THE CHALLENGE:

21ST CENTURY SKILL DEVELOPMENT IN A RAPIDLY CHANGING SOCIETY

HOW UNIVERSITIES STILL PROVIDE THE BEST ENVIRONMENT – BUT DON'T BE COMPLACENT!

[1] General characteristics of a rapidly changing (VUCA) society

We are living in a so-called 'VUCA world'. This acronym was introduced by the US military to cover for the increased Volatility, Uncertainty, Complexity and Ambiguity that technological, political and economic processes create at the moment (→ the challenge in the original skill sheets). A VUCA world creates in particular a challenge for complex problems solving skills. But what type of complexity are we actually looking at? What is at stake? Already in the 1990s, authors started to realise that a so-called 'networked knowledge society' was rapidly coming of age (cf. Castells, 1996). Instead of hierarchical communities, relatively open communities increasingly interact with each other. The access to knowledge is increasing, partly due to the spread of the Internet, but also due to the breaking down of ideologies and other shared values. Communities of peers pragmatically get together to interactively produce joint knowledge. This trend is best exemplified by the Wiki-phenomenon in which an open community of often unregistered participants – aided by collaborative software and the Internet – generate knowledge through quickly adding, removing and editing content. 'Wiki' in principle means 'able to be edited quickly'. In some instances, quick and open Wiki networks have already provided better and more accessible knowledge results than the slower networks of closed communities dominated, for instance, by scientific peers. The networking society has multiple centres for power and decision-making, which also makes it more difficult to change its course once it takes the wrong route. The declining number of shared values can lead to the disintegration of societies that were built on these values, with nothing replacing them (cf. Etzioni, 1998). The power vacuum produces an institutional void, in which the lack of common rules and practices can also lead to chaos (cf. Van Tulder, with Van der Zwart, 2006). In economic terms, the wiki-society got organised as a 'shared-economy' or the 'we-economy', which emphasizes decentralized collaboration as much as competition. But sharing, also implies exclusion of those groups that are not allowed to participate.

   If quick and open becomes more pervasive, it could also jeopardise the creation of more thorough and deep knowledge, which sometimes requires closed networks of dedicated and committed peers that engage in dialogue to develop knowledge. Wikipedia as the most advanced global application of the Wiki-principle has been criticised for being susceptible to manipulation and electronic vandalism. Cornell University, confronted with comparable developments, even instituted a taskforce to enhance 'wisdom in the age of information'. Another term used for the effects of abundant information is 'infobesitas' which leads to people facing increased choice stress. Or in the words of Mega Trend watcher John Naisbit (1982): "we are drowning in information, but starved for knowledge"

■ **Relevance**: the first challenge of the VUCA society is to increase the reliability and relevance of open knowledge exchange, without losing flexibility. Open knowledge exchange requires high skill levels to wisely use the abundance of knowledge, and to

access and produce *relevant* knowledge. In the internet age, this obviously requires a high level of 'data literacy'.

Principles
Networking changes the traditional selection criteria for identifying the quality and the relevance of knowledge. Absolute quality is becoming less relevant than relative quality. This is also due to the absence of a mutually accepted authority that can define absolute quality standards. Increasingly, benchmarking and rankings are used to distinguish 'best-practices' and help individual participants specify their own rules of engagement. A 'rating economy' matures in which people start to rate hotels, restaurants, products, but also governments and companies. The rational argument is that the 'wisdom of the crowd' provides higher quality information than the opinion of a single expert. The more intuitive argument is that you trust the opinion of your fellow group more than of independent expert even if they have a high scientific prestige. The bubble economy reinforces this trend (see below).
But who is defining the 'best-practice' and who compiles the rankings and ratings? It has been shown that the more independent ranking agencies produce more reliable knowledge. At the same time 'peer reviews' act as an increasingly important mechanism through which information and influence is regulated. In media, accountancy, the medical and legal trades, science in general, even in regards to entire countries, peer reviews are considered the only feasible way to come to judgements. But how independent are those peers and who defines who the peers are? Networks of peers often constitute rather closed communities, which in turn limit the trend towards openness.

