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Choosing your Mentor: A letter to creative minds

Forthcoming on the *Journal of Innovation Economics & Management*

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ABSTRACT

Choosing the right mentor is one of the most important decisions in the life of any creative mind. This decision often paves the way to several aspects of an individual professional career and intellectual development. However, the choice is often made unawares and involuntarily, also because it is taken by individuals in the initial stages of their profession and with still limited information. The fact that it is often dictated by available opportunities (e.g. in which academy, school, or university a student is accepted, or which grants he or she manages to obtain) does not help. This paper invites young people to pause and to think about mentorship. It suggests assessing actual and potential mentors against a few basic questions. Perhaps also senior intellectuals, artists, and scholars will find it instructive to consider if the mentorship they provide is what their students and junior colleagues actually need.

Keywords: creative class, doctoral students, supervisors, learning, tacit knowledge

JEL Codes: A23, D64, D83, I23, O30

Acknowledgements: The observations developed here arose from what I have learned from my mentors (in chronological order), Piero Pataconi, Franco Voltaggio, Federico Caffè, Chris Freeman and Keith Pavitt, and subsequently through the interactions with younger colleagues that I had the pleasure of having as mentees. I also had the opportunity to present these observations during soft skills courses for young researchers organized at CNR, Birkbeck College, University of London, and Venice International University.

Origin of the term mentor

Mentor was the friend to whom Ulysses entrusted his son Telemachus before leaving for the Trojan war. A mentor, we can say, was ineffective if he could not prevent Penelope's suitors from undermining Telemachus' mother and stripping the assets of his friend Ulysses, the King of Ithaca. Yet twice Athena - the benevolent protector of Ulysses - hides inside Mentor to instill courage in Telemachus. Mentor is therefore a friend to whom the father turns in time of need to entrust his son, but behind him lies the goddess of wisdom and science, the daughter born directly from the mind of Zeus. We are all very fond of the mentor, perhaps because of his double nature: on the one hand, a benevolent substitute for the father figure, but on the other hand, also a female, embodied in the wisest and least maternal goddess. In this paper, I will refer to the mentor as a woman like Athena, and to the novice as a young man, like Telemachus. But, of course, both characters are gender interchangeable.

Over time, and thanks to the intermediation of the edifying novel by François Fénelon (1699), the term has identified an older person who transfers her skills and secrets to a younger one, often selected from among the most promising of the next generation, with the hope that one day he may become the chosen one. Unlike what happened to Telemachus, a young creative mind does not have to wait for his father to choose his mentor: he has to look for her alone. And in many cases, the choice of mentor, or better yet, of mentors, is the most important choice in the life of an artist, a musician, a scholar. Such an important choice is often left to chance or, at least, dictated by the opportunities of life without many young people reflecting fully on how important this meeting is.

As a member of academia, I am more familiar with the practices of mentorship within universities and research institutions, but digging into the history of art, music, business, media, or craftsmanship I discovered surprising similarities. Perhaps the relationship between mentor and apprentice is more explicit in universities and higher education organizations than elsewhere, if only because these places are institutionally devoted to teaching and learning and are therefore based on the dyadic relationship between a teacher and a learner. But the mentor is certainly not an academic figure only: this role is found in all professional activities and, more generally, they are essential in the transfer of skills, knowledge, and the rules of life between generations. Each hero hides a mentor, as is evidenced by the greatest hits in literature and cinema. Behind Batman, Rocky Balboa and Luke Skywalker we find the advisers Alfred, Mickey Goldmill, and Ben Kenobi.

The relevance of mentorship is increasingly recognized by public organizations and business companies as a way to transfer competences and knowledge, and especially from one generation to the next one. There are a growing number of guidelines released on the subject and many organizations formally contemplate junior and not so junior members of staff being connected to a mentor (see for example Johnson, 2002); in the majority of cases this is a different individual than the line

manager. This is due to a widespread view that effective mentorship enhances the working environment. They are certainly helpful to improve current practices within organizations, but less attention has so far been devoted to advising young colleagues about the choice they are making. Since this is mainly an individual decision, in this paper I urge young creative minds to pause for a while and to start asking: who are my mentors? Have I chosen them accurately?

