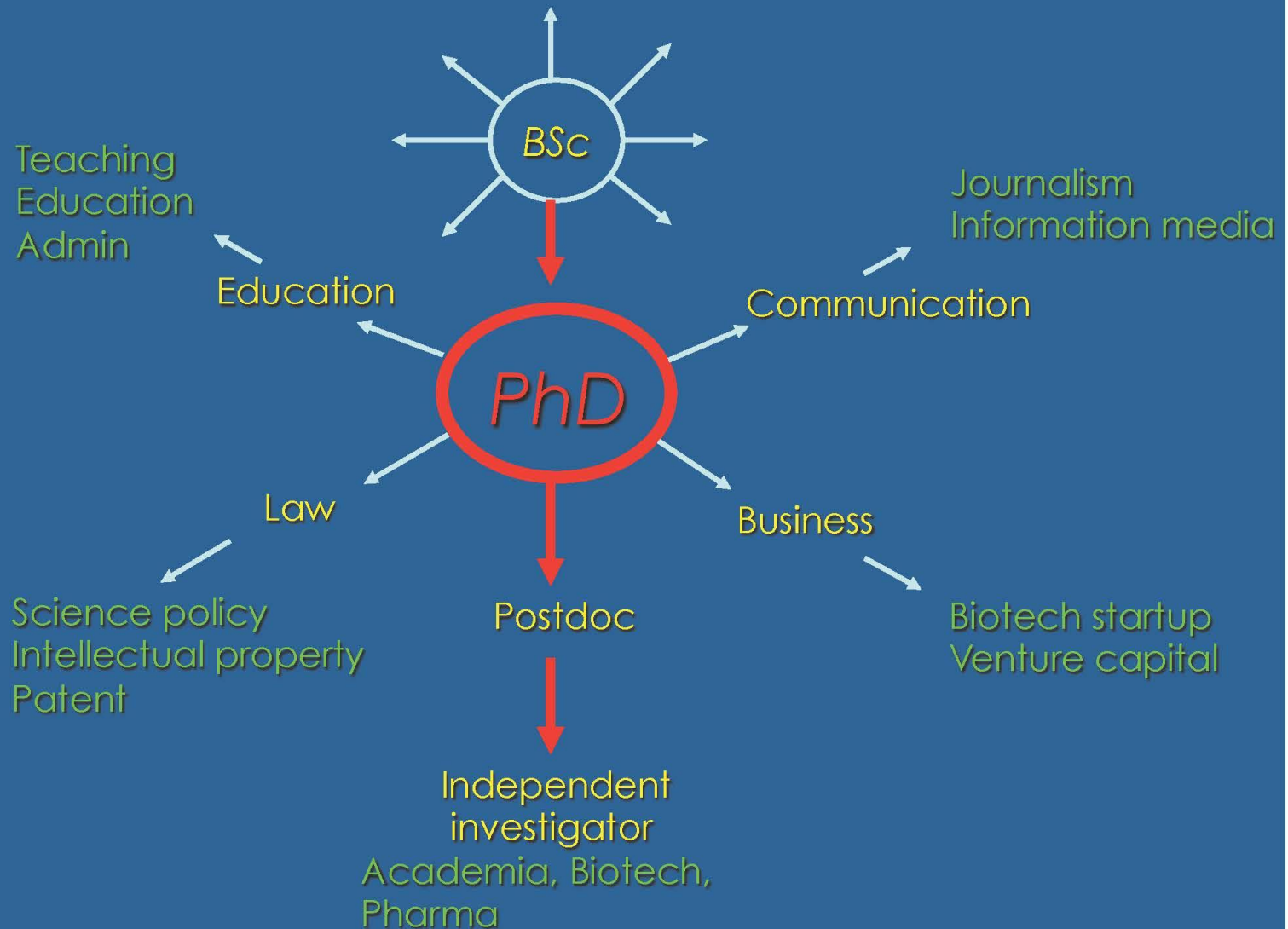


# A PhD “hub” with career option “spokes”

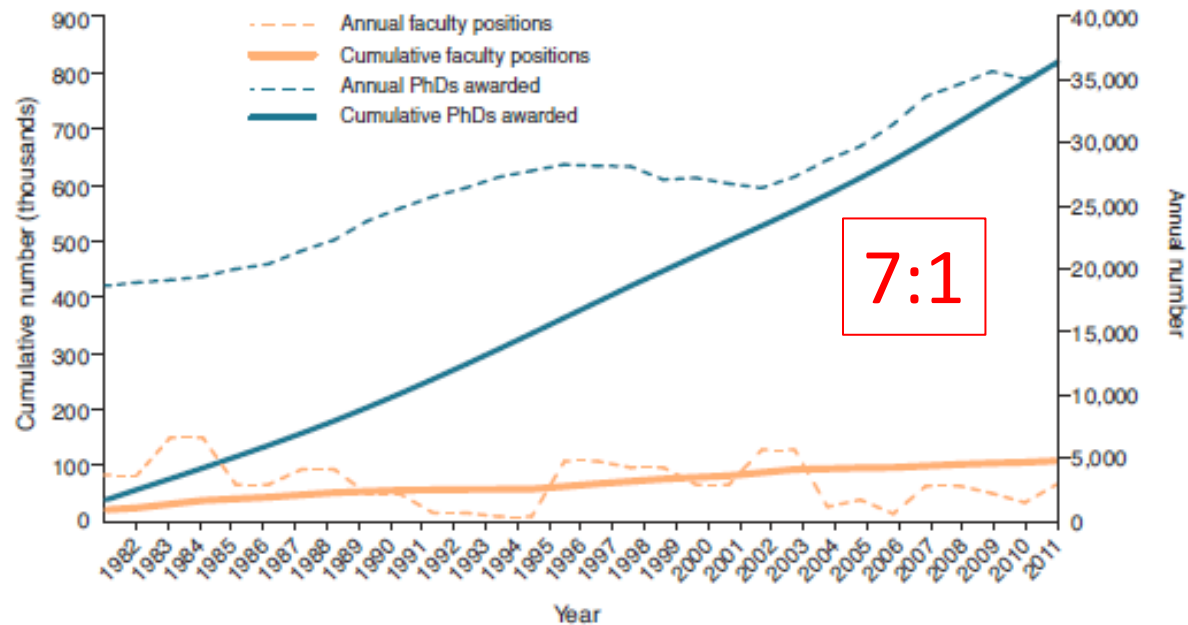


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A new type of initiative is empowering graduate students and postdocs to reshape their academic training, providing another avenue to express their passion for research.

As graduate students, we have become disillusioned with our academic training. We began graduate school full of ambition, drive and optimism but have long since come to realize that we have joined a system that does not meet our diverse interests. We yearn for a community that supports creativity and the expression of future career goals instead of one with a narrow, focused interest.

Current PhD training programs are focused primarily on the academic career track despite its disheartening outlook: the number of awarded PhDs is significantly outpacing the available positions<sup>1,2</sup>, fiscal pressures have slowed the growth of available independent research jobs<sup>3</sup> and the time it takes to earn a PhD has not improved over the past two decades<sup>4</sup>. Each year, there are seven times more PhDs awarded in science and engineering than there are newly available faculty positions (Fig. 1). As a result, only about 25% of biomedical sciences PhD recipients are in tenure-track positions five years after earning



**Figure 1** New faculty positions versus new PhDs. Since 1982, almost 800,000 PhDs were awarded in science and engineering (S&E) fields, whereas only about 100,000 academic faculty positions were created in those fields within the same time frame. The number of S&E PhDs awarded annually has also increased over this time frame, from ~19,000 in 1982 to ~36,000 in 2011. The number of faculty positions created each year, however, has not changed, with roughly 3,000 new positions created annually<sup>2,10</sup>.