There is, consequently, a constant quest for producing ratios, rankings, and exact measures. What counts is what you can measure, and in the present society that also applies to the unmeasurable. The resulting 'numeracy society' creates another problem – that of an increasing number of innumerate people. Innumeracy is the 'inability or unwillingness to understand basic mathematical ideas involving numbers of logic as they apply in everyday life' (Dewdney, 1993). It is the mathematical parallel of illiteracy. In networking processes, actors (companies, governments, special-interest groups, the media) increasingly use mathematics – in numbers, surveys, percentages – to sell their ideas and products. But use can easily turn into abuse, as actors exploit the innumeracy of their audience by twisting logic and distorting numbers (ibid: 2).
In this search for 'facts' and measures, however, science is becoming yet 'another opinion'. Experts therefore susceptible to low levels of trust. This trend has become further reinforced from within science, where an increasing number of scientific disciplines found considerable flaws in the robustness of their theories and empirical findings. This problem applied to the more 'softer' social sciences like psychology, but also to more 'hard sciences' like biomedical research. Sometimes up to 50% of published findings could not be reproduced or validated. Science is a human activity. These developments point at serious flaws in the organization of science – in double blind review procedures, ranking of journals, funding of research – but also in the kind of knowledge that is sought after – with a bias in favor of quantifiable knowledge. The organization of science itself has become part of the complexity problem that require a high level of skills (Science, 2015).
These developments feed into two other societal trends: the 'Post-Truth society' and the 'bubble society'. Post-truths policies relies on feelings, not facts. Since 2017, the Trump administration in the United States has become the leading, but certainly not the only, exponent of this trend. Post-truth politics create 'alternative facts' that are not intended to convince people but to reinforce prejudices (The Economist, September 10th 2016). This trend is pervasive, not only as part of new forms of politics and an exponent of 'low trust' societies in which science has also become under pressure.

■ **Reliability:** The second challenge of the VUCA society is to produce high quality and relevant knowledge on the basis of peer review and benchmarking. It requires high

skill levels to identify, select and reproduce *reliable* knowledge. To dinstinguish 'fake news' from 'real news' and 'facts' from 'fables'. It also requires the ability to work together in teams, learn how to learn and apply persuasion and influencing skills in an ethical manner and to deal with biases.

Dynamics

Modern society can empower skillful participants. But as a societal model, it seems to come at a considerable price. Knowledge creation and diffusion is basically a slow process. There seems to be less time available for slow progress. Under the constant pressure of media, people are often stimulated to put more emphasis on timely information than on relevant information. The concept of a 'deadline society' is another expression of this phenomenon: relevant knowledge is only what can be produced within the deadline. In a deadline society, 'being right' is less important than being proved right by your peers. This leaves tremendous room open for so-called 'pseudo-intellectuals' and the rule of the 'mediacracy' – when appearances are more important than reality. The spread of pseudo-intellectualism is a sign of intellectual sloppiness. One of the mechanisms through which pseudo-intellectualism operates is through easy abstractions and superficial judgements (Barzun, 2002). 'Mediacracy' sounds remarkably similar to 'mediocracy' (or 'mediacrazy'). Instead of collaboration and dialogue, society becomes governed by the principles of a 'debate society', in which sound bites and smart one-liners are more important than solid argumentation. Culture historian Herman Pleij complained that students nowadays 'can do many things, but don't know anything anymore'. At the same time this spurs a high degree of negativity, criticism and cynicism. This trend is based on a fundamental human trait, i.e. that people tend to remember four negative memories for every positive one (Roberts et al., 2005). This makes distant and negative commenting easier than committed and positive feedback. The mediacracy is further fed by these tendencies. Research comparing the contents of British media over time, found that the ratio of negative versus positive articles moved from 3:1 in 1974 to 18:1 in 2001 (Kamp, 2005). Based on these figures the present society can also be labelled as a 'cynical society'.