There are several reasons which explain why too often a novice does not think enough about the choice of his mentors. First of all, students are making their first steps into learning institutions and they are not well aware of their mechanisms. Second, precisely because they are still students, they do not yet have the instruments to assess whether a specific research program or activity which the potential mentor is pursuing is valid or not. Third, life often follows opportunities: if a young scholar is offered a doctoral grant in a good university, he is likely to accept it even if the potential mentors do not correspond to his own predispositions.

Mentors and tacit knowledge

Why do we need mentors, rather than being self-taught and acquiring skills directly? And why are mentors even more important when skills become increasingly complex, be they the ability to play a violin, to make a film, or to carry out supramolecular chemistry experiments? Basically, one could say, all these skills can be inferred from observing others who carry out the same activities, from carefully studying essays, articles, and treatises.

What justifies the need for mentors is the fact that an important part of knowledge is transferred through personal contacts. In some fields - crafts, culinary art, hairdressing - much of the knowledge is transferred from one person to another through direct observation, imitation, trial and error. There are no manuals capable of transferring skills with a sufficient degree of precision. It takes a great ability to articulate and transfer knowledge that is difficult or even impossible to code in treatises, handbooks, scientific papers or guidelines. Doing so would be a complex and expensive task, both for those who must codify this knowledge and for those who should acquire it. Knowledge that is not easily expressed has been christened as tacit by Michael Polanyi (1966), opposing it to codified knowledge, which is what we find in scientific books and publications, in university courses and instruction manuals. For Polanyi, tacit knowledge occurs every time that we feel that we know more than we can tell.

The Internet has facilitated the transfer of parts of knowledge even when this is tacit. Someone of my generation is surprised when young people use YouTube to learn how to bake a Tarte Tatin or to tie a tie: some of these specific tutorials have reached several million viewers, and often a digital apprenticeship is successful. The baby boomers, as with previous generations, have learned how to cook or tie their ties thanks

to the patience of their parents and grandparents. When one of my sons graduated, everybody in the class had to wear a tie, perhaps for the first time in their lives, and I carefully studied the elegance of their knots. Those who relied on their relatives certainly had better knots than those who learned it online, indicating that the Internet has not (yet?) thwarted tacit knowledge.

What distinguishes much of the academic discourse from crafts or other professions is that a substantial part of the fruits and discoveries of science are codified: theories, formulas, experiments, data, and results must not only be articulable and articulated, but they must also be available and replicable. Both scientific journals and patent offices, for example, require that authors provide the information so that an expert in the field can understand and be able to replicate the results obtained. Manuals, publications, university lectures, patents, conferences, and congresses are the ways in which that part of the knowledge that is articulated is made available.

Compared to the world of craftsmanship, tacit knowledge seems to be less important in academic life and, correspondingly, coded knowledge is more relevant. A university professor is expected to have students and to be able to expose her knowledge clearly, while the same is not expected from an artist, a carpenter, a barber, a cook. Nonetheless, it would be a very serious mistake to underestimate the importance of tacit knowledge in academic life, and for a young person it is essential to have a mentor to help him acquire it. Sometimes just mentioning an author, an experiment, a university department, a specific article, may be enough to obtain information that would otherwise be obtained in months of investigation. An expert colleague can tell us who to contact to solve a specific puzzle, what is the limit of some statistical methods, where to find obscure sources.

Despite the Internet, we cannot do without the experience accumulated by colleagues of previous generations. It is not enough that knowledge is available: it is also necessary to know how to select that part of knowledge that is specific to our needs and so that we can solve our own riddles. This is the basic difference between knowledge that can be used freely and the knowledge that can be used without learning costs (Callon, 1994). And for the transferee, learning costs are substantially smaller when the transferor closely collaborates with the transferee (Archibugi and Filippetti, 2015b).

