2009), pp. 191.
11. Ibid., pp. 194, 196.
12. از جمله بعضی که فقط به صورت بخط منتشر می‌شوند. منبع: Royal Society (2011).
13. Carr (2007).
14. Brooke (1991), p. 155.
15. Fara (2009), p. 197.
16. Ibid., p. xv.
17. Kröning (1992), p. 155.
18. Gervais (2010).
19. این اقبال را داشته‌ام که در گفت‌وگوهای علمی و فلسفی زیادی شرکت کنم که واقعاً جزء روشنی‌بخش‌ترین تحریبیات زندگی‌ام بوده‌اند. مثلاً‌با دیوید بوهم و هانس پیتر دور، که هردو متخصص فیزیک کوانتومی‌اند، در این باره بحث کردم که فیزیک مدرن چگونه می‌تواند با میدان‌های ریخت‌زا مرتبط باشد. با متیو فاکس‌الهی دان به بررسی پیوندهای جدید میان علم و معنویت پرداختیم؛ بعضی از بحث‌های ما در کتاب‌های مشترکمان تبرک طبیعی (1996) و فیزیک فوشنگان (Natural Grace, 1996) منتشر شد. من و اندرو وایل، در مجموعه‌ای از گفت‌وگوهای سالانه، به پیوندهای میان پژوهش علمی، پژوهشکی یکپارچه و مطالعات آگاهی پرداختیم که همه به صورت صوتی در وب‌سایتم (www.sheldrake.org) در دسترس‌اند. در مجموعه‌ای از بحث‌های سه‌طرفه، که پانزده سال طول کشید، با رالف آبراهام، ریاضی‌دان پیشناز در عرصه نظریه آشوب، و ترنس مک‌کنا، پژوهشگر استفاده شمن‌ها از گیاهان روان‌گردان، به طیف وسیعی از موضوعات پرداختیم. بعضی از گفت‌وگوهای ما در کتاب‌های میان مشترکمان آشوب، خلاقیت و آگاهی کیهانی (The Evolutionary Mind, 2005) و ذهن‌نکاملی (Chaos, Creativity and Cosmic Consciousness, 2001) منتشر شد و اکثرش‌هم به صورت بخط در وب‌سایتم در دسترس است.
20. UK Office of Science and Technology (2000).

21. Hansen (2010).
22. For example, the AIDS Treatment Activist Coalition: <http://www.atac-usa.org>
23. Akrich et al. (2008).
24. Source: The Association of Medical Research Charities: <http://www.amrc.org.uk/our-members-member-profiles>
25. Sample (2010).
۲۶. این ایده را با سیاستمداران بر جسته بریتانیا، هم در دولت و هم اپوزیسیون، در میان گذاشتم و اکثرشان استقبال کردند. این را در نیچر (Sheldrake, 2004b) و نیوبورک تایمز (Sheldrake, 2003c) منتشر کردم و اندیشکده دموس سراغش رفت (Wilsdon et al., 2005). اما هیچ اتفاقی نیفتاد. کار راحت‌تر این بود که اوضاع همین طور که هست بماند و ضمناً تغییر در سیستم‌های بودجه رسانی علمی چندان رأی آور نیست. اما هنوز هم این امکان وجود دارد.
27. Shannon (2002).
28. Viveiros de Castro (2004).
29. Wallace (2009), pp. 24–al
30. Horgan (2003).
31. Weil (2004).
32. Heglund et al. (1995).
۳۳. مثلاً نگاه کنید به بررسی‌های خودم با متیو فاکس الهی دان در منبع زیر:
- Sheldrake and Fox (1996) and Fox and Sheldrake (1996).
34. Tarnas (1991), Chapter 3.
35. Suzuki (1998).
36. Royal Society (2011).

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