Consequently, the level of opportunism in societal interactions increases. Enter the idea of a 'low-trust' society (Troman, 2000). The intensification of mutual relationships leads to calculating behaviour in which participants – in case they still want to get it right – want to do this with preferably the least amount of effort. Often, this is easier to obtain in a closely-knit network of people, which further precipitates the concept of a 'knitting society' in which it proves easier to network than it is to work. Sociologist Kees Schuyt refers to this phenomenon as the 'multi-individual society' in which everybody negotiates with everybody else, but on the basis of bleak convictions. MIT professor Sherry Turkle (2011) points to the development that people expect more from technology (in particular social media) and less from direct interactions. She calls this trend 'alone together', the abundance of communication between people that is accompanied by a lack of contact. This is typical of a high-tech society in which the identity (the self) is fragile and linked to technological networks. The adage becomes 'I share so I exist'. In a society in which convictions become bleak and personal contact superficial, strategic behaviour – that can involve misrepresenting one's preferences in order to vote against the least preferred outcome – prevails. The flipside of the debate society is therefore what sociologist Henk Becker has called the 'protestocracy'. Societal actors have to speak up in order to be heard, or to be allowed to participate at one of the (manifold) bargaining tables where decisions are made. When faced with negative consequences of specific measures, you have to share the protests, or risk being hit twice as hard. It leads to interactions that are largely guided by tactical and short-term considerations.

The 'low-trust' society gives room to a 'second-opinion' society. Basically, the search for second opinions highlights the growing assertiveness and research orientation of people that acknowledges that there can be more sides to an issue or a problem if the quality levels are not established objectively. Second opinions can lead to more informed choices. However, in practice the 'second-opinion' society also leads people to search for a second opinion if they do not like the first opinion they get – no matter the quality. The

principle of *competitive bidding* increasingly applies to participants of the bargaining society even in the private realm of personal health (sometimes with devastating effects for the individual involved). As a consequence, quackery and charlatanism are on the rebound in many societies. The 'scientific method' (of proving what you claim to be true or relevant) is put under pressure.

This trend is accompanied and partly reinforced by the bubble economy and the mediacracy, in which people organize themselves in (social) networks of like-minded members. Social media networks like Facebook and twitter reinforce this trends. Commercial networks like Amazon or search engines like Google do the same, by applying specific algoritms people's preferences are filtered; but they don't decide what gets in or don't see what gets edited out (Pariser, 2011). This is a highly selective process. Research on the filtering effects of facebook, for instance, shows that in five year's time facebook users become more myopic in using specific sources of news: after a while they only select – or get selected by facebook's algoritm – those news items that exactly fit their world view. This selection bias becomes stronger, the more active people use the social network (cf. Volkskrant, 11 March 2017). The leading internet corporations create a 'platform economy' in which a relatively limited number of companies dominate networks, create new offerings (such as Airbnb or uber) but also require new form of regulation.

■ **Timely organized**: the third challenge entails in particular organizing and producing relevant and reliable (controllable or auditable) knowledge for specific audiences. It requires high skill levels to produce (often together with others) *timely* knowledge with sufficient independence and openness towards new insights, as well as the ability to effectively and modestly communicate about the results.

Outcome
What is the outcome of all of the above parallel developments? Two final societal concepts are relevant in this respect: the risk society and the hyperkinetic society. Ulrich Beck first coined the term 'risk society' in 1992. He focussed on competing scientific and political ways in the management of the increasing risks associated with modern society. Modern risks are 'manufactured' and much more the result of human activity than in the past. The operation of the risk society contains a boomerang effect, in that individuals will also increasingly be exposed to these risks. But the distribution of the causes and consequences of risk can be unequal. In the view of Beck, the unequal distribution of risk is fundamentally dependent on the knowledge and access to information of individuals. This brings us back to the previously mentioned skill challenges. To what extent can individuals become aware of the threats and opportunities of the risk society? Here the challenge can become very personal.