In the creative area, the mentor has a threefold function. The first is to guide a young person in the difficult task of acquiring, selecting, and absorbing the set of coded knowledge. The second is to make available a set of tacit knowledge that has been acquired by the mentor herself during her professional life. The third and perhaps most important is to make a youngster understand that, engaging with constancy and determination, he has the potential to achieve the results he expects.

Since the relationship between the mentor and the young selected person is often deeper than a simple professional one, and involves not only an intellectual, but also an

emotional partnership, an apprentice should not only consider the skills of a mentor, but also her human attitudes, first of all the willingness to transfer knowledge to the younger person (Tjan, 2017).

In education institutions, the mentor is the scholar who has an institutional function and who helps young people to take their first steps in a world that is still unknown to them. Tutors and supervisors, but also the directors of a research project for which young people work, or senior colleagues, are institutional mentors. Beyond institutional mentors, everyone has the possibility to seek mentors in life, including in professional life, academic institutions based in cities and countries, social, cultural, and political associations. Those can be called elective mentors.

If we go digging into the past life of a successful creative person, we always find not only exceptional qualities, perhaps innate, but also the presence of a teacher capable of bringing them out, what – following Socrates – we label the maieutics. This also needs to be associated with a suitable intellectual environment that encourages interaction among colleagues of different generations. I feel, therefore, that I should caution young people who intend to pursue any creative career: don't just think about working hard, don't just trust the resources of your own intellect, even when it's very powerful. These are the indispensable conditions, but there is another necessary condition: find someone who knows something, and who wants to transfer it. As Bernard of Chartres warned, a young person should know that “we are like dwarves perched on the shoulders of giants [of the past], and thus we are able to see more and farther than the latter. And this is not at all because of the acuteness of our sight or the stature of our body, but because we are carried aloft and elevated by the magnitude of the giants”. Only a few mentors are those giants, but many mentors act as a medium between the knowledge of the past and of the future.

Questions to identify a good mentor

I suggest young persons ask themselves nine questions to assess their actual and prospective mentors.

1) Does the mentor command his/her own subject?

By definition, the mentor requires that she know the subject better than you do. While it is easy for her to assess how much you know and what your potential is, it is often difficult for you to properly assess her mentoring skills. To test her knowledge of the subject, perhaps you have to rely not only on your intuition, but also to check how much your mentor participates in the life of the epistemic community (if she is an academic: has she produced significant research? Has this research been published? Does she have she a continuous publishing record? If she is an artist: what are her most relevant works? Is she still producing?). And equally important, you need to check how

her work is valued (Are her works mentioned? Is she invited to conferences and seminars in her own country and abroad?).

But this does not mean putting the brain in storage. Success should not be the only factor used to assess a mentor and you need to critically consider the validity of her work, as well as the consistency with your own emerging intellectual project. There are scholars who know many things, and who perhaps have never published a single word. Without Plato, today no one would know of Socrates, but without having received the teachings of his mentor, there would have been no Plato. These are the cases in which a mentor needs a pupil much more than a pupil needs a mentor. The test to select your mentor is not on her fame, but on her skills. If your mentor is not competent, look for another! An incompetent mentor can provide encouragement, be a good friend and an excellent confidant, but you will never learn the trade from her.

2) Is your elective mentor also the institutional one?

There are mentors who are institutionally required to work with you and for you (for example, Doctoral supervisors). Others are willing to do it voluntarily. You will certainly not be the first to find a mentor in a university (for example, because you have won a doctoral scholarship in a university) and who would like to be followed by others for which you feel more affinity, with specific expertise in your area, or who are simply more competent. Outside learning organizations, institutional mentoring is becoming more and more common, but this does not impede the existence of informal mentoring.