The present risk society has also manufactured a 'hyperkinetic society' (cf. Hallowell, 2005) in which fast thinking is more important than deep thinking. The demands on time and attention of the human brain have exploded over the last two decades. Life has accelerated tremendously. According to Edward Hallowell (2005), the human mind is filled with noise, and the brain gradually loses its capacity to fully and thoroughly do anything. Computer expert Linda Stone (1998) coined the term 'continuous partial attention' for this phenomenon. The human brain can be improved, but can also be destroyed due to societal stress, multi-tasking and loss of dedicated attention for important aspects of life. An increasing number of people complain about loss of memory and concentration. According to neurologist, Margriet Sitskoorn, these complaints are caused by a mismatch between existing skills and the demands imposed upon us by the rapidly changing environment. The cognitive brain might perfectly understand the operation of the bargaining society; the emotional brain does not (yet). As a result, even smart people tend to underperform and suffer from serious attention deficits. Only under stress can they perform. Stress stimulates the production of adrenaline, which resembles the chemicals used to treat Attention Distraction/Deficit Disorder – a neurological disease. Firms, universities, society at large ask people 'to work on multiple overlapping projects and initiatives, resulting in second-rate thinking' (Hallowell, 2005). The

hyperkinetic society tends to reward those that do a lot and punish those that try to focus. The hyperkinetic society reinforces the universal human tendency to procrastinate (➜B9).

A Gig economy is developing. It creates an environment in which temporary positions are common as are short-term engagements. Flexible work, short-term contracts and the like prevail. The problem with the gig economy is that short-termism prevails, collective learning becomes more difficult. The gig economy feeds into – and is the result of – a low trust society.

As a consequence of the coming of age of modern society in many countries, managers, students, teachers, researchers, administrators, parents, and politicians are increasingly operating in a continuous 'survival' mode. This affects the functioning of your brain, which in turn further precipitates calculating behaviour. In such a society everyone has to become a calculating person to a certain extent. You can do that cleverly or not. For instance, engaging in many activities at the same time requires prioritisation and management, which in turn requires clever calculation. Calculating behaviour is a fact of life in a multi-faceted, rapidly changing society. It is difficult to attach negative or positive connotations *per se* to this behaviour.

■ **Shared intelligence:** THE fourth challenge of a VUCA society entails the production of *shared and meaningful knowledge* that takes into account the outcome of societal processes, and assesses their desirability in order to come up with effective solutions. In the words of Douglas Englebrecht, key contributor to the Internet revolution, 'for coping with critical, global problems (…) a higher order of shared intelligence is essential' (quoted in *Business Week*, September 6, 2004). For an individual student this challenge implies that you are intimately aware of the positive as well as negative consequences of the hyperkinetic society for yourself, and are capable and willing to make effective use of the knowledge developed by yourself and others. This requires an integrated approach to skills, for which this book is intended – to give you sufficient support.

Table 1 summarises the various characterisations of modern society. The four challenges resulting from these trends are mutually reinforcing.

Table 1 Conflicting trends and characterisations of modern society

■ **The Network Society**	You are who you know.
■ **The Knowledge Economy**	Access to knowledge is abundant and decisive for active participation.
■ **The Wiki Society**	Quick and open is better than thorough and closed. 'I share, so I exist.'
■ **The Open Society**	Interrelated open networks create better results than closed, isolated, networks.
■ **A Peer Review Society**	Absolute quality does not exist; it is all in the eye of the beholder.
■ **The Benchmarking Society**	Doing it right is relative to the 'best-practices'.
■ **The Numeracy Society**	What counts is what you can measure, even the unmeasurable.
■ **The Deadline Society**	It is only relevant if it can be achieved within the deadline.
■ **The Pseudo-Intellectual Society**	It is not about being right but about being proved right.
■ **The Knitting Society**	It is more effective to network than to work.
■ **The Mediacracy**	What/who you appear to be is more important than what/who you are.

■ **The Calculating Society**	Getting it right is only right if it takes the least amount of effort.
■ **The Multi-Individualist Society**	Everybody opportunistically bargains with everybody else.
■ **The Low-Trust Society**	Low mutual trust in skills and integrity.
■ **A Second Opinion Society**	Two is more than one.
■ **The Debate Society**	You don't have to win a debate, but be sure not to lose it.
■ **A Protestocracy**	If you do not protest, you will be ignored (and hit twice as hard).
■ **The Cynical Society**	Commenting is more important than commitment.
■ **The Risk Society**	A society that is preoccupied with the future 'manufactures' risk and distributes it unevenly.
▪ **A Bubble society**	Seemingly open, but relatively closed networks of likeminded people
▪ **Rating economy**	Experts and scientists cannot be trusted; there is considerable wisdom in the crowd
▪ **A Gig economy**	Short-term prevails over long-term
■ **The Hyperkinetic Society**	Fast thinking is more important than deep thinking.
▪ **The Post-Truth Society**	'Alternative facts' are as relevant as 'real facts' ; facts are less important than opinion and emotions and '' fake news' becomes a point of discussion
▪ **The We/sharing-Economy**	Whereas competition prevailed in the old economy, the new economy is based on collaboration and sharing
▪ **A VUCA society**	Volatility, Uncertainty, Complexity and Ambiguity prevail
▪ **The Digital and Platform society**	Digital networking and communication infrastructures that provide a global platform for communication, collaboration and the search of information

Four Skill Challenges
1 **Relevance:** wisely use the abundance of knowledge to access and produce relevant and meaningful knowledge.
2 **Reliability:** identify, select and reproduce reliable knowledge.
3 **Timeliness:** produce, together with others, timely knowledge with sufficient independence.
4 **Sharing:** produce shared and meaningful knowledge that takes the outcome of societal processes into account.

2 Entering a calculating learning environment
I have come to summarise the above developments under the single heading of an 'international bargaining society' (cf. Van Tulder with Van der Zwart, 2006). This concept abstains from any positive or negative connotations, but only recognises that a society is materialising in which more and more assertive stakeholders are willing and capable of bargaining over the rules of the game and its outcome. For society as a whole, it is not clear whether this will lead to positive or negative outcomes. Witness in particular the crisis of science as 'yet another opinion' fed a low-trust society governed by post-truth policies and room for 'alternative facts'. The VUCA world creates a a bargaining society that increases the relevance of acquiring more meta-cognitive (head-hands), but also emotional (heart) skills. What does this context actually mean for students who engage in learning at a moment when they probably will make decisions (acquiring skills related to content) that will have tremendous impact on the rest of their lives? Higher education

often presents a 'tipping point' in a vital time of people's lives – so-called formative years of adulthood between the age 18 to 25 – that defines future pathways and mindsets. . But an academic environment creates much more opportunities than a secondary school, not in the least because students have reached a more mature age and are considered to take up much more responsibility for their own learning. And they can.

At the start of any type of advanced study after secondary school, you face the challenge of a significant change in attitude. The information load you are facing is often overwhelming; you are expected to study large amounts of material in a disciplined manner, gather information yourself, work together with other students that come from different places (and cultures sometimes) and create new information. With relatively little external control or incentives from the educational institution, the responsibility for personal development and academic achievement rests largely on the individual student. There are no laws forcing you to study, and your parents are hardly able to check whether you are doing your 'homework'. Tutors can enthuse and encourage you to study, but in the end it all comes down to your own *intrinsic motivation* and your ability to adapt to this new style of learning. Moreover, academia is less and less a place where in splendid isolation from the outside world, scientists and students can pursue 'the truth' and accumulate knowledge and skills. Academia has become part and parcel of the *international bargaining society* and researchers/teachers are under increased stress to publish (or perish) and are struggling to get their methods and theories right, while often engaged with more suspicion than in the past (see section 1).What are the implications of the (VUCA) bargaining society for the academic environment? Faculty members often find themselves caught up in a 'publish or perish' rat race and struggle with an increasing and diverse set of demands and activities. Students increasingly bargain over grades, as well as the content and work load of courses – confronted as they are with an increasing and diverse set of demands and ambitions in a complex society with a wide range of possibilities. Higher education as a public good is getting increasingly mixed up with a private mode of organising and financing. Higher education, in many countries around the world, is becoming a *hybrid* form that unites public and private – with all its opportunities, but also with all its drawbacks. By blending into the international bargaining society, academia also becomes susceptible to one of its dominant mechanisms – participants engaging in calculating behaviour and seeking to maximise output through minimum effort. The wider academic community in principle consists of the following actors: students, staff (administrators, teachers, researchers) and financiers (governments, business, parents).