It often happens that institutional mentors do not like having their own students or assistants or apprentices collaborate with someone else. Some mentors are more jealous of their students than of their spouse. And it seems that the more incompetent academics are, the more jealous and possessive they are. Have psychologists not taught us that jealousy is driven by insecurity? Being able to establish a happy ménage-à-trois that includes an institutional and an elective mentor is not easy, but it is often possible, and it may be in your interest to put the two in contact. Moreover, your mentor may find it convenient to expand her epistemic community thanks to the collaborations started by you.

3) Is she capable and willing to articulate and transfer her knowledge?

Not everyone has the same willingness to articulate and transfer their knowledge. There are some mentors who are willing to tell everything they know, often repeating the same things several times (mentors can be more repetitive than grandparents), and who do their best to make their know-how accessible. Others are characteristically less able to codify their knowledge and even less to transfer it. Still others have uniqueness syndrome. Antonio Stradivari was certainly the most competent luthier of his age but, despite being trained by the flourishing Cremonese school of Nicolò Amati, he was unable, or perhaps unwilling, to create a school, so much so that not even his children managed to follow the tradition, and he took with him to the grave many of his secrets.

You have to evaluate how much your mentor is willing to spend time transferring the knowledge she has acquired, which means reading and commenting on your work, indicating what the promising research areas would be, pointing out professional opportunities.

But if you don't succeed in learning, don't blame your mentor alone: it's also up to you to extract knowledge from a living encyclopedia, asking specific and relevant questions, following the advice and pursuing the reasoning. A good disciple also stands out because he is capable of stealing the trade from his master.

4) Does she enjoy a good reputation among her colleagues?

The judgment of the external community has value for at least two good reasons. First, a reputation - good or bad that it is - is not always undeserved: if someone has the reputation of being "quarrelsome" or of being a "well of knowledge" perhaps she has deserved it. You should therefore listen to what they say, both as regards academic attributes and as regards personal characteristics. Second, a mentor's good or bad reputation tends to project itself onto her students, especially in the closed and gossipy academic community. If your mentor has a bad reputation among colleagues, try to create an autonomous intellectual profile so that you do not end up by being only her protégé.

5) Can she motivate and squeeze the most out of her students and collaborators?

Every young scholar is potentially a hero. It is difficult to make a youngster understand that he is in the most fruitful years of his life. The good mentor is not recognized for a pat on the shoulder, but because she manages to make the most of the potential of the students and collaborators. This means that she must also be able to understand what the intellectual and character attitudes are, and direct students and collaborators on the areas in which they are motivated and capable.

Good-natured mentors may leave you happy after each meeting, but they may not have made their students work hard enough in the most precious years of their existence. The true mentor is the one who leaves you with something new to understand each time you meet her. If she doesn't put pressure on you, try to put pressure on yourself, setting ambitious goals.

6) Does she cope positively with competition from her students?

The relationship between teacher and learner is mainly collaborative. But it would be naive to think that there is no rivalry. Not all pupils are, like Telemachus, waiting in an adoring way for their father. Many are more like Oedipus, needing to assert themselves with their father. And just as many renowned scholars are like Oedipus' father, Laius also decided to get rid of his son only because an oracle had predicted that the son would kill his father. The relationships between generations are often

conflicting and academic life does not fail this general rule. Not all mentors are likely to amiably welcome a brilliant pupil who can overshadow him. Competition is part of human life. Within certain limits, the competition between teachers and learners is healthy because it places two scholars, even if of different generations, on the same level. But beyond a certain level, competition can be destructive, especially if the mentor uses her social power (for example, her greater network of connections) to restrain or hinder the disciple's creative progresses. Young researchers need mentors, not tormentors.