Table 2 The academic community as a calculating society

Calculating...	Characteristics	Possible Consequences
Students	Only doing what is required; trying to make maximum use of any ambiguities in a programme; engaging in free-rider behaviour; CV-building (extra-curricular activities are more important than actual study to distinguish and less frequent exams; yourself in the job market).	Lengthy appeal procedures; lack of time for effective studying; constant demand for lower intensity of classes and less frequent exams; plagiarism; increasing number of pseudo-intellectuals; grade-inflation.
Administrators	Kissing up, kicking down; not laying down clear rules so as to manipulate them to own advantage; not engaging in evaluation exercises; networkers.	Lack of transparency; lengthy meetings; atmosphere of mistrust; lower productivity; increased overhead expenditures.
Scientists/teachers	Refraining from engaging in small group tutoring (too much work); preference for mass lectures (highest returns per contact hour) and strict	Limited commitment to students; hierarchical; rule-oriented rather than content oriented; stricter rules; lowered quality of exams; growing

Calculating...	Characteristics	Possible Consequences
	grading systems; multiple-choice exams; limited availability; scientist as a bureaucrat.	gap between teaching and research.
Scientists/researchers	Choosing 'easy' topics that lead to easier publications or easier funding for consulting research; use of junior researchers; free-rider on the efforts of colleagues in their own institutions; networkers in the academic community and funding organisations.	Publishing as an act of extreme pleasing of referees (or 'prostitution'; cf. Frey, 2003); 'old boys' network in research funding; (top) scientists become administrators; gap between academics (know a lot about little) and intellectuals (know something about a lot) increases.
Governments	Budgetary problems in funding universities not in the least because more people study – and they study longer; trying to 'rationalise' education, cutting back on funding of scholarships and involving private parties in funding; stricter selection or admission criteria; privatisation of higher education.	Race between universities to attract additional funding; decline in cooperation in periods of rationalisation; lack of funding through scholarships force students to work, often with negative consequences for their studies.
Business	Due to decreased government funding, business gets more involved as sponsors (buildings, facilities), but also as customers for research. Scholarships of firms select the 'best' students. Choice of master's studies is strongly influenced by job opportunities. Thesis topics reflect business interests.	No fundamental but only applied research is done. Interests of business become the leading research questions. Scientist becomes 'guru'. 'Market conformity' of the university triggers more calculating behaviour. 'Best students' are defined from the perspective of future employers, not necessarily with reference to scientific requirements.
Parents	*Quid pro quo:* support in financing higher education as retirement scheme and way to exert control over children.	Parental affection channeled through scholarships and dependency relations; only interested in the grades and consecutive career – not in the topic.

Table 2 illustrates the various forms of calculating behaviour exhibited by these stakeholders and the possible sub-optimal consequences of this behaviour. See whether this image corresponds to your academic environment, and to what extent. It will help you to determine the extent to which you should develop a strategy to escape the negative consequences of a calculating academic community. The result of a calculating environment has been that students (as well as teachers and researchers) have a tendency to be (1) less motivated to learn, (2) less prepared to work hard, (3) try to evade complex problems and (4) have a shorter concentration and interest span for developing skills and content. This is exactly opposite to what constitute 21st Century skills! Research of the Dutch *Onderwijsinspectie* (Ministry of Education and Sciences, 2016)shows that this situation seems more problematic in the Netherlands than in other countries. The advice is to make education more meaningfull, personal and more coherent. Exactly the formula that the Skill Sheets embraces.