Mentors often have an ambivalent attitude: their first move tends to subjugate their students. But if they fail and the student manages to survive, then they start to respect them as equals. If you find yourself in such a case, your best bet is to pull out your credentials and make it clear that you are an equal and not a slave. External recognition - be it a successful presentation, an article published in a good journal (maybe one where your mentor has never published), praise for your work, the achievement of funding - could clarify to your mentor that she is dealing with a younger, but no less capable, colleague.

7) Does she leave room for approaches other than hers?

Human life is short, that of a scholar is very short. After having accumulated knowledge for decades, a scholar may eventually hope to capitalize on her wisdom when she is often overwhelmed by unexpected diseases such as Alzheimers, Parkinsons, or simply by ageing. It should be quite natural for a scholar to wish to pass the baton to a younger colleague who is not yet suffering from these ailments, due to time passing. But here there is often the rise of another syndrome that afflicts senior scholars: they would like to transform students into clones that passively perpetuate the research activities they started. In many cases, a young scholar can take advantage of this, because he manages to capitalize on a wealth of knowledge laboriously built over the course of a lifetime. But this is not always the case: scientific progress has often taken other paths, old methodologies have been supplanted by new ones, perhaps even fashions (in fine arts as well as in the academic discourse) have changed. Change is even more important in the creative professions since a young artist is assessed for his capacity to break with old stylistic features and to pioneer fresh ones.

A capable mentor should be able to make available to her collaborators the wealth of knowledge she has accumulated, but encourage, rather than hinder, the development of different or alternative styles, themes, and methodologies. A critical evaluation by the old guard of the new lines of research is always beneficial, the attempt to hinder new developments is evil. Take possession of your mentor's cultural background, but also think about increasing it, considering the developments that are at the frontier of knowledge.

8) Did she manage to generate a school in the past?

History repeats itself. A mentor's ability in coaching pupils through their academic or artistic career should be visible in the achievements of her acolytes. If at a reasonable age (45 years? 50 years? 55 years?), capable students do not emerge, it is legitimate to doubt that an artist, a scholar, a novelist, even if a very good one, is also a good mentor. The ability to advance former students to become junior and senior colleagues can be identified not only because of institutional mentoring (doctoral students, collaborators, and so on), but also in the ability to leave a trace in a wider epistemic community. By ability to generate a school I don't just mean to support protégés in the job market, but that of leaving an intellectual trace recognizable in their work. If a mentor has not created an intellectual circle, start looking around for alternatives or integration. If she has successfully created a vibrant school, start making contact with her alumni.

9) Are there some of her students who have become or will become better professionals than her?

Leonardo da Vinci said: "Poor is the pupil who does not surpass his master", and who knows if his disciples were truly saddened by having met such an exceptional man on their way. If, after a certain age, an intellectual has generated a school, she should have produced a number of alumni who are as capable as she, who have an independent intellectual profile, and who are on par with their ancient mentor. Being part of such a school of thought means being able to learn (and collaborate) not only with a mentor, but also with her alumni and now her colleagues. It is the best guarantee that you are choosing the right person.

Mentoring and creative groups

The role played by mentorship is crucial, but it is only a part of the story. I do not wish to give the impression that the single component of individual cognitive development is associated with the bilateral relationship between the apprentice and his master. A fruitful personal progress does not depend on the choice of a good mentor only. It is also associated with interactions with a large number of colleagues and very often exchanges and communications among peers of the same generation are crucial to creative achievements. A creative mind is likely to have fewer inhibitions when exchanging his views with university mates rather than with his professors. Learning is equally important in a vertical line [mentor -> pupil] and a horizontal line [pupils - > pupils].