   An overly calculating environment implies high transaction costs and increases the propensity towards free-rider behaviour of all involved. American philosopher Martha Nussbaum (2010) talks about the silent crisis in the educational system in this context: instead of teaching students how to think critically on complex global problems, the system focuses on instrumental skills for direct results (often business-orientated). Nussbaum's solution is education aimed at democratic citizenship and the re-

establishment of 'liberal arts' as a basic training requirement at universities and high schools in an intensive and Socratic manner. This Skill Sheets collection follows Nussbaum's basic orientation. It helps you to develop your own (humanistic) competencies, even if the system does not provide optimal conditions.

One of the basic problems for individual students is that they only understand what they have missed out on during their studies long *after* graduation. Whilst the bargaining/knowledge society is also characterised by the continuous need for education and re-education, missed opportunities at university level do not easily get compensated for during your postgraduate career. The choices made at university often have a lasting impact on an individual. The lasting impact does not apply to the academic discipline chosen – there is an abundance of examples of postgraduates who established a career in a completely different area to the one they were trained for. A more lasting impact exists in terms of the skills and attitude you have developed during these extremely important formative years. Whatever attitude you develop in this period, including the social networks you become involved in, will shape your future in a more profound manner than the exact study you choose.

[2] The university (nevertheless!) as a positive learning environment

So much for the 'realistic' scenario. Luckily, a university environment should be able to make the best out of the bargaining society, provided you are able and willing to effectively apply the four Skill challenges presented in the first section of this chapter. The university (and other institutes of higher education) can provide excellent preconditions for a continuous and virtuous learning environment as long as students realise that they are not passive consumers of these facilities, but are active **co-creators** of this learning environment. There are five dimensions to this issue: the staff; the library; the free haven function of the university; the peers, and the application of quality standards.

■ **Outstanding and committed staff**: Universities make it their business to attract the best intellectual resources available. Even in remote areas around the world, academic staff are dedicated to the combination of research and teaching. Their commitment is not dependent upon their status, and often not even upon their remuneration. Calculating students who project their, somewhat distorted, expectations upon staff members tend to assume that the faculty is generally not very eager to invest much time in supporting students, certainly not bachelor and undergraduate students. If you approach a teacher to bargain about your grades in an ostensibly calculating manner – you received a 5.2 and start negotiating to receive a 5.5 (the minimum requirement to pass in most countries) – it should not come as a surprise that the teacher also behaves in a calculating manner. It is likely that the staff member will be absent or will make you feel that this is not a priority. It has been shown, however, that faculty members at some of the top universities in the United States – including even a number of Nobel Laureates – proved to be very receptive to students' concerns, provided that these students entered their room with an informed question and/or showed that they had done their homework (having read some of the professor's academic writings). The inaccessible professor suddenly became very accessible.

> Making use of the great potential of academic staff requires that (1) you are willing to listen to and learn from people who are more experienced or knowledgeable than you; (2) you are prepared to invest time and energy to reap the rewards of interacting with existing staff and (3) you do not view staff as 'teachers' – as a burden you have to bear in order to get a sufficient grade – but as 'researchers', 'advisers', 'mentors', 'writers' – which is much closer to their identity and ambition…

■ **Dedicated libraries and librarians**: Notwithstanding the financial limitations of your

particular university, most of the time the university is the place where you will find the best equipped libraries and the best trained librarians *relative* to other nearby facilities. Why? Because universities make it their business to invest in 'knowledge', and academic staff deals with relatively well-informed customers (you), who prompt them to continuously request good library facilities. Librarians are trained to be of assistance to you and their self-esteem is often dependent on the degree to which they are capable of assisting you in your research efforts. Librarians around the world also have a professional interest in finding things on the Internet, so their advice can be very useful before you start 'Googling around' to find information. Besides, large amounts of relevant information cannot be found through the Google search engine(s) (➤ A18). Many students who did internships at international organisations, government departments, companies, and the like, found out that these organisations often have no access to very sophisticated databases and sources. They return to the university library to find the relevant information.