Still, research carried out on creative teams (see De Masi, 1989; Florida, 2004) indicates that a group of promising artists or scientists are very often kept together by a hub figure who provides the occasions in which the team interacts. Sometimes the hub figure is also the most brilliant mind of the team, as was the case with Enrico Fermi, who coached a group of Italian physicists in Via Panisperna, Rome, in the 1930s. In other cases, the hub figure is the individual with the human skills to assemble talents

and induce them to actively collaborate, as was the case of Max Horkheimer for the Frankfurt School since the 1930s. Fermi and Horkheimer are particularly significant examples because their skills as coaches persisted over time: Fermi was equally successful as a leader in a totally different historical context: when he played a pivotal role in the Manhattan project in the early 1940s. Horkheimer managed to keep together his group of promising scholars from Frankfurt to Geneva in the 1930s (when most of the members had to flee from Nazi Germany), and then again from Geneva to New York in the 1930s, from New York to Los Angeles in the early 1940s, and then back to Frankfurt after the end of World War II.

Here the need is to assess a mentor not only for what she is able to provide individually to her mentees, but also for her willingness to introduce them into a vital community.

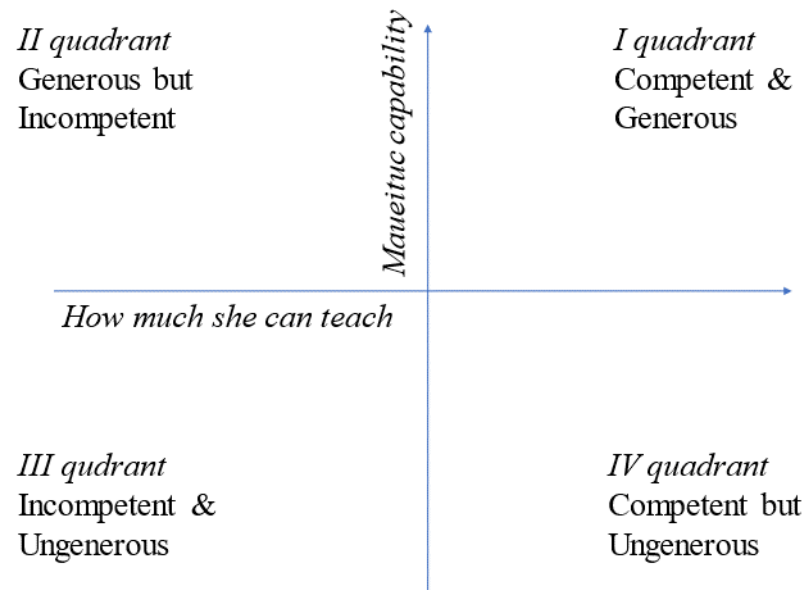
Conclusion: The simple route to assess your mentor

If you have checked all these conditions and received an affirmative answer to most of them, you have indeed chosen the right mentor. Good mentors are not common, and it is now your responsibility to squeeze as much wisdom as possible from her. I have listed nine criteria, and perhaps this is too many. But they can be summarized in just two: competence and generosity. As an exercise, you can try to place about a dozen well-known scholars in your field just to check how the real and the ideal mentor compare (see Figure 1).

If you find your mentors located in the third quadrant, obviously you don't love yourself very much; this is the worst condition and it's better to get out immediately. It's personally frustrating and intellectually depressing. The second quadrant is suitable for those who need to be reassured, but not for those who have a great desire to try harder to learn their trade. The fourth quadrant is the most emotionally tiring one, but it could also be intellectually fruitful, provided that you have enough energy to steal trade from a mentor who knows things but with no desire to pass on the baton. If you are in the first quadrant, congratulations! You have made the right choice. Take advantage of this.

And don't forget that in a decade there could be students placing you in one of the four quadrants. It will be your time to start working with younger colleagues. Try to improve the species, not only of the disciples, but also of the mentoring. There is very little time from when we are ambitious young people looking for an intellectual guide to when others turn to us for guidance. And after going to sleep at night as demanding students who have a lot of complaints to make about our teachers, it would be really sad to get up in the morning and find that we have transformed, rather than into a wise and competent mentor, but instead into an iron-fisted sergeant major.

Figure 1 – Assess your mentors



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