> Making use of the often excellent university libraries and librarians requires that (1) you know where the library is; (2) you know your way around the library, i.e. you have spent some time understanding the system and its manifold applications and (3) you understand why the librarians are there…

■ **An intellectual-free haven**: The university – no matter how it is structured – often provides an opportunity to develop your intellectual capacities, thus furnishing you with the competencies to belong to the 'thinking' segment of society. The societal elite of a country strongly corresponds with the intellectual elite of a country. This requires a relatively safe and secure environment to experiment and get feedback on complex issues that necessitate a large number of skills. When you go to university you extend your 'learning' period with the aim to reach higher competencies than you would normally attain; you must learn to walk before you can run. But you should also understand that the level of intellectual freedom, the university can provide depends on the type or organization as well as the type of open-mindedness the academic staff is able to implement. Pay first attention to discussion on scientific 'rigor' versus 'relevance' that guides the direction of research. Pay also attention to the discussion on 'efficiency' versus 'effectiveness' of the kind of teaching that the organization offers. The level of abstract and intellectual thinking that you need to acquire as part of 21st century skills does not come out of a 'toolbox' but will be the result of a thriving intellectual community. Are you interested to participate?

> An intellectual-free haven is only relevant to you if you (1) are interested in independent thinking; (2) want to think in the first place and (3) are willing to learn and receive feedback, (4) want to get engaged in the discourse on relevant theories and methods…

■ **Interesting peers**: A university is a meeting place of interesting peers; everybody comes to the university with specific ambitions and ideals; some might be more calculating, but in general no student has ever entered a university just for economic reasons – the alternative being to get a job and earn some 'real bucks' straight away. Moreover, your fellow students come from all over the country (or even the world) and probably have had some interesting life experiences. It is a matter of tapping into these stories and experiences. Your university experience will become a 'micro cosmos' of what you will encounter during the rest of your life – although right now in a somewhat more controlled environment. Didactic research has found that you often learn more from your fellow students than from lecturers. It might start with 'how to fry an egg' (if you have left the parental home for the first time), but can proceed into very rewarding exchanges of insights and experiences on how to analyse society and how to come up with interesting solutions to real problems.

■ **Promoting high standards**: Universities are increasingly competing to establish and maintain high standards; in the bargaining society they are judged on the basis of peer reviews (visitation commissions) of their educational, research and administrative quality. Whether or not these systems are fair and effective is contingent upon a large number of variables. But it implies in any case that there is a strong sense of quality control at most universities around the world. As a student you can make use of this awareness by demanding the highest possible quality in teaching, examinations and related activities. Faced with the serious flaws in the organization of their own community, and the many cases of fraud or poorly executed (lazy) research, many disciplines have started to discuss how to create higher standards. At the same time, a discussion has appeared on how to make science more 'relevant' for complex and multidisciplinary/qualitative topics that a more calculating community of researchers tends to abstain from. It is worthwhile to keep track of the most important discussions in these areas. In case your university does not engage you in this discourse, you should ask for greater transparency.

Bibliography

Barzun, J. (2002) The House of Intellect, New York: Harper Collins, Perennial Classics.

Etzioni, A. (1998) The New Golden Rule: Community and Morality in a Democratic Society, New York: Basic Books.

Ministerie van onderwijs en wetenschappen. (2017) Jaarbeeld 2016; Effectief toezicht voor beter onderwijs, Den Haag.

Nussbaum, M. (2010) Not for Profit: Why Democracy Needs the Humanities, Princeton: Princeton University Press.

Pariser, E. (2011) The filter bubble: What the Internet is hiding from you, London: Penguin UK.

Stone, L. (1998) Thoughts on attention and specifically, continuous partial attention.

Troman, G. (2000) 'Teacher Stress in the Low-Trust Society', British Journal of Sociology of Education Vol. 21 (3): 331